International Engineering Journal For Research & Development
Vol.4
Issue 4

E-ISSN NO:-2349-0721

Impact factor : 6.03

SEISMIC PERFORMANCE OF RCC BUILDING WITH SHEAR WALLS AT VARIOUS LOCATIONS - A REVIEW

Prof.S.R.Band
Prof.Ram Meghe Institute of Technology and Research, Badnera-Amravati,India.
Swapnil28_band@yahoo.co.in

Prof. S.A.Deshmukh
Prof.Ram Meghe Institute of Technology and Research, Badnera-Amravati,India.
shashikantdeshmukh.2012@rediffmail.com

Prof.P.S.Deshmukh
Prof.Ram Meghe Institute of Technology and Research, Badnera-Amravati,India.
psdeshmukh2013@gmail.com

Prof. M.S.Mahalle
Prof.Ram Meghe Institute of Technology and Research, Badnera-Amravati,India.
mayur.askar@gmail.com

Abstract:-

The occurrence of the earthquakes in the world and construction of high rise buildings demands for the construction of earthquake resistant buildings. Many of the tall buildings had collapsed in past earthquakes and the reasons attributed were poor design and construction practices. The high seismic areas may be susceptible to the severe damage in structures. In the seismic design shear walls play a major role in earthquake resisting members. Now a day, shear wall in R.C. structure are most popular system to resist lateral load due to earthquake. Shear wall is a rigid vertical diaphragm capable of transferring lateral forces from exterior walls, floors, and roofs to the ground foundation in a direction parallel to their planes. Shear walls have more strength, stiffness and resist in-plane loads that are applied along its height. Buildings with shear walls which are properly designed give a very good performance Also the positioning of shear wall has influence on the overall performance of the building. For effective performance of building it is essential to provide position of shear wall in an ideal location. In the present paper, studies of various researches were discussed on performance of RCC building with shear wall based on its location.

Keywords - Shear wall, Earthquake, RCC, Seismic Forces

INTRODUCTION

Earthquakes demonstrate vulnerability of various inadequate structures, every time they occur. The lessons taught from the aftermath of earthquakes and the research works being carried out in laboratories give better understanding about the performance of the structure and their components. Damage in reinforced concrete structures was mainly attributed to the inadequate detailing of reinforcement, lack of transverse steel and confinement of concrete in structural elements. Typical failures were brittle in nature, demonstrating inadequate capacity to dissipate and absorb inelastic energy. This necessitates a better understanding of the design and detailing of the reinforced concrete structures under various types of loading.

Shear wall is a rigid vertical diaphragm capable of transferring lateral forces from exterior walls, floors, and roofs to the ground foundation in a direction parallel to their planes. When shear walls are designed and constructed properly, they will have the strength and stiffness to resist the horizontal forces. Shear walls are especially important in high-rise buildings subject to lateral wind and seismic forces.

In the present study, various researches were discussed on performance of shear wall based on its location, orientation and materials used for construction. .

REVIEW OF LITERATURE

Chandurkar and Pajgade, presented a study towards the solution for shear wall location in multistory building. Effectiveness of shear wall had been studied with the help of four different +models. Model one was bare frame

2019-19

International Research Journal of Engineering and Technology (IRJET) e-ISSN: 2395-0056
Volume: 05 Issue: 11 | Nov 2018 www.irjet.net p-ISSN: 2395-0072

STABILIZATOIN OF BLACK COTTON SOIL BY USING GEOTEXTILE MATERIAL IN ROAD CONSRUCTION

Namrata D Sune [1], S.A Deshmukh[2],

[1]*ME student (Transportaion Engg & Mgmt), Dept of Civil Engg, DRGIT&R, Amravati, Maharashtra , India.*
[2]*Assistant Professior, Dept Of Civil Engg, Ram Meghe Institute of Technology & Research Amravati, Maharashtra,India*

Abstract - *Geotextile material a newly emerging field in the civil engineering and other field i.e. road work, river canal work, drainage etc Considerable length of roads planned to be constructed in India under various programmes require construction over poor subgrade soils. The performance of a road largely depends on properties of the subgrade soil. One such subgrade soil often encountered is the black cotton (BC) soil. It is inorganic clay of medium to high compressibility, high shrinkage and swelling property, very hard when dry, but lose its strength completely when in wet condition. As a result of wetting and drying process, vertical movement takes place in the soil mass leading to failure of pavement, in the form of settlement, heavy depression, cracking and unevenness.in order to improve the stabilization of BC soil the geotextile material has a scope as reinforcement. The overview of various synthesis geotextile fibre used in road construction.*

Key Words: Key words:- black cotton soil, polypropylene fiber, polyethylene fiber, compaction test

1.INTRODUCTION

A developing country like India which has a large geographical area and population, demands vast infrastructure i.e. network of roads and buildings. Everywhere land is being utilized for various structures from ordinary house to sky scrapers, bridges to airports and from rural roads to expressways.

1.1 OBJECTIVES

1.To study the effect of the soil strength after the application of geotextile materials
2 To conduct the primary soil tests such as natural Proctor Compaction Test
3.To study the results drawn from above tests for the unreinforced and reinforced soil with different percentages like 1%, 2%, 3%, 4% & 5%.

3 METHODOLOGY

3.1 MATERIALS

3.1.1 Black Cotton Soil

Black soils are formed by lava basaltic rocks. Hence they are very dark in color. They develop cracks during dry period and swell if got moisture, hence they are self-tilling in nature, that's why they are fertile and can hold water for long time. This capacity is used for Cotton cultivation, hence they also called Regular Black Cotton Soil

3.1.2 High Density Polyethylene (HDPE)

Polyethylene (PE), also known as polyethene (IUPAC name) or polythene, is a major group of thermoplastic polymers, produced by the polymerization of ethylene. Depending on the polymerization process used, various types of polyethylene with differing properties can be obtained.

3.1.3Polypropylene

Polypropylene (PP), also known as polypropene, is a thermoplastic polymer used in a wide variety of applications. It is produced via chain-growth polymerization from the monomer propylene.

International Engineering Journal For Research & Development

Vol.4
Issue 4

E-ISSN NO.:2349-0721

Impact factor : 6.03

UTILIZATION OF COFFEE INDUSTRY WASTE AND SPENT COFFEE GROUND FOR GENERATION OF POWER ALCOHOL

Prof. Pallavi P. Tajane
Department of Civil Engineering
Prof.Ram Meghe Institute of Technology and Research,Badnera
Amravati, India
ptajane@mitra.ac.in

Prof. Neelam W. Chorey
Department of Civil Engineering
Prof.Ram Meghe Institute of Technology and Research,Badnera
Amravati, India
chorey.neelam@gmail.com

Abstract:

As a consequence of this big market, the reuse of the main coffee industry residues is of significance importance from environmental and economic viewpoint. Research employs advance process to extract oil, which involves soaking the coffee ground in organic solvents that separates the oil. The separated oil later undergoes a series of chemical reaction to produce biodiesel. Inexpensive process to extract oil from the coffee waste that was then converted into biodiesel, which could be used to fuel motor vehicles, will be use. Biodiesel from coffee oil will be more economical though in the current scenario of coffee biodiesel would not be able to replace conventional fuel. Researchers estimate that 10 kg of waste coffee grounds are produced by a small coffee shop, which can produce nearly 12 liters of bio-fuels.

Research employs advance process to extract oil, which involves soaking the coffee ground in organic solvents that separates the oil. The separated oil later undergoes a series of chemical reaction to produce biodiesel. Inexpensive process to extract oil from the coffee waste that was then converted into biodiesel, which could be used to fuel motor vehicles, will be use. Biodiesel from coffee oil will be more economical; though in the current scenario of coffee biodiesel would not be able to replace conventional fuel. Researchers estimate that 10 kg of waste coffee grounds are produced by a small coffee shop, which can produce nearly 12 liters of biofuels.

Keywords: *Spent coffee ground, biodiesel, Bio-ethanol, fermentation, zero waste*

INTRODUCTION

Agro – industrial wastes are generated in large quantities throughout the world. Their non – utilization results in loss of valuable nutrients and environmental pollution. The wastewater generated from such industries discharge directly into surrounding water bodies, which affect human health and aquatic life. As per research, people residing in the vicinity of this industries utilizing polluted water for domestic purposes and suffer from severe health problems. Also, projected fuels demands indicate that, new, alternative and low priced feedstock are needed. This problem will be tackle by adopting this technology as it will help in reduction of disposal of waste in surrounding. Also solve the problem of the crisis of energy fuel. Alemayehu Haddis 2008 carried out health problems reported by the population living nearby industries.

Health Problems	% of Population Affected
Spinning sensation (feeling drunk)	89
Eye irritation (burning inside)	32
Skin irritation	85
Stomach problem	42
Breathing problem	75

Table 1: Percentage of Population Affected

Presently economy of the world is manly dependent on fossil energy source like oil, coal, natural gas, etc., which are being used for generation of fuel, electricity and other goods. Large consumption of fossil fuels has resulted in high level of pollution. Global energy consumption has increased gradually with the expansion of human

International Engineering Journal For Research & Development

Vol.4
Issue - 4

E-ISSN NO:-2349-0721

Impact factor : 6.03

Seismic Control of Skewed Highway Bridge Using Seismic Control System

Madhur M. Gupta
PG Student
M.E. Structural Engineering
Prof .Ram Meghe Institute of Technology & Research
Badnera,Amravati, India
Mrmgupta.06@gmail.com

Dr. N. P. Kataria
Professor
Civil Engineering Department
Prof. Ram Meghe Institute of Technology & Research
Badnera,Amravati,India
nkataria143@gmail.com

Abstract*— Highway bridges play a vital link role in surface transportation network, and their failures not only cause disruption of service but also danger people life. Seismic base isolation is an important technique that is used for reduce the seismic vulnerability by decreasing the seismic demand instead of increasing the seismic capacity. Present work deals with study of response of bridge using seismic control systems. For present study, a two-span prestressed concrete box girder highway bridge is considered and analyzed for seismic forces using SAP2000 software. The seismic response and behavior of Box Girder Bridge is studied by linear time history analysis using Newmark's beta method. For the analysis four different ground motion data selected and scaled for target spectra as per zone IV. The highway bridge is isolated with Lead Rubber Bearing (LRB). The response of bridge system under earthquakes has been compared with the corresponding bridge with and without the isolation system. It is observed that LRB is highly effective for controlling not only the seismic response of the bridge but also include the structural response on the cost of slight increase in the displacement of the deck.

Key Words*— skewed Highway Bridge; lead rubber bearing; time history analysis

INTRODUCTION

Bridges are widely present in today's built environment, carrying highways through cities and Countries and serving as the transportation lifeline of modern civilization. It provokes many benefits for the people and especially, promotes inter-regional trades and reduces traffic crowding and emergency movement. Past year have seen number of calamitous failures of Highway Bridge due to strong earthquake ground motions such as Northridge earthquake 1994, Kobe earthquake 1995 and chi-chi earthquake 1999 [Panchal and Jangid, 2008]. Due to seismic damage in the bridge tends to stop the transportation system and it harms economy ruinously. Seismic isolation appeared as one of the important techniques to protect the structures like buildings, bridges etc., from the destructive effects of earthquakes. Basically, the main purpose of base isolation system is to decouple the structure from the seismic ground motion which results in reducing the structural damages. Seismic isolation techniques minimized the seismic responses on the highway bridge by increasing the fundamental period of the bridge and increased energy dissipating capability [Kunde and Jangid, 2006].

In the past numerous research and studies were carried out for investigating the effectiveness of seismic isolation devices for seismic resistant design of bridges. Panchal and Jangid (2008) conducted a numerical studied of bridge isolated by the variable curvature friction pendulum system (VCFPS) and found that under near fault ground motion, the VCFPS is quite effective in controlling the seismic response of bridge within desirable range. Chavan and Mrunal (2015) investigated the effect of seismic isolation on the seismic response of bridge components. In their study, first existing bridge with Elastomeric bridge bearing is modeled

International Engineering Journal For Research & Development
Vol.4
Issue 4

E-ISSN NO:-2349-0721

Impact factor : 6.03

ADVANCES IN AIR POLLUTION, ITS MONITORING & REMEDIAL MEASURES - A REVIEW

S.V.Dharpal
Department of Civil Engineering,
Prof. Ram Meghe Institute of Technology & Research,
Research, Badnera-Amravati, India
dharpal007@rediffmail.com

Dr. N.W. Ingole
Department of Civil Engineering,
Prof. Ram Meghe Institute of Technology &
Badnera-Amravati, India
nwingole@mitra.ac.in

Abstract –

Air quality have been long-standing concerns in the India and elsewhere, primarily due to rapid economic growth, industrialization and urbanization with associated increase in energy demand. Lack of implementation of environmental regulation is contributing to the bad air quality of most of the Indian cities. The World Health Organization reports that every year several million people die prematurely due to air pollution. Particulate matter (PM), Sulphur Dioxide (SO_2), Nitrogen Dioxide (NO_2), Carbon Monoxide (CO) and Ozone (O_3) are the major element of polluted air. The presented review is an effort to discuss various aspects of advances in air pollution and control technologies emphasizing on the history and present scenario.

Keywords - Air Quality, Air Quality Index, Urban air pollution, Particulate Matter, Ozone,

I. INTRODUCTION

Air pollution means the presence in the outdoor atmosphere of one or more contaminants, such as dust, fumes, gas, mist, odour, smoke, or vapors, in quantities, with characteristics, and of duration such as to be injurious to human, plant, or animal life or to property, or which unreasonably interfere with the comfortable enjoyment of life and property. (Engineers Joint Council-USA). Air is one of the five vital basic natural ingredients of life system. The immediate environment of human-being comprises of air on which depends all forms of life. The major anthropogenic sources of air pollutants are industrial emissions, domestic fuel burning, emissions from power plants and transportation activities etc. The advent of technological and scientific innovations in various fields and diverse activities of human race for its sophistication have put extra load on the atmosphere by way of releasing air pollutants like suspended particulate matter (SPM), respirable suspended particulate matter (RSPM), sulphur dioxide (SO_2), oxides of nitrogen (NOx), carbon monoxide (CO), unburned hydrocarbon (HC), hydrogen fluoride (HF) and other organic as well as inorganic pollutants including trace metals responsible for causing health consequences. Air Pollution indeed is now a serious worldwide public health problem. The short term health impacts of air pollution have been studied extensively since the London fog in the mid 20th Century and subsequent series of dreaded incidents in industrialized countries. The compatibility between ecology and economy is one of the most burning issues of the present times. Developmental activities e.g. industrial expansion, mining exploration, transportation and constructional works etc. cause degradation and drastic changes in every component of environment namely; hydrosphere, lithosphere, atmosphere and

Scientific Journal of Impact Factor (SJIF): 5.71

e-ISSN (O): 2348-4470
p-ISSN (P): 2348-6406

International Journal of Advance Engineering and Research Development

Volume 5, Issue 07, July -2018

FEASIBILITY STUDIES ON DEFLUORIDATION OF WATER USING NATURAL ADSORBENTS

Shreyas S. Dahane[1], Shailesh S .Gupta[1], Sachin V. Dharpal[2]

[1]Civil Engineering, Prof. Ram Meghe institute of technology and research, Badnera
[2]Assistant Prof. Department of Civil Engineering, Prof. Ram Meghe institute of technology and research, Badnera.

Abstract - *Fluorides are the major pollutants present in the effluents from various industries and ground water sources. These are highly toxic to living beings and have a hazardous effect on their health. Thus the removal of fluoride using bio sorbents is a major step towards the protection of environment. Adsorption is the most effective and widely used method and is applicable for the removal of fluoride even at low concentrations This paper presents the results of investigations carried out for removal of Fluoride from water by using natural adsorbents i.e. Amla bark powder, Neem bark powder, Ground granulated blast furnace slag, Waste lime, Sugarcane baggase. The fluoride removal efficiency of adsorbents was investigated by batch wise adsorption experiment. The effect of various important parameters on the % removal was studied to find the optimum condition for the maximum removal of fluorides. The parameters like contact time, adsorbent dose, height of column and pH were investigated. The optimum pH, height of column, adsorbent dose and contact time were found to be 5, 15ml, 20g/l and 50 min. respectively for which there was maximum fluoride removal. All the results were validated on the basis of statistical analysis. All the graphs were fitted to various trend lines. Out of which the equation of most fitted trend line was adopted for the validation and deviation were observed.*

Keywords *- Adsorption, biosorbents, statistical analysis, fluoride, GGBFS.*

I. INTRODUCTION

Fluoride is an inorganic, monatomic anion of fluorine with the chemical formula F^- which is of halogen group. Fluoride is the simplest anion of fluorine. Its salts and minerals are important chemical reagents and industrial chemicals, mainly used in the production of hydrogen fluoride for fluorocarbons. In terms of charge and size, the fluoride ion resembles the hydroxide ion. Fluoride ions occur on earth in several minerals, particularly fluorite, but are only present in trace quantities in water. Fluoride contributes a distinctive bitter taste. It contributes no colour to fluoride salts.

Fluoride can act as a base. It can combine with a proton (H^+):

$$F^- + H^+ \rightarrow HF$$

This neutralization reaction forms hydrogen fluoride (HF), the conjugate acid of fluoride.

In aqueous solution, fluoride has a pK_b value of 10.8. It is therefore a weak base, and tends to remain as the fluoride ion rather than generating a substantial amount of hydrogen fluoride. That is, the following equilibrium favours the left-hand side in water:

$$F^- + H_2O \qquad HF + HO^-$$

However, upon prolonged contact with moisture, soluble fluoride salts will decompose to their respective hydroxides or oxides, as the hydrogen fluoride escapes. Fluoride is distinct in this regard among the halides. The identity of the solvent can have a dramatic effect on the equilibrium shifting it to the right-hand side, greatly increasing the rate of decomposition.

1.1 Occurrence

Fluoride is found in all natural waters at some concentration. Seawater typically contains about 1mg/l while rivers and lakes generally exhibit concentrations of less than 0.5 mg /l. In ground waters, however, low or high concentrations of Fluoride can occur, depending on the nature of the rocks and the occurrence of fluoride-bearing minerals. High fluoride Concentrations may therefore be expected in ground waters from calcium-poor aquifers and in areas where fluoride bearing minerals are common.

1.2 Effect of fluoride

1.2.1. Dental fluorosis- If fluoride present in this range of 0.7 to 1.5 mg F/l in drinking water may cause dental fluorosis, in dental fluorosis loss of lustre and shine of the dental enamel. The discoloration starts from white yellow, brown to black enamel matrix is laid down on incremental lines before and after birth. Fluorosis is seen as mild moderate and severs depending on the amount of fluoride ingested during the stages of formation of the teeth.

Economic Design of Alternative to Conventional Bricks in RC Structure

Awes Tauseef Khan Wazeer Khan[1] Prof. M. Shahezad[2]
[1]PG Student [2]Professor
[1,2]PRMIT & R, Badnera, Amravati, India

Abstract— Although building techniques and materials have evolved over thousands of years, construction is still a long, complex, and expensive process. Construction industry boom can be seen in almost all the developing countries. With the increase in material costs in the construction industry, there is a need to find more cost saving alternatives so as to maintain the cost of constructing houses at prices affordable to people. There is need to develop an alternative system of building component which would impart more benefits and are multifunctional with optimum use of labor and material. Conventional/ Red bricks are one of the most pre-eminent construction material used for construction. The carbon dioxide emissions in the brick manufacturing process has been certified as a relevant factor to global warming. Therefore, it becomes necessary to focus more on pursuing environmental solutions for greener environment. To fulfill this objective, new construction materials can be used for construction. Two such material i.e., Fly Ash brick and AAC blocks can be used as an alternative material for construction. This project presents brief analysis and Design of building for G+10 by using Conventional brick, Fly Ash brick and AAC block with gravity load and Live load. Cost analysis is made by using Conventional brick, Fly Ash brick and AAC block and overall modeling and analysis is done by using STAAD-Pro software.

Keywords: STAAD-Pro, RC Structure, Fly Ash brick, AAC Block

I. Introduction

A building can be defined as an enclosed structure intended for human occupancy. However, a building includes the structure itself and nonstructural components (e.g., cladding, roofing, interior walls and ceilings, HVAC systems, electrical systems) permanently attached to and supported by the structure. The walls are a very important part of any structure since they are the ones which distinguishes the structure from the environment. Conventional/ Red bricks are one of the most pre-eminent construction material used for construction. It is heavy in weight and also carbon dioxide emissions in the brick manufacturing process has been certified as a relevant factor to global warming. Therefore, it becomes necessary to focus more on pursuing environmental solutions for greener environment and light in weight. To fulfill this objective, new construction materials can be used for construction. Two such material i.e., Fly Ash brick and AAC blocks can be used as an alternative material for construction. This project presents brief analysis and Design of building for G+10 by using Conventional brick, Fly Ash brick and AAC block with gravity load and Live load. Cost analysis is made by using Conventional brick, Fly Ash brick and AAC block and overall modeling and analysis is done by using STAAD-Pro software. The properties of different types of bricks are shown below, which we have used in our project.

A. Types of Bricks

1) Red Clay Bricks/ Conventional Brick

Red clay bricks are generally made by consolidating a blend of locally accessible mud and sand with the end goal that the ratio of sand is least 30% and maximum 50%. After the blend is set into molds they are kept in the sun for around 3 weeks for drying or else are prepared in the kiln at 1800°F for seven days. It has a size of 225mm X 75mm X 100/150mm with a variety size of 5 mm (+/-)4. According to IS codes it has a compressive quality of 3.5 N/mm2 and dry thickness of 1800kg/m3.It can retain 17-20% of water of its aggregate volume A single cum of red clay bricks costs roughly around Rs. 2440. These bricks have low thermal insulation when contrasted with AAC and CLC blocks and has resistance to fire for around 2 hours5. These are effectively accessible in local stretch and are incredible for development of low rise structures, nonetheless one sq. ft. of cover area with clay brick walling will devour 25.5 kg of top soil (approx), which actually harms the environment and since it has high heat conductivity (0.81 Kw-M/C). Hence, there are no noteworthy cost savings. These bricks require thick mortar surface as there are varieties in the measurements. Cylindrical sewer vents or sewage loads require small size of blocks with the goal that the curvature can be framed consequently. Red clay bricks are valuable, they likewise prove to be useful for both load bearing and non-load bearing structure.

2) AAC Block

AAC mostly known as Autoclave Aerated Concrete or Autoclaved Cellular Concrete is a agile, precast, foam solid building material fabricated during mid-1920s that concurrently provides framework, fire-mold intransigence and insulation. Blocks, wall-panels, floor and roof boards, cladding or façade panels and lintels are all produce of AAC bricks. The substance was perfected by Dr. Johan Axel Eriksson in the Royal Institute of Technology and went into manufacturing in the Sweden in 1929. The raw materials in order to attain an AAC brick are quartz-sand, fly-ash, air-entraining agents while lime, and cement and water are used as a constraint agent. The size of the bricks is around 400-600mm X 200mm X 150–300mm with a variation of 1.5 mm (+/-).As per IS codes, it maintains a compressive strength of 3-4 N/mm2 and dry density of up to 550-650 kg/m3 which encompasses one third of the weight of clay brick which makes it easily portable. It absorbs 10-12% of water of its total volume and hence reflects a low thermal conductivity of 0.24 Kw-M/C and an 8" inch wall of AAC can withstand a fire for up to 4 hours. For such bricks there is no top-soil consumption, so there is low carbon-dioxide emission. Chemical mortars are utilized for adjoining the brick which in-turn reduces the consumption of cement and also evades the process of curing. These bricks possess good dimensional accuracy so there is less requirement of thickness, in internal and external plaster. They commit to government taxes in the form of central, excise and VAT.A single cum of these bricks cost Rs. 4200 and being factory produce, they have high-end

2019

International Research Journal of Engineering and Technology (IRJET) e-ISSN: 2395-0056
Volume: 06 Issue: 12 | Dec 2019 www.irjet.net p-ISSN: 2395-0072

SEISMIC ANALYSIS OF MULTISTORY BUILDING WITH FLOATING COLUMN: A REVIEW

Shivam Wankhade[1], Prof. M. Shahezad[2]

[1]*Post Graduate Student, Civil Engg. Department, PRMIT & R, Badnera, SGBAU University, Maharashtra, India.*
[2]*Professor, Civil Engg. Department, PRMIT & R, Badnera, SGBAU University, Maharashtra, India .*

Abstract - *Modern multi-storey buildings are constructed with irregularities such as soft storey, vertical or plan irregularity, floating column and heavy loads. These type of structures have become a very common construction practice in urban India. It is observed that most of the RC structures with such irregularities constructed are highly undesirable in seismically active areas from the results of past earthquake studies. These effects occurred due to various reasons, such as non-uniform distribution of mass, stiffness and strength. This study explains the seismic analysis of a multi-storey building with floating column constructed in seismically active areas observing its reactions to the external lateral forces exerted on the building in various seismic zones using the software ETABS, STADD Pro and Sap2000. For analysis and study purpose there are few models will be developed in this study such that a multi-storey building that is G+12, G+14, G+16 buildings are considered and the models developed as multi-storey building with floating column where these floating column are present at different positions and at different height of the building analysing it at different zones as zone 5 to zone 2 as per codal provisions. Thus highlighting the alternative measures involving in improvising the non-uniform distribution in the irregular building such as multi-storied building with floating column, and recommended the safer design of such building in seismically active areas considering the results observed from storey drifts, story displacements, when compared to Response Spectrum method. Response Spectrum Analysis will be adopted which shows the best results.*

Key Words: Floating columns, ETABS analysis, Response Spectrum

1. INTRODUCTION

India is a developing country, where urbanisation is at the faster rate in the country including adopting the methods and type of constructing buildings which is under vast development in the past few decades. As a part of urbanisation multi-storey buildings with architectural complexities are constructed. These complexities are nothing but soft storey, floating column, heavy load, the reduction in stiffness, etc. Now a day's most of the urban multi-storey buildings have open first storey as an unavoidable feature. Accommodation of parking or reception lobbies is the primary use of these open first story in the multi-storey buildings constructed. But Conventional Civil Engineering structures are designed on the basis of strength and stiffness criteria. Usually the ground storey is kept free without any constructions, except the columns which transfer the building weight to the ground. This report adopt the multi-storey building with a architectural complexity i.e. the complexity of a multi-storey building with Floating column and the behaviour of the building in higher seismic zones is observed and considered some recommendations.

Hanging or Floating Columns

1.1 Floating Column

A column is supposed to be a vertical member starting from foundation level and transferring the load to the ground. The term floating column is also a vertical element which at its lower level rests on a beam which is a horizontal member. Buildings with columns that hang or float on beams at an intermediate storey and do not go all the way to the foundation, have discontinuities in the load transfer path. The beams in turn transfer the load to other columns below it..The floating column is a vertical member which rest on a beam and doesn't have a foundation. The floating column act as a point load on the beam and this beam transfers the load to the columns below it. But such column cannot be implemented easily to construct practically since the true columns below the termination level are not constructed with care and hence finally cause to failure.

1.2 Earthquake Resistant Design

Generally these buildings with floating columns are usually designed for gravity loads and are safe under gravity loads but are not designed for earthquake loads. So these buildings

2018-17

IJSRD - International Journal for Scientific Research & Development| Vol. 6, Issue 09, 2018 | ISSN (online): 2321-0613

Economic Design of Alternative to Conventional Bricks in RC Structure: A Review

Awes Tauseef Khan Wazeer Khan[1] Prof. M. Shahezad[2]
[1]PG Student [2]Professor
[1,2]PRMIT & R, Badnera, Amravati, India

Abstract— Although building techniques and materials have evolved over thousands of years, construction is still a long, complex, and expensive process. Construction industry boom can be seen in almost all the developing countries. With the increase in material costs in the construction industry, there is a need to find more cost saving alternatives so as to maintain the cost of constructing houses at prices affordable to people. There is need to develop an alternative system of building component which would impart more benefits and are multifunctional with optimum use of labor and material. Conventional/ Red bricks are one of the most pre-eminent construction material used for construction. The carbon dioxide emissions in the brick manufacturing process has been certified as a relevant factor to global warming. Therefore, it becomes necessary to focus more on pursuing environmental solutions for greener environment. To fulfill this objective, new construction materials can be used for construction. Two such material i.e., Fly Ash brick and AAC blocks can be used as an alternative material for construction. This project presents brief analysis and Design of building for G+2, G+10 & G+18 by using Conventional brick, Fly Ash brick and AAC block with considering earthquake forces for zone III. Cost analysis is made by using Conventional brick, Fly Ash brick and AAC block and overall modeling and analysis is done by using STAAD-Pro software.

Key words: Conventional Bricks, RC Structure

I. Introduction

Bricks are one of the most important building materials used for the construction. Brick is a building material which is used to make walls, pavements and other elements in construction. The continuation use of clay bricks in construction industry is leading to the extensive loss of fertile top soil which could be a devastating environmental hazard. It is causing a number of environmental and health problems. Within the reach of a brick kiln, environmental pollution from brick-making operations is injurious to human health, animals and plant life. Environmental pollution from brick manufacturing process contributes to the global warming and climatic change. The weather may cause degradation of the brick surface due to frost damage is leading to global warming which is now a global concern. Brick is a building material which is used to make walls, pavements and other elements in construction. The continuation use of clay bricks in construction industry is leading to the extensive loss of fertile top soil which could be a devastating environmental hazard. It is causing a number of environmental and health problems. Within the reach of a brick kiln, environmental pollution from brick-making operations is injurious to human health, animals and plant life. Environmental pollution from brick manufacturing process contributes to the global warming and climatic change. The weather may cause degradation of the brick surface due to frost damage is leading to global warming which is now a global concern. To reduce environmental pollution and global warming problems, various types of blocks can be used as an alternative to the red bricks. AAC blocks may be one of the solutions as a replacement to clay bricks. AAC blocks are a relatively new phenomenon in Indian construction industry. In spite of drastic growth in manufacturing of AAC, the real fact is that market share of AAC is very small as compared to the red bricks. Autoclaved Aerated Concrete (AAC) blocks are made of fly ash, aluminum powder and water. The manufacturing process of AAC blocks does not cause any environmental problems. Autoclaved Aerated Concrete (AAC) blocks are smooth and almost eight times bigger than the red bricks and are lighter than the normal red clay bricks. The bricks are of typical size. They do not have much strength as compared to aerated concrete blocks. The larger size of AAC blocks leads to faster masonry works and reduces the cost of the project. AAC has an excellent property which makes it an excellent insulator i.e. the interior environment is easier to maintain. Autoclaved Aerated Concrete (AAC) blocks have light weight, high strength, good durability, heat preservation, sound insulation, fire proofing, impervious, good anchoring properties. Autoclaved Aerated Concrete (AAC) is a certified green building materials, which is porous, nontoxic, reusable, renewable and recyclable can be used for commercial, industrial and residential construction.

A. Types of Bricks

1) Red Clay Bricks/ Conventional Brick

Red clay bricks are generally made by consolidating a blend of locally accessible mud and sand with the end goal that the ratio of sand is least 30% and maximum 50%. After the blend is set into molds they are kept in the sun for around 3 weeks for drying or else are prepared in the kiln at 1800°F for seven days. It has a size of 225mm X 75mm X 100/150mm with a variety size of 5 mm (+/-)4. According to IS codes it has a compressive quality of 3.5 N/mm2 and dry thickness of 1800kg/m3.It can retain 17-20% of water of its aggregate volume A single cum of red clay bricks costs roughly around Rs. 2440. These bricks have low thermal insulation when contrasted with AAC and CLC blocks and has resistance to fire for around 2 hours5. These are effectively accessible in local stretch and are incredible for development of low rise structures, nonetheless one sq. ft. of cover area with clay brick walling will devour 25.5 kg of top soil (approx), which actually harms the environment and since it has high heat conductivity (0.81 Kw-M/C). Hence, there are no noteworthy cost savings. These bricks require thick mortar surface as there are varieties in the measurements. Cylindrical sewer vents or sewage loads require small size of blocks with the goal that the curvature can be framed consequently. Red clay bricks are valuable, they likewise prove to be useful for both load bearing and non-load bearing structure.

International Research Journal of Engineering and Technology (IRJET) e-ISSN: 2395-0056
Volume: 06 Issue: 05 | May 2019 www.irjet.net p-ISSN: 2395-0072

Minimization of Effect of Soft Storey during Earthquake by Providing Semi Soft Storey

Pratik S. Deshmukh[1], Rameshwar R. Ingalkar[2], Ms. Sayali A. Baitule[3]

[1,2,3]*Assistant Professor, Dept. of Civil Engineering, P.R.M.I.T.&R,. Badnera, Maharastra, India*

Abstract - *Most of reinforced concrete (R.C.) structures are fail due to soft storey mechanism. The present work focused on an behaviour of soft storey and semi soft storey. We had seen that in previous earthquakes severe structural damage suffered by many multi-storey buildings exemplify the importance of avoiding sudden changes in lateral stiffness and ductility. In this study I try to investigate performance of a building (G+4) with soft storey along with semi soft storey is analysed in order to reduce soft storey effect on seismic response of building. The linear response spectrum analysis was carried out and the results obtained from models were compared in terms of storey displacement, storey drift, storey shear, time period and best alternative for construction in earthquake-prone area has selected.*

Key Words: **Soft storey, Shear wall, Storey drift, Storey displacement, Storey shear, Time period, Time historey analysis, Response spectrum analysis, ETAB.**

1. INTRODUCTION

A soft storey known as weak storey is defined as a storey in a building that has substantially less resistance or stiffness or inadequate ductility to resist stresses induced due to earthquake. Soft storey buildings are characterized by having a storey which is provided without brick wall or shear wall in between two columns and beams. Many multistorey buildings in India have open first storey. This is primarily being adopted to accommodate parking or reception lobbies in the first stories. For to take this advantage this feature is unavoidable. In soft storey building upper stories have brick unfilled wall panels. The Indian seismic code classifies lateral stiffness of soft storey is less than 70% of the storey above [IS: 1893, 2016]. Whereas during an earthquake the total seismic base shear as experienced by a building is dependent on its natural period, the seismic force distribution is dependent on the distribution of stiffness and mass along the height. Due to the presence of infill walls in the entire upper storey except for the ground storey makes the upper storey much stiffer than the open ground storey. Thus, the upper storey moves almost together as a single block and most of the horizontal displacement of the building occurs in the soft ground storey itself. In other words, this type of buildings sways back and forth like inverted pendulum during earthquake shaking, and hence the columns in the ground storey columns and beams are heavily stressed. Therefore, it is required that the ground storey columns must have sufficient strength and adequate ductility. Due to various needs. A soft storey is also unavoidable and thus it becomes important to study the performance of a soft storey building.

Know a day we had seen that solution for soft storey peoples provide shear wall, but it is highly uneconomical so that shear walls are not preferred in regular everyone.

2. REVIEW OF LITERATURE

Misam. A and Mangulkar Madhuri N. (2012) discussed about severe structural damage suffered by several modern buildings during recent earthquakes illustrates the importance of avoiding sudden changes in lateral stiffness and strength. The lower level containing the concrete columns behaved as a soft storey in that the columns were unable to provide adequate shear resistance during the earthquake. Usually the most economical way to eliminate such failure in a building is by adding shear wall to soft stories. In this paper occurring of soft storey at the lower level of high-rise buildings subjected to earthquake has been studied. Also has been tried to investigate on adding of shear wall in various arrangements to the structure. Four different models were prepared in this paper & they are as follows:

Model 1: The structure without lateral load resistance system is called model-I.

Model 2: The model-I (Soft storey at bottom) is modified into this model with adding the shear wall.

Model 3: This model is also a shear wall-frame building. The shear wall is added at the corners bays of the building.

Model 4: This model is also a shear wall-frame building. The shear wall is added at the two center bay of building. In this model, the soft storey at the lowest floor has been added the shear wall in center bay too.

Mohamed Riyas N.K, Dr. Raneesh K.Y and Marshiyth K.P (2016) studied the seismic vulnerability of building with an Example of G+24 building with soft storey at intermediate floor using linear static analysis. Analysis and design were carried out on an RCC moment resisting framed tall building without Infill wall on different floors with the help of Software ETABS 2015 and concluded that deflection and displacement are always maximum at soft storey level. Models considered for the study are as follows:

Model 1: Soft storey at ground floor level

Model 2: Semi Soft storey at ground floor level

Model 3: Soft storey at 12th floor level

International Engineering Journal For Research & Development
Vol.4
Issue 4

E-ISSN NO:-2349-0721

Impact factor : 6.03

A REVIEW PAPER ON PARTIAL REPLACEMENT OF PORTLAND CEMENT BY ALCCOFINE

Sayali Baitule
Department of civil Engineering
P.R.M.I.T& R. Badnera Amravati, India
sayali.baitule@gmail.com

Abstract –

Concrete is most widely used material for construction. Major component of concrete is cement. There is large amount of carbon dioxide emissions into the atmosphere, a major contributor for green house effect and global warming during manufacturing process of cement. Thus it becomes necessary to discover a substitute material for cement in concrete. There are many other Supplementary Cementitious Materials (SCM's) have been used as a partial replacement to cement in the production of concrete. Also the necessity of High Performance Concrete is increasing day by day. The production of high strength and durable eco-friendly concrete leads to the use of a new generation ultrafine supplementary cementitious material. Alccofine is a new generation micro fine concrete material which can be use in concrete by partially replacing the cement. Properties of concrete can be improved by partial replacement of cement by alccofine. Also Alccofine is easy to use and it can be added directly with cement. This paper involves the review of published literature of various authors which focused on effect of partial replacement of cement with alccofine in concrete. It is concluded that partial replacement of cement with alccofine can improve the strength and durability characteristics of concrete. The cost of concrete mix prepared with alccofine is less than the concrete without Alccofine for high strength concrete.

Keywords—Concrete, Cement, Alccofine, Supplementary Cementitious Materials (SCM's), strength and durability characteristics.

INTRODUCTION

Concrete is the most frequently and widely used construction material. Concrete is a homogenous mixture of cement, sand, coarse- aggregate, water and admixtures. . A major component of concrete is cement, which is one of the primary producers of carbon dioxide gas. Manufacturing of cement for concrete involves large amount of carbon dioxide emissions into the atmosphere, a major contributor for green house effect and global warming. Also necessity of high performance concrete is increasing because of the increasing demand of the construction materials in the construction industry. Thus it becomes necessary to discover a substitute material for cement in concrete. A lot of Supplementary Cementitious Materials (SCM's) like fly ash, silica fumes, slag powder etc. have been identified in the past and also have been effectively used as a partial replacement to cement in the production of concrete. The production of high strength and durable eco-friendly concrete leads to the use of a new generation ultrafine supplementary cementitious material Alccofine as a partial replacement of cement in concrete. This new ultrafine pozzolonic material has become popular in the construction industry and has brought a revolution in the field of civil engineering. A significant improvement in the properties of concrete at fresh and hardened stage has been observed by the partial replacement of cement with Alccofine in concrete. [15]

ALCCOFINE

Alccofine is a new generation, micro fine material of particle size much finer than other hydraulic materials like cement, fly ash etc. manufactured in India. It has unique characteristics to enhance 'performance of concrete' in fresh and hardened stages. It can be used as practical substitute for Silica Fume. This new ultrafine pozzolonic material has become popular in the construction industry and has brought a revolution in the field of civil engineering. A significant improvement in the properties of concrete at fresh and hardened stage has been observed by the partial replacement of cement with Alccofine in concrete.

Series of alccofine:

Alccofine series 1200: It is a range of micro fine mineral additives for concrete. It improves the performance parameters of concrete in wet and hardened stage.
Alccofine series 1100: It is a range of cementitious micro fine injection grouts for soil stabilisation, tunnel grouting, permeation grouting.etc

International Engineering Journal For Research & Development

Vol.4
Issue 4

E-ISSN NO:-2349-0721

Impact factor : 6.03

COST AND SCHEDULE OVERRUN IN CONSTRUCTION PROJECTS

Shraddha P. Raut
Department iof Covil Engineering
PRMIT & R Badnera
Amravati, India
shraddha.raut2709@gmail.com

Vikram S. Gohatre
Department iof Covil Engineering
PRMIT & R Badnera
Amravati, India
vikramgohatre@gmail.com

Piyush V. Kolhe
Department iof Covil Engineering
PRMIT & R Badnera
Amravati, India
piyushkolhe007@gmail.com

Abstract-

In construction industry time and cost performance is the fundamental criteria for success of any project .Unfortunately construction industry facing poor performance leading to failure in achieving effective time and cost performance. Therefore to complete the project on time it is necessary to reduce the causes which are responsible for time & cost overrun. The aim of the study is to analyze the construction projects to determine construction cost and schedule overrun in various types and size of the projects. Number of samples were collected and analyzed to find various factors responsible for the cost and schedule overrun. This study will help the practitioners to implement the mitigation measure at planning stage in order to achieve successful construction project. The aim of the study is to establish significant causes of cost escalation, schedule overruns and propose mechanisms that could be used to systematically address the causal factors.

Keywords: Cost overrun, Schedule overrun, Construction Project, Analysis

INTRODUCTION

1.1 Construction Industry In India- Indian economies have been on a very positive development curve for years now, posting impressive growth rate percentages. The Indian construction industry is an integral part of country's economy and its growth and a conduit for a substantial part of India's development investment. It is poised for solid growth due to industrialization, urbanization and economic development together with people's expectations of improved living standards. The construction sector employs approximately 31 million people, accounts for some 6-8% of GDP and, after agriculture, is the largest employment sector in the country. In general, it has been growing at 9-11% year on year, primarily due to the strength of increased domestic and international manufacturing activities and industrial growth (Harris, 2011).The construction industry is primarily driven by government investments on core and urban infrastructure; industrial capital investment by corporate sector and development activities of real estate/housing sector. The industry plays a pivotal role in developing the country's infrastructure, a pre-requisite for high levels of economic growth. Major importance is placed by the government of India on bridging the infrastructure deficit. Massive investment is being done in the field. Construction sector accounts for nearly 45% of the total investment in infrastructure and is expected to be the prime beneficiary of the surge in infrastructure investment in the near to medium term. Development of adequate infrastructure to achieve/sustain high GDP growth is a priority for the Government of India. Despite slippages from targets, investments in infrastructure reported a compounded annual growth rate (CAGR) of 18% over the last three years, with the spending increasing to Rs. 4.0 lakh crore in FY 2009-10 from 2.4 lakh crore in 2006-07 (ICRA, 2011). Development of infrastructure is key to growth within the commercial sector and it has been estimated that India needs to spend US$ trillions in the next few years to meet its infrastructure requirements. The government plans to source these funds from combinations of Public Private Partnerships (PPP), public investments and exclusive private investments while FDI is expected to provide liquidity to allow key rail, road, and power projects to continue to be built. India's infrastructure industry is currently experiencing unprecedented levels of growth, on the back of the expansion of the economy as a whole and continued infrastructure investment is expected to up the Tier II and Tier III. Cities driving demand for new, high quality commercial developments (Harris, 2011).With the economy booming, the demand for all segments of the real estate sector is going to continue to grow. The Indian Government's decision to allow 100% Foreign Direct Investment (FDI) in the real estate industry has stimulated construction activities throughout the country. The Indian real estate industry is

I J50

International Engineering Journal For Research & Development

Vol.4
Issue 4

E-ISSN NO:-2349-0721

Impact factor : 6.03

A REVIEW PAPER ON TORSIONAL BEHAVIOR OF ASYMMETRICAL BUILDINGS

Aayushee K. Gulhane
Department of civil engineering Prof. Ram Meghe Institute of Technology and Research, Badnera, M.E. (Structural Engineering) Final Year,

Dr. P. S. Pajgade
Professor Department of civil engineering Prof. Ram Meghe Institute of Technology and Research, Badnera, M.E.

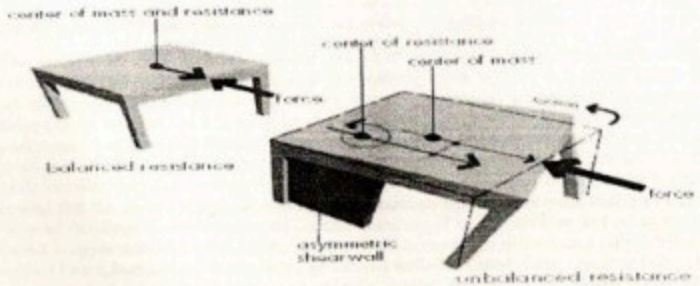
Abstract:

The structures having discontinuity in their mass, stiffness and geometry, such structure is termed as asymmetric/ irregular structure. At the present scenario there are many buildings which are asymmetric in their plan as well as in elevation. These asymmetry leads to major damage during earthquake than regular buildings. Sometimes irregularities are not avoidable in construction of buildings. However the torsional behavior of asymmetric building during earthquake needs to be studied for appropriate design and better performance of building. Several studies of structural damage during past earthquake conclude that torsion is the most critical factor leading to major damage or complete collapse of a building. The object of the present work is to state a review on the past papers presented on torsional behavior of asymmetrical buildings. So the present work provides a good source of information to understand structural behavior of building with irregularities under strong ground motion.

Keywords: ***Earthquake, Asymmetrical Building, Torsion***.

I. INTRODUCTION:

The earthquakes are the most unpredictable and devastating among all natural disasters, which causes the more damages to the buildings and living things. So it is very necessary to identify the behaviour of buildings, especially their torsional behaviour during an earthquake. Torsion response in a building is affected by coupling of translation vibration with rotational vibration.



Figl-

Generation of torsional moment in asymmetric structures during seismic excitation.

The past investigation regarding to earthquake revels that irregular structures suffers from more damages than the regular one. An irregularity in dimensions affects the distribution of stiffness while a mass

2018-19

International Engineering Journal For Research & Development
Vol.4
Issue 4

E-ISSN NO:-2349-0721

Impact factor : 6.03

ANALYSIS AND DESIGN OF RC UNSYMMETRICAL MULTISTOREY BUILDING HAVING SOFT STOREY

Mayur L. Mawale
PG Student
M.E. Structural Engineering
Prof. Ram Meghe Institute of Technology & Research
Badnera,Amravati, India
mawale.mayur@gmail.com

Dr. P. S. Pajgade
Professor
Civil Engineering Department
Prof. Ram Meghe Institute of Technology & Research
Badnera, Amravati, India
ppajgade@gmail.com

Abstract *- Due to the tremendous destructions of buildings after earthquakes in past few decades, there is the need to evaluate and improve the seismic performance of multistoried reinforced concrete buildings. There are several numbers of factors affecting the behavior of building. Stiffness irregularity in vertical direction is one of them, as a result of which soft storey is formed. As per the latest seismic code IS 1893:2016, minimum 2% of plan density of shear walls should be available to resist earthquake force smoothly. In this paper, a parametric study is performed on unsymmetrical multi storey building with soft first storey, located in seismic zone III by considering different percentage of plan densities of shear walls at various locations. It is intended to describe the performance characteristics such as stiffness, displacement, drift etc. The study is carried out on a building with the help of different models considering various methods for improving the seismic performance of the building with soft first storey. The response spectrum analysis is carried out on all the 3D model using the software ETABS 2017 and the comparison of these models are presented. Also, the effect of torsion in the analysis of buildings is studied.*

Key Words *— soft storey; shear wall; response spectrum analysis; torsion*

INTRODUCTION

Due to the increasing population since the past few decades, car parking space for residential apartments in populated cities is a major problem. So that the constructions of multistoried building with open first storey is a common practice in the world. Hence the trend has been to utilize the ground storey of the building itself for parking or reception lobbies in the first storey. These buildings have no infill masonry walls in the ground storey, but all the upper storeys have masonry infill walls are called "soft first storey or open ground storey building.

A. General Behavior of Soft Storey

The presence of infill walls in the upper storeys of the building makes them much stiffer than the open ground storey. Thus, all the upper storeys of the building move together as a single block, and most of the horizontal displacement of the building occurs in the open ground storey itself. In common, this type of buildings can be explained as a building on chopsticks. Thus, such type of buildings swing back-and-forth like inverted pendulums during earthquake shaking and the columns in the open ground storey are severely stressed. If the columns are weak i.e. do not have the required strength to resist these high stresses or if they do not have adequate ductility, they may be severely damaged which may even lead to collapse of the building. Therefore it is required that the ground storey columns have sufficient strength and adequate ductility. The vulnerability of this type of buildings is attributed to the sudden lowering of lateral stiffness and strength in ground storey, compared to upper storey with infill walls. A bare frame is much less stiffer than a fully infilled frame, it resists the applied lateral load through frame action and shows well-distributed plastic hinges at failure but when, frame is fully infilled, truss action is introduced. A fully infilled frame structure shows lesser inter storey drift, although it attracts higher base shear (due to increased stiffness).

2018-19

Scientific Journal of Impact Factor (SJIF): 5.71

e-ISSN (O): 2348-4470
p-ISSN (P): 2348-6406

International Journal of Advance Engineering and Research Development

Volume 5, Issue 07, July -2018

FEASIBILITY STUDIES ON DEFLUORIDATION OF WATER USING NATURAL ADSORBENTS

Shreyas S. Dahane[1], Shailesh S .Gupta[1], Sachin V. Dharpal[2]

[1]Civil Engineering, Prof. Ram Meghe institute of technology and research, Badnera
[2]Assistant Prof. Department of Civil Engineering, Prof. Ram Meghe institute of technology and research, Badnera.

Abstract - *Fluorides are the major pollutants present in the effluents from various industries and ground water sources. These are highly toxic to living beings and have a hazardous effect on their health. Thus the removal of fluoride using bio sorbents is a major step towards the protection of environment. Adsorption is the most effective and widely used method and is applicable for the removal of fluoride even at low concentrations This paper presents the results of investigations carried out for removal of Fluoride from water by using natural adsorbents i.e. Amla bark powder, Neem bark powder, Ground granulated blast furnace slag, Waste lime, Sugarcane baggase. The fluoride removal efficiency of adsorbents was investigated by batch wise adsorption experiment. The effect of various important parameters on the % removal was studied to find the optimum condition for the maximum removal of fluorides. The parameters like contact time, adsorbent dose, height of column and pH were investigated. The optimum pH, height of column, adsorbent dose and contact time were found to be 5, 15ml, 20g/l and 50 min. respectively for which there was maximum fluoride removal. All the results were validated on the basis of statistical analysis. All the graphs were fitted to various trend lines. Out of which the equation of most fitted trend line was adopted for the validation and deviation were observed.*

Keywords *- Adsorption, biosorbents, statistical analysis, fluoride, GGBFS.*

I. INTRODUCTION

Fluoride is an inorganic, monatomic anion of fluorine with the chemical formula F^- which is of halogen group. Fluoride is the simplest anion of fluorine. Its salts and minerals are important chemical reagents and industrial chemicals, mainly used in the production of hydrogen fluoride for fluorocarbons. In terms of charge and size, the fluoride ion resembles the hydroxide ion. Fluoride ions occur on earth in several minerals, particularly fluorite, but are only present in trace quantities in water. Fluoride contributes a distinctive bitter taste. It contributes no colour to fluoride salts.

Fluoride can act as a base. It can combine with a proton (H^+):

$$F^- + H^+ \rightarrow HF$$

This neutralization reaction forms hydrogen fluoride (HF), the conjugate acid of fluoride.

In aqueous solution, fluoride has a pK_b value of 10.8. It is therefore a weak base, and tends to remain as the fluoride ion rather than generating a substantial amount of hydrogen fluoride. That is, the following equilibrium favours the left-hand side in water:

$$F^- + H_2O \qquad HF + HO^-$$

However, upon prolonged contact with moisture, soluble fluoride salts will decompose to their respective hydroxides or oxides, as the hydrogen fluoride escapes. Fluoride is distinct in this regard among the halides. The identity of the solvent can have a dramatic effect on the equilibrium shifting it to the right-hand side, greatly increasing the rate of decomposition.

1.1 Occurrence

Fluoride is found in all natural waters at some concentration. Seawater typically contains about 1mg/l while rivers and lakes generally exhibit concentrations of less than 0.5 mg /l. In ground waters, however, low or high concentrations of Fluoride can occur, depending on the nature of the rocks and the occurrence of fluoride-bearing minerals. High fluoride Concentrations may therefore be expected in ground waters from calcium-poor aquifers and in areas where fluoride bearing minerals are common.

1.2 Effect of fluoride

1.2.1. Dental fluorosis- If fluoride present in this range of 0.7 to 1.5 mg F/l in drinking water may cause dental fluorosis, in dental fluorosis loss of lustre and shine of the dental enamel. The discoloration starts from white yellow, brown to black enamel matrix is laid down on incremental lines before and after birth. Fluorosis is seen as mild moderate and severs depending on the amount of fluoride ingested during the stages of formation of the teeth.

2018-19

Certificate

We are pleased to award this certificate to

H. P. Nistane

for contributing / presenting the research paper entitled

Feasibility Study on Fly Ash Based Geopolymer Concrete

in

International Conference on
INDUSTRY 4.0

Innovations in Engineering, Technology and Management

29th Nov. to 1st Dec. 2019

Organised by

Vidharbha Youth Welfare Society's

Prof. Ram Meghe Institute of Technology & Research,

Badnera - Amravati

Sponsored by

All India Council for Technical Education, New Delhi

(vide letter no. F.No. 67-78/RIFD/GOC/Policy-1/2017-18 dated 22.04.2019)

Dr. S. J. Deshmukh
Coordinator, ICI4.0

Dr. D. S. Ingole
Convener, ICI4.0

Dr. A. P. Bodkhe
Chairperson, ICI4.0

2018-19

In Association with

PRMIT&R, Badnera - Amravati

Anjangaon Bari Road, Badnera (C.Rly).
Amravati (M.S.) INDIA - 444701
www.mitra.ac.in/ici4.0 icindustry4.0@gmail.com
Phone No.: +91 721-2681246, Fax: +91 721-2681337

Certificate

We are pleased to award this certificate to

S.R.Band

for contributing / presenting the research paper entitled

Seismic Performance of RCC Building with Shear Walls at Various Locations - A Review

in

International Conference on

INDUSTRY 4.0

Innovations in En[illegible] and Management

29th Nov. [illegible] Dec. 2019

Organised by

Vidharbha Youth Welfare Society's

Prof. Ram Meghe Institute of Technology & Research,

Badnera - Amravati

Sponsored by

All India Council for Technical Education, New Delhi 2018-19

(vide letter no. F.No. 67-78/RIFD/GOC/Policy-1/2017-18 dated 22.04.2019)

Dr. S. J. Deshmukh
Coordinator, ICI4.0

Dr. D. S. Ingole
Convener, ICI4.0

Dr. A. P. [illegible]
Chairman, ICI4.0

In Association with

PRMITAR, Badnera - Amravati

Anjangaon Bari Road, Badnera (C. Rly),

Amravati (M.S.) INDIA - 444701

www.mitra.ac.in/ici4.0 icindustry4.0@gmail.com

Phone No.: +91 721 2681246, Fax: +91 721 2681337

Study of Retrofitting Technique with reference to Soil Structure Interaction: A Review

Dr. M. V. Mohod[#1]
Assistant Professor,Civil Engineering Department,Prof. Ram Meghe Institute of Technology and Research
Badnera, Maharashtra, India.

Abstract
Most of the earthquake in the world shows that there is a need to study basic conditions of earthquake vibration. During earthquake the behaviour of any structure is influenced not only by the response of the superstructure, but also by the response of the soil underneath. Soil structure interaction is in disciplinary field which involves structural and geotechnical engineering. The conventional method of building frame analysis assumes that columns are resting on unyielding supports. In certainty, the supporting soil strata deforms unevenly under the action of loads, which causes redistribution of forces in the frame members and stresses in the supporting soil media. Past earthquake shows that most of the structural designer does not consider the soil structure interaction effect on structure during an earthquake and because of that we will not find out exact behaviour of earthquake in buildings. Present work is focused on soil structure interaction and study of different retrofitting techniques for finding out the optimized solution for any structure which require retrofitting.

Keywords: *Soil structure interaction, retrofitting techniques.*

I. INTRODUCTION

Earthquake in India shows that not only non-engineered structure but also engineered structure are also heavily damaged during moderate earthquake. As waves from an earthquake reach a structure, they produce motions in the structure. These motions depend on the structure's vibration characteristics and the layout of structure. For the structure to react to the motion, it needs to overcome its own inertia force, which results in an interaction between the structure and the soil. The extent to which the structural response changes the characteristics of earthquake motions observed at the foundation level depends on the relative mass and stiffness properties of the soil and the structure. Thus the physical property of the foundation medium is an important factor in the earthquake response of structures supported on it. The process in which the response of the soil influences the motion of the structure and the motion of the structure influences the response of the soil is termed as soil-structure interaction (SSI).

II. LITERATURE REVIEW

From exhausted survey done by many researches it was found that many researcher works on a one by one technique of retrofitting but no one judge the effect of different retrofitting techniques on a single structure by considering soil structure interaction. Following literature survey was done for understanding the effect of soil structure interaction on structure.

R. M. Jenifer Priyanka et al (2012) studied though the structures are supported on soil, most of the designers do not consider the soil structure interaction and its subsequent effect on structure during an earthquake. Different soil properties can affect seismic waves as they pass through a soil layer. When a structure is subjected to an earthquake excitation, it interacts the foundation and soil, and thus changes the motion of the ground. It means that the movement of the whole ground structure system is influenced by type of soil as well as by the type of structure. Tall buildings are supposed to be of engineered construction in sense that they might have been analyzed and designed to meet the provision of relevant codes of practice and building bye-laws. IS 1893: 2002 "Criteria for Earthquake Resistant Design of Structures" gives response spectrum for different types of soil such as hard, medium and soft. An attempt has been made in this paper to study the effect of Soil-structure interaction on multi storeyed buildings with various foundation systems. Also to study the response of buildings subjected to seismic forces with Rigid and Flexible foundations. Multi storeyed buildings with fixed and flexible support subjected to seismic forces were analyzed under different soil conditions like hard, medium and soft. The buildings were analyzed by Response spectrum method using software STAAD Pro. The response of building frames such as Lateral deflection, Storey drift, Base shear, axial force and Column moment values for all building frames were presented in this paper.

Maria I. Todorovska (2002)et althis paper presents a review of the full scale experimental studies of soil structure interaction. It briefly reviews that the early

VIBRATION EFFECTS ON STRUCTURE DUE TO EARTHQUAKE AND WIND: AN OVERVIEW

Dr. Milind V. Mohod
Assistant Professor, Department of Civil Engineering., PRMIT&R Badnera, mvmohod@gmail.com

ABSTRACT

Natural disasters like earthquake / flood / wind create a very huge devastation in terms of life, money and structural damages. We know that prevention is better than cure but no one can predict natural disaster as when it is coming and at what time on which place, we cannot prevent this type of disaster but definitely prepare for it. Structural engineers cannot construct disaster proof structure but it is possible to construct disaster resistance structure. For analyzing any structure for disaster, we consider either earthquake effect or wind intensity effect because we assume both disasters will not act simultaneously. In this review paper, I have surveyed and presented the effect of earthquake vibration and wind intensity on structure. Earthquake is the natural disaster, which is erratic and shocking of all other natural disasters. Development of proper techniques for mitigation of stresses/deflections developed due to vibrations has become the need of time. The high-rise buildings, long-span bridges, towers and others modern structures are rising up frequently now a days, those structures are very vulnerable to random forces like earthquakes, winds and waves loads. Those forces create extreme vibration whose have a devastating effect on a civil structure that is why the engineers and research are very stressful to safe the structures and keep the deflection within a desired limit. Many researcher works to demolish or reduce the effect vibration due to earthquake on structure. There are many techniques established to reduce vibration of earthquake like Dampers (Tuned mass damper (TMD), Tuned Liquid Damper (TLD),) Base- Isolator and others [1]. Among that device, TMD considered as the most popular and commonly passive control device for mitigating the dynamics response of structures due to effectiveness, robustness and relatively easy installation. Tuned mass dampers, consisting of a secondary mass, a viscous damper and an elastic spring is commonly attached to a vibrating primary system for suppressing undesirable vibrations[1]. Closed form optimal design theories are only available for simple systems, i.e. two degree of freedom systems as pointed out by [2]. The base-isolation techniques prove to be very effective for the seismic protection of new framed buildings as well as for the seismic retrofitting of existing ones [3]. Exhaustive literature survey have been carried out to study vibration effects on structure due to earthquake and wind , it has been learned from the survey that for controlling vibration effect on structure isolation and dampers are found to be effective.
Keywords: Earthquake vibrations, Wind vibrations, Base Isolation, Dampers

1. INTRODUCTION

The earthquake vibration control has received much attention in recent years due to its effect on the functionality of systems involved and health. Vibration can cause instability or even failure, as in the case in buildings subject to earthquake or wind intensity. Study of vibration effect is a vital requirement of structural designer particularly when there is a strong source of

Experimental Study on Self Compacting Concrete using Fly Ash

Shubham J.Kalantri, Prof. S. R. Bhuskade
P. G. Scholar,Asst. Professor
PRMIT&R, Badnera, Amravati, Maharashtra, India.

Abstract:- *- Self-Compacting Concrete (SCC) is a flowing concrete mixture that has the capacity to consolidate under its own weight. The current trend all over the world is to utilize the treated and untreated industrial by-products, domestic waste etc. as a raw material in concrete, which gives an eco-friendly edge to the concrete preparation process. This practice not only helps in reuse of the waste material but also creates a cleaner and greener environment. This study aims to focus on the possibility of using industrial by-products like Fly Ash (FA) in preparation of SCC. This project presents the results of an experimental study aimed at producing SCC mixes by adopting different mix proportions, incorporating mineral admixtures Fly Ash, as supplementary cementing materials and comparison of their performances.*

Keywords: Self-compacting concrete, Fly ash

1.0 INTRODUCTION

Self-compacting concrete (SCC) is an pioneering concrete that does not involve shuddering for insertion and compaction.It does not require to be vibrated to achieve full compaction. The composition of SCC mixes includes substantial proportions of fine-grained inorganic materials and this gives possibilities for utilization of mineral admixtures, which are currently waste products with no practical applications.

It is good alternative of conventional concrete especially in congested formwork where compaction is not fissile and in this situation, work with self-compacting concrete is preferred. With the rising demand for productivity and comfort at site as well as performance of the hardened concrete, use of SCC can reduce the labor cost, vibratory machine cost and also faster completion of construction schedule. The use of SCC provides greater flaccidity while placing and compaction than the normal concrete as well as acquiring required resources which results in time and resource saving.

The SCC has gained wide use in many countries for different application and structural Configurations SSC require a high slump that can be achieved by incorporating several chemical admixtures. The super plasticizer influences the rheological behavior; the viscosity and the yield value of the fresh concrete are reduced in certain concrete mix. The super plasticizer ensures high fluidity and reduces water powder ratio. Super plasticizer greatly improves pump-ability and the slump value can be greatly increased. The use of viscosity modifying admixtures increases segregation resistance of concrete and increases the deformability without segregation and then to lead high optimum self-compatibility. The SCC technology is now been adopted in many countries.

2.0 AIM OF THIS PROJECT

To study of effect of replacement of cement with Fly Ash in concrete.

- To find the optimum percentage of Fly Ash by replacing 0%,10%,20%,30% & 40% of Fly Ash which give maximum strength to concrete.
- To determine and compare the fresh concrete properties of concrete such as Slump-flow test, L box test ,U-box test, V funnel test.
- To determine and compare the hardened properties of concrete such as compressive strength, splitting tensile strength , flexural strength
- To find an alternative material for partial replacement of cement.

3. RESULTS OF FLOW TABLE TEST

Table 3.1 Flow table test

Material	Replacement levels	w/c	Flow Table Test (mm)
Fly Ash	0%	0.38	656
	10%	0.38	670
	20%	0.38	678
	30%	0.38	695
	40%	0.38	722

Iron and Aluminum as Electrode Material in Removal of COD and Color from Textile Industry Wastewater – A Comparative Study

Nitin W. Ingole

Professor & Dean (Research & Development), Department of Civil Engineering, Prof. Ram Meghe Institute of Technology & Research, Badnera, Amravati, Maharashtra, India.
Email: nwingole@mitra.ac.in; Mobile: +91 90490 67628

Sudhir R. Gujare

P.G. Student in Environmental Engineering, Department of Civil Engineering, Prof. Ram Meghe Institute of Technology & Research, Badnera, Amravati, Maharashtra, India.
Email: sudhirgujare06@gmail.com; Mobile: +91 79729 55632

Abstract: The technique of electrocoagulation (EC) is investigated with iron and aluminum electrodes. Comparative study of iron and aluminum as electrodes material on removal of COD and Color is conducted to investigate the feasibility of most efficient electrode material for the process. The effect of relevant operating conditions such as current density (i) and electrolysis time were investigated for evaluation of performance of the electrodes. The result indicate that electrocoagulation technique is effective in the removal of COD and Color. Results indicate that COD removal efficiency of 95 % achieved at current density of 7.81 to 7.97 mA/cm² at electrode spacing of 20mm at electrolysis time of 60 min with iron electrode. In case of aluminum electrodes the optimum COD removal efficiency of 91% achieved at the current density of 23.44 to 23.59 mA/cm² at electrolysis time of 75 min at electrode spacing 20 mm. The color removal of 100% is noticed with iron electrodes at all the current densities and all electrode spacing. However in case of aluminum electrodes the color removal efficiencies noticed in the range of 52 to 95%. Maximum of 95 % color removal occurred with iron electrodes at current density of 23.44 to 23.59 mA/cm² at electrode spacing of 10 mm. Iron as an electrode material is observed to be more efficient in the removal of COD and Color than aluminum. Iron is efficient in the removal of pollutants even at lower current densities.

Key Words: *Electrocoagulation, Iron, Aluminum, COD, Color, Textile industry wastewater.*

I. INTRODUCTION

Industrialization is the need of the modern era. Industrialization is growing very fast since last few decades. As the population of the world is growing at a very faster rate, there is increase in the rate of industrialization to meet the needs of the growing population. The industries consume water for different processes. Major part of the water used by the industries is converted into wastewater, which comprises of many chemicals, dyes, acids, alkalis, color, hazardous and toxic substances depending upon the nature of the industry.

Textile industries are growing at a very faster rate in India. The population of India is about 17.74 % of the total population of the world. To meet the need of such huge population increase in the rate of industrialization is the need of present time. So textile industries are also growing at a faster rate. Textile industries use water for various processes such as washing, manufacturing, bleaching and dyeing etc. So the wastewater is generated in larger amount from these industries. Apart from presence of many chemicals, hazardous and toxic substances, textile industry wastewaters impart high color and COD to the effluent coming out of the industry. Sludge obtained may not be stable and there is problems of disposal of such effluent and sludge.

There are several methods for decolorization such as advanced oxidation process, chemical coagulation, adsorption, ozonation, reverse osmosis, bioological methods. Each of above mentioned processes have problems and limitations.

Electrocoagulation technique is the development of modern time. Many researches were carried out to investigate the feasibility of textile industry wastewater with electrocoagulation technique. Electrocoagulation technique emerged as promising technique in treatment of textile industry wastewater. Many researches were conducted to study the effectiveness of electrocoagulation technique in the treatment of textile industry wastewater.COD removal of 76 % and color removal of 95% achieved at 20 min detention time (NehaTyagi et al., 2014). Maximum removal of COD (86.5%) and color removal (93.4) achieved at initial pH 5 and detention time of 60 min.(SumanChakrabartty et

2018-19

MANTECH Publications
Journal of Transportation Engineering and Its Applications
Volume 4 Issue 1

Need of Smart Transportation for Transforming Indian Cities – State of the Art

Prof. (Ms) P. P. Tajane[1], Dr. N. W. Ingole[2]
Assistant Professor[1], Professor and Director[2]
Department of Civil Engineering
Prof. Ram Meghe Institute of Technology & Research, Badnera, India
Corresponding Author's E-mail: *paltajane1290@gmail.com*

Abstract

In the approach to the smart city mission, the objective is to promote cities that provide core infrastructure and give a decent quality of life, a clean and sustainable environment and application of 'smart' solutions. Smart transportation system is sentient soul of the smart city. During development of a smart city one of the most important aspect include effective transport system is to make the existing transportation system of a city smarter. For this modern means of transport must be included in the planning of smart city. While planning efforts must be directed to make the transportation system swift, efficient, cost effective and acceptable to the citizens of the city. The present paper discusses about the various means of transport which might be adoptable while planning for a smart city. Smart Transportation technologies include state of the art with a goal to improve surface transportation safety, efficiency, and convenience.

Keywords: - Sky bus, Metrino, Monorail, Metro rail, ITS.

INTRODUCTION

With increasing pressure on cities' mobility infrastructures due to rising urbanization, city governments all over the world are constructing new roads, bridges and tunnels, and using intelligent transportation systems (ITS), to mitigate transportation-related challenges and requirements. However, ITS implementation is costly as different technologies, platforms, and systems need to integrate into a single platform. Cyber security, data analysis, and connectivity will be critical to ITS success. Cities are

2018-19

CONSERVATION OF WASTAGE OF POTABLE WATER

Pallavi P. Tajane

Assistant Professor, Civil Engg. Dept., Prof. Ram Meghe Institute of Technology & Research, Badnera, MH, India. Email: pallavi.tajane1290@gmail.com, Mobile: +91 84858 47545

Nitin W. Ingole

Prof. and Dean (P & D), Civil Engg. Dept., Prof. Ram Meghe Institute of Technology & Research, Badnera, MH, India. Email: nwingole@rediffmail.com, Mobile: +91 90490 67628

Abstract: The conservation of clean water depends on minimizing wastage from leaks and reducing unnecessary or excessive consumption. Some wastage appears to be inevitable in every drinking water supply system. There are cases where in the order of 60% of the distributed water is unaccounted for, and not billed, due to leaks or non-metering. The leaks in the public mains system can be minimized by systematic inspection and maintenance by the authority concerned, it is more difficult to trace and remedy leaks on private property. A relatively small (3mm) leak in a service pipe, or a dripping tap, under normal working pressure can waste 340 liters per day, the amount required to supply the needs of a family of three. Leakage and wastage on private property can be minimized by the use of quality materials and workmanship in the installation of plumbing systems, as well as promptly instituting repairs when needed.

Key Words: Water Conservation, Leaked Taps, Monitoring, Statistical Analysis, Modelling.

1. INTRODUCTION

Water covers about 75 percent of our planet, so it appears plentiful. However, 97 percent of that water is salty ocean water, which we cannot drink. Only 3 percent water is fresh water, most is frozen in glaciers and polar ice caps. As a result, only 1 percent of the Earth's water may be available for drinking as surface or subsurface water. Consider just a few of the many ways we use water: In and around our homes

- For cooking
- For bathing, washing cloths and utensils
- For cleaning our houses
- For recreation, such as swimming, fishing, boating, and boating
- In industry and agriculture
- For transportation of goods
- For generating steam power
- For growth of animals and plants
- For manufacturing of products, such as paper, wool and cement
- For generating electric power

The conservation of clean water depends on minimizing wastage from leaks and reducing unnecessary or excessive consumption. Some wastage appears to be inevitable in every drinking water supply system, and the term "waste prevention" is used for measures intended to reduce losses to a minimum. In this context, the term "waste" refers to water that escapes from the system unused or unaccounted for, and not to human wastes or other forms of used or degraded water that are carried away by drains or sewers.

There are cases where in the order of 60% of the distributed water is unaccounted for, and not billed, due to leaks or non-metering. A single dripping tap (2mm dia. drop) can waste 75,000 liters of water in a year.

Wastage and leakage of water can occur from the public (mains) system or in the private systems owned by individual customers. In the public supply system, the best protection against wastage is the careful design and construction of the mains, combined with an active program of supervision and preventive maintenance and leak detection. In the private system, the main strategies are the prompt correction of leaks, the use of technologies to reduce overuse, and public education on water conservation. As well as metering and use of rate structures that are a function of volume consumed versus billing of the zone is accounted.

While leaks in the public mains system can be minimized by systematic inspection and maintenance by the authority concerned, it is more difficult to trace and remedy leaks on private property. A relatively small (3 millimeters) leak in a service pipe, or a dripping tap, under normal working pressure can waste 340 liters per day, the amount required to supply the needs of a family of three. While leaks within

2018-19

DECOLOURIZATION OF TEXTILE INDUSTRIAL EFFLUENT BY USING BIOMATERIALS

Mrunal Gatfane
Under graduate student's department of civil engineering, Prof. Ram Meghe Institute of technology and Research, Badnera.

Asmita Meshram
Under graduate student's department of civil engineering, Prof. Ram Meghe Institute of technology and Research, Badnera.

Dr. N.W. Ingole
Professor and Dean (R&D) Department of civil engineering, Prof. Ram Meghe Institute of technology andResearch, Badnera.

Abstract:

Coagulation flocculation is the most widely used method and is applicable for the removal of the colour even at low concentrations. This paper represents the results of investigations carried out for the removal of colour from waste water by using natural flocculent i.e. Cactus, aloe Vera, ferrous sulphate and combination of cactus and aloe vera. The parameters like ph, coagulant dose, flocculent dose, mixing time of coagulant, mixing speed of coagulant, mixing time of flocculent, mixing speed of flocculent, setting time, concentration of waste water were investigated. The bio-flocculents cactus, aloe vera and combination of both gives maximum colour removal efficiency of 89.33%, 82%, 83% respectively.All the result was validated on the basis of mathematical analysis.

Key Words: Biomaterials, coagulation-flocculation, colour, Taguchi modeling, textile effluent.

1. Introduction

India is the world's second major manufacturer of textiles and garments after china. The textile industry in India is one of the oldest manufacturing sectors in the country. It is one of the major industries in the world that provide employment with no required special skills and play a major role in the economy of many countries. The textile industry utilizes various chemicals and large amount of water during the production process. Colour is the major pollutants present in the effluent from various textile industries. These are highly toxic to living beings and have hazardous effect on their health. Thus removal of colour using natural flocculent is a major step towards the protection of natural resources. Coagulation flocculation is the most widely used method and is applicable for the removal of the colour even at low concentrations. Effluents from textile industry are a major cause of water pollution. In general, textile wastewater contains high concentrations of organic compounds, heavy metals, high temperature, high COD, high pH and strong color. Textile wastewater is a source of pollution, which could have effects on the ecology and environment. We have studied the feasibility of various natural flocculants and coagulants and its efficiency for removal of colour. For the optimization of various parameters such as pH, coagulant dose, flocculent dose, mixing speed of coagulant, mixing time of coagulant, mixing speed of flocculent, mixing time of flocculent and setting time; batch study is used. To validate the laboratory results taguchi modeling technique is used.

2. Materials and Methods

2.1 Preparation of synthetic wastewater: -

In order to batch study and to carry out examine the result we prepare synthetic wastewater by using various dyes and chemicals used in dying industry. Use of this dyes and chemicals ensures the same properties like waste water effluent coming from textile industry. Experiments were carried out on synthetic wastewater samples consisting of 300mg/L basic red dye 5001 B (commercial name of a direct dye used extensively in the region), 3gm/L NaCl, 5.56 mg/L hydrolyzed starch, 11.12 mg/L ammonium sulphate, 11.12 mg/L disodium hydrogen phosphate, 7-8 drops liquid detergent. Synthetic wastewater was prepared by mixing all the chemicals in tap water and heated at 80°C for 1.5 hours to stimulate the actual wastewater, which was then left to cool to room temperature. The physicochemical characteristics of simulated wastewater were tabulated in table 2.1.

2.2 Coagulant and flocculent preparation:

2.2.1 Coagulant preparation: -

Coagulant Used: Ferrous sulphate solution of 10% dilution make available an accurate analytical weighing balance, clean beaker, distilled/deionized water, stirrer. Place the beaker on the balance and tare/zero the reading. With the aid of the spatula

2018-19

Published: 27 March 2019

Whale–crow optimization (WCO)-based Optimal Regression model for Software Cost Estimation

Sumera W Ahmad & G R Bamnote

Sādhanā **44**, Article number: 94 (2019) | Cite this article

Abstract

Software Cost Estimation (SCE) is the emerging concern of the software companies during the development phase of the software, as it requires effort and cost factors for modelling the software. These factors are modelled using the Artificial Intelligence models, which seem to be less accurate and non-reliable by increasing the risk factor of the software projects. Thus, for estimating the software cost, meta-heuristics are employed. This paper proposes an algorithm, termed as whale–crow optimization (WCO) algorithm, which is the integration of the whale optimization algorithm (WOA) and the crow search algorithm (CSA). The main function of the

International Journal of Innovative Research & Studies ISSN NO : 2319-9725

Cyberbullying Prevention by Game Chat Learning : An Overview

Shraddha C. Shelare
Student Masters of Engineering (CSE)
Prof. Ram Meghe Institute of Technology and Research, Amravati, India
Email: shraddhashelare15@gmail.com

Sunil R. Gupta
Assistant Professor (CSE)
Prof. Ram Meghe Institute of Technology and Research, Amravati, India
Email:sunilguptacse@gmail.com

Abstract— A broadening network of online communication and social networking not only providing a wide range of technology but also given a wings to the cybercrime. This leads to increase a drastic numbers of reports in cybercrime. Various internet services assist to establish a new connections between persons or support a prevail one. However, they can also results in disobedience or cyber law-breaking for example, Cyberbullying. Cyberbullying is the process to bullying someone by using internet technology via online chatting or social networking platform etc. Although it has been a problem for many years, the remembrance of its influence on young generation has showing a drastic growth in cybercrime. Social networking sites, such as instagram, Facebook and twitter provide a productive source to bullies. Teens and young adults who use these sites are unprotected to attacks. Through machine learning, we can detect language patterns used by bullies and their victims, and develop rules to automatically detect cyberbullying content.

Analysis of Basic File Searching Techniques in Structured Peer-to-Peer Distributed Network System

Vaishali S. Ambadekar[1], Dr. Sunil R. Gupta[2]
[1]Department of Computer Science and Engineering,
[2]Department of Computer Science and Engineering, PRMIT&R, Badnera.
[1]vaishaliambadekar@gmail.com
[2]sunilguptacse@gmail.com

Abstract

High Performance applications generates large amount of data. This huge amount of data generated from computation is then distributed over the system. Many difficulties arrive when users need these files for later use and eventually they try to locate them. For small amount of files this might not be an issue but as the number and size of files begins to grow, many problems come into existence making search even harder with use of ordinary methods. Hence this work focuses on study and investigation of various files searching techniques in Distributed Systems. Goal is to investigate and study more convincing searching methods other than those in existence and then analyses their results on various parameters.

Keywords— Distributed systems, searching, structured-peer-to-peer network, hash table, binary-search-tree, symbol table, linear search.

Sādhanā (2019) 44:94
https://doi.org/10.1007/s12046-019-1085-1

Whale–crow optimization (WCO)-based Optimal Regression model for Software Cost Estimation

SUMERA W AHMAD* and G R BAMNOTE

Department of Computer Science and Engineering, Prof. Ram Meghe Institute of Technology and Research, Badnera, Amravati 444 701, India
e-mail: sumeraahmad20034@gmail.com; grbamnote@mitra.ac.in

MS received 2 August 2018; revised 19 November 2018; accepted 21 December 2018; published online 27 March 2019

Abstract. Software Cost Estimation (SCE) is the emerging concern of the software companies during the development phase of the software, as it requires effort and cost factors for modelling the software. These factors are modelled using the Artificial Intelligence models, which seem to be less accurate and non-reliable by increasing the risk factor of the software projects. Thus, for estimating the software cost, meta-heuristics are employed. This paper proposes an algorithm, termed as whale–crow optimization (WCO) algorithm, which is the integration of the whale optimization algorithm (WOA) and the crow search algorithm (CSA). The main function of the WCO algorithm is to determine the Optimal Regression coefficients for the regression models, such as the Linear Regression model and the Kernel Logistic Regression model, to develop an Optimal Regression model to estimate the software cost. The experimentation is carried out using four datasets taken from the Promise software engineering repository to perform effective performance analysis. Analysis is carried out regarding the mean magnitude of relative error (MMRE) that proves that the proposed method of SCE is

International Research Journal of Engineering and Technology (IRJET) e-ISSN: 2395-0056
Volume: 06 Issue: 02 | Feb 2019 www.irjet.net p-ISSN: 2395-0072

Efficient Data Embedding and Data Encryption in video Stream

Ms. Rupali D. Wankhade[1], Dr. G.R. Bamnote[2], Ms. S.W. Ahmad[3]

[1]ME FT Final Year, Computer Science & Engineering, P.R.M.T&R, Badnera
[2]Head & Professor, Dept. Computer Science & Engg, PRMIT&R, Badnera, Amravati
[3]Astt. Professor, Dept. Computer Sci. & Engg., PRMIT&R, Badnera

---

Abstract: *- Now day's Digital video needs to be stored and processed in an encrypted format to maintain security and privacy. Data hiding in encrypted data without decryption preserves the confidentiality of the data. In addition, it is more efficient without decryption followed by data hiding and re-encryption. The data hiding directly in the encrypted version of H.264/AVC video stream is proposed, which includes the following three parts, i.e., H.264/AVC video encryption, data embedding, and data extraction. By analysing the method of H.264/AVC codec, the code words of intraprediction modes, the code words of motion vector differences, and the code words of residual coefficients are encrypted with stream ciphers. Then, a data hider may embed additional data in the encrypted domain by using codeword substitution technique, without knowing the original video content. In order to adapt to different technic application scenarios, data extraction can be done either in the encrypted domain or in the decrypted domain. Furthermore, video file size is strictly hide even after encryption and data embedding.*

H.264/AVC videos will undoubtedly become popular in the future. Due to the constraint of encryption, it is very difficult and sometimes impossible to transplant the existing data hiding algorithms to the encrypted domain. In the paper gives the data hiding, on the implementation of data hiding in encrypted H.264/AVC video streams.

H.264/AVC having various advances in standard video coding innovation, as far as both coding proficiency improvement and adaptability for powerful use over a wide assortment of system sorts and application spaces H.264/AVC is a video pressure design i.e. standard for high definition (HD) advanced video.

2. System Implementation

The Video Encryption and Sharing is an application developed for preventing hacking of videos being shared via users. The source video is uploaded by the user itself which undergoes through various

International Research Journal of Engineering and Technology (IRJET) e-ISSN: 2395-0056
Volume: 05 Issue: 12 | Dec 2018 www.irjet.net p-ISSN: 2395-0072

Data Hiding in Video Stream by Efficient Data Embedding

MS. Rupali Wankhade[1], Dr.G.R.Bamnote[2], Ms. S.W. Ahmad[3]

[1]ME FT Final Year, Computer Science & Engineering, P.R.M.I.T&R,Badnera
[2]Head & Professor, Dept.Computer Science & Engg, PRMIT&R, Badnera, Amravati
[3]Astt. Professor, Dept.Computer Sci. & Engg, PRMIT&R, Badnera

---

ABSTRACT *- Nowadays the need for security is becoming more important due to increased security requirements, data security is mostly provided with data hiding. It is an encrypted domain without decryption preserves the confidentiality of the content. In addition, it is more efficient without decryption followed by data hiding and re-encryption. In the novel scheme of data hiding directly in the encrypted version of H.264/AVC video stream, divided into three parts, which is H.264/AVC video encryption, data embedding, and data extraction with the help of data hiding code word technique. The cloud server can manage the video or verify its integrity without knowing the original contents, and thus to provide security and protection. A user can hide a data and may embed additional data in the encrypted domain by using substitution technique named code word. In order to adapt to different application scenarios, data extraction can be done either in the encrypted domain or in the decrypted domain. Furthermore, video file size is strictly preserved even after encryption and data embedding.*

KEYWORDS: *Data Hiding in Encrypted codeword*

Till now, few successful data hiding schemes in the encrypted domain have been reported in the open literature. With the increasing demands of providing video data security and privacy protection, data hiding in encrypted H.264/AVC videos will undoubtedly become popular in the near future. Obviously, due to the constraint of the underlying encryption, it is very difficult and sometimes impossible to convert the existing data hiding algorithms to the encrypted domain. The proposed scheme can achieve good performance in the three different ways.

- The data hiding is performed directly in encrypted H.264/AVC video bit-stream.
- This scheme can ensure both the format compliance and the strict file size preservation.
- This scheme can be applied to two different applications by retrieving the hidden data it can either encrypted video stream or may be the decrypted video stream.

International Journal of Electronics, Electrical and Computational System
IJEECS
ISSN 2348-117X
Volume 6, Issue 11
November 2017

Academic Science

Study and Analysis of Various Options for Utilization of Bandwidth Optimally in Wireless Networks

Ms. N. V. Pardakhe, Mr. S. S. Dandge, Ms. N. M. Yawale
P.R.M.I.T. &R., Badnera

ABSTRACT

With the development of network services, richness of service types, and diversification of terminals, market competition intensifies. Wireless network optimization is developed towards the intelligent and intensive direction. Data mining is performed for large amount of data collected by network devices are unlocked, and network parameters and settings can be adjusted intelligently and automatically. Tools are applied to improve work efficiency, reduce optimization and maintenance costs, achieving intensive optimization management. The development of data services arouses great needs for bandwidth, running short of frequency spectrum resources. Therefore, wireless network optimization focuses on improving the utilization efficiency of frequency spectrum resources and adjusting the resources based on service requirements. Bandwidth is the only tool which enhances the communication over internet / intranet applications. Optimized use of bandwidth in the specific locality can effectively give solutions for bandwidth utilization problems.

61st IETE Annual Convention 2018 on "Smart Engineering for Sustainable Development"
Special Issue of IJECSCSE, ISSN: 2277-9477

A Survey of Detection of HTTP Bot

Mayank R. Dundale Prof. S. S. Dandge Prof. N. V. Pardakhe

***Abstract*- A botnet is a group of collaborated computers which are remotely controlled by hackers to dispatch different system attacks, for example, DDoS attack, junk mail, click fraud and data phishing. The ongoing botnets have started utilizing basic conventions, for example, HTTP which makes it much harder to recognize their correspondence designs. The greater part of the HTTP bot transportations are established on TCP associations. Of every single current risk to digital security, bo tnets are at the highest of the rundown. In significance, consideration in this issue is expanding quickly among the exploration network and the quantity of diaries on the inquiry has grown-up exponentially as of late. This article proposes a review of botnet research and introduces an overview of botnet identification.**

***Keywords*- Botnet, Feature Reduction, Feature Extraction, Legitimate user.**

I. INTRODUCTION

Botnets are a standout amongst the most [redacted] directions from web servers under the assailant's control [6]. Accordingly, distinguishing bots with electronic controlling is more unpredictable than bots with IRC-based controlling. In this study, we have experienced different systems for HTTP botnet discovery and techniques utilized in them.

II. LITERATURE SURVEY

2.1 Botnet detection based on traffic behavior analysis and flow intervals.

In this paper, creator recommended that investigations movement conduct and arrange organize activity conduct utilizing machine learning. Here traffic conduct investigation does not subject to the parcels payload, so they can work with encoded arrange correspondence conventions. Proposed demonstrate permits distinguishing bot action in both order and control and assault stages which is simply in light of the

Impact Factor (SJIF): 5.301

International Journal of Advance Research in Engineering, Science & Technology

e-ISSN: 2393-9877, p-ISSN: 2394-2444
Volume 5, Issue 4, April-2018

Traffic Control System For Emergency Services

Subodh Pachkawade[1], Ajinkya Bhonde[2], Anurag Bhagat[3], Kishor Waydhane[4], Sangram Dandge[5]

[1]*Computer Science and Engineering, PRMIT&R, Badnera*
[2] *Computer Science and Engineering, PRMIT&R, Badnera*
[3] *Computer Science and Engineering, PRMIT&R, Badnera*
[4] *Computer Science and Engineering, PRMIT&R, Badnera*
[5] *Assistant Professor and Project Guide, PRMIT&R, Badnera*

Abstract — ***Traffic congestion is major problem in cities of developing countries like India. Growth in urban population and the middle-class segment consume vehicles to the rising number of vehicles in the cities. Congestion on roads eventually results in slow moving traffic, which increases the time of travel, thus be notable as one of the major issues in metropolitan cities. Emergency vehicles like ambulance and fire trucks need to reach their destinations at the earliest. If they spend a lot of time in traffic jams, valued lives of many people may be in danger. We aim to propose a system which will help emergency vehicle to pass without any congestion. In this project, we will send the location coordinates i.e. latitude, longitude and direction, diatance to the database via mobile application which will be operated by the authenticated operator. Raspberry Pi will fetch the information from database and it will examine aspects of the information fetched from database and turn the specific signal to green which will help emergency vehicle to pass without any obstacle.***

Keywords- Traffic congestion, Location coordinate, Mobile application, Database, Raspberry pi.

Impact Factor (SJIF): 5.301

International Journal of Advance Research in Engineering, Science & Technology

e-ISSN: 2393-9877, p-ISSN: 2394-2444

Volume 5, Issue 4, April-2018

Auto Farm Monitoring System by Using IOT

Richa Dhoke[1], Rakhi Bramhane[2], Pooja Ramteke[3], Suraj Chate[4], Prof. Sangram Dandge[5]

[1]*Computer Science and Engineering, Prof. Ram Meghe Institute of Technology and Research, Badnera*
[2]*Computer Science and Engineering, Prof. Ram Meghe Institute of Technology and Research, Badnera*
[3]*Computer Science and Engineering, Prof. Ram Meghe Institute of Technology and Research, Badnera*
[4]*Computer Science and Engineering, Prof. Ram Meghe Institute of Technology and Research, Badnera*
[5]*Computer Science and Engineering, Prof. Ram Meghe Institute of Technology and Research, Badnera*

Abstract *— Agriculture is the basic occupation in our country. But now due to migration of people from rural to urban and do to the lack of knowledge regarding technology there is hindrance in farming. So to overcome this problem we go for auto farm monitoring system by using IOT. Technological importance has been a great support for making decisions in farming. The development of agriculture has been on under development for the past few years due to lack of Agriculture knowledge, environmental changes and technological knowledge. Here, the main focus is on the improvement of rural and agricultural development through advanced information and communication processes. This project includes various features like humidity & temperature sensing and proper irrigation. It makes use of modem for internet. Various sensor nodes are deployed at different locations in the farm for noting the temperature and humidity. These parameters are controlled through any remote device like android application and the operations are performed by interfacing sensor with Wi-Fi, camera with raspberry pi board. This concept is created as a product and given to the farmer for their welfare.*

Keywords: *IOT, wifi, raspberry pi, sensors*

61st IETE Annual Convention 2018 on "Smart Engineering for Sustainable Development"
Special Issue of IJECSCSE, ISSN: 2277-9477

Data Modeling and Data Analytics: Big Data Perspective

Prof. Yogita S. Alone Prof. Ruchita A. Kale Prof. P. P. Deshmukh Prof. Gaurav J. Sawale

***Abstract*- The volume of data we deal with has grown to terabytes and petabytes in internet. As the volume of data keeps growing, the types of data generated by applications become richer than before. Traditional relational databases are challenged to capture, store, search, and share, analyze, and visualize data. Information is now available in an over a abundance, hat distinguishing the noise from the signal has become very problematic. The collection and storage of information was the primary issue. Currently, there are massive amounts of data both structured and unstructured, that need to be analyzed in an iterative, In a time sensitive manner. In response to this need, data analytical tools and services have emerged as a means to solve this problem.**

Keywords- Big Data , Data Modeling, Data Analytics, Modeling Language

I. INTRODUCTION

An exponential growth of the volume of data produced and MapReduce [5]. Big data is a generic term used to refer to massive and complex datasets, which are made of a variety of data structures (structured, semi structured and unstructured data) from a multitude of sources [6]. Big Data can be categorized by three Vs: volume (amount of data), velocity (speed of data in and out) and variety (kinds of data types and sources) [7]. Still, there are added some other Vs for variability, veracity and value [8]. Implementing Big Data-based technologies not only moderates the problems existing above, but also opens new perspectives that allow extracting value from Big Data. Big Data-based technologies are being applied with success in multiple scenarios [1] [9] [10] like in:

(1) e-commerce and marketing, where count the clicks that the crowds do on the network permit identifying trends that improve campaigns, evaluate personal profiles of a user, so that the content shown is the one he will most likely enjoy;

61st IETE Annual Convention 2018 on "Smart Engineering for Sustainable Development"
Special Issue of IJECSCSE, ISSN: 2277-9477

Data Modeling and Data Analytics: Big Data Perspective

Prof. Yogita S. Alone Prof. Ruchita A. Kale Prof. P. P. Deshmukh Prof. Gaurav J. Sawale

***Abstract*- The volume of data we deal with has grown to terabytes and petabytes in internet. As the volume of data keeps growing, the types of data generated by applications become richer than before. Traditional relational databases are challenged to capture, store, search, and share, analyze, and visualize data. Information is now available in an over a abundance, hat distinguishing the noise from the signal has become very problematic. The collection and storage of information was the primary issue. Currently, there are massive amounts of data both structured and unstructured, that need to be analyzed in an iterative, In a time sensitive manner. In response to this need, data analytical tools and services have emerged as a means to solve this problem.**

Keywords- Big Data , Data Modeling, Data Analytics, Modeling Language

I. INTRODUCTION

An exponential growth of the volume of data produced and MapReduce [5]. Big data is a generic term used to refer to massive and complex datasets, which are made of a variety of data structures (structured, semi structured and unstructured data) from a multitude of sources [6]. Big Data can be categorized by three Vs: volume (amount of data), velocity (speed of data in and out) and variety (kinds of data types and sources) [7]. Still, there are added some other Vs for variability, veracity and value [8]. Implementing Big Data-based technologies not only moderates the problems existing above, but also opens new perspectives that allow extracting value from Big Data. Big Data-based technologies are being applied with success in multiple scenarios [1] [9] [10] like in:

(1) e-commerce and marketing, where count the clicks that the crowds do on the network permit identifying trends that improve campaigns, evaluate personal profiles of a user, so that the content shown is the one he will most likely enjoy;

(2) Government and public health, allowing the detection and

61st IETE Annual Convention 2018 on "Smart Engineering for Sustainable Development"
Special Issue of IJECSCSE, ISSN: 2277-9477

Data Modeling and Data Analytics: Big Data Perspective

Prof. Yogita S. Alone Prof. Ruchita A. Kale Prof. P. P. Deshmukh Prof. Gaurav J. Sawale

***Abstract*- The volume of data we deal with has grown to terabytes and petabytes in internet. As the volume of data keeps growing, the types of data generated by applications become richer than before. Traditional relational databases are challenged to capture, store, search, and share, analyze, and visualize data. Information is now available in an over a abundance, hat distinguishing the noise from the signal has become very problematic. The collection and storage of information was the primary issue. Currently, there are massive amounts of data both structured and unstructured, that need to be analyzed in an iterative, In a time sensitive manner. In response to this need, data analytical tools and services have emerged as a means to solve this problem.**

Keywords- Big Data , Data Modeling, Data Analytics, Modeling Language

I. INTRODUCTION

An exponential growth of the volume of data produced and MapReduce [5]. Big data is a generic term used to refer to massive and complex datasets, which are made of a variety of data structures (structured, semi structured and unstructured data) from a multitude of sources [6]. Big Data can be categorized by three Vs: volume (amount of data), velocity (speed of data in and out) and variety (kinds of data types and sources) [7]. Still, there are added some other Vs for variability, veracity and value [8]. Implementing Big Data-based technologies not only moderates the problems existing above, but also opens new perspectives that allow extracting value from Big Data. Big Data-based technologies are being applied with success in multiple scenarios [1] [9] [10] like in:

(1) e-commerce and marketing, where count the clicks that the crowds do on the network permit identifying trends that improve campaigns, evaluate personal profiles of a user, so that the content shown is the one he will most likely enjoy;

(2) Government and public health, allowing the detection and

61st IETE Annual Convention 2018 on "Smart Engineering for Sustainable Development"
Special Issue of IJECSCSE, ISSN: 2277-9477

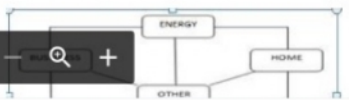
A REVIEW PAPER ON INTERNET OF THINGS AND ROBOTICS AN INTEGRATIVE APPROACH

Prof. Komal R. Hole, Prof. Rupali A. Meshram, Prof. Pranita P. Deshmukh

Abstract: *Internet of Things is the interconnection i.e connection between each other through the Internet to send and receive data via different devices entrenched in everyday objects. IoT helps everyone to reorganize the ways they approach their businesses, industries and markets and gives them the tools to improve their business strategies for achieving new level of goals. One of the most important application of IoT is internet of robotic things which combined concept of Internet of things (IoT) with Robotics gives the most efficient strategy helpful for digitizing environment.*

Keywords: *Internet of things (IoT), Internet of robotic things (IoRT), Humanoid robot.*

to things or it can be between things to things. With the help of internet anything can be connected to anything at anytime atanyplace [1].For connecting IoT appliances with each other providing extension of accessibility can be achieved with the help of IoT clouds. It also provides facilities like storing, processing and analyzing data. It is acts as a connector between different sensors and networks.



61stETE Annual Convention 2018 on "Smart Engineering for Sustainable Development"
Special Issue of IJECSCSE, ISSN: 2277-9477

Smart Water Geyser System

Rupali A. Meshram, Komal R. Hole, Pranita P. Deshmukh

***Abstract*- We know the wide applications of internet of things. In this work we will present a model of IOT based Water Geyser System.This proposes model will replace the normal water geyser system into the Smart Water Geyser System. Some times we forget tostart Geyser. This Smart Water Geyser System contains the mobile application which directly ON/OFF the Geyser and also itprovides the facility if the user want to start the Geyser after half an hour of morning wake-up. This System automatically ON theWater Geyser after half an hour of morning wake-up. This system takes the morning wake-up timing from the alarm system of theuser's mobile.**

***Keywords*-Water Geyser System, Cloud Computing, Internet of Things.**

II. RELATED WORK

Different researchers are provides different types of IoTapplication/technology. Applications of IoT which is currentlyused in various areas like home, retail, cities, medical,agriculture, automotive/transportation, industrial and energy.E. Padma and Prof. Dr. S. Rajlakshmi [1] have proposedmethodology of Trusted Platform Module (TPM) to assist thesecure mechanism. They have built cloud-based architectureand have merged the TPM on IOT to handle the IOT and tovalidate the users. Using this methodology, the users getbenefits in performance, security feature and deploymentthrough three-step authentication process. The —hon—imed—t the result shows the better performance which hasbeen verified experimentally.

Nikesh Gondchawar and Prof. Dr. R. S. Kawitkar [2]

61st IETE Annual Convention 2015 on "Smart Engineering for Sustainable Development"
Special Issue of IJECSCSE, ISSN: 2277-6477

Data Modeling and Data Analytics: Big Data Perspective

Prof. Yogita S. Alone Prof. Ruchita A. Kale Prof. P. P. Deshmukh Prof. Gaurav J. Sawale

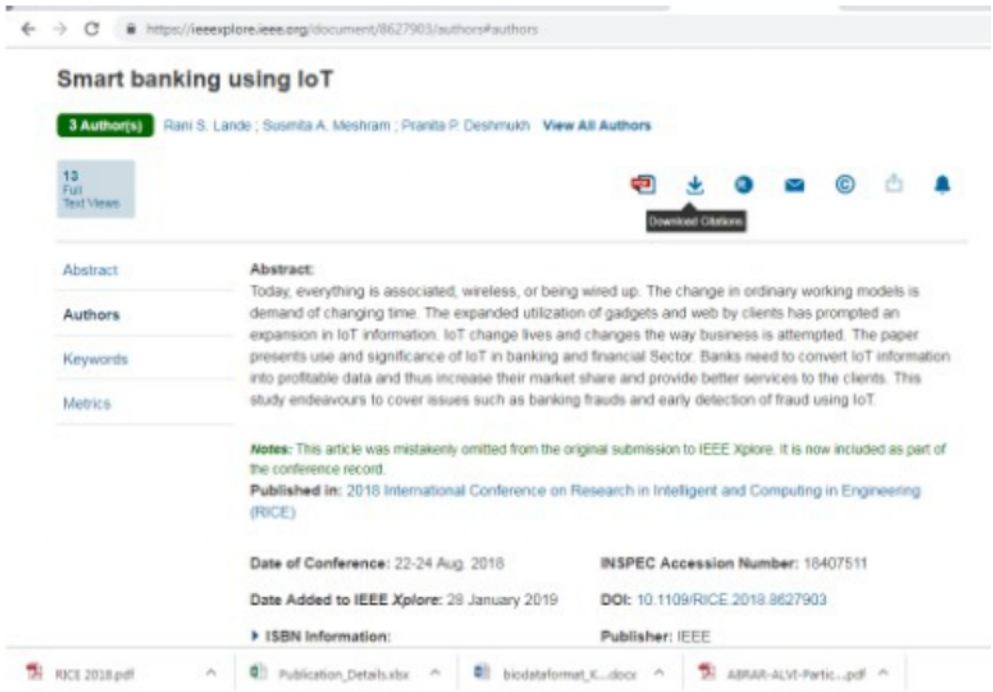
***Abstract*- The volume of data we deal with has grown to terabytes and petabytes in internet. As the volume of data keeps growing, the types of data generated by applications become richer than before. Traditional relational databases are challenged to capture, store, search, and share, analyze, and visualize data. Information is now available in an over a abundance, but distinguishing the noise from the signal has become very problematic. The collection and storage of information was the primary issue. Currently, there are massive amounts of data both structured and unstructured, that need to be analyzed in an iterative, In a time sensitive manner. In response to this need, data analytical tools and services have emerged as a means to solve this problem.**

Keywords- Big Data , Data Modeling, Data Analytics, Modeling Language

I. INTRODUCTION

An exponential growth of the volume of data produced and MapReduce [5]. Big data is a generic term used to refer to massive and complex datasets, which are made of a variety of data structures (structured, semi structured and unstructured data) from a multitude of sources [6]. Big Data can be categorized by three Vs: volume (amount of data), velocity (speed of data in and out) and variety (kinds of data types and sources) [7]. Still, there are added some other Vs for variability, veracity and value [8]. Implementing Big Data-based technologies not only moderates the problems existing above, but also opens new perspectives that allow extracting value from Big Data. Big Data-based technologies are being applied with success in multiple scenarios [1] [9] [10] like in:

(1) e-commerce and marketing, where count the clicks that the crowds do on the network permit identifying trends that improve campaigns, evaluate personal profiles of a user, so that the content shown is the one he will most likely enjoy;


https://ieeexplore.ieee.org/document/8627903/authors#authors
Smart banking using IoT
3 Author(s)
Rani S. Lande ; Susmita A. Meshram ; Pranita P. Deshmukh
View All Authors
13
Full
Text Views
Download Citations
Abstract
Authors
Keywords
Metrics
Abstract:
Today, everything is associated, wireless, or being wired up. The change in ordinary working models is demand of changing time. The expanded utilization of gadgets and web by clients has prompted an expansion in IoT information. IoT change lives and changes the way business is attempted. The paper presents use and significance of IoT in banking and financial Sector. Banks need to convert IoT information into profitable data and thus increase their market share and provide better services to the clients. This study endeavours to cover issues such as banking frauds and early detection of fraud using IoT.
Notes: This article was mistakenly omitted from the original submission to IEEE Xplore. It is now included as part of the conference record.
Published in: 2018 International Conference on Research in Intelligent and Computing in Engineering (RICE)
Date of Conference: 22-24 Aug. 2018
INSPEC Accession Number: 18407511
Date Added to IEEE Xplore: 29 January 2019
DOI: 10.1109/RICE.2018.8627903
ISBN Information:
Publisher: IEEE
RICE 2018.pdf
Publication_Details.xlsx
biodataformat_K...docx
ABRAR-ALVI-Partic...pdf

International Journal for Research in Applied Science & Engineering Technology (IJRASET)
ISSN: 2321-9653; IC Value: 45.98; SJ Impact Factor: 6.887
Volume 7 Issue IV, Apr 2019- Available at www.ijraset.com

Xallot: A Scheduler for Allotment of External Examiner for Practical Examination

Akash A. Gillerkar[1], Shubham S. Dakre[2], Kshitij K. Kaikade[3], Harshal P. Sabale[4], Saurabh S. Utkade[5], Prof. Ms. Komal R. Hole[6]
[1, 2, 3, 4, 5, 6]Department of Computer Science & Engineering, Prof. Ram Meghe Institute of Technology & Research, Badnera - Amravati

Abstract: *In today's era, most of the manual works are replacing by the machines and different applications. Due to this, human efforts are drastically decrease with highly increase in efficiency. The making of such applications or software reduce time and provide high accuracy. Although, there are some jobs or works these performs manually. Similar problem is faced by Sant Gadge Baba Amravati University. The current problem face by Sant Gadge Baba Amravati University is the allotment of professor for external practical examination taken in all the colleges under Amravati University. Usually in university the meeting is conducted for allotment of the externals under the university, but there is possibility of occurrence of chaos. This process is too much complicated and time consuming. Also, there is some possibility of partiality in allotment. To solve this problem, there should be an application or software which can schedule allotments of the externals. This software generate output depends on the parameter such as qualification, experience, subjects taught, etc. and provide output direct in the form of table contents.*

Keywords: *Xallot; Genetic Algorithm; External Examiner; Scheduler; Practical Examination; Banker's Algorithm.*

I. INTRODUCTION

During the season of exams at the time of university practical examination university allots different professors as an external to the different colleges lying under the same university. For these allotments each college within same university certain number of professors are appointed to act as an external in the practical examination. But, before allotment of the professors for practical examination there is a meeting of all the professors who are selected to act as an external by different colleges. When this meeting is arranged in university, in this meeting there is too much chaos in the meeting. Each professor wants to go to different college for a particular time, but this is not possible as number of requirement for the professors for different subject is different for different colleges. Also, the requirement is depending upon the number of branches & the number of students in the particular branch, again their timing is also having to be managed. So, the result of the meeting taken in the university has no conclusion. In this meeting there is only disorder and confusion. Due to this reason university randomly allot the different professors according to requirement of the subject & the number of students performing practical exams. The process took very long time for the allotment of the professors for different colleges. University has to be managed the timing of the practical examination. To simplify the task, develop software that schedules the professors according to their requirement of college. The Xallot application will be developed, for the Sant Gadge Baba Amravati University to schedule the allotment of the professors as external for university practical exams in all B.E. colleges in Amravati University. This system automatically allots the professor as external according to their years of experience & qualification to the respective field in various colleges without human interference and generate the allotment result.

II. WORKING

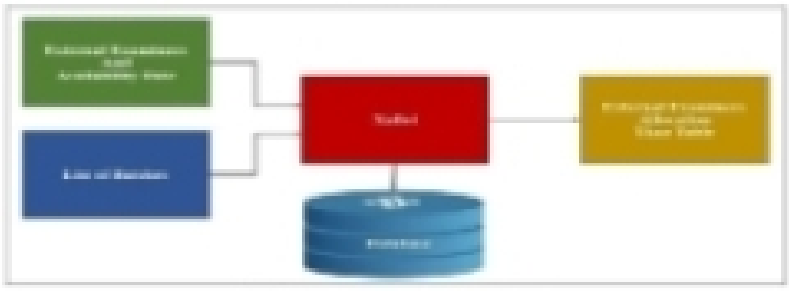


Fig. 1 Block Diagram of Xallot

61st IETE Annual Convention 2018 on "Smart Engineering for Sustainable Development"
Special Issue of IJECSCSE, ISSN: 2277-9477

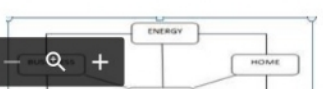
A REVIEW PAPER ON INTERNET OF THINGS AND ROBOTICS AN INTEGRATIVE APPROACH

Prof. Komal R. Hole, Prof. Rupali A. Meshram, Prof. Pranita P. Deshmukh

Abstract: ***Internet of Things is the interconnection i.e connection between each other through the Internet to send and receive data via different devices entrenched in everyday objects. IoT helps everyone to reorganize the ways they approach their businesses, industries and markets and gives them the tools to improve their business strategies for achieving new level of goals. One of the most important application of IoT is internet of robotic things which combined concept of Internet of things (IoT) with Robotics gives the most efficient strategy helpful for digitizing environment.***

Keywords: ***Internet of things (IoT), internet of robotic things (IoRT), Humanoid robot.***

to things or it can be between things to things. With the help of internet anything can be connected to anything at anytime atanyplace [1].For connecting IoT appliances with each other providing extension of accessibility can be achieved with the help of IoT clouds. It also provides facilities like storing, processing and analyzing data. It is acts as a connector between different sensors and networks.



61stIETE Annual Convention 2018 on "Smart Engineering for Sustainable Development"
Special Issue of IJECSCSE, ISSN: 2277-9477

Smart Water Geyser System

Rupali A. Meshram, Komal R. Hole, Pranita P. Deshmukh

***Abstract*- We know the wide applications of internet of things. In this work we will present a model of IOT based Water Geyser System.This proposes model will replace the normal water geyser system into the Smart Water Geyser System. Some times we forget tostart Geyser. This Smart Water Geyser System contains the mobile application which directly ON/OFF the Geyser and also itprovides the facility if the user want to start the Geyser after half an hour of morning wake-up. This System automatically ON theWater Geyser after half an hour of morning wake-up. This system takes the morning wake-up timing from the alarm system of theuser's mobile.**

***Keywords*-Water Geyser System, Cloud Computing, Internet of Things.**

II. RELATED WORK

Different researchers are provides different types of IoTapplication/technology. Applications of IoT which is currentlyused in various areas like home, retail, cities, medical,agriculture, automotive/transportation, industrial and energy.E. Padma and Prof. Dr. S. Rajlakshmi [1] have proposedmethodology of Trusted Platform Module (TPM) to assist thesecure mechanism. They have built cloud-based architectureand have merged the TPM on IOT to handle the IOT and tovalidate the users. Using this methodology, the users getbenefits in performance, security feature and deploymentthrough a three-step authentication process. The —thos— —med— at the result shows the better performance which hasbeen verified experimentally.

Nikesh Gondchawar and Prof. Dr. R. S. Kawitkar [2]

International Journal of Application or Innovation in Engineering & Management (IJAIEM)
Web Site: www.ijaiem.org Email: editor@ijaiem.org
Volume 8, Issue 4, April 2019 ISSN 2319 - 4847

An Iris Recognition System: A good Idea for Security

Prof. Nupoor M. Yawale[1] , Prof. Nilima V. Pardakhe[2], Prof. Meghana A. Deshmukh

[1]Assistant professor, PRMIT &R Badnera, Amravati. (INDIA)

[2]Assistant professor, PRMIT &R Badnera, Amravati. (INDIA)

[3]Assistant professor, PRMIT &R Badnera, Amravati. (INDIA)

ABSTRACT

In this paper we discuss an iris recognition system. There has been significant progress in improving the performance of computer-based iris recognition system over the last decade. This paper discusses a generic framework for the iris recognition system, and the variants that are frequently encountered by the iris recognizer. In today's word to maintain the security of information or physical property is becoming both increasingly important and increasingly difficult. It is most secure recognition system as iris doesn't change throughout adult life.

Keywords: Iris Recognition, Acquisition, Localization, Normalization, Feature extraction and matching.

61st IETE Annual Convention 2018 on "Smart Engineering for Sustainable Development"
Special Issue of IJECSCSE, ISSN: 2277-9477

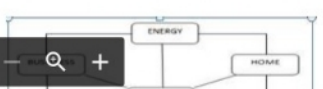
A REVIEW PAPER ON INTERNET OF THINGS AND ROBOTICS AN INTEGRATIVE APPROACH

Prof. Komal R. Hole, Prof. Rupali A. Meshram, Prof. Pranita P. Deshmukh

Abstract: ***Internet of Things is the interconnection i.e connection between each other through the Internet to send and receive data via different devices entrenched in everyday objects. IoT helps everyone to reorganize the ways they approach their businesses, industries and markets and gives them the tools to improve their business strategies for achieving new level of goals. One of the most important application of IoT is internet of robotic things which combined concept of Internet of things (IoT) with Robotics gives the most efficient strategy helpful for digitizing environment.***

Keywords: ***Internet of things (IoT), internet of robotic things (IoRT), Humanoid robot.***

to things or it can be between things to things. With the help of internet anything can be connected to anything at anytime atanyplace [1].For connecting IoT appliances with each other providing extension of accessibility can be achieved with the help of IoT clouds. It also provides facilities like storing, processing and analyzing data. It is acts as a connector between different sensors and networks.



61stIETE Annual Convention 2018 on "Smart Engineering for Sustainable Development"
Special Issue of IJECSCSE, ISSN: 2277-9477

Smart Water Geyser System

Rupali A. Meshram, Komal R. Hole, Pranita P. Deshmukh

***Abstract*- We know the wide applications of internet of things. In this work we will present a model of IOT based Water Geyser System.This proposes model will replace the normal water geyser system into the Smart Water Geyser System. Some times we forget tostart Geyser. This Smart Water Geyser System contains the mobile application which directly ON/OFF the Geyser and also itprovides the facility if the user want to start the Geyser after half an hour of morning wake-up. This System automatically ON theWater Geyser after half an hour of morning wake-up. This system takes the morning wake-up timing from the alarm system of theuser's mobile.**

***Keywords*-Water Geyser System, Cloud Computing, Internet of Things.**

II. RELATED WORK

Different researchers are provides different types of IoTapplication/technology. Applications of IoT which is currentlyused in various areas like home, retail, cities, medical,agriculture, automotive/transportation, industrial and energy.E. Padma and Prof. Dr. S. Rajlakshmi [1] have proposedmethodology of Trusted Platform Module (TPM) to assist thesecure mechanism. They have built cloud-based architectureand have merged the TPM on IOT to handle the IOT and tovalidate the users. Using this methodology, the users getbenefits in performance, security feature and deploymentthrough a three-step authentication process. The —thos— —med— at the result shows the better performance which hasbeen verified experimentally.

Nikesh Gondchawar and Prof. Dr. R. S. Kawitkar [2]

IJARCCE

ISSN (Online) 2278-1021
ISSN (Print) 2319-5940

International Journal of Advanced Research in Computer and Communication Engineering

Vol. 8, Issue 4, April 2019

Identify Available Parking Space Detection System using IOT

Sakshi S. Jain[1], Sanjiksha R. Jadhav[2], Dolly R. Sathawane[3], Rashmika S. Kamble[4], Prof. Rupali A. Meshram[5]

UG Students, Computer Science and Engineering, PRMIT&R Badnera, Amravati, India[1,2,3,4]

Assistant Professor, Computer Science and Engineering, PRMIT&R Badnera, Amravati, India[5]

Abstract: In college the parking slots are available but sometimes it's very complicated to find out the empty parking space and there is not any such functionality available for checking the parking slot is available. In institutes there is the separate parking available for faculties and students whenever we would like to search parking slot we have to reach there to find out the available slots. Then it is very less time consuming process to reach till empty or vacant slots. Now a day's almost all people use the smart phone so if we connect the parking slot to the smart phone then it is very useful for the upcoming vehicle to search for the empty parking slot and park the car over there. The user can also reserve the space for the parking slots via smart phone. Through this user can reserve parking space for given location online in advance .Then user can place the vehicle in the parking slot with minimal fees. After study about some current systems and it shows that the current systems are not totally automated and require a certain level of human interference and communication with the system. The difference between our system and existing systems is that we intend to make our system as less human independent by automating whole parking area.

Keywords: Smart phone, Internet of Things (IoT), IR sensor, Raspberry Pi

I. INTRODUCTION

Traffic jam caused by vehicle is an alarming problem at a global scale and it has been growing exponentially. The difficulty we encounter at these places the availability of parking space. Most of the times we need to travel to find a free space for parking. If parking slots are full and it becomes time consuming this is the biggest problem. To overcome for this situation there is a need of automatic parking system that regulates parking in given area as well as less human intervention. According to IoT techniques the system is connected with more than one device, vehicles and another items embedded with sensors. Physical world connected with computer-based systems. Our proposed system comparing with existing system the efficiency is improve, economic profits, and reduced human efforts. IoT is the only way to get proposed for the identification of empty parking lot the proposed will connect the parking using IoT to android. An automatic parking system that provides the parking slot at any time to user. In registration module, user can register with the help of registration process and user can login. There are many problem occurs in current system. but with help of this proposed system user can reserve the parking lot by using Android application.

So that, proposed system designed a new parking reservation system that would solve the need of exploring entire parking slot and would also solve low utilization level of conventional reservation-based parking slot problem .To make spaces detecting easy to manage and more intelligent, the ability of thinking is recommended for the detector to get the recognition results via sampling and processing sensor signals the development of reservation for parking slots commanded by android application, recognition, parking slot status and electronic billing system is implemented. This system reduces the effort and time require for searching slot . Also the payment transaction is handled online which makes the system less human dependent.

At the time of checkout the user has to pay bill and extra charges if any then only barrier will get opened. There are three modules (1) Android Application (2) Interfacing of Microcontroller with sensors (3) Interfacing of Microcontroller with rotator motor. This system is useful for users, whenever user want to parked the vehicle according to the user's need at that time user can reserve their own slot.

II. LITERATURE SURVEY

The author [1] has been proposed the system that is to automate the car and car parking as well. A model of an automatic car parking system that can identify the number of car parked in parking area at any given time on the availability of parking slot. The entering and leaving to the slot is depend on the android application.

ISSN: XXXX XXXXX © 2019 IJESC

IJESC

Research Article Volume 9 Issue No.4

Vehicle Tracking and Overload Detection System in Public Transport using IoT

Vaishnavi D. Hajare[1], Devyanshi N. Mohbare[2], Sachin V. Changlani[3], Prof. Rupali A. Mohbare[4]
Department of Computer Science & Engineering
PRMIT&R, Badnera, Maharashtra, India

Abstract:
Now a day lots of accident happens due to overloading of the vehicles. Every vehicle has some number of seating capacity but most of the time they violate the law and allows more passengers which causes accident some time so that we need to provide auto overload detection system. The types of sensors employed are weight sensors on the vehicles suspension to detect overloaded vehicles. The device will automatically detect the in and out count of passenger/goods and Sensors will collect information from the vehicles, forward this to an on board data analyser (normally to be placed at authority stations). Authority station will mark the time and location of that vehicle at that moment. Later that whole data will use to completely analyse the vehicle. In inspection of vehicle the authority stations will analyse the overloaded point and generate the fine according to that. So we have proposed a system in which the counter is getting count by using the IR sensors and manipulation done by server which will help to keep the eye on transportation system by RTO and owner of the transport system.

Keywords: Accident, GPS Tracking, Overload Detection, Vehicle Tracking.

I. INTRODUCTION

As the Wireless Sensor Networks have scientifically advanced more rapidly and more proficiently, they have become the key source for the advancement of IoT. They find it use in almost all fields including smart grid, smart transportation systems, smart home, smart hospitals, and so on. The accomplishment of the above leads to the smart city development as mentioned by our Indian Prime Minister. The new applications and businesses are created continuously with the help of technology through the internet. IoT (Internet of Things) can help in integration of communication, control and information processing across various transportation systems. Generally, in public transportation, there is lack of real time information. Carrying more passengers than capacity by bus is a huge problem. Some other buses squeeze people in the spaces between the seats. Example a space of 4 passengers will accommodate 5 passengers. Why have passengers become agents and disciples of impunity in the bus industry? The worst part is that the money never reaches the owner it goes into the pockets of the drivers and the conductors. In the situation when someone complains or refuses to squeeze the conductor and some of the passengers will tell them to buy their own car. The importance of controlling overloading passengers cannot be ignored because it helps to reduce deaths and casualties as the findings show that excessive passengers is one of the major causes of many deaths and casualties when accidents occur. There should be a way of controlling that because passengers have to sit and wear seat belts for their safety [1]. It is clear that, at some point, we need to limit the number of extra passengers to be accommodated. Worldwide people invest in quality control programs in order to assess and improve the services provided to the passengers [2]. Overload passenger in public transport is a serious problem in many countries across the world because it incurs huge costs in terms of life, property and maintenance of buses. Many countries have established a system to reinforce overload limit regulation (rule) and some are attempting to address the issue and implement strict controlling mechanisms. The struggle for the problem since the last decades particularly after the introduction of public transport buses received more attention, and yet these are playing major roles in the transportation satisfying the transport demand generated by the growing economy and ever increasing population both in developed and developing countries. The problem of overloading is generally under control in many developed countries while it is still a challenge too many developing and under developed nations. Public transportation service available on sharing basis for the benefit of general public. It includes city buses, trolleybuses, trams, ferries. Unlike transportation modes like carpooling, rickshaws and taxis, this system encompasses an entirety of strangers. Now a day lots of accident happens due to overloading of the vehicles. Every vehicle has some number of seating capacity but most of the time they violate the law and allows more passengers which causes accident some time so that we need to provide auto overload detection system. The types of sensors employed are weight sensors on the vehicles suspension to detect overloaded vehicles. The device will automatically detect the in and out count of passenger/goods and Sensors will collect information from the vehicles, forward this to an on board data analyser (normally to be placed at authority stations). Authority station will mark the time and location of that vehicle at that moment. Later that whole data will use to completely analyse the vehicle. In inspection of vehicle the authority stations will analyse the overload.

A. Objective and Scope of Project

The aim of this project is to identify the effectiveness of using overload system in enhancing the operations in enforcing vehicle weight limit regulations. Specifically, this project attempts to quantify the effect of overloaded vehicle and protect the system and infrastructure of the roads.

- Developing responsive and innovative way to manipulate the fine and check for the passenger security in public transport system.

A Review on Cluster between Internet of things and Social Network

Ms.S.G.Pundkar, Ms.R.S.Badre, Ms.N.A.Deshmukh, Mr.A.U.Chaudhari

Abstract **The clustering between Internet of Things and social networks enables the relation of people to the everywhere computing universe. In this framework, the data coming from the situation is provided by the Internet of Things, and the social networks bring the bond to allow human-to-device communications. This paper explores the novel paradigm for everywhere computing beyond IoT, denoted by Social Internet of Things. Therefore, this paper first addresses a complete view on Social Internet of Things and input perspectives to imagine the real everywhere computing. Later, a literature evaluate is accessible along with the evolutionary the past of IoT research from Internet of Things to Social Internet of Things. Finally, this paper proposes a basic Social Internet of Things architecture and presents a conversation about enabling technologies, research challenges, and open issues.**

Keywords **Internet of Things , Social Internet of Things , Social Networks**

I. Introduction

The position on the edge of a new age with actual ubiquitous computing and communication where many gadgets, such as sensors, RFID tags, and smart electronic devices, surrounding us will be on the association [1], [2]. The gadgets would vanish and interface themselves into the material of our daily life to work in show to support us in shipping our daily life actions, tasks and rituals in an easy, natural way using information and intelligence, hidden in the network connecting the gadgets. [1], [4]. The IoT vision of pervasively involving many things which is able to interact with the surroundings around us and receive data on its type that was earlier unavailable by just looking at a collection of things [5]. In other words, in earlier Internet of Things [5], [6], which was a local network of a collection of things such as wireless sensor networks (WSNs), machine-to-machine (M2M), and smart homes, can only take out regional data containing particular content from the things, IoT can present large scale, inclusive, and historical data by collaborating between sport intranets of things even if they have regarding devices, local announcement technologies, and consumption goals. Furthermore, IoT enables the making and composition of new services and applications, offering to personality users a new ecology system where special intranets of things can combine. In Internet of things, as revealed over, an individual user connects to the others via heritage networks; on the other hand, sets of things work together with each other via the Internet for offering information to stylish services and applications, while each user uses them. The IoT follows two interaction paradigms: 1) person-to-person and 2) object-to-object, and then person simply make use of information from object as an elderly shaped client-server communication model [7],[8]. In this way the IoT so far does not agree to a right connection between person and object, i.e., human-to-thing, for real everywhere computing [6]. In order to practically mix the ubiquitous computing in our outlook daily life with high quality, we need to progress the connection of all the associations between users and object, and to enhance the availability of computational control via sets of things surrounding us. This logical pattern can be realized from side to side exhibiting features from human social network and adopts them for the suggested universal social network of all entities. The feature set can include the interactivity idea, profiling system, advice, and mash up of services. This social network assists in the rising of new communities motivated by increasing social, inborn from traditional social networks, could give the opportunity to realize customer requirements, and thus they also recover the accessibility based on belief in each group of people. In fact, growing the accessibility of processing power would be accompanied by diminishing the visibility [1], [9]. Thus, this novel dangerous vision with better publicity is denoted by SIoT.

2. SIoT Architecture

To review our idea toward a future-driven SIoT, we consider the following elements to be part of the architecture:

1) Actors

2) An intelligent system

3) An interface and

4) Internet.

Next, we discuss about each element in the architecture in detail (see Fig. 1).

ISSN XXXX XXXX © 2019 IJESC

IJESC

Research Article

Volume 9 Issue No.4

Analysis of Reducing the Delay in Roadside Unit Caching Mechanism Via Hybrid Compression Technique

Wasudeo B. Pahurkar[1], Rupesh D. Sushir[2], Ku. Archana B. Pahurkar[3]

Abstract:
Recent improvements in vehicular ad hoc networks are accelerating the realization of intelligent transportation system (ITS), which not only provides road safety and driving efficiency, but also enables infotainment services. Since data dissemination plays an important part in ITS, recent studies have found caching as a promising way to promote the efficiency of data dissemination against rapid variation of network topology. In this paper, we focus on the scenario of roadside unit (RSU) caching, where multiple content providers (CPs) aim to improve the data dissemination of their own contents by utilizing the storages of RSUs. To deal with the competition among multiple CPs for limited caching facilities, we propose a multi-object auction-based solution, which is sub-optimal and efficient to be carried out. A caching-specific handoff decision mechanism is also adopted to take advantages of the overlap of RSUs. We will improve the system using a novel compression algorithm which will take into consideration general compression with data aggregation in order to improve the overall system performance.

Keywords: Reducing the Delay, Energy, Jitter and increase Through put, PDR Using Hybrid Compression Technique.

1. INTRODUCTION:

Recently, with the development of vehicle industry and wireless communication technology,vehicular ad hoc networks are becoming one of the most promising research fields. Due to their unique characteristics such as high dynamic topology and predictable mobility, VANETs attract so much attention of both academia and industry. Vehicular ad hoc networks (VANETs) are becoming increasingly popular in recent years, aiming to cope with the strong demands for communicating on the move. As more and more communication and computing techniques being enabled by VANETs, it is promising to deploy Intelligent Transportation Systems (ITS) widely in our real world [1]. By combining the theoretical improvements with the development of transportation infrastructure, ITS is expected to alleviate or even prevent many road traffic problems such as congestions and accidents effectively. To achieve these targets, roadside units (RSUs) are being deployed as the most significant infrastructure in ITS [2]. RSUs are typically Internet-connected devices, dedicated in exchanging information with on-board units (OBUs) placed at vehicles.Therefore, vehicle-to-roadside (V2R) communications are enabled in addition to the vehicle-to-vehicle (V2V) communications. Although initially designed to improve road safety and driving efficiency, ITS can also provide infotainment services for the passing-by drivers and passengers with the help of RSUs, such as commercial, informative, and entertainment services [3]. One of the prerequisites for infotainment services is to design the data dissemination strategy in VANET environment, where data can either be generated by the OBUs in VANETs or by the content provider (CP) on the Internet. In both cases, wireless data need to be disseminated to the given set of target vehicular users through VANET. However, due to the rapid changes in network topology and high variability of the connectivity, it is hard to guarantee that data can arrive at targets safely, accurately and punctually [4]. Therefore, data dissemination in VANET still remains to be a challenging task.
The main contributions of this project work are listed below:
involves multiple CPs that is competing for the limited caching storages of RSUs.
2) To formulate the caching problem with the objective to maximize the total amount of downloaded data, where a caching-specific handoff mechanism are adopted due to the overlap of RSUs.
3) To provide a sub-optimal solution based on multi-object auctions, which is efficient to be carried out and also compatible with the existence of multiple MNOs.
VANETs which use vehicles as mobile nodes are a subclass of mobile ad hoc networks (MANETs) to provide communications among nearby vehicles and between vehicles and nearby roadside equipment but apparently differ from other networks by their own characteristics. Specifically, the nodes (vehicles) in VANETs are limited to road topology while moving, so if the road information is available, we are able to predict the future position of a vehicle; what is more, vehicles can afford significant computing, communication, and sensing capabilities as well as providing continuous transmission power themselves to support these functions. However, VANETs also come with several challenging characteristics, such as potentially large scale and high mobility. Nodes in the vehicular environment are much more dynamic because most cars usually are at a very high speed and change their position constantly. The high mobility also leads to a dynamic network topology, while the links between nodes connect and disconnect very often. Besides, VANETs have a potentially large scale which can include many participants and extend over the entire road network. It is precisely because of both of these unique attractive features and challenging characteristics that VANETs could draw the attention from both industry and academia.

2. OBJECTIVES

1) To focus on the roadside unit caching scenario which involves multiple CPs that are competing for the limited caching storages of RSUs.
2) To formulate the caching problem with the objective to

International Journal of Electronics, Electrical and Computational System
IJEECS
ISSN 2348-117X
Volume 6, Issue 11
November 2017

Academic Science

Study and Analysis of Various Options for Utilization of Bandwidth Optimally in Wireless Networks

Ms. N. V. Pardakhe, Mr. S. S. Dandge, Ms. N. M. Yawale
P.R.M.I.T. &R., Badnera

ABSTRACT

With the development of network services, richness of service types, and diversification of terminals, market competition intensifies. Wireless network optimization is developed towards the intelligent and intensive direction. Data mining is performed for large amount of data collected by network devices are unlocked, and network parameters and settings can be adjusted intelligently and automatically. Tools are applied to improve work efficiency, reduce optimization and maintenance costs, achieving intensive optimization management. The development of data services arouses great needs for bandwidth, running short of frequency spectrum resources. Therefore, wireless network optimization focuses on improving the utilization efficiency of frequency spectrum resources and adjusting the resources based on service requirements. Bandwidth is the only tool which enhances the communication over internet / intranet applications. Optimized use of bandwidth in the specific locality can effectively give solutions for bandwidth utilization problems.

International Journal of Application or Innovation in Engineering & Management (IJAIEM)
Web Site: www.ijaiem.org Email: editor@ijaiem.org
Volume 8, Issue 4, April 2019 ISSN 2319 - 4847

An Iris Recognition System: A good Idea for Security

Prof. Nupoor M. Yawale[1] , Prof. Nilima V. Pardakhe[2], Prof. Meghana A. Deshmukh

[1]Assistant professor, PRMIT &R Badnera, Amravati. (INDIA)

[2]Assistant professor, PRMIT &R Badnera, Amravati. (INDIA)

[3]Assistant professor, PRMIT &R Badnera, Amravati. (INDIA)

ABSTRACT

In this paper we discuss an iris recognition system. There has been significant progress in improving the performance of computer-based iris recognition system over the last decade. This paper discusses a generic framework for the iris recognition system, and the variants that are frequently encountered by the iris recognizer. In today's word to maintain the security of information or physical property is becoming both increasingly important and increasingly difficult. It is most secure recognition system as iris doesn't change throughout adult life.

Keywords: Iris Recognition, Acquisition, Localization, Normalization, Feature extraction and matching.

A Survey of Detection of HTTP Bot

Mayank R. Dundale Prof. S. S. Dandge Prof. N. V. Pardakhe

Abstract- A botnet is a group of collaborated computers which are remotely controlled by hackers to dispatch different system attacks, for example, DDoS attack, junk mail, click fraud and data phishing. The ongoing botnets have started utilizing basic conventions, for example, HTTP which makes it much harder to recognize their correspondence designs. The greater part of the HTTP bot transportations are established on TCP associations. Of every single current risk to digital security, botnets are at the highest of the rundown. In significance, consideration in this zone is expanding quickly among the exploration network and the quantity of diaries on the inquiry has grown-up exponentially as of late. This article proposes a review of botnet research and introduces an overview of botnet identification.

Keywords- Botnet, Feature Reduction, Feature Extraction, Legitimate user.

I. Introduction

Botnets are a standout amongst the most keen current threats to digital security. The term botnet is utilized to characterize a system of pervaded machines, named bots, which are underneath the control of a human administrator normally known as the bot ace. Bots are utilized to complete a comprehensive changeability of fiendish and destructive activities against frameworks and administrations, including forswearing of-benefit (DoS) assaults, spam spreading, phishing, and click extortion. Botnets are sorted out systems of tainted (Zombie) machines running bot codes, classified by their utilization of a summon and control (C&C) channel. Utilizing the order and control of botnet, a bot ace can control a huge gathering of traded off bots and after that perform noxious assaults . At early occasions, C&C correspondences depended on Web Hand-off Visit (IRC) convention. The aggressor used to effectively issue orders on the exceptional channel of IRC server to every one of the bots. As of late, HTTP turns into a more well known correspondence convention for bots [9]. These online C&C bots attempt to blend into general HTTP activity, which makes them more hard to be distinguished, since HTTP is a usually utilized system correspondence convention in numerous applications. The HTTP bots as often as possible request and download directions from web servers under the assailant's control [6]. Accordingly, distinguishing bots with electronic controlling is more unpredictable than bots with IRC-based controlling. In this study, we have experienced different systems for HTTP botnet discovery and techniques utilized in them.

II. Literature Survey

2.1 Botnet detection based on traffic behavior analysis and flow intervals.

In this paper, creator recommended that investigations movement conduct and arrange organize activity conduct utilizing machine learning. Here traffic conduct investigation does not subject to the parcels payload, so they can work with encoded arrange correspondence conventions. Proposed demonstrate permits distinguishing bot action in both order and control and assault stages which is simply in light of the perception of its system flow qualities for specific time interims.

2.1.1 Methodology Used

Creator right off the bat thinks about different botnet location machine learning procedures through system conduct investigation like Bayesian Network, Support Vector Machine and utilized choice tree classifier machine learning calculation.

2.2 A Network Behavior-Based Botnet Detection Mechanism Using PSO and K-means

In this paper creator proposed a system that gives a basic and direct technique to find the Bot customer. Proposed component utilizes the three primary system practices of bot customer, Act Behavior, Fail Behavior, and Scan Behavior. PSO+K-implies bunching calculation is utilized to anticipate the potential individuals from Botnet. System utilizes the traffic flows, instead of the decapsulated bundle substance, to find the suspicious Bot customers. The principle preferred standpoint of this framework is that client does not require to introduce different discovery applications so it is appropriate for residence arrange, a home system, and a versatile 3G organize.

Pulling social media twitter data into R

Rosham R. Karwa Vishal V. Rathi Parag P. Kadu Ankush R. Deshmukh

***Abstract*- R is software as well as language considered as a dialect of the S language produced by the AT&T BellLaboratories. R is a well- simple and useful programming language which includes conditional statements, loopslike repeat, while, for; user defined functions and input output facilities. R has a valuable data handling and storagefacility. R provides a set of operators like Arithmetical, Relational, Logical which can be used to perform operationson Data Objects like Vector, Factor, Array, List and Data frame. R provides a great, rational and included group oftools for data analysis. R provides graphical facilities for data analysis and demonstrates either directly at thecomputer or printing at the papers. This paper is about how to get setup to pull social media twitter data into R sothat we can do text analytics with it.**

***Keywords*-Twitter, Data Extraction, Analytics, Social Media**

I. INTRODUCTION

Data is factual thing or entity. When data isorganized, processed or presented in a given context,it is called as Information. For example, Student isData whereas his/her percentage is Information asPercentage will be processed. We reside in a world that's drowning in data. Data is not only in Textformat but also in other formats like Image, Video,and Geographical Location etc. That is, Data isavailable in Structured as well as in unstructured datasand study of Data is called as Data Science. In otherterminology, Data science is the multidisciplinaryfield that focuses on finding actionable information inlarge, raw or structured data sets to identify patternsand uncover other insights. The data science domainlooks for to find out answers for areas that arenotidentified and unforeseen. Analysis of this data isvery important. To analyze data, one need toappropriate platform where data will be stored anddata will be retrieved.On Social media like Facebook, Twitter, Instagramand Whatsapp, users express their opinions by meansof Posts, Status, Tweets, Stories or messages. It isvery important to analyze this data and first step inanalyzing data is Extracting Data from SocialMedia. This paper deals with extraction of data(tweets) of Twitter media using R Programminglanguage. [13]R which is both software and programminglanguage is provides different packages that helps toachieve objective. R is Interpreted language that is itis not a Compiled language, there is no need tocompile the code written, it will be directly run oncomsole.

II. PLATFORM FOR PULLING DATA

RStudio is a open source integrated developmentenvironment (IDE) for R programming language. Itwas developed by JJ Allaire and Chief Scientist atRStudio is Hadley Wickham. It is accessible in twoeditions:

1) RStudio Desktop: The program is run locallyas a regular desktop application

2) RStudio Server: It allows accessing RStudiousing a web browser while it is running on aremote server.

III. LANGUAGE USED FOR PULLING DATA

Language used for pulling data from Social MediaTwitter is R Programming [1]. R is InterpretedProgramming language. Once you type commands, itwill be executed directly without compiling. One canperform many operations on R using R like Obtainingsatellite image of Particular area, Reading from file,writing into File, Analyzing data by generatingGraphs & Charts etc. This all functions can beperformed using appropriate package.R Packages contains collection of Functions and itssample data. These are accumulating under directorycalled "Library" in R environment.

To install Package, the syntax is

install.packages ("package_name")

The above command gets the respective package fromCRAN Website and then install in your Renvironment. While installing, it gives message toselect nearest location. Select India (https) if you arein India or otherwise.

IV. PACKAGES REQUIRED FOR PULLING DATA

There are 5 Packages required to do the required task,they are as follows: [8]

1) twitteR
2) bitops
3) ROAuth
4) RCurl
5) RJSONIO

[NC-Race 18]
DOI: 10.5281/zenodo.1488715

ISSN 2348 – 8034
Impact Factor- 5.070

GLOBAL JOURNAL OF ENGINEERING SCIENCE AND RESEARCHES

A NOVEL AUTOMATED BLOOD BANK SYSTEM USING ARDUINO

Vishal V.Rathi [*1] & Roshan Karwa[2]

[*1]Assistant Professor, EXTC Department, Sipna COET, Amravati, India

[2]Assistant Professor, CSE Department, PRMIT&R, Badnera, India

ABSTRACT

Blood is life and it has to be made available as and when required. Obviously, it is a duo involved ,the donor and the recipient .When an earnest request from the recipient is made to reach the donor ,a project from all the useful Android may get involved , and this is how an automated blood bank comes into existence .A heart-to-heart tete-e-tete would be the best answer and their communication could be best initiated by providing a direct link between the two . It requires Micro USB of 5V and 2A power supply only. Entire communication takes place via SMS (Short Messaging Service) which is compatible among all mobile types. "Automated Blood Bank" is a dream come true project ,both for the giver and taker. The passionate sense of the wonder of existence ,which sets in a personal problem of having to ask for that life –fluid ,for self'–nourishment crops up and the ready help is provided by this life saving project. The proposed work explores to find blood donors by using GSM based Arduino Kit. The vision is to be "The hope of every Indian in search of a voluntary blood donor.

Keywords: *Android, SMS, Micro USB, Communication.*

I. INTRODUCTION

Blood is the red fluid that circulates in our blood vessels, i.e. veins and arteries. As for justification. There may or can be no substitutes for wide ranging need for blood, no other possibility to get it so quickly through other alternatives . It cannot be made or manufactured. The more widely it is used ,the more society will become aware of the magic of its utility and practices which make it valuable for a diversity of social purposes. Science has repeatedly insisted on the need to examine the concept of blood and its scope more articulately.

Blood is the human fluid carries out all the participatory function of the body –natural,foetal,biological and all.It is red in colour but with different antigens namely A,B,AB and O and specific about who shall take what .Blood too is fashionable –it has its own matching system.AB is a universal receiver and O is the universal Donor. Group A blood has only the A antigen, group B has only the B antigen, group AB has both and group O has neither.

Blood can be stored for a limited period of time that is why the blood banks need a steady and constant collection.

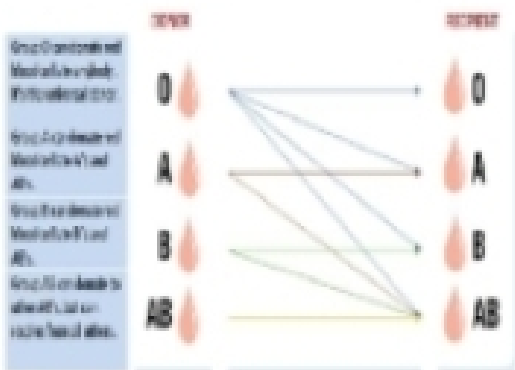


Figure 1.1. Donor- Recipient

Pulling social media twitter data into R

Roshan R. Karwa Vishal V. Rathi Parag P. Kadu Ashish R. Deshmukh

Abstract- R is software as well as language considered as a dialect of the S language produced by the AT&T Bell Laboratories. R is a well- simple and useful programming language which includes conditional statements, loops like repeat, while, for; user defined functions and input output facilities. R has a valuable data handling and storage facility. R provides a set of operators like Arithmetical, Relational, Logical which can be used to perform operations on Data Objects like Vector, Factor, Array, List and Data frame. R provides a great, rational and included group of tools for data analysis. R provides graphical facilities for data analysis and demonstrates either directly at the computer or printing at the papers. This paper is about how to get setup to pull social media twitter data into R so that we can do text analytics with R.

Keywords-Twitter, Data Extraction, Analytics, Social Media

I. INTRODUCTION

Data is factual thing or entity. When data is organized, processed or presented in a given context it is called as Information. For example, Student is Data whereas his/her percentage is Information as Percentage will be processed. We reside in a world that's drowning in data. Data is not only in Text format but also in other formats like Image, Video and Geographical Location etc. That is, Data is available in Structured as well as in unstructured data and study of Data is called as Data Science. In other terminology, Data science is the multidisciplinary field that focuses on finding actionable information in large, raw or structured data sets to identify patterns and uncover other insights. The data science domain looks for to find out answers for areas that are unidentified and unforeseen. Analysis of this data is very important. To analyze data, one need to appropriate platform where data will be stored and data will be retrieved. On Social media like Facebook, Twitter, Instagram and Whatsapp, users express their opinions by means of Posts, Status, Tweets, Stories or messages. It is very important to analyze this data and first step in analyzing data is Extracting Data from Social Media. This paper deals with extraction of data (tweets) of Twitter media using R Programming language. [17] R which is both software and programming language is provides different packages that helps to achieve objective. R is interpreted language that is its not a Compiled language, there is no need to compile the code written, it will be directly run on console.

II. PLATFORM FOR PULLING DATA

RStudio is a open source integrated development environment (IDE) for R programming language. It was developed by JJ Allaire and Chief Scientist at RStudio is Hadley Wickham. It is accessible in two editions:
1) RStudio Desktop: The program is run locally as a regular desktop application
2) RStudio Server: It allows accessing RStudio using a web browser while it is running on a remote server

III. LANGUAGE USED FOR PULLING DATA

Language used for pulling data from Social Media Twitter is R Programming [1]. R is Interpreted Programming language. Once you type commands, it will be executed directly without compiling. One can perform many operations on R using R like Obtaining satellite image of Particular area, Reading from file, writing into File, Analyzing data by generating Graphs & Charts etc. This all functions can be performed using appropriate package. R Packages contains collection of Functions and its sample data. These are accumulating under directory called "Library" in R environment.

To install Package, the syntax is

install.packages ("package_name")

The above command gets the respective package from CRAN Website and then install in your R environment. While installing, it gives message to select nearest location. Select India (https) if you are in India or otherwise.

IV. PACKAGES REQUIRED FOR PULLING DATA

There are 5 Packages required to do the required task, they are as follows: [8]

1) twitteR
2) httpuv
3) ROAuth
4) RCurl
5) RJSONIO

Picture Exchange Communication Software for Person with Intellectual Disabilities

Prof. P. P. Kashi[1] Vaibhav Aher[2] Pratiksha Bende[3] Sneha Tongre[4] Prajakta Kawar[5]
[1][2][3][4][5]Prof. Ram Meghe Institute of Technology and Research, Badnera, India

Abstract— Persons with intellectual disabilities have slow mental development therefore, it is very difficult for them to communicate with general public in society. Such people can't express themselves using language because it is very hard for them to understand and implement sentence construction. The aim of this study is to develop and assess a learning experience the Picture Exchange Communication (PECS) software for Autism Spectrum Disorder (ASD) children's. the underlying objective of this application is to guarantee that autistic children can have a better alternative intervention through the PECS approach so that they would not rely on the therapist's great deal or go to the intervention which is often costly. It will help that person to express themselves so that all kind of anxiety in their mind will be diminish. Such people can't go anywhere their because of their speech disability but with the help of this software they can communicate with other in ASD their all needs. This help them to improve communication so our day will be capable of speaking on their own without any help. In our proposed system, we proposed a step by step communication system for persons having intellectual disabilities with the help of image technologies. To improve the day to day communication, picture exchange communication system is a wide media.

Keywords: ASD, PECS, IoT

I. INTRODUCTION

The picture exchange communication system (PECS) is commonly used as a communication aid for children with autism spectrum disorder (ASD). It has been used with a wide variety of learners, from preschool to adults, who have various communicative, cognitive, and physical impairments. PECS was created in 1985 at the Delaware Autism Program by Lori Frost and Andy Bondy. They stated that usual communication techniques, including speech imitation, sign language, and picture point systems, required the teacher to initiate social interactions and were focused on teaching students to imitate interactions.

PECS is developed to teach functional communication skills with an initial focus on spontaneous communication. It has been and continues to be implemented in a variety of settings and contexts (home, school, community) so users have the skills to communicate their wants and needs. PECS does not need complex or expensive materials since it uses picture symbols as the modality. PECS is a method to instruct young children or any individual with communication impairment a way to communicate within a social context. Research has shown that many preschoolers using PECS also started developing speech. As per the current information, PECS has been shown as an emerging treatment shown to increase communication skills for individuals with ASD. People suffering from the Autistic Spectrum Disorder find the most basic everyday tasks are not easy to perform due to their inability to communicate correctly with others. Consequent time, many efforts have been taken to facilitate the learning of a new language and try to help ASD children and grownups to communicate more easily with other people. The most famous systems nowadays is called the Picture Exchange Communication System (PECS). PECS methodology is very simple and clear. Objects are shown as pictures in cards that are used to express the needs and wants of ASD sufferers. This system has been proven to be very effective in teaching the basics of a language and helping autistic people communicate with others in a social context.

A. Problem Statement

Persons who have autism children usually have difficulties as they need to adjust their daily activities and pay extra attention to their autistic children. Parents can't afford fees for the autism care centers. Life of person having intellectual disabilities is getting harder and harder. Not every parent has that much information about pass so they can't help their child to overcome the difficulties of communication. PECS was delivered in a variety of natural ways, such as homes and schools across the 10 studies. PECS was implemented specifically by experimenters or trained personnel in three studies (Adkins & Axelrod, Chu Sip-Chung et al., 2002, Cruz de Simpson, 2008), while the remaining eight studies trained teachers or parents in the intervention deliveries. There are some software's available related to this topic but they are not efficient in some how only communication facility and some have only limited facility. There is no such software which have capability of doing both in second manner. Some of the Persons software design related to this subject doesn't have voice generation.

II. LITERATURE REVIEW

In [1] proposed methodology there is a tablet-based software named iCAN which will help autism children's language process. These children learn a word needed to be pronounced more than 100 times in order for children with autism to remember it. This was a great burden for the caregivers. With iCAN, children can learn by themselves, much to the relief of the caregivers, which provided an excellent UX when teaching. In terms of the presentation of categories each category has a label, colour, and small pictures become children with autism tend to have better abilities to recognize colors and pictures and after learning basic words, the next step is to learn sentences. iCAN provide an easier way to make sentences that can be essential for future use.

In [2] proposed methodology there is a chat application which is used for communication between two person having intellectual disabilities at long distance by using symbol. The basic set is one evaluation consist of about 2300 symbols. The symbol set includes also a few self-made symbols and pictures of places that are familiar to the test users. Symbols in each category are given a binary priority value, with higher priority symbols being listed at the start of

A review paper on Internet of Things: Applications & Challenges

Shruti G. Taley Prachi N. Deshmukh Rasika S. Badre

Abstract- Nowadays Internet of Things (IoT) gained a good attention from researchers, since it becomes an essential technology that guarantees a rational human being life, by permitting a communications between objects, machines and each thing at the side of peoples. IoT represents a system that consist things within the globe, and sensors attached to or combined to these things, connected to the Internet via wired and wireless network structure. The IoT sensors will use numerous styles of connections like RFID, Wi-Fi, Bluetooth, and ZigBee, additionally to permitting wide area connectivity using several technologies like GSM, GPRS, 3G, and LTE. IoT enabled things can share facts regarding the condition of things and also the encompassing surroundings with individuals, software systems and different machines. By the technology of the IoT, the world can become smart in each aspects, since the IoT can provides a method of smart cities, smart healthcare, smart homes and building, additionally to several necessary applications like smart energy, grid, transportation, waste management and surveillance. In this paper we tend to review a concept of the many IoT applications and challenge that facing the implementation of the IoT.

Keywords: IoT Applications, Future Technologies, Smart Cities, Smart Environment, Smart Energy and Grid, Smart Manufacturing, Smart Healthcare

I. Introduction

The Internet of Things (IoT), sometimes referred to as the Internet of Objects, can unify everything together with ourselves. The Internet has a bearing on education, communication, business, science, government, and humanity [6]. Clearly, the Internet is altogether the most important and powerful creations in all of human history and currently with the construct of the Internet of things, the Internet becomes favorable to possess a smart life in such facet [14].

Internet of Things is new technology of the internet accessing. By the internet of Things, objects acknowledge themselves and procure intelligence behavior by creating or enabling related decisions thanks to the actual fact that they'll communicate data regarding themselves [15]. These objects will access information that has been aggregate by different things, or they'll augment different services [15]. Figure 1 reviews that with the internet of things, anything's can able to communicate to the internet at any time from anyplace to provide any services by any network to anyone. This idea can produce an alternate kind of applications which will involve smart vehicle and the smart home, to provide several services like notifications, security, energy saving, automation, communication, computers and entertainment [11, 12].

Figure 1: Internet of things Concept

By developing the IoT technology, testing and deploying product will be a lot of short to implementing smart environments by 2020 [10]. in the near future, storage and communication services will be highly persistent and distributed. individuals, machines, smart objects, surrounding space and platforms connected with wireless/wired sensors, MEM devices, RFID tags can produce a extremely subordinated resources interconnected by a dynamic network of networks [15].

In the IoT, the communication happens will be based on interoperable protocols, operational in heterogeneous environments and platforms [16]. IoT during this context could be a generic term and every one objects will play a lively role to their association to the internet by making smart environments, where the role of the internet has customized [17].

A Review on Smart Object Based on IOT

Prof. Rasika S. Badre   Prof. ShrutiG.Taley   Prof. Prachi N. Deshmukh

Abstract- Nowadays we live in a world, which a period ago would only be described in the science fiction literature. Daybe day things become smart and both scientists and engineers struggle for developing not only new undisnovative devices, but also homes, factories, or even cities. Despite of non-stop development, many of theseconcepts are still being just a vision of the future, which still desires a lot of effort to become true. This paperreviews the usage of adjective smart in respect to technology and with a special emphasis on the smart factoryconcept placement among modern studies. Due to a absence of a consensus of common understanding of thisterm, a unified definition is proposed. The reconceptualization will not only refer to different smart factory visionsreported in the literature, but also link the fundamental characteristics of this emerging manufacturing concept toward manufacturing practice. Subsequently, the authors discuss the challenges of the potential smart factoryapplications in SMEs, and also propose the future research viewpoint in order to further develop the smartfactory concept.

Keywords- Smart Factory; U Factory;Real Time Factory;Manufacturing of the Future;SMEs; adaptive; flexible;automation.

I. Introduction

Currently people are surrounded by several things that are called smart. Nearly everybody have a smartphone, some people have smart homes [16], which are related to smart grids [1]. South Korea's government in collaboration with the local industry has even launched the project to form the smart city [6]. In order to produce these large smart systems, smart devices [20] have been used. The label smart (and interchangeably used- intelligent) looks to be abused in many different contexts, because its meaning with favours to objects is yet not clearly defined. Smart, in some contexts, refers to an independent device, which mostly consists of following: a sensor, and/or an actuator, a microcomputer and a transceiver [21]. Nevertheless, adjective smart is also normally used to characterize an object that was improved by implementation of further features, which introduce multiplatform communication and increase its computational abilities. The intelligence of such device can be exposed by cooperation in a network of other smart devices, which have the ability to check the system state updates and decide whether to act on them or does not act on system [24]. What is not surprising, such a network is called a smart network [24]. One can also find a reference to smart objects, as items having the ability to store the link related data as well as it may offer access to it for a human or machine user[28]. There are also smart products, which are equipped with the memory understood as a sort of product [28]. In the case of homes, smart is commonly used as a synonym of extensively automated [27] [24]. It can also refers to homes with systems for monitoring and controlling the appliances [1]. Now, what is important, a monitoring function could not be limited to turning devices on and off; devices involved in a smart house should be able to operate semi- autonomously conforming to the predefined patterns or user requirements [27]. The overuse of the adjective smart is frequently faced. Like, some scholars write about smart radio-frequency identification (RFID) tags [3]. Even though RFID tags observe with a number of above mentioned definitions of smart devices, there are characteristic properties of each RFID tag, so adding a RFID tag label smart is a misuse (due to the lack of enhancement of a basic product). It has been observed, that scholars have started to use the term smart factories in describing their apparitions of future manufacturing. Nevertheless, there is no agreement about a clear definition of what smart means in respect to manufacturing facility. That's why, the motivation of this paper is to survey a considerable literature and summarize the smart factory concepts from a combination of shared literature streams in order to simplify the term and develop a uniform definition that will contribute to the future research within this area.

II. Smart Factory -Various Visions of a Concept

The term smart factory is used by both industrialpractitioners and scholars, but there is no consistentdefinition for smart factory. There are some otherterms used interchangeably: aU-Factory(ubiquitous factory) [15], a factory-of-things [7], real-time factory [9], or an intelligent factory of thefuture [3]. Smart factory refers as a technology [4],an approach [9][7],or a paradigm [15].

2.1. A conceptual framework of the Ubiquitous Factory

Yoon et al. [15],have expand a conceptualframework based on the product design, recycling and manufacturing, via so called

Open Research Issues, Tools andChallenges in Big Data Analytics

Prof. Prachi N. Deshmukh Prof. Radika S. Badre Prof. Shruti G. Taley

Abstract. A large storage area of terabytes of data is generated each day from modern information systems and digitaltechnologies such as Internet of Things and cloud computing. Study of these massive data requires a lot ofefforts at multiple levels to extract knowledge for decision making. Therefore, big data analysis is a current areaof study and improvement. The basic goal of this paper is to explore the possible impact of big data challenges,open research issues, and various tools related with it. As a result, this article provides a platform to explore bigdata at various stages. Additionally, it opens a new possibility for researchers to extend the result, based on thechallenges and open research issues.

***Keywords*—Big data analytics; Hadoop; Massive data; Structured data; Unstructured Data.**

I. Introduction

In digital world, information are generatedfrom different sources and the rapid transition fromdigital technologies has led to growth of big data. Itprovides evolutionary breakthroughs in many fieldswith gathering of large datasets. In general, it referstto the collection of large and difficult datasetswhich are difficult to process using establisheddatabase management tools or data processingapplications. These are obtainable in structured,semi-structured, and unstructured format inpetabytes and outside. Formally, it is distinct from3Vs to 4Vs. 3Vs refers to volume, velocity, andvariety. Volume refers to the large amount of datathat are being generated everyday whereas velocityis the rate of growth and how fast the data aregathered for being analysis. Variety provideinformation about the types of data such asstructured, unstructured, semi-structured etc. Thefourth V refers to veracity that includesaccessibility and responsibility. The prime goal ofbig data analysis is to method data of high volume,velocity, variety, and veracity using various andtraditional computational intelligent techniques [11].Generally, Data warehouses have been used tocontrol the big dataset. In this case extracting theexact knowledge from the accessible big data is aforemost issue. The key problem in the analysis ofbig data is the need of organization betweendatabase systems as well as with analysis toolssuch as data mining and statistical analysis. Thesechallenges generally occur when we wish toexecute knowledge discovery and demonstrationfor its practical applications. Additionally, thestudy on difficulty theory of big data will helpunderstand required characteristics and formationof difficult patterns in big data, simplify itsrepresentation, gets better knowledge abstraction,and guide the design of computing models andare interested in disseminating the findings of bigdata. This paper focuses on *challenges in big dataand its available techniques.*

II. OPEN RESEARCH ISSUES IN BIG DATA ANALYTICS

Big data analytics and data science arebecoming the research main point in industries andacademia. Data science aims at researching bigdata and knowledge extraction from data.Applications of big data and data science containinformation science, uncertainty modeling,uncertain data analysis, machine learning,statistical learning, pattern recognition, data warehousing, and signal processing. Main focus ofthis section is to discuss open research issues in bigdata analytics. The research issues pertaining to bigdata analysis are classify into three big categoriesnamely internet of things (IoT), cloud computing,bio inspired computing, and quantum computing.

A. IoT for Big Data Analytics

Internet has simplified globalinterrelations, the ability of businesses, culturalrevolutions and an incredible number of personalcharacteristics. Currently, machines are getting intothe act to control incalculable autonomousgadgets via internet and create Internet of Things(IoT). Thus, appliances are appropriate the user ofthe internet, just like humans with the webbrowsers. Internet of Things is attracting the noticeof recent researchers for its most capableopportunities and

Pulling social media twitter data into R

Roshan R. Kanwa Vishal V. Rathi Parag P. Kadu Ankush R. Deshmukh

Abstract- R is software as well as language considered as a dialect of the S language produced by the AT&T Bell Laboratories. R is a well- simple and useful programming language which includes conditional statements, loops like repeat, while, for; user defined functions and input output facilities. R has a valuable data handling and storage facility. R provides a set of operators like Arithmetical, Relational, Logical which can be used to perform operations on Data Objects like Vector, Factor, Array, List and Data frame. R provides a great, rational and included group of tools for data analysis. R provides graphical facilities for data analysis and demonstrates either directly at the computer or printing at the papers. This paper is about how to get setup to pull social media twitter data into R, what we can do text analytics with R.

Keywords-Twitter, Data Extraction, Analytics, Social Media

I. INTRODUCTION

Data is factual thing or entity. When data isorganized, processed or presented in a given context,it is called as Information. For example, Student isData whereas his/her percentage is Information isPercentage will be processed. We reside in a world that's drowning in data. Data is not only in Textformat but also in other formats like Image, Video,and Geographical Locations etc. That is, Data isavailable in Structured as well as in unstructured data,and study of Data is called as Data Science. In otherterminology, Data science is the multidisciplinaryfield that focuses on finding actionable information inlarge, raw or structured data sets to identify patternsand uncover other insights. The data science demandsthe to find out answers for areas that areunidentified and unforeseen. Analysis of this data isvery important. To analyze data, one need toappropriate platform where data will be stored anddata will be retrieved.On Social media like Facebook, Twitter, Instagramand Whatsapp, users express their opinions by statusof Posts, Status, Tweets, Stories or messages. It isvery important to analyze this data and first step instudying data is Extracting Data from SocialMedia. This paper deals with extraction of data(tweets) of Twitter media using *R Programming*language. [1][2]R which is both software and programminglanguage is provides different packages that helps toachieve objective. R is interpreted language that is its not a Compiled language, there is no need tocompile the code written, it will be directly run oncecode.

II. PLATFORM FOR PULLING DATA

RStudio is a open source integrated developmentenvironment (IDE) for R programming language. Itwas developed by JJ Allaire and Chief Scientist atRStudio is Hadley Wickham. It is accessible in twoeditions:
1) RStudio Desktop: The program is run locallyas a regular desktop application.
2) RStudio Server: It allows accessing RStudiousing a web browser while it is running on aremote server.

III. LANGUAGE USED FOR PULLING DATA

Language used for pulling data from Social MediaTwitter is R Programming [1]. R is InterpretedProgramming language. Once you type commands, itwill be executed directly without compiling. One canperform many operations on R using R like Obtainingsatellite image of Particular area, Reading from file,writing into File, Analyzing data by generatingGraphs & Charts etc. This all functions can beperformed using appropriate package.R Packages contains collection of Functions and itsexample data. These are accumulating under directorycalled "Library" in R environment.

To install Package, the syntax is

install.packages ("package_name")

The above command gets the respective package fromCRAN Website and then install in your Renvironment. While installing, it gives message toselect nearest location. Select India (https) if you arein India or otherwise.

IV. PACKAGES REQUIRED FOR PULLING DATA

There are 5 Packages required to do the requiredtask,they are as follows: [3]

1) twitteR
2) httpuv
3) ROAuth
4) RCurl
5) RJSONIO

A Review on Smart Object Based on IOT

Prof. Rasika S. Hadre **Prof. Shruti G. Taley** **Prof. Prachi N. Deshmukh**

Abstract- Nowadays we live in a world, which a period ago would only be described in the science fiction literature. Daily day things become smart and both scientists and engineers struggle for developing not only new and innovative devices, but also homes, factories, or even cities despite of non stop development, many of these concepts are still being just a vision of the future, which still desires a lot of effort to become true. This paperreviews the usage of adjective smart in respect to technology and with a special emphasis on the smart factoryconcept placement among modern studies. due to a absence of a consensus of common understanding of theterm, a unified definition is proposed. The conceptualization will not only refer to different smart factory viewsreported in the literature, but also link the fundamental characteristics of this emerging manufacturing concept toreal manufacturing practice. Subsequently, the authors discuss the challenges of the potential smart factoryapplications in SMEs, and also propose the future research viewpoint in order to further develop the smartfactory concept.

(Keywords-Smart Factory; U-Factory;Real-Time Factory;Manufacturing of the Future;SMEs; adaptive; flexible;automation.

I. INTRODUCTION

Currently people are surrounded by several things that are called smart. Nearly everybody have a smartphone, some people have smart homes [16], which are related to smart grids [1]. South Korea's government in collaboration with the local industry has even launched the project to form the smart city [4]. In order to produce these large smart systems, smart devices [28] have been used. The label smart (and interchangeably used intelligent) looks to be abused in many different contexts, because its meaning with favours to objects is yet not clearly defined. Smart, in some contexts, refers to an independent device, which usually consists of following: a sensor, and/or an actuator, a microcomputer and a transceiver [24]. Nevertheless, adjective smart is also usually used to characterize an object that was improved by implementation of further features, which introduce multiplatform communications and increase its computational abilities. The intelligence of such device can be exposed by cooperation in a network of other smart devices, which have the ability to check the system state updates and decide whether to act on them or does not act on system [24]. What is not surprising, such a network is called a smart network[24].One can also find a reference to smart objects, as items having the ability to store the link related data as well as it may offer access to it for a human or machine user[28]. There are also smart products, which are equipped with the memory understood as a sort of product. [26]. In the case of homes, smart is commonly used as a synonym of excessively automated [27] [24]. It can also refers to homes with systems for monitoring and controlling the appliances [1]. Now, what is important, a monitoring function could not be limited to turning devices on and off: devices involved in a smart house should be able to operate semi– autonomously conforming to the predefined patterns or user requirements [27]. The overuse of the adjective smart is frequently faced. Like, some scholars write about smart radio-frequency identification (RFID) tags [3]. Even though RFID tags observe with a number of above mentioned definitions of smart devices, there are characteristic properties of each RFID tag, so adding a RFID tag label smart is a misuse (due to the lack of enhancement of a basic product). It has been observed, that scholars have started to use the term smart factories in describing their apparitions of future manufacturing. Nevertheless, there is no agreement about a clear definition of what smart means in respect to manufacturing facility. That's why, the motivation of this paper is to survey a considerable literature and summarize the smart factory concepts from a combination of altered literature streams in order to simplify the term and develop a uniform definition that will contribute to the future research within this area.

II. SMART FACTORY-VARIOUS VISIONS OF ACONCEPT

The term smart factory is used by both industrialpractitioners and scholars, but there is no consistentdefinition for smart factory. There are some otherterms used in exchangeably of:- Factory(ubiquitous factory) [15], a factory-of-things [7], seamless factory [9], or an intelligent factory of thefuture [3]. Smart factory refers as a technology [4],as approach [9][7],or a paradigm [15].

2.1. A conceptual framework of the Ubiquitous Factory

Yoon et al. [15]have expand a conceptualframework based on the product design, recyclingand manufacturing, via so called

A review paper on Internet of Things: Applications & Challenges

Shruti G. Taley **Prachi N. Deshmukh** **Rasika S. Badre**

Abstract **Nowadays Internet of Things (IoT) gained a good attention from researchers, since it becomes an essential technology that guarantees a rational human being life, by permitting a communications between objects, machines and each thing at the side of peoples. IoT represents a system that consist things within the globe, and sensors attached to or combined to those things, connected to the Internet via wired and wireless network structure. The IoT sensors will use numerous styles of connections like RFID, Wi-Fi, Bluetooth, and ZigBee, additionally to permitting wide area connectivity using several technologies like GSM, GPRS, 3G, and LTE. IoT enabled things can share facts regarding the condition of things and also the encompassing surroundings with individuals, software systems and different machines. By the technology of the IoT, the world can become smart in each aspects, since the IoT can provides a method of smart cities, smart healthcare, smart homes and building, additionally to several necessary applications like smart energy, grid, transportation, waste management and surveillance. In this paper we tend to review a concept of the many IoT applications and challenge that facing the implementation of the IoT.**

Keywords: IoT Applications, Future Technologies, Smart Cities, Smart Environment, Smart Energy and Grid, Smart Manufacturing, Smart Healthcare.

I. INTRODUCTION

The Internet of Things (IoT), sometimes referred to as the Internet of Objects, can modify everything together with ourselves. The Internet has a bearing on education, communication, business, science, government, and humanity [6]. Clearly, the Internet is altogether the most important and powerful creations in all of human history and currently with the construct of the Internet of things, the Internet becomes favorable to possess a smart life in each facet [14].

Internet of Things is new technology of the internet accessing. By the internet of Things, objects acknowledge themselves and procure intelligence behavior by creating or enabling related decisions thinks to the actual fact that they'll communicate data regarding themselves [15]. These objects will access information that has been aggregate by different things, or they'll augment different services [15]. Figure 1 reviews that with the internet of things; anything's can able to communicate to the internet at any time from anyplace to provide any services by any network to anyone. This idea can produce an alternate kind of applications which will involve smart vehicle and the smart home, to provide several services like notifications, security, energy saving, automation, communication, computers and entertainment [11, 12].

Figure 1: Internet of things Concept

By developing the IoT technology, testing and deploying product will be a lot of about to implementing smart environments by 2020 [10]. in the near future, storage and communication services will be highly persistent and distributed: individuals, machines, smart objects, surrounding space and platforms connected with wireless/wired sensors, M2M devices, RFID tags can produce a extremely suburbanized resources interconnected by a dynamic network of networks [13].

In the IoT, the communication language will be based on interoperable protocols, operational in heterogeneous environments and platforms [16]. IoT during this context could be a generic term and every one objects will play a lively role to their association to the internet by making smart environments, where the role of the internet has customized [17].

61st IETE Annual Convention 2018 on "Smart Engineering for Sustainable Development"
Special Issue of IJECSCSE, ISSN: 2277-9477

A Review on Cluster between Internet of things and Social Network

Ms.S.G.Pundkar, Ms.R.S.Badre, Ms.N.A.Deshmukh, Mr.A.U.Chaudhari

Abstract- **The clustering between Internet of Things and social networks enables the relation of people to the everywhere computing universe. In this framework, the data coming from the situation is provided by the Internet of Things, and the social networks bring the bond to allow human-to-device communications. This paper explores the novel paradigm for everywhere computing beyond IoT, denoted by Social Internet of Things. Therefore, this paper first addresses a complete view on Social Internet of Things and input perspectives to imagine the real everywhere computing. Later, a literature evaluate is accessible along with the evolutionary the past of IoT research from Intranet of Things to Social Internet of Things. Finally, this paper proposes a basic Social Internet of Things architecture and presents a conversation about enabling technologies, research challenges, and open issues.**

Keywords- **Internet of Things , Social Internet of Things , Social Networks**

I. Introduction

The position on the edge of a new age with actual ubiquitous computing and communication where many gadgets, such as sensors, RFID tags, and smart electronic devices, surrounding us will be on the association [1], [2]. The gadgets would vanish and interlace themselves into the material of our daily life to work in show to support us in shipping out daily life actions, tasks and rituals in an easy, natural way using information and intelligence, hidden in the network connecting the gadgets. [1], [4]. The IoT vision of pervasively involving many things which is able to interact with the surroundings around us and receive data on its type that was earlier unavailable by just looking at a collection of things [5]. In other words, in earlier Intranet of Things [5], [6], which was a local network of a collection of things such as wireless sensor networks (WSNs), machine-to-machine (M2M), and smart homes, can only take out regional data containing particular content from the things, IoT can present large scale, inclusive, and historical data by collaborating between apart intranets of things even if they have regarding devices, local announcement technologies, and consumption goals. Furthermore, IoT enables the making and composition of new services and applications, offering to personality users a new ecology system where special intranets of things can combine. In Internet of things, as revealed over, an individual user connects to the others via heritage networks; on the other hand, sets of things work together with each other via the Internet for offering information to stylish services and applications, while each user uses them. The IoT follows two interaction paradigms: 1) person-to-person and 2) object-to-object, and then person simply make use of information from object as an elderly shaped client-server communication model [7],[8]. In this way the IoT so far does not agree to a right connection between person and object, i.e., human-to-thing, for real everywhere computing [6]. In order to practically mix the ubiquitous computing in our outlook daily life with high quality, we need to progress the connection of all the associations between users and object, and to enhance the availability of computational control via sets of things surrounding us. This logical pattern can be realized from side to side exhibiting features from humans social network and adopts them for the suggested universal social network of all entities. The feature set can include the interactivity idea, profiling system, advice, and mash up of services. This social network assists in the rising of new communities motivated by increasing social, inborn from traditional social networks, could give the opportunity to realize customer requirements, and thus they also recover the accessibility based on belief in each group of people. In fact, growing the accessibility of processing power would be accompanied by diminishing the visibility [1], [9]. Thus, this novel dangerous vision with better publicity is denoted by SIoT.

2. SIoT Architecture

To review our idea toward a future-driven SIoT, we consider the following elements to be part of the architecture:

1) Actors
2) An intelligent system
3) An interface and
4) Internet.

Next, we discuss about each element in the architecture in detail (see Fig. 1).

Open Research Issues, Tools andChallenges in Big Data Analytics

Prof. Prachi N. Deshmukh Prof. Rasika S. Badre Prof. Shruti G. Tukey

Abstract **A huge storage area of terabytes of data is generated each day from modern information systems and digitaltechnologies such as Internet of Things and cloud computing. Study of these massive data requires a lot ofefforts at multiple levels to extract knowledge for decision making. Therefore, big data analysis is a current areaof study and improvement. The basic goal of this paper is to explore the possible impact of big data challenges,open research issues, and various tools related with it. As a result, this article provides a platform to explore bigdata at various stages. Additionally, it opens a new possibility for researchers to extend the result, based on thechallenges and open research issues.**

Keywords **Big data analytics; Hadoop; Massive data; Structured data; Unstructured Data.**

I. INTRODUCTION

In digital world, information are generatedfrom different sources and the rapid transition fromdigital technologies has led to growth of big data. Itprovides evolutionary breakthroughs in many fieldswith gathering of large datasets. In general, it refersto the collection of large and difficult datasetswhich are difficult to process using establisheddatabase management tools or data processingapplications. These are obtainable in structured,semi-structured, and unstructured format inpetabytes and outside. Formally, it is distinct fromVs to 4Vs. 3Vs refers to volume, velocity, andvariety. Volume refers to the large amount of datathat are being generated everyday whereas velocityis the rate of growth and how fast the data arecollected for being analysis. Variety providesinformation about the types of data such asstructured, unstructured, semi-structured etc. Thefourth V refers to veracity that includesaccessibility and responsibility. The prime goal ofbig data analysis is to method data of high volume,velocity, variety, and veracity using various usualand computational intelligent techniques [1][].Generally, Data warehouses have been used tocontrol the big dataset. In this case extracting thexact knowledge from the accessible big data is aforemost issue. The key problem in the analysis ofbig data is the need of organization betweendatabase systems as well as with analysis toolssuch as data mining and statistical analysis. Thesechallenges generally occur when we wish toexecute knowledge discovery and demonstrationfor its practical applications. Additionally, thestudy on difficulty theory of big data will helpunderstand required characteristics and formationof difficult patterns in big data, simplify itsrepresentation, gets better knowledge abstraction,and guide the design of computing models andbe interested in disseminating the findings of bigdata. This paper focuses on challenges in big dataand its available techniques.

II. OPEN RESEARCH ISSUES IN BIG DATA ANALYTICS

Big data analytics and data science arebecoming the research main point in industries andacademia. Data science aims at researching bigdata and knowledge extraction from data.Applications of big data and data science containinformation science, uncertainty modeling,uncertain data analysis, machine learning,statistical learning, pattern recognition, data warehousing, and signal processing. Main focus ofthis section is to discuss open research issues in bigdata analytics. The research issues pertaining to bigdata analysis are classify into three big categories,namely internet of things (IoT), cloud computing,bio inspired computing, and quantum computing.

A. IoT for Big Data Analytics

Internet has simplified globalinterrelations, the ability of businesses, culturalrevolutions and an incredible number of personalcharacteristics. Currently, machines are getting into the act to control incalculable autonomousgadgets via internet and create Internet of Things(IoT). Thus, appliances are appropriate the user ofthe internet, just like humans with the webbrowsers. Internet of Things is attracting the noticed of recent researchers for its most capableopportunities and

Open Research Issues, Tools andChallenges in Big Data Analytics

Prof. Prachi N. Deshmukh Prof. Rasika S. Badre Prof. Shruti G. Tukey

Abstract **A huge storage area of terabytes of data is generated each day from modern information systems and digitaltechnologies such as Internet of Things and cloud computing. Study of these massive data requires a lot ofefforts at multiple levels to extract knowledge for decision making. Therefore, big data analysis is a current areaof study and improvement. The basic goal of this paper is to explore the possible impact of big data challenges,open research issues, and various tools related with it. As a result, this article provides a platform to explore bigdata at various stages. Additionally, it opens a new possibility for researchers to extend the result, based on thechallenges and open research issues.**

Keywords **Big data analytics; Hadoop; Massive data; Structured data; Unstructured Data.**

I. INTRODUCTION

In digital world, information are generatedfrom different sources and the rapid transition fromdigital technologies has led to growth of big data. Itprovides evolutionary breakthroughs in many fieldswith gathering of large datasets. In general, it refersto the collection of large and difficult datasetswhich are difficult to process using establisheddatabase management tools or data processingapplications. These are obtainable in structured,semi-structured, and unstructured format inpetabytes and outside. Formally, it is distinct fromVs to 4Vs. 3Vs refers to volume, velocity, andvariety. Volume refers to the large amount of datathat are being generated everyday whereas velocityis the rate of growth and how fast the data arecollected for being analysis. Variety providesinformation about the types of data such asstructured, unstructured, semi-structured etc. Thefourth V refers to veracity that includesaccessibility and responsibility. The prime goal ofbig data analysis is to method data of high volume,velocity, variety, and veracity using various usualand computational intelligent techniques [1][].Generally, Data warehouses have been used tocontrol the big dataset. In this case extracting thexact knowledge from the accessible big data is aforemost issue. The key problem in the analysis ofbig data is the need of organization betweendatabase systems as well as with analysis toolssuch as data mining and statistical analysis. Thesechallenges generally occur when we wish toexecute knowledge discovery and demonstrationfor its practical applications. Additionally, thestudy on difficulty theory of big data will helpunderstand required characteristics and formationof difficult patterns in big data, simplify itsrepresentation, gets better knowledge abstraction,and guide the design of computing models andbe interested in disseminating the findings of bigdata. This paper focuses on challenges in big dataand its available techniques.

II. OPEN RESEARCH ISSUES IN BIG DATA ANALYTICS

Big data analytics and data science arebecoming the research main point in industries andacademia. Data science aims at researching bigdata and knowledge extraction from data.Applications of big data and data science containinformation science, uncertainty modeling,uncertain data analysis, machine learning,statistical learning, pattern recognition, data warehousing, and signal processing. Main focus ofthis section is to discuss open research issues in bigdata analytics. The research issues pertaining to bigdata analysis are classify into three big categories,namely internet of things (IoT), cloud computing,bio inspired computing, and quantum computing.

A. IoT for Big Data Analytics

Internet has simplified globalinterrelations, the ability of businesses, culturalrevolutions and an incredible number of personalcharacteristics. Currently, machines are getting into the act to control incalculable autonomousgadgets via internet and create Internet of Things(IoT). Thus, appliances are appropriate the user ofthe internet, just like humans with the webbrowsers. Internet of Things is attracting the noticed of recent researchers for its most capableopportunities and

A review paper on Internet of Things: Applications & Challenges

Shruti G. Taley **Prachi N. Deshmukh** **Rasika S. Rudre**

Abstract *Nowadays* **Internet of Things (IoT) gained a good attention from researchers, since it becomes an essential technology that guarantees a rational human being life, by permitting a communications between objects, machines and each thing at the side of peoples. IoT represents a system that consist things within the globe, and sensors attached to or combined to those things, connected to the Internet via wired and wireless network structure. The IoT sensors will use numerous styles of connections like RFID, Wi-Fi, Bluetooth, and ZigBee, additionally to permitting wide area connectivity using several technologies like GSM, GPRS, 3G, and LTE. IoT enabled things can share facts regarding the condition of things and also the encompassing surroundings with individuals, software systems and different machines. By the technology of the IoT, the world can become smart in each aspects, since the IoT can provides a method of smart cities, smart healthcare, smart homes and building, additionally to several necessary applications like smart energy, grid, transportation, waste management and surveillance. In this paper we tend to review a concept of the many IoT applications and challenge that facing the implementation of the IoT.**

Keywords: IoT Applications, Future Technologies, Smart Cities, Smart Environment, Smart Energy and Grid, Smart Manufacturing, Smart Healthcare.

I. INTRODUCTION

The Internet of Things (IoT), sometimes referred to as the Internet of Objects, can modify everything together with ourselves. The Internet has a bearing on education, communication, business, science, government, and humanity [6]. Clearly, the Internet is altogether the most important and powerful creations in all of human history and concretely with the construct of the Internet of things, the Internet becomes favorable to possess a smart life in each facet [14].

Internet of Things is new technology of the internet assessing. By the internet of Things, objects acknowledge themselves and procure intelligence behavior by creating or enabling related decisions thanks to the actual fact that they'll communicate data regarding themselves [15]. These objects will access information that has been aggregate by different things, or they'll augment different services [15]. Figure 1 reviews that with the internet of things, anything's can able to communicate to the internet at any time from anyplace to provide any services by any network to anyone. This idea can produce an alternate kind of applications which will involve smart vehicle and the smart house, to provide several services like notifications, security, energy saving, automations, communication, computers and entertainment [11, 12].

Figure 1: Internet of things Concept

By developing the IoT technology, testing and deploying product will be a lot of about to implementing smart environments by 2020 [16]. in the near future, storage and communication services will be highly persistent and distributed: individuals, machines, smart objects, surrounding space and platforms connected with wireless/wired sensors, M2M devices, RFID tags can produce a extremely subordinated resources interconnected by a dynamic network of networks [13].

In the IoT, the communication language will be based on interoperable protocols, operational in heterogeneous environments and platforms [16]. IoT during this context could be a generic terms and every one objects will play a lively role to their association to the internet by making smart environments, where the role of the internet has customized [17].

61st ITT Annual Convention 2016 on "Smart Engineering for Sustainable Development"
Special Issue of IJECSCSE, ISSN: 2277-9477

Open Research Issues, Tools andChallenges in Big Data Analytics

Prof. Prachi N. Deshmukh Prof. Rasika S. Badre Prof. Shruti G. Taley

Abstract: A huge storage area of terabytes of data is generated each day from modern information systems and digitaltechnologies such as Internet of Things and cloud computing. Study of these massive data requires a lot offforts at multiple levels to extract knowledge for decision making. Therefore, big data analysis is a current areaof study and improvement. The basic goal of this paper is to explore the possible impact of big data challenges,open research issues, and various tools related with it. As a result, this article providesa platform to explore bigdata at various stages. Additionally, it opens a new possibility for researchers to extend the result, based on thechallenges and open research issues.

Keywords: Big data analytics; Hadoop; Massive data; Structured data; Unstructured Data.

I. INTRODUCTION

In digital world, information are generatedfrom different sources and the rapid transition fromdigital technologies has led to growth of big data. Itprovides evolutionary breakthroughs in many fieldswith gathering of large datasets. In general, it refersto the collection of large and difficult datasetswhich are difficult to process using establisheddatabase management tools or data processingapplications. These are obtainable in structured,semi-structured, and unstructured format inpetabytes and outside. Formally, it is distinct from3Vs to 4Vs. 3Vs refers to volume, velocity, andvariety. Volume refers to the large amount of datathat are being generated everyday whereas velocityis the rate of growth and how fast the data arecollected for being analysis. Variety provideinformation about the types of data such asstructured, unstructured, semi-structured etc. Thefourth V refers to veracity that includesaccessibility and responsibility. The prime goal ofbig data analysis is to method data of high volume,velocity, variety, and veracity using various usefuland computational intelligent techniques [1][].Generally, Data warehouses have been used tocontrol the big dataset. In this case extracting theexact knowledge from the accessible big data is aforemost issue. The key problem in the analysis ofbig data is the need of organization betweendatabase systems as well as with analysis toolssuch as data mining and statistical analysis. Thesechallenges generally occur when we wish toexecute knowledge discovery and demonstrationfor its practical applications. Additionally, thestudy on difficulty theory of big data will helpunderstand required characteristics and formationof difficult patterns in big data, simplify itsrepresentation, gets better knowledge abstraction,and guide the design of computing models andare interested in disseminating the findings of bigdata. This paper focuses on challenges in big datand its available techniques.

II. OPEN RESEARCH ISSUES IN BIG DATA ANALYTICS

Big data analytics and data science arebecoming the research main point in industries andacademia. Data science aims at researching bigdata and knowledge extraction from data.Applications of big data and data science containinformation science, uncertainty modeling,uncertain data analysis, machine learning,statistical learning, pattern recognition, data warehousing, and signal processing. Main focus ofthis section is to discuss open research issues in bigdata analytics. The research issues pertaining to bigdata analysis are classify into three big categoriesnamely internet of things (IoT), cloud computing,bio inspired computing, and quantum computing.

A. IoT for Big Data Analytics

Internet has simplified globalinterrelations, the ability of businesses, culturalrevolutions and an incredible number of personalcharacteristics. Currently, machines are getting into the act to control incalculable autonomousgadgets via internet and create Internet of Things(IoT). Thus, appliances are appropriate the user offthe internet, just like humans with the webbrowsers. Internet of Things is attracting the noticeof recent researchers for its most capableopportunities and

SECURITY IN ANDROID OS

Prof. Sumedh P. Ingale **Prof. Ankit R.Mune** **Prof. Aditya O. Sable**

Abstract– **Today's Smartphones are small personal computers with added services, because of it we say that next generations of operatingsystem will be on these handheld Smartphones and the OS of these Smartphones are similar to windows, IOS and android areshowing us the way to the future. Android OS has already gained significant popularity over its counterparts and in terms gainedmuch of market share. One of the reason behind this result and most important feature of Android is that it is open source andDeveloper friendly so anyone could easily develop their own applications and publish them freely. This openness of androidbrings the developers and users a wide range of convenience but leads to some gaps in security. One of the major threat ofAndroid users is Malware Infection via Android Applications which is targeting some loopholes in the architecture mainly on theend-users part. In this paper we presents the current state of Android OS its security mechanisms and their limitations.**

Keywords–**Android, Android Security, Architecture, Threats, Malware, Smartphone.**

I. Introduction

Android OS is a modern mobile platform OS that wasdesigned to be truly open. In the OS Android applicationsmake use of advanced hardware and software, as well as localand served data exposed through the platform to bringinnovation and value to consumers [1]. Android wasdeveloped by the Open Handset Alliance (which was visiblyled by Google), is OS based on Linux platform [2]. It is now widely used open source operating system for mobiledevices which provides a base OS, an application middlewarelayer, a Java software development kit (SDK) and a collectionof system applications .The widespread usage of Smartphonesand with its increasing functionalities to meet newrequirements has made both industry and common consumersto rely on these handheld devices for their daily life routine .The most striking feature of Android OS is its openness .Because of which anybody can publish their applicationsfreely on the android market . This openness brings largenumbers of developers which use these platform, but with theseopenness comes some risk as likes that user is may downloadand use a malicious software made hackers causing harm totheir privacy .Thus we need to study of the SecurityMechanisms for Android and on the way make it simple andmore understandable making the user And make the end-useraware of areas where he has to be careful.

II. Android Overview

The Android operating system began its release with Android beta in November 2007. It was designed with keeping in mind, with both the developers and the end user, because of which the for the developer can easily develop its idea into and application and user is given some visibility over applications work. The first complete version Android 1.0 was released in September 2008. Android is under ongoing development by Google and the Open Handset Alliance (OHA) is a consortium of 84 firms, and has seen a number of updates to its base operating system since its initial release. Since April 2009, Android versions have been developed under a confectionery-themed code name with significant first improvement over time to time is listed below

Cupcake (1.5)
Soft-keyboard with text-prediction, Record/watch videos,Bluetooth A2DP, AVRCP support

Donut (1.6)
Turn-by-turn navigation , Gesture framework

Éclair (2.0–2.1)
HTML, Microsoft Exchange support, Bluetooth 2.1,Digitalzoom, Live Wallpapers,Updated UI

Froyo (2.2–2.2.3)
Speed improvements, JIT implementation, Applicationsinstallation to the expandable memory, Upload file support inthe browser, USB Tethering, Animated GIF

Gingerbread (2.3–2.3.7)
Updated UI, Improved copy/paste, Improved keyboard easeof use, Improved power management, Near FieldCommunication support, Native VoIP/SIP support, Video callsupport, Social networking features.

Honeycomb (3.0–3.2.6)

Multi core support, Media/Picture transport protocol,Updated 3D UI, Private browsing, Better tablet support, HTTP Live streaming, System-wide Clipboard.

Ice Cream Sandwich (4.0–4.0.4)

61stIETE Annual Convention 2018 on "Smart Engineering for Sustainable Development"
Special Issue of IJECSCSE, ISSN: 2277-9477

SECURITY IN ANDROID OS

Prof. Sumedh P. Ingale **Prof. Ankit R.Mune** **Prof. Aditya O. Sable**

Abstract- **Today's Smartphones are small personal computers with added services, because of it we say that next generations of operatingsystem will be on these handheld Smartphones and the OS of these Smartphones are similar to windows, IOS and android areshowing us the way to the future. Android OS has already gained significant popularity over its counterparts and in terms gainedmuch of market share. One of the reason behind this result and most important feature of Android is that it is open source andDeveloper friendly so anyone could easily develop their own applications and publish them freely. This openness of androidbrings the developers and users a wide range of convenience but leads to some gaps in security. One of the major threat ofAndroid users is Malware infection via Android Applications which is targeting some loopholes in the architecture mainly on theend-users part. In this paper we presents the current state of Android OS its security mechanisms and their limitations.**

Keywords-**Android, Android Security, Architecture, Threats, Malware, Smartphone.**

I. INTRODUCTION

Android OS is a modern mobile platform OS that wasdesigned to be truly open. In the OS Android applicationsmake use of advanced hardware and software, as well as localand served data exposed through the platform to bringinnovation and value to consumers [1]. Android wasdeveloped by the Open Handset Alliance (which was visiblyled by Google), is OS based on Linux platform [2]. It is anow widely used open source operating system for mobiledevices which provides a base OS, an application middlewarelayer, a Java software development kit (SDK) and a collectionof system applications .The widespread usage of Smartphone'sand with its increasing functionalities to meet newrequirements has made both industry and common consumersto rely on these handheld devices for their daily life routine .The most striking feature of Android OS is its openness ,Because of which anybody can publish their applicationsfreely on the android market . This openness brings largenumbers of developers which use these platform, but with thisopenness comes some risk in likes that user is may downloadand use a malicious software made hackers causing harm totheir privacy .Thus we need to study of the SecurityMechanisms for Android and on the way make it simple anduser understandable making the user And make the end-useraware of areas where he has to be careful.

II. ANDROID OVERVIEW

The Android operating system began its release with Android beta in November 2007. It was designed with keeping in mind, with both the developers and the end user, because of which the for the developer can easily develop its idea into and application and user is given some visibility over applications work. The first complete version Android 1.0 was released in September 2008. Android is under ongoing development by Google and the Open Handset Alliance (OHA) is a consortium of 84 firms, and has seen a number of updates to its base operating system since its initial release. Since April 2009, Android versions have been developed under a confectionery-themed code name with significant feat improvement over time to time is listed below

Cupcake (1.5)
Soft-keyboard with text-prediction, Record/watch videosBluetooth A2DP, AVRCP support

Donut (1.6)
Turn-by-turn navigation , Gesture framework

Éclair (2.0–2.1)
HTML, Microsoft Exchange support, Bluetooth 2.1,Digitalzoom, Live Wallpapers,Updated UI

Froyo (2.2–2.2.3)
Speed improvements, JIT implementation, Applicationsinstallation to the expandable memory, Upload file support inthe browser, USB Tethering, Animated GIF

Gingerbread (2.3–2.3.7)
Updated UI, Improved copy/paste, Improved keyboard easeof use, Improved power management, Near FieldCommunication support, Native VoIP/SIP support, Video callsupport, Social networking features.

Honeycomb (3.0–3.2.6)

Multi core support, Media/Picture transport protocol,Updated 3D UI, Private browsing, Better tablet support, HTTP Live streaming, System-wide Clipboard.

Ice Cream Sandwich (4.0–4.0.4)

SECURITY IN ANDROID OS

Prof. Sumedh P. Ingale **Prof. Ankit R.Mune** **Prof. Aditya O. Sable**

Abstract- **Today's Smartphones are small personal computers with added services, because of it we say that next generations of operatingsystem will be on these handheld Smartphones and the OS of these Smartphones are similar to windows, IOS and android arcshowing us the way to the future. Android OS has already gained significant popularity over its counterparts and in terms gainedmuch of market share. One of the reason behind this result and most important feature of Android is that it is open source andDeveloper friendly so anyone could easily develop their own applications and publish them freely. This openness of androidbrings the developers and users a wide range of convenience but leads to some gaps in security. One of the major threat ofAndroid users is Malware infection via Android Applications which is targeting some loopholes in the architecture mainly on theend users part. In this paper we presents the current state of Android OS its security mechanisms and their limitations.**

***Keywords*-Android, Android Security, Architecture, Threats, Malware, Smartphone.**

I. INTRODUCTION

Android OS is a modern mobile platform OS that wasdesigned to be truly open. In the OS Android applicationsmake use of advanced hardware and software, as well as localand served data exposed through the platform to bringinnovation and value to consumers [1]. Android wasdeveloped by the Open Handset Alliance (which was visiblyled by Google), is OS based on Linux platform [2]. It is now widely used open source operating system for mobiledevices which provides a base OS, an application middlewarelayer, a Java software development kit (SDK) and a collectionof system applications .The widespread usage of Smartphone'sand with its increasing functionalities to meet newrequirements has made both industry and common consumersto rely on these handheld devices for their daily life routine .The most striking feature of Android OS is its openness ,Because of which anybody can publish their applicationsfreely on the android market . This openness brings largenumbers of developers which use these platform, but with thisopenness comes some risk in likes that user is may downloadand use a malicious software made hackers causing harm totheir privacy .Thus we need to study of the SecurityMechanisms for Android and on the way make it simple andeasy understandable making the user And make the end-useraware of areas where he has to be careful.

II. ANDROID OVERVIEW

The Android operating system began its release with Android beta in November 2007. It was designed with keeping in mind, with both the developers and the end user, because of which the for the developer can easily develop its idea into and application and user is given some visibility over applications work. The first complete version Android 1.0 was released in September 2008. Android is under ongoing development by Google and the Open Handset Alliance (OHA) is a consortium of 84 firms, and has seen a number of updates to its base operating system since its initial release. Since April 2009, Android versions have been developed under a confectionery-themed code name with significant feat improvement over time to time is listed below

Cupcake (1.5)
Soft-keyboard with text-prediction, Record/watch videosBluetooth A2DP, AVRCP support

Donut (1.6)
Turn-by-turn navigation , Gesture framework

Éclair (2.0 2.1)
HTML, Microsoft Exchange support, Bluetooth 2.1,Digitalzoom, Live Wallpapers,Updated UI

Froyo (2.2 2.2.3)
Speed improvements, JIT implementation, Applicationsinstallation to the expandable memory, Upload file support inthe browser, USB Tethering, Animated GIF

Gingerbread (2.3 2.3.7)
Updated UI, Improved copy/paste, Improved keyboard easeof use, Improved power management, Near FieldCommunication support, Native VoIP/SIP support, Video callsupport, Social networking features.

Honeycomb (3.0 3.2.6)

Multi core support, Media/Picture transport protocol,Updated 3D UI, Private browsing, Better tablet support, HTTP Live streaming, System-wide Clipboard.

Ice Cream Sandwich (4.0–4.0.4)

International Journal of Latest Trends in Engineering and Technology
Vol.(13)Issue(2), pp.058-061
DOI: http://dx.doi.org/10.21172/1.132.10
e-ISSN:2278-621X

DIABETIC RETINOPATHY INFECTION DETECTION & CLASSIFICATION USING ADVANCE GENETIC ALGORITHM

S. M. Deshmukh[1], M.V. Tiwari[2], Juee Tatte[3]

Abstract- Diabetic retinopathy is a disorder which affects the retina of the eye by effecting or damaging the blood vessels which results in leakage of blood and fluids from eye which causes swelling of retinal tissue and blurred vision. This concept proposes an advance genetic algorithm to segment retinal image so as to get infected region accurately. The main goal is automatic retinal image analysis, which can reduce the workload associated to manual grading as well as save diagnosis costs and time. The aim of this project is to detect the diabetic retinopathy (DR) and to perfectly classify an image into different stages of a retinal diseases using fuzzy logic also to put necessary prescription against future diseases spreading.
Keywords- Diabetic Retinopathy, Advance Genetic Algorithm, fuzzy logic.

1. INTRODUCTION:

Diabetic Retinopathy is a disease of the retina resulting from the effects of diabetes on the retinal blood vessels. It is the leading cause of blindness in those of ages between 20 & 60.
There are 3 main types of diabetic retinopathy:

1.1 Background Diabetic Retinopathy

Diabetic retinopathy is commonly seen in people who have been diabetic for a long time. The patient's vision is normal and his retinal blood vessels are mildly affected.

1.2 Diabetic Maculopathy

Fluid and protein may be leaked from the retina's blood vessels as a result of diabetes. This causes swelling of the retina. Vision will become blurred if the swelling involves the macula (centre of the retina).

1.3 Proliferative Diabetic Retinopathy

The retinal blood vessels are blocked, leading to the formation of new vessels which are abnormal and fragile. This may lead to haemorrhage (rupture of the vessels) in the eyes and cause a sudden vision loss.
In more advanced cases, scar tissue develops. The scarring will pull and distort the retina. This may cause the retinal to detach, resulting in a more severe loss of vision.

Types Of Available Treatments:

A. Laser Treatment

In the case of diabetic maculopathy, laser treatment to the points of leakage can decrease swelling and stabilize the vision. In the early stages of proliferative diabetic retinopathy, more extensive laser treatment can be done to slow down the formation of abnormal blood vessels, thereby preventing the development of more severe complications. Laser treatment has its risks. Some patients may experience a decrease in vision to the sides (peripheral vision). In others, night and colour vision may be affected.

B. Surgery

Surgery such as vitrectomy may be required in more severe cases where the disease continues worsening (persistent bleeding the eye/retinal detachment) despite the laser treatment.
Injection of Medication Inside The Eyes Medications such as Triamcinolone and anti VEGF can be injected inside the eye to help maintain/ improve vision in some patients with diabetic retinopathy.

[1] Professor, Electronics and telecommunication department , Prof. Ram Meghe College of Engineering & Research, Badnera, Maharashtra, India
[2] Professor, Electronics and telecommunication department , Prof. Ram Meghe College of Engineering & Research, Badnera, Maharashtra, India
[3] Student, Electronics and telecommunication department , Prof. Ram Meghe College of Engineering & Research, Badnera, Maharashtra, India

International Journal on Recent and Innovation Trends in Computing and Communication
Volume: 6 Issue: 7

ISSN: 2321-8169
86 - 89

Quality Determination and Grading of Tomatoes using Raspberry Pi

Mr. Swapnil M. Wasule[1]
M.E. Student, Department of Electronics & Telecommunication,S.G.B. Amravati,University Amravati, India[1]
Swapnilmw42@gmail.com

Prof. Dr. S. M. Deshmukh[2]
HOD & Professor:Department of Electronics & Telecommunication, S.G.B. Amravati University Amravati, India[2]

***Abstract*—**In India cultivation of tomatoes is carried out by traditional methods and techniques. Today tremendous improvement in field of agriculture technologies and products can be seen. The tomatoes affect the overall production drastically. Image processing technique can be key technique for finding good qualities of tomatoes and grading. This work aimed to study different types of algorithms used for quality grading and sorting of fruit from the acquire image. In previous years several types of techniques are applied to analyses the good quality fruits. A simple system can be implemented using Raspberry pi with computer vision technology and image processing algorithms.

***Keywords*-Raspberry Pi 3, USB Camera, Haar classifier, Contour, Conveyor system,filtering process, masking, color detection.**

*****

I. INTRODUCTION

India is well known for its agricultural economy. India ranks second worldwide in farm output. More than sixty percent of people depend on farming business directly or indirectly. Agriculture product contributes significantly in India's gross domestic product. Slow agricultural growth is main concern for Indian farmers. Traditional agricultural practices are neither economically nor environmentally suitable for agriculture development. There is requirement of precise and efficient technology for agricultural development. Agriculture quality production highly affected due to various environmental factors and false practices of farmers. Most of the quality issue occur on plant, goods, fruits etc. Hence area of interest is to find quality of goods, fruits, etc. In order to improving fruits quality and production efficiency, reduce labor intensity, it is necessary to research nondestructive automatic detection technology. Fruit nondestructive detection is the process of detecting fruits inside and outside quality without any damage, using some detecting technology to make evaluation according some standard rules. Nowadays, the quality of fruit shape, default, color and size and so on can not evaluated on line by the traditional methods. With the development of image processing technology and computer software and hardware, it becomes more attractive to detect fruits quality by using vision detecting technology. At present, most existing fruit quality detecting and grading system have the disadvantage of low efficiency, low speed of grading, high cost and complexity. So it is significant to develop high speed and low cost fruit size detecting and grading system.Image processing can give solution to find quality on the basis of their visual symptoms. Decide the quality of tomato on shape, size, color and texture grading by human eyes often leads to error due to visual stress is not accurate. A vision machine to replace human eyes can solve this weakness since a machine will not prompt errors due to stress. Human vision has limited ability in differentiating similar colors like pure green (100% green) with orange (90% orange), light red (60-90% red) with red color (>90% red). Human perception towards shape, size, color and texture is subjective and varies among different peoples. A same fruit may appear as light green for first human but pure green for second human. This leads to inaccuracy of the judgment for tomato maturity. Color grading is a main step in this system design for processing of fruits that directly affects profit, because the products quality is mainly associated with their color. The existing color grading systems use a set of color separating parameters to determinethe color quality. In this Paper 100% Red, 100% Orange color tomatoes is fully mature and ready to consume and 100% Green, 50% Green color tomatoes is premature and ready to transport. The proposed automated classification and grading system is designed to combine five processes such as Image Acquisition, Masking, Contour, Image Enhancement, and Color Detection. The entire system is designed over RASPBERRY PI software to inspect the shape, size, color and texture of the fruit. Here grading can be categories into four ways Red, Orange, Green, turning to Green. Work in this paper considered tomatoes as fruits having different shape, size, color and texture for finding quality and grading. In this paper simple and effective method will be used for evaluating maturity level of tomatoes. The visual features can be extracted from tomatoes images and classify them according to their feature using image processing techniques.

International Journal for Research in Applied Science & Engineering Technology (IJRASET)
ISSN: 2321-9653; IC Value: 45.98; SJ Impact Factor: 7.177
Volume 7 Issue V, May 2019- Available at www.ijraset.com

Quality Analysis and Grading of Soybean using Image Processing and Neural Network

Mr. Vaibhav S. Yende[1], Prof. S.V. Pattalwar[2], Dr. S.M. Deshmukh[3]
[1]M.E. Digital Electronics PRMIT&R Badnera,
[2]Associate Professor PRMIT&R Badnera,
[3] Professor PRMIT&R Badnera, SGBAU

Abstract: *The use of good quality seed is very important for the better production of a good quality crop and is essential for export in markets. Quality control is very important in food industry because based on quality of food products are classified and graded into different grades. Soybean is primarily graded based on its grain shape, colour, size and texture. This paper attempts to automate the grading process by using image processing and machine vision techniques. Soybean's grade is affected by damaging, decolourization, infection by insects, immaturity and shrivels, splitting, breaking, cracks, inorganic and organic foreign matter present in the sample. One of the objectives of this paper is to study the effect of these parameters on shape, colour, size and texture of the soybean image. In the present soybean-handling scenario, type and quality are identified manually by visual inspection which is tedious and not accurate. There is need for the growth of accurate, fast and objective system for quality determination of food grains. This paper is automate the system for grading of soybean by extracting morphological features as attributes for classification using image processing techniques and artificial neural network. This method requires minimum time and it is low in cost.*

Keywords: *ANN, Grading, Image Processing, Soybean, Morphological, Seed features*

I. INTRODUCTION

Soybean contributes significantly to the Indian edible oil pool. Currently soybean contributes 43 % to the total oilseeds and 25% to the total oil production in the country. Currently, India's rank is fourth in respect to production of soybean in the world. The crop helps earn valuable foreign exchange (Rs. 62000 millions in 2012-13) by way of soya meal exports. Soybean has largely been responsible in increasing farmer's economic status in many pockets of the country. It usually earns higher income to the farmers owing to the huge export market for soybean de-oiled cake. in contrast production of Soybean in India has increased at a CAGR of 9.60 per cent from 6.87 million tonnes in 2004-05 to 15.68 million tonnes in 2012-13. On the other hand Soybean meal consumption has also increased at a CAGR of 10.82 percent over the last eleven years from 1365 thousand million tonnes in 2004-05 to 4225 thousand million tonnes in 2014- 15. Therefore to increasing demand it is imperative to increase the productivity level of Soybean in the country. Production of soybean in India is ruled by Maharashtra and Madhya Pradesh which contribute 89 per cent of the total

DETECTION AND CLASSIFICATION OF DISEASES ON RICE AND SUGARCANE USING COMPUTER VISION TECHNIQUE

[1]Sevakram Tanaji Kumbhare, [2]Mrs. Madhavi S Joshi, [3]Dr. D T Ingole, [4]Mrs. A P Deshmukh

[1]M.E. Research Scholar, [2]Professor, [3]Professor, [4]Asst. Professor
[1] Electronics & Tele. Engg. Department,
[1]Prof. RMIT&R, Badnera, India

Abstract: Rice and Sugarcane are one of the most important crops in Maharashtra. In the agriculture field, disease identification from the crop images and crop protection is one of the interesting research areas. Digital Image Processing can be applied for Disease identification and classification. This project presents a prototype system for detection and classification of rice and sugarcane diseases based on the images of infected plants. Images of the infected rice and sugarcane plants are captured by digital camera. Digital image processing is used to detect infected parts of the plants. Analyzing the infected part, the type of disease is detected. Captured image is in the RGB format which is then converted in HSV format. Color feature is extracted using color histogram technique from the HSV image. Texture feature which is also an important parameter are extracted using GLCM (Gray Level Co-Occurrence Matrix). Random Forest classifier is used to detect the disease on the plant.

IndexTerms - Computer Vision Technique, disease identification and classification, GLCM, Image processing, rice and sugarcane disease

I. Introduction

In India, main source of the income for major population is Agriculture. In India, Almost 70 % of the population depends on farming. Almost 58 percent of the rural people depend on farming. Rice and sugarcane are one of the important foods in India. Sugarcane is one of the important cash crops. Diseases on rice and sugarcane destroy 10 to 15 % of production in Asia resulting in loss of earning. Plant diseases are the main cause for reduction of quality and quantity of agriculture crops. Reduction in both aspects can directly affect the overall production of the crop in a country. Different diseases that occur on rice plants are Bacterial Blight, Blast, and Sheath blight; on sugarcane crop are Leaf scald, rust and smut. Most of farmers are unable to identify disease well in time due to difficulty in identifying the diseases, which lead to loss of the crop. The main problem is a lack of continuous monitoring of the plants. The current approach of disease detection is manual, which means farmers mainly depend on the guide books, use their experiences to identify the diseases or naked eye observation through experts. The accuracy of the decision taken by an expert depends on his/her physical condition, such as work pressure, fatigue and eye sight, climate etc. So this method is time consuming and less efficient. Each plant disease has different stages of growth. Farmers have to keep eyes on the infection, whenever the disease occurs on a plant. This approach of disease detection is time-consuming and requires some precaution during the selection of pesticides.

Probability of occurrence of diseases on any plant is unpredictable. However, a continuous monitoring may prevent disease infection. On any plant, diseases are mainly caused by bacteria, fungi, and viruses. Image processing operations can be used on external appearances of infected plants. However, the symptoms of diseases are different for different plants. Each disease has its own unique characteristics. Diseases differ in shape, size, and color of disease symptoms. Some of the diseases might have the same color, but different shapes; while some have different colors but same shapes. Sometimes farmers get confused and are unable to take proper decision for selection of pesticides resulting in inefficient crop protection. This project attempts to apply concepts of Image Processing to solve the problem of automatic detection and classification of diseases of the rice and sugarcane crop.

II. Literature Review

Different approaches of Rice and Sugarcane leaf diseases have been proposed by various authors or researchers, described below.

Arya M S, Anjali K. et al. [3] proposed an idea of detecting plant diseases using image processing. Image processing toolbox of MATLAB is used for measuring affected area of disease and to determine the difference in the colour of the disease affected area. The algorithm can be used to classify the leaves and the classified outcomes are separated using Arduino based conveyor belt system. This reduces an important task of monitoring of farms crops at very early stage itself to detect the symptom of diseases appear on plant leaves. Framework for early detection of diseases in rice crops from visual symptoms was proposed. Author target rice crops owing to their extensive use in the Indian subcontinent and developed a user-friendly IoT reference architecture to provide on-field disease detection and prediction using cloud analytics [4].

Rakesh Chaware, Rohit Karpe, et al. [5] presented the critical analysis of different plants disease segmentation techniques. This provide description of leaf disease detection using image processing that can recognize problems in crops from images, based on color, texture and shape to automatically detect diseases and give the fast and accurate solutions to farmers. Author proposed the novel automated rice leaf disease identification and detection system using the improved support vector machine with the radial basis neural networks. Histogram equalization is used for image enhancement. Affected region is segmented with the help of the Otsu' thresholding

International Journal for Research in Applied Science & Engineering Technology (IJRASET)
ISSN: 2321-9653; IC Value: 45.98; SJ Impact Factor: 6.887
Volume 7 Issue IV, Apr 2019- Available at www.ijraset.com

Detection and Classification of Diseases on Rice and Sugarcane: A Review

Mr Sevakram T Kumbhare[1], Prof. Mrs. M. S. Joshi[2]
[1, 2]Electronics & Tele. Engg. Department, Prof. RMIT&R, Badnera, SGB Amravati University, India.

Abstract: *Rice and Sugarcane are one of the most important crops in Maharashtra. In the agriculture field, disease identification from the crop images and crop protection is one of the interesting research areas. Digital Image Processing can be applied for Disease identification and classification. This project presents a prototype system for detection and classification of rice and sugarcane diseases based on the images of infected plants. Images of the infected rice and sugarcane plants are captured by digital camera. Digital image processing is used to detect infected parts of the plants. Analyzing the infected part, the type of disease is detected.*

Keywords: *Image processing, disease identification and classification, rice and sugarcane disease, Computer Vision Technique*

I. INTRODUCTION

Plant diseases are one of the causes in the reduction of quality and quantity of agriculture crops. Reduction in both aspects can directly affect the overall production of the crop in a country. The main problem is a lack of continuous monitoring of the plants. Generally, diseases can occur on any plant at any time. However, a continuous monitoring may prevent disease infection. The main approach adopted in practice for detection and identification of plant diseases is naked eye observation through experts. The decision making capability of an expert also depends on his/her physical condition, such as fatigue and eye sight, work pressure, climate etc. So this method is time consuming and less efficient.

On any plant, diseases are mainly caused by bacteria, fungi, and viruses. Image processing operations can be applied on external appearances of infected plants. However, the symptoms of diseases are different for different plants. Each disease has its own unique characteristics. Diseases differ in shape, size, and colour of disease symptoms. Some of the diseases might have the same colour, but different shapes; while some have different colours but same shapes. Sometimes farmers get confused and are unable to take proper decision for selection of pesticides resulting in inefficient crop protection. This project attempts to apply concepts of Image Processing to solve the problem of automatic detection and classification of diseases of the rice and sugarcane crop.

II. LITERATURE REVIEW

Different approaches of Rice and Sugarcane leaf diseases have been proposed by various authors or researchers, described below.

R. Rajmohan, M. Pajany, R. Rajesh, D. Raghu Raman and U. Prabu [1] proposed a Sensor based Mobile App framework for accuracy agribusiness which furnishes agriculturists with valuable information about the paddy yield and its condition. The framework intends to make development more productive as the agriculturist can settle on better educated choices and subsequently spare time and assets.

Rakesh Chaware, Rohit Karpe, Prithvi Pakhale and Prof. Smita Desai [2] presented the critical analysis of different plants disease segmentation techniques. This provide description of leaf disease detection using image processing that can recognize problems in crops from images, based on color, texture and shape to automatically detect diseases and give the fast and accurate solutions to the farmer.

T. Gayathri Devi, P. Neelamegam [3] proposed the novel automated rice leaf disease identification and detection system using the improved support vector machine with the radial basis neural networks. Initially the captured paddy images are transformed into the gray scale image and the noise present in the image is eliminated with the help of the image clipping, cropping and smoothing process. Afterwards, the image enhancement needs to perform by applying the histogram equalization method and the particular affected region is segmented with the help of the Otsu' thresholding with k-means clustering process. From the segmented region, different features are extracted using scale invariant method and the features are classified with the help of the support vector machine trained radial basis neural network.

Harshadkumar B. Prajapati, Jitesh P. Shah and Vipul K. Dabhi [4] proposed a prototype system for detection and classification of rice diseases based on the images of infected rice plants. This prototype system is developed after detailed experimental analysis of various techniques used in image processing operations. Author considered three rice plant diseases namely Bacterial leaf blight,

International Journal of Scientific & Engineering Research Volume 10, Issue 4, April 2019
ISSN: 2229-5518

Optical Character Recognition (OCR) for Printed Devnagari Script Using Artificial Neural Network

Author 1: Aparna Patil
Government Polytechnic, Arvi
District: Wardha, Maharashtra

Author 2: Prof. M. D. Ingole
Prof. Ram Meghe Institute of Technology,Badnera
District: Amaravati, Maharashtra

ABSTRACT–There are about 300 million people in India who speak Hindi and write Devnagari script. Research in Optical Character Recognition (OCR) is popular for its application potential in banks, post offices, defense organizations and library automation etc. However most of the OCR systems are available for European texts. In this paper, we have proposed a technique for OCR System for different five fonts and sizes of printed Devnagari script using Artificial Neural Network. The recognition rate of the proposed OCR system with the image document of Devnagari Script has been found to be excellent.

Index Term- OCR, Preprocessing, Segmentation, Feature Extraction, Classification, ANN, Skew Detection and Correction.

1.INTRODUCTION

With the advent of development in computer power machine simulation of human reading, become important topic of research. Optical Character Recognition is a phenomenon by which we can convert printed document or scanned page to ASCII character or some other standard code like unicode that can be recognized by computer. Lot of research is done in developed countries But still there is need to carry out research in indian language there are two approaches to recognize isolated devnagri words, 4 first is to segment the word into its character part and individually recognize the character. The major drawback of this approach is Devnagari script word contains mantras ,shirorekha ,conjuct characters, modifiers and lack of benchmark database to train classifier . The second scheme is to recognize word in its entirety the recognizer are complex if it is general purpose and simpler if it is for specific lexion. The document image itself can be either machine printed or handwritten, or the combination of two. The speed of input operation is improved and decrease some possible human errors by using computer system equipped with such an OCR system. Recognition of printed characters is itself a challenging problem since there is a variation of the same character due to change of fonts or introduction of different types of noises. If preprocessing, feature extraction and recognition are not robust then recognition task difficult due to difference in font and sizes There may be noise pixels that are introduced due to scanning of the image. Besides, same font and size may also have bold face character as well as normal one. Thus, width of the stroke is also a factor that affects recognition. Therefore, a good character recognition approach must eliminate the noise after reading binary image data, smooth the image for better recognition, extract features efficiently, train the system and classify patterns. Till now there is no complete OCR for printed Devnagari Script which gives 100% success rate.

In this paper, we present a scheme to develop complete OCR system for different five fonts and sizes of Devnagari characters so that we can use this system in Banking and Corporate sectors. Steps of the OCR have being implemented by us in the system like preprocessing, segmentation, feature extraction and classification. In preprocessing step it is expected to include noise removal, skew detection & correction. After finding out the feature of the segmented characters artificial neural network (ANN) [1], [3] and [4] will be used for classification purpose. Efforts have been made to improve the performance of character recognition using artificial neural network techniques. The proposed OCR system shall be capable of accepting document images from a file or from a scanner directly. Recognized characters can also be displayed and edited.

2. DESIGN OF OCR

Various approaches used for the design of OCR systems are discussed below:

Matrix Matching: Matrix Matching converts each character into a pattern within a matrix, and then compares the pattern with an index of known characters. Its recognition is strongest on monotype and uniform single column pages.

Fuzzy Logic: Fuzzy logic is a many-valued logic in which truth value of variable may be any number between 0 and 1inclusive, between conventional evaluations like

International Journal for Research in Applied Science & Engineering Technology (IJRASET)
ISSN: 2321-9653; IC Value: 45.98; SJ Impact Factor: 7.177
Volume 7 Issue IV, Apr 2019- Available at www.ijraset.com

Smart Underground Drainage Water Management System - A Review

P. R. Ramteke[1], V. U. Kale[2], C. N.Deshmukh[3]
[1]Final Year Student. M.E., [2]Professor, [3]Professor, PRMIT&R, Badnera, Maharashtra, India

***Abstract*— Underground drainage water management system and the manholes in cities of our country India is one of the major issues, due to its poor maintenance. The drainage water that contains sewage and other domestic and industrial waste water is overflowed on the roads causing water logging and sometimes gets mixed up in the drinking water which causes health hazards to common people. To overcome this issue a model called Wireless sensor network based smart underground drainage water and safe multiple manholes management system is proposed. This proposed system will monitor various parameters related to various fluids in the underground drainage system such as the water level and gas level in the drainage system, manholes conditions, locating the underground blockage and removing the same in the drainage system and the measured values will be stored in the cloud storage. Then the stored data will be analysed and conditions of underground drainage water system and manholes will be sent to nearby corporation office as short message using IoT module.**

***Keywords*— Iot(Internet of Things), WSN(Wireless sensory network), GSM(Global System for mobile Communication), CPU(Central processing Unit), Zigbee, Wi-Fi(Wireless Fidelity), GPRS(General Packet Radio Service), UDS(Underground Drainage System), RTC(Real Time Control)**

I. INTRODUCTION

In India most of the cities has underground drainage system are maintained by Municipal Corporation to make clean healthy surroundings and hence environment. Often due to poor maintenance of the underground drainage system, the water in the drainage system gets mixed up with the pure water and consumption of this polluted water leads to water borne diseases. Due to sudden changes in the atmosphere and variations in the climate during different seasons the drainage gets blocked or water logged, making environment unhealthy and disturbs the healthy routine of common people. To overcome all these issues in the underground drainage system and inform the municipal corporation about the condition of the underground drainage system by sending short messages through internet , so that the officials can take the necessary action to repair the drainage system and the manholes. Also various gases are formed inside the drainage system due to domestic and industrial waste will also be detected using the different gas sensor so that we can avoid explosion due to pressure inside the drainage system. If the drainage system manhole lid is opened for long hours then by using tilt angle sensor modules we can detect the opening of the lid over the manholes and inform the municipal corporation officials to take proper action on it. Thus, main aim is to monitor the

IJTIMES

International Journal of Technical Innovation in Modern Engineering & Science (IJTIMES)
Impact Factor: 3.45 (SJIF-2015), e-ISSN: 2455-2585
Volume 4, Issue 5, May-2018

OBSERVATION OF SOLAR PHOTOVOLTAIC ENERGY HARVESTING SYSTEM

[1]SHREYAS HOLE, [2]DR. S. W. MOHOD
[1,2] Department of Electronic and Telecommunication Engineering,
Prof. Ram Meghe Institute of Technology & Research,
Amravati-Badnera

ABSTRACT:*All over the world, the growth in electric power demand has slowed down and dropped to 0.7% per year [1]. Capacity addition to the grid has kept up with the demand, but the sources of generation have varied over decades. This has given renewable energy sources a tremendous growth potential, and recent capacity additions have come mainly from natural gas and renewable. Among renewable, solar and wind power provide most of the growth [1]. The steady and rapid growth in solar photovoltaic installation across the world has been driven by many factors including renewable portfolio standards, decreasing costs of installations and incentives[1]–[3]. The increasing capacity addition of solar PV and installation of larger power stations has led to research and development in high-power converter topologies for PV applications. In this paper presenting the different observations of solar PV system and also observed the characteristics of voltage and current or voltage and power for different solar radiation and temperature respectively. In second observation we observed and analysis the performance of PV module in series or parallel connection with respect to I-V and V-Pcharacteristics. In third observation, studied the effect of shading on module output power. In fourth and fifth observation, to overcome the problem in shading module in output power by using the DC-to-DC converter and also observed the MPP by varying the duty cycle of converter. In sixth and seventh case, to observed the performance of SEPIC converter in open and closed loop system respectively and to overcome the problem of boost and Buck converter.*

INTRODUCTION

Solar energy is the raw material and main source for several applications of renewable energy systems; thus, knowledge about the intensity of solar irradiation is essential for efficiency of these systems. Electric energy sources capable of meeting the growing demands of society with minimal impacts to the environment and high efficiency have been object of research in the last decade. In this context, the conversion of sunlight into electricity through photovoltaic cells has become one of the most encouraged and used resources in the world. However, the most unpredictable factor, which hampers capturing solar irradiation, preventing a proper conversion of sunlight into electricity, is the presence of clouds in the sky.

LITURATURE REVIEW

SomasundaramEssakiappanet. al. [4] discussed megawatt-scale PV plant is divided into many zones, each comprising of two series-connected arrays. Each zone employs a medium-frequency transformer with three secondary's, which interfacewith the three phases of the medium voltage grid. An insulated-gate bipolar transistor full bridge inverter feeds the MF transformer. The voltages at the transformer secondary's are then converted to three-phase line frequency ac by three full-bridge ac–ac converters. Second line frequency harmonic power does not appear in the dc bus, thereby reducing the dc capacitor size. Cascading several such cells, a high-quality multilevel medium-voltage output is generated. A new control method is proposed for the cascaded multilevel converter during partial shading while minimizing the switch ratings. The proposed topology eliminates the need for line frequency transformer isolation and reduces the dc bus capacitor size, while improving the power factor and energy yield. Paper presents the analysis, design example, and operation of a 10-MW utility PV system with experimental results on a scaled-down laboratory prototype.

Nicolae-Cristianet. al. [5] introduces a reliability-oriented design tool for a new generation of grid-connected photovoltaic (PV) inverters. The proposed design tool consists of a real field mission profile (RFMP) model (for two operating regions: USA and Denmark), a PV panel model, a grid-connected PV inverter model, an electrothermal model, and the lifetime model of the power semiconductor devices. An accurate long-term simulation model able to consider the one-year RFMP (solar irradiance and ambient temperature) is developed.

International Research Journal of Engineering and Technology (IRJET) e-ISSN: 2395-0056
Volume: 06 Issue: 01 | Jan 2019 www.irjet.net p-ISSN: 2395-0072

Semi-Automated Brain Tumor Segmentation and Detection from MRI

Sanjay M. Shelke[1], Dr. Sharad W. Mohod[2]

[1]*Research Scholar, Deptt of Electronics EngineeringProf. Ram Meghe Institute of Technolog & Research, Badnera, Amravati. India*

[2]*Professor, Dept. of Electronic Engineering, Prof. Ram Meghe Institute of Technology & Research, Badnera. Amravati. India*

Abstract - *To increases the survival rate of the brain tumor patients and to have a improved treatment technique in medical image processing, brain tumor segmentation is essential method of diagnosis. The early and correct diagnosis of brain tumors plays an important role. Magnetic Resonance Imaging (MRI) technique is the most popular non-invasive technique; in these days imaging of biological structures by MRI is a common investigating procedure. For cancer diagnosis the brain tumors segmentation can be done manually from MRI, which gives the poor level of accuracy and identification. The classification of abnormalities is not predictable and straightforward but it is a time consuming task for physician. Nowadays, the issue of automatic segmentation and analysis of brain tumours are major research area. However the detection of tumor is a challenging task since tumor possesses complex characteristics in appearance and boundaries. In order to produce a completely automated segmentation method like the KG (knowledge-guided) technique which encrypts the information of the pixel intensity and spatial relationships in the images. The k NN classifier under the learned optimal distance metrics is used to determine the possibility of each pixel belonging to the foreground (tumour) and the back ground. The paper presents semi-automatic segmentation method by using CNN (Convolutional neural networks) on the basis of individual statistical information and population, to segment brain tumours early, increase the correct rate and minimize error rate. The experimental result of proposed method demonstrates the robustness for brain tumor segmentation. It shows improved result for classification of Brain tumor from MRI of brain than k-NN Classifier.*

Key Words: *Brain Tumor, Brain Tumor Segmentation, CNN, Magnetic Resonance Imaging (MRI).*

1. INTRODUCTION

The centre of human central nervous system is Brain. Brain is a complex organ and it consists of very large network forming due to presence of 50-100 billion neurons. Brain tumor is nothing but abnormal growth of set of cells that grow inside or around the brain uncontrollably. The malignant and benign are types of brain tumors. The non-cancerous tumor is benign. It is less harmful, generally localized and it does not spread to other parts of the body and well treated due to its proper response. Benign tumor is less harmful than malignant tumor. Malignant tumors are cancerous growths. They are often resistant to treatment tumors are classified into primary and secondary tumors. The malignant tumor spreads very fast and attacks other brain tissues and weakens the helth condition which most of the time causes even death. The detection of Brain tumor is very challenging problem for preliminary judgment on diagnosis, due to complex structure of brain [1]-[4].

The magnetic resonance imaging (MRI) images are used in medical imaging technique, to provide detailed information about the internal tissue of respective image. In the diagnosis of brain tumor, determination of the exact location is an important task which helps to find out the shape & size of tumor. In brain tumor detection techniques, image segmentation plays a energetic role. In order to extract tumor from MRI images of brain different image segmentation techniques are used. For the reason that segmentation of MRI provides the detailed information about the soft brain tissues such as gray matter (GM), white matter (WM), cerebral spinal fluid (CSF) etc. There are two types of segmentation includes a manual segmentation and automatic segmentation.

For cancer diagnosis the brain tumors segmentation is done manually from MRI images, consist of large amount of data generated in clinical routine which is a time consuming and challenging task. Subsequently the automatic brain tumor image segmentation is needed. Recently, the deep learning methods for automatic segmentation shows popular as these methods achieve the advanced results and can address the problem in improved way [5].

In general the current standard computational time is in few minutes. The actual segmentation time is too difficult to achieve but in medical routine, computation time over a few minutes is not desirable. Another essential aspect required for brain tumor segmentation methods is robustness. If an automatic segmentation technique does not work in certain situations, clinicians will not have their faith and not use such technique. Therefore, the robustness is also one of the most important assessment criteria for every new technique applied in clinical practice. Some current brain tumor segmentation methods give healthy results within a fairly good computation time [7]. The paper proposes semi-automated brain tumor detection and segmentation from MRI using convolutional neural networks has following objectives.

- It improves the achieved segmentation results.

International Journal of Innovative Technology and Exploring Engineering (IJITEE)
ISSN: 2278-3075, Volume-8 Issue-6S, April 2019

Solar PV System with Battery Energy Storage for Critical Load

Shridhar S. Khule, Sharad W. Mohod

Abstract* — *In a microgrid network, it is difficult to supply the critical load without energy storage, especially when renewable energy sources are used. The proposed solar PV system with battery energy storage is used to supply the controllable real and non-active power to the load. The generated solar power can be extracted under varying irradiance and temperature condition and can be stored in the batteries at low power demand hours. In proposed scheme, inverter control is implemented with active and non-active power control mode to achieve the faster dynamic switchover for the support of critical load. The Battery storage appended with solar PV system synthesizes the output waveform by injecting or absorbing non-active power and enable the real power flow required by the load. The system reduces the burden on the conventional source and utilizes solar PV to supply critical load constraints. Thus, the system provides fast response to support the critical loads. The scheme can also be operated in an islanded mode in case of grid failure. MATLAB/SIMULINK software is used to simulate the proposed system and results are presented.

Keywords*— *Microgrid, solar PV Generator, battery energy storage, critical load.

I. Introduction

With high population growth and economic development in the world, there is a very high demand for energy. Traditional fossil fuel based power networks are facing confrontation due to the emerging crisis of these non sustainable resources, poor energy efficiency and increased environmental pollution. As a renewable energy, solar energy generation has been focused as a clean and inexhaustible energy providing a feasible solution to energy shortage [1]-[5]. The microgrid consisting of solar PV system with battery back-up is becoming more prominent with the increasing demand of power generation [6]. It increases the reliability of the system with reduced environment pollution. However the sporadic nature of solar PV source causes fluctuation in output power and will affect the operation in the distribution network. The residential, industrial and commercial consumers often operate the sensitive electronic equipments or critical load that cannot tolerate voltage deviation or loss of power, which moreover cause decrease in life of operating equipments or stoppage in industrial production [7]. Therefore there is a pressing need to mitigate the output fluctuation so as to supply quality power to the loads. The battery storage appended with solar PV system can provide the effective, reliable solution to the distributed power system. However, to maintain the voltage and frequency within permissible limit, the operation and control of the inverter interface of solar PV in a microgrid is a real challenge [8]. Researchers in [9] proposed a voltage control method based on traditional droop control for voltage sag mitigation. Frequency regulation of a microgrid using solar power is explained in [10], however the battery storage is not considered. The coordinated control of solar PV system with battery back-up in microgrid is investigated in [11]; however this work lacks consideration of battery SOC constraint. In summary, the previous work either lack consideration of battery storage or incorporation of control transition in different scenarios. The proposed control strategy with battery storage fulfills these gaps by considering following objectives.

- To supply real and non-active power from solar PV system and battery to the load
- To extricate maximum power from solar PV generator
- To maintain State of Charge (SOC) of battery
- Stan-alone operation of microgrid

The rest of the paper is organized as follows. Section II introduces the proposed microgrid. Section III briefly presents solar energy extraction with batteries. Section IV describes proposed active -reactive power (P-Q) control and battery SOC control strategies. Section V discusses experimental results. Section VI finally draws the conclusions.

II. Proposed Microgrid

A microgrid architecture consisting of solar PV generator, battery energy storage, Diesel Generator (D-G) set and load is illustrated in Fig. 1. The microgrid consists of renewable energy resources, which are small units provided with power electronics (PE) interface. To obtain the maximam power under varying operating conditions, the solar PV array is integrated through a DC-DC boost converter and controlled using a Maximum Power Point Tracking (MPPT) algorithm [12]. The solar PV array is integrated through a DC-DC boost converter and controlled using a Maximum Power Point Tracking (MPPT) algorithm to obtain the maximum power under varying operating conditions [12]. The Battery Energy Storage System (BESS) is concatenated through buck boost converter to maintain state of charge of battery. BESS offers charging during the daytime when the irradiance is large and load is less, and discharging when the irradiance is less and load is more. The converter is used either in buck or boost mode to charge or discharge the battery respectively. The control signal provided to the converter switches maintains the operation mode.

Revised Manuscript Received on December 22, 2018.
Shridhar S. Khule, Research Scholar, Prof. Ram Meghe Institute of Technology and Research, Badnera, Amravati, Maharashtra, India
Sharad W. Mohod, Professor, Prof. Ram Meghe Institute of Technology and Research Badnera Amravati Maharashtra India

International Journal of Advanced Innovative Technology in Engineering (IJAITE), Vol. 4, Issue 3, May -2019 *ISSN: 2455-6491*

"SECURE DATA TRANSMISSION THROUGH DIGITAL PROTECTION WALL OVER WIRELESS MEDIA"

[1]MS. DEVIKA GAWANDE
M. Tech Scholar, Department of Electronics & Telecommunication, PRMIT, Badnera, Amravati, Maharashtra, India
gawande195@gmail.com

[2]DR. S. W. MOHOD
Professor, Department of Electronics & Telecommunication PRMIT, Badnera, Amravati, Maharashtra, India
sharadmohod@rediffmail.com

ABSTRACT: *The secrecy and security of information has always been important to the people whenever it come to confidential data. Today there is advancement in internet technology and hence there has been increase in use of text and multimedia data transfer over internet. Thus this motivates us to add another layer of security to secrete data. Which hides the confidential information within carrier? The carrier we used is the transfer of images that can hide secret information within the region of image. The paper proposes method of half toning visual cryptography technique with digital protection wall Here which improves the imperceptibility as well as capacity of carrier by considering higher LSB layer for hiding secret information and replacing RGB component bit with secret information. Thus transfer of carrier through wireless media and recovering the secret data at receiving side. The data is extracted simply by using reverse algorithm. And the capacity, imperceptibility is compared by using various factors like cross correlation, MS error, peak to signal noise ratio. The suggested protection wall is flexible so that carrier can hide the data within the protected area and shall protect from unauthorized user which will be known to receiver only.*

Keywords: Carrier Image, Higher LSB, Protection wall, Visual Cryptography, Half Toning.

1. INTRODUCTION

Data hiding is the transmission of a secret message hidden within an ordinary carrier without revealing its existence. The container (cover file) may be a digital still image, audio file, or media file. Once the secret message has been embedded, it may be transferred across insecure lines or posted in public places. Usually, the data rate of covert data transmission using data hiding is low in order to keep the covert data imperceptible within the cover medium. This data rate is somewhat proportional to the volume of the cover medium. For this reason, digital media is a convenient choice for data hiding. Nowadays, given the high degree of collaboration and cooperation in modern information systems such as emerging multimedia sensor networks, covert communications becomes a greater threat to forensic analysis than ever. It is imperative to investigate methods to detect and discourage covert communications such as data hiding in multimedia networks that acquire highly correlated data.

Communication is very important with respect to word civilization. Nation who do not communicate with each other lost their identity. With the advancement of technology communication is mostly done through internet which is open and public in nature Internet came into existence in the late 1960s and 1970s out of the need to exchange research data among the researchers across different universities and also to enable communication in the battlefield to convey vital information which could prove advantageous in the war situations. Since the inception of the internet, the security and the confidentiality of the sensitive information have been of utmost importance and top priority.

Anybody with the proper knowledge and right applications can eavesdrop and learn of the communication and intercept the data transfer which could be very dangerous and Even life threatening in some situations. Ideally the internet and the communication network and the routing protocols should exhibit the properties such as security, quality of service, reliability, robustness. Fault tolerance etc. But most of communication networks fail to provide such attributes and hence loss of information or stealing of information is carried out. This work will focus on the particular problem of the compressed media data hiding. The primary focus of video monitoring application is to resolve the difficulties such as object recognition, classification, and tracking.

2. DATA HIDING TECHNIQUE

A. Stegnography

It involves concealing of secrete information within ordinary file in order to avoid detection to unauthorized user. Stegnography is a Greek word in which steganos means hidden and graph means to write. Stegnography involves a cover file. Within this cover file secrete information is embedded. This cover can an audio, video or image and secrete information can also be anything like text, doc file etc. Thus by using this technique of stegnography for transmitting information wireless media make secrete data unidentified to unauthorized user.

B. Cryptography

It involves conversion of secrete information into other form. The converted information is usually called as cipher text. It involves storing and transmitting of data in such manner that only whom it is intended can access it.

C. Digital Watermarking

It is method of embedding data into digital media content. This method is generally used to verify the credibility of content or to recognize the identity of digital content owner.

Published by :
http://www.ijert.org

International Journal of Engineering Research & Technology (IJERT)
ISSN: 2278-0181
Vol. 8 Issue 05, May-2019

Detection and Identification of Plant Leaf Diseases based on Python

Mr. Ashish Nage
Prof. Ram Meghe Institute of Technology & Research, Badnera

Prof. V.R. Raut
Prof. Ram Meghe Institute of Technology & Research, Badnera

***Abstract*— The major cause for the decrease in the quality and amount of agricultural productivity is due to pests. Farmers encounter great difficulties in detecting and controlling plant diseases. Thus, it is of great importance to diagnose the plant diseases at early stages so that appropriate and timely action can be taken by the farmers to avoid further losses. The project focuses on the approach based on image processing for detection of diseases of plants. In this paper, we propose an Android application that helps farmers for identifying plant disease by applying a leaf image to the system. The system has a set of algorithms which can identify the type of disease. Input image given by the user undergoes several processing steps to detect the disease and results are returned back to the user via android application.**

Keywords*— *Image processing, Detection, Identification of plant leaf diseases, Convolutional neural network

I. INTRODUCTION

The most widely used method for plant disease detection is simply naked eye observation by experts through which identification and detection of plant diseases are done. For doing so, a large team of experts as well as continuous monitoring of experts is required, which costs very high when farms are large. At the same time, in some countries, farmers don't have proper facilities or even idea that they can contact to experts. Due to which consulting experts even cost high as well as time-consuming too. In such a condition, the suggested technique proves to be beneficial in monitoring large fields of crops. And automatic detection of the diseases by just seeing the symptoms on the plant leaves makes it easier as well as cheaper. Plant disease identification by the visual way is a more laborious task and at the same time less accurate and can be done only in limited areas. Whereas if automatic detection technique is used it will take fewer efforts, less time and more accurately. In plants, some general diseases are bacterial, black spotted, and others are Rust, viral and Red coloration Leaf. Image processing is the technique which is used for measuring the affected area of disease, and to determine the difference in the color of the affected area [1]. Image segmentation is the process of separating or grouping an image into different parts. There are currently many different ways of performing image segmentation, ranging from the simple thresholding method to advanced color image segmentation methods. The segmentation process is based on various features found in the image. This might be color information, boundaries or segment of an image.

I. LITERATURE REVIEW

Paper [1] Extensive research has been conducted to explore various methods for automated identification of plant diseases. The disease can manifest in various parts of the plant such as roots, stem, fruit or leaves. As stated before, this work concentrates, particularly on leaves.

Paper [2] discussed a methodology for recognition of plant diseases present on leaves and stem. The proposed work is composed of K-Means segmentation technique and the segmented images are classified using a neural network. They developed a method for detecting the visual signs of plant diseases by using the image processing algorithm. The accuracy of the algorithm was tested by comparing the images, which were segmented manually with those automatically segmented.

Paper [3] discussed various techniques to segment the diseased part of the plant. This paper also discussed some Feature extraction and classification techniques to extract the features of infected leaf and the classification of plant diseases. The use of ANN methods for classification of disease in plants such as self-organizing feature map, back propagation algorithm, SVMs, etc. can be efficiently used. From these methods, we can accurately identify and classify various plant diseases using image processing techniques.

In paper [4] an approach based on image processing is used for automated plant diseases classification based on leaf image processing the research work is concerned with the discrimination between diseased and healthy soybean leaves using SVM classifier. They have tested our algorithm over the database of 120 images taken directly from different farms using different mobile cameras. The SIFT algorithm enables to correctly recognize the plant species based on the leaf shape. The SVM classifier can help in recognizing normal and diseased soybean leaves with an average accuracy as high as 93.79%. The main aim of the proposed work is to provide inputs to an autonomous DSS which will provide necessary help to the farmers as and when required over the mobile. This system will provide help to the farmer with minimal efforts. The farmer only needs to capture the image of the plant leaf using a mobile camera and send it to the DSS, without any additional inputs.

In paper [5] the work represents groundnut leaf disease extraction and classification using color imagery. The color imaginary transform, color co-occurrence matrix, feature extraction will be done and get an efficiency

International Journal of Science and Research (IJSR)
ISSN: 2319-7064
Impact Factor (2018): 7.426

Review on Detection and Identification of Plant Leaf Diseases based on Linux

Ashish Nage[1], V. R. Raut[2]

[1]Student, Department of Electronics & Telecommunications Engineering, Prof.Ram Meghe Institute of Technology & Research, Badnera

[2]Professor, Department of Electronics & Telecommunications Engineering, Prof.Ram Meghe Institute of Technology & Research, Badnera

Abstract: *The major cause for decrease in the quality and amount of agricultural productivity is plant diseases. Farmers encounter great difficulties in detecting and controlling plant diseases. Thus, it is of great importance to diagnose the plant diseases at early stages so that appropriate and timely action can be taken by the farmers to avoid further losses. The project focuses on the approach based on image processing for detection of diseases of plants. In this paper, we propose an Android application that help farmers for identifying plant disease by uploading leaf image to the system. The system has set of algorithms which can identify the type of disease. Input image given by the user undergoes several processing steps to detect the disease and results are returned back to the user via android application.*

Keywords: Image processing, Detection, Identification of plant leaf diseases

1. Introduction

The most widely used method for plant disease detection is simply naked eye observation by experts through which identification and detection of plant diseases are done. For doing so, a large team of experts as well as continuous monitoring of experts is required, which costs very high when farms are large. At the same time, in some countries, farmers don't have proper facilities or even area that they can contact to experts. Due to which consulting experts even cost high as well as time-consuming too. In such condition, the suggested technique proves to be beneficial in monitoring large fields of crops. And automatic detection of the diseases by just seeing the symptoms on the plant leaves makes it easier as well as cheaper. Plant disease identification by the visual way is a more laborious task and at the same time less accurate and can be done only in limited areas. Whereas if automatic detection technique is used it will take fewer efforts, less time and more accurately. In plants, some general diseases are known and yellow spots, or early and late scorch, and others are fungal, viral and bacterial diseases. Image processing is the technique which is used for measuring the affected area of disease, and to determine the difference in the color of the affected area [1]. Image segmentation is the process of separating or grouping an image into different parts. There are currently many different ways of performing image segmentation, ranging from the simple thresholding method to advanced color image segmentation methods. The segmentation process is based on various features found in the image. This might be color information, boundaries or segment of an image.

2. Literature Review

Extensive research has been conducted to explore various methods for automated identification of plant diseases. The disease can manifest in various parts of the plant such as roots, stem, fruit or leaves. As stated before, this work concentrates, particularly on leaves.

Paper [2] discussed a methodology for recognition of plant diseases present on leaves and stem. The proposed work is composed of K-Means segmentation technique and the segmented images are classified using a neural network. They developed a method for detecting the visual signs of plant diseases by using the image processing algorithm. The accuracy of the algorithm was tested by comparing the images, which were segmented manually with those automatically segmented.

Paper [3] discussed various techniques to segment the diseased part of the plant. This paper also discussed some Feature extraction and classification techniques to extract the features of infected leaf and the classification of plant diseases. The use of ANN methods for classification of disease in plants such as self-organizing feature map, back propagation algorithm, SVMs etc. can be efficiently used. From these methods, we can accurately identify and classify various plant diseases using image processing techniques.

In paper [4] an approach based on image processing is used for automated plant diseases classification based on leaf image processing the research work is concerned with the discrimination between diseased and healthy soybean leaves using SVM classifier. They have tested our algorithm over the database of 120 images taken directly from different farms using different mobile cameras. The SIFT algorithm enables to correctly recognize the plant species based on the leaf shape. The SVM classifier can help in recognizing normal and diseased soybean leaves with an average accuracy as high as 93.79%. The main aim of the proposed work is to provide inputs to an autonomous DSS which will provide necessary help to the farmers as and when required over the mobile. This system will provide help to the farmer with minimal efforts. The farmer only needs to capture the image of the plant leaf using a mobile camera and send it to the DSS, without any additional inputs.

In paper [5] the work represents groundnut leaf disease extraction and classification using color imagery. The color imaginary transform, color co-occurrence matrix, feature extraction will be done and get an efficiency output with a

International Journal for Research in Applied Science & Engineering Technology (IJRASET)
ISSN: 2321-9653; IC Value: 45.98; SJ Impact Factor: 7.177
Volume 7 Issue V, May 2019- Available at www.ijraset.com

Quality Analysis and Grading of Soybean using Image Processing and Neural Network

Mr. Vaibhav S. Yende[1], Prof. S.V. Pattalwar[2], Dr. S.M. Deshmukh[3]
[1]*M.E. Digital Electronics PRMIT&R Badnera,*
[2]*Associate Professor PRMIT&R Badnera,*
[3] *Professor PRMIT&R Badnera, SGBAU*

Abstract: *The use of good quality seed is very important for the better production of a good quality crop and is essential for export in markets. Quality control is very important in food industry because based on quality of food products are classified and graded into different grades. Soybean is primarily graded based on its grain shape, colour, size and texture. This paper attempts to automate the grading process by using image processing and machine vision techniques. Soybean's grade is affected by damaging, decolourization, infection by insects, immaturity and shrivels, splitting, breaking, cracks, inorganic and organic foreign matter present in the sample. One of the objectives of this paper is to study the effect of these parameters on shape, colour, size and texture of the soybean image. In the present soybean-handling scenario, type and quality are identified manually by visual inspection which is tedious and not accurate. There is need for the growth of accurate, fast and objective system for quality determination of food grains. This paper is automate the system for grading of soybean by extracting morphological features as attributes for classification using image processing techniques and artificial neural network. This method requires minimum time and it is low in cost.*

Keywords: *ANN, Grading, Image Processing, Soybean, Morphological, Seed features*

I. INTRODUCTION

Soybean contributes significantly to the Indian edible oil pool. Currently soybean contributes 43 % to the total oilseeds and 25% to the total oil production in the country. Currently, India's rank is fourth in respect to production of soybean in the world. The crop helps earn valuable foreign exchange (Rs. 62000 millions in 2012-13) by way of soya meal exports. Soybean has largely been responsible in increasing farmer's economic status in many pockets of the country. It usually earns higher income to the farmers owing to the huge export market for soybean de-oiled cake. in contrast production of Soybean in India has increased at a CAGR of 9.60 per cent from 6.87 million tonnes in 2004-05 to 15.68 million tonnes in 2012-13. On the other hand Soybean meal consumption has also increased at a CAGR of 10.82 percent over the last eleven years from 1365 thousand million tonnes in 2004-05 to 4225 thousand million tonnes in 2014- 15. Therefore to increasing demand it is imperative to increase the productivity level of Soybean in the country. Production of soybean in India is ruled by Maharashtra and Madhya Pradesh which contribute 89 per cent of the total

International Journal for Research in Applied Science & Engineering Technology (IJRASET)
ISSN: 2321-9653; IC Value: 45.98; SJ Impact Factor: 7.177
Volume 7 Issue IV, Apr 2019- Available at www.ijraset.com

Smart Underground Drainage Water Management System - A Review

P. R. Ramteke[1], V. U. Kale[2], C. N.Deshmukh[3]
[1]Final Year Student, M.E., [2]Professor, [3]Professor, PRMIT&R, Badnera, Maharashtra, India

***Abstract*-- Underground drainage water management system and the manholes in cities of our country India is one of the major issues, due to its poor maintenance. The drainage water that contains sewage and other domestic and industrial waste water is overflowed on the roads causing water logging and sometimes gets mixed up in the drinking water which causes health hazards to common people. To overcome this issue a model called Wireless sensor network based smart underground drainage water and safe multiple manholes management system is proposed. This proposed system will monitor various parameters related to various fluids in the underground drainage system such as the water level and gas level in the drainage system, manholes conditions, locating the underground blockage and removing the same in the drainage system and the measured values will be stored in the cloud storage. Then the stored data will be analysed and conditions of underground drainage water system and manholes will be sent to nearby corporation office as short message using IoT module.**

***Keywords*— Iot(Internet of Things), WSN(Wireless sensory network), GSM(Global System for mobile Communication), CPU(Central processing Unit), Zigbee, Wi-Fi(Wireless Fidelity), GPRS(General Packet Radio Service), UDS(Underground Drainage System), RTC(Real Time Control)**

I. INTRODUCTION

In India most of the cities has underground drainage system are maintained by Municipal Corporation to make clean healthy surroundings and hence environment. Often due to poor maintenance of the underground drainage system, the water in the drainage system gets mixed up with the pure water and consumption of this polluted water leads to water borne diseases. Due to sudden changes in the atmosphere and variations in the climate during different seasons the drainage gets blocked or water logged, making environment unhealthy and disturbs the healthy routine of common people. To overcome all these issues in the underground drainage system and inform the municipal corporation about the condition of the underground drainage system by sending short messages through internet , so that the officials can take the necessary action to repair the drainage system and the manholes. Also various gases are formed inside the drainage system due to domestic and industrial waste will also be detected using the different gas sensor so that we can avoid explosion due to pressure inside the drainage system. If the drainage system manhole lid is opened for long hours then by using tilt angle sensor modules we can detect the opening of the lid over the manholes and inform the municipal corporation officials to take proper action on it. Thus, main aim is to monitor the

International Journal of Advanced Innovative Technology in Engineering (IJAITE), Vol. 4, Issue 3, May -2019 *ISSN: 2455-6491*

"STUDY OF INTERNET OF THINGS AND DEVELOPMENT TOOLS AND TECHNOLOGY"

[1]SWARUP DESHMUKH
ME, Scholar, Department of Electronics & Telecommunication Engineering, Prof. Ram Meghe Institute of Technology & Research, Badnera, Amravati, India
swarup.deshmukh21@gmail.com

[2]DR. C. N. DESHMUKH
Head, Department of Electronics & Telecommunication Engineering, Prof. Ram Meghe Institute of Technology & Research, Badnera, Amravati, India
cndesh1968@gmail.com

ABSTRACT: *Now a day's innovations in production of mobile computers and smart phones, sensors and sensor networks in connection with next generation mobile networks opened great opportunities for researchers and developers of various systems and application in the field of Smart Cities. Some typical applications including garbage monitoring, Humidity built-in sensors, water supply monitoring street light monitoring, and air pollution monitoring etc. require a smart gateway to provide high data rate, along with end-to-end connectivity is required with higher bandwidth. This paper presents a study of the research progress of IoT by analyzing the security requirements and presenting the different research areas of IOT and discusses the various open source software tools and hardware tools used for developing the IOT based Application.*

Keywords: Sensors, Smart Cities, Internet of Things

1. INTRODUCTION

Internet of Things can be defined as an interconnection between people, animal or object that has ability to exchange data over network without involving human-to-human or human-to-computer interaction. IOT offer various kinds of connectivity from devices, systems, and services that work within machine-to-machine communications and cover most applications, domains and protocols. Nowadays, there are many implementations of IoT devices, for instances, garbage monitoring, Humidity built-in sensors, water supply monitoring street light monitoring, air pollution monitoring etc. In current market the implementation of smart thermostat systems and washer/dryer with ~~for~~ remote monitoring ~~by~~ using Wi-Fi can be construed as another example of IoT based systems. The main aim of this paper is to provide ~~an~~ a study of IoT security concerns, the relevant software development tools, IoT modelers and simulators.

2. LITERATURE REVIEW

Shanzhi Chen et. al. [1] proposed acting standard that can hopefully balance desires from different parties, can open the door for future fundamental theory development, and can eventually stimulate/regulate IoT development. For the past few years, Chinese government is pushing the development of the IoT. Following the Chinese 12th Five-Year Plan for IoT Development, China has accomplished a number of demonstration application projects such as the smart city and the intelligent transportation system in public IoT applications, intelligent coal mine, and the IOFs in industry applications.

Sanjana Prasad et. al. [2] deals with the design and implementation of Smart surveillance monitoring system using Raspberry pi and PIR sensor for mobile devices. It increases the usage of mobile technology to provide essential security to our homes and for other control applications. The proposed home security system captures information and transmits it via a 3G Dongle to a Smart phone using web application. Raspberry pi operates and controls motion detectors and video cameras for remote sensing and surveillance, streams live video and records it for future playback. It can also find the number of persons located with the help of the Infrared sensor. The cameras automatically initiate recording and the Raspberry pi device alerts the owner of the possible intrusion having a smart phone. Raspberry- Pi has two main components interacting with each other: one is the Web Application that executes on the mobile device's browser and server-side scripts that run in a cloud which will be operated by the Raspberry Pi Hardware tool component.

Adarsh Hegde et. al. [3] helps to automatically monitor the supply of water from the authorities and to get alert regarding it which helps in the proper utilization of it. This will help the masses to fill up their containers even in case of unusual timing of supply with automated procedures. Also the automation helps to reduce the wastage of water when containers are filled. Since in urban masses where water scarcity is quite common problem in summer, there is need to monitor the consumption of water used for domestic purposes. So that it is possible for judicial usage of water especially in the dry areas.

Akshay D. Deshmukh et. al. [4] intends to provide information using wireless sensor technology which comprises o raspberry pi, Arduino Nano, Zigbee, wireless senso

International Journal of Research in Advent Technology, Vol.7, No.5, May 2019
E-ISSN: 2321-9637
Available online at www.ijrat.org

Design Wireless Sensor Network and IoT for Smart City

Swarup Deshmukh[1], Dr. C. N. Deshmukh[2]
Department of Electronics & Telecommunication [1,2], PRMIT, Badnera Amravati, Maharashtra, India-444701[1,2]
Email: swarup.deshmukh21@gmail.com[1], cndesh1968@gmail.com[2]

Abstract- Now a day's innovations in production of mobile computers and smart phones, sensors and sensor networks in connection with next generation mobile networks opened great opportunities for researchers and developers of various systems and application in the field of Smart Cities. Some typical applications including garbage monitoring, Humidity built-in sensors, water supply monitoring street light monitoring, and air pollution monitoring etc. require a smart gateway to provide high data rate, end-to-end connectivity is required with higher bandwidth. This paper proposes a novel model for Smart city concept using the IoT which has important benefits.

Index Terms- sensors, Smart Cities, Internet of Things

1. INTRODUCTION

Internet of Things can define as interconnection between people, animal or object that ability to exchange data over network without involving human-to-human or human-to-computer interaction. IOT offer various kinds of connectivity from devices, systems, and services that work within machine-to-machine communications and cover with applications, domains and protocols. Nowadays, there have many implementations of IoT devices, for instances, garbage monitoring, Humidity built-in sensors, water supply monitoring street light monitoring, air pollution monitoring etc. In current market the implementation of smart thermostat systems and washer/dryer for remote monitoring by using Wi-Fi.

In this work integrated system of Wi-Fi modem, IoT, Internet, Cameras and Sensor is introduced for efficient and economic garbage collection, Street Light Management, Water flow management, and Air pollution control in residential areas. The developed system provides improved for garbage collection time and waste amount at each location. We analyzed the solutions currently available for the implementation of IoT. By implementing this project we will avoid over flowing of garbage from the container in residential area which is previously either loaded manually or with the help of loaders in traditional trucks. It can automatically monitor the garbage bin & send the image of garbage bin to collection truck. The technologies which are used in the proposed system are good enough to ensure the practical and perfect for solid garbage collection process monitoring and management for green environment. The system monitors the street light. System simply checks the intensity of ambient light to the threshold value if ON the street light. Otherwise OFF the street light.

2. RELATED WORK

Shanzhi Chen et. al. [1] proposed acting standard can hopefully balance desires from different parties, can open the door for future fundamental theory development, and can eventually stimulate/regulate IoT development. Recent years, Chinese government is pushing the development of the IoT. Following the Chinese 12th Five-Year Plan for IoT Development, China has accomplished a number of demonstration application projects such as the smart city and the intelligent transportation system in public IoT applications, intelligent coal mine, and the IOFs in industry applications.

Sanjana Prasad et. al. [2] deals with the design and implementation of Smart surveillance monitoring system using Raspberry pi and PIR sensor for mobile devices. It increases the usage of mobile technology to provide essential security to our homes and for other control applications. The proposed home security system captures information and transmits it via a 3G Dongle to a Smart phone using web application. Raspberry pi operates and controls motion detectors and video cameras for remote sensing and surveillance, streams live video and records it for future playback. It can also find the number of persons located with the help of the Infrared sensor. The cameras automatically initiate recording and the Raspberry pi device alerts the owner of the possible intrusion having a smart phone. Raspberry- Pi has two main components interacting with each other: one is the Web Application that executes on the mobile device's browser and server-side scripts that run in a cloud which will be operated by the Raspberry Pi Hardware tool component.

Adarsh Hegde et. al. [3] helps to automatically monitor the supply of water from the authorities and to get alert regarding it which helps in the proper utilization of it. This will help the masses to fill up their containers even in case of unusual timing of supply with automated procedures. Also the

International Journal of Science and Engineering Applications
Volume 8-Issue 6, 111-114, 2019, ISSN:-2319-7560

Home Automation and Surveillance: A review

K. S. Pachpor,
Dept of Electronics and Telecomm.,
PRMIER, Badnera,
Amravati (MS), India.

Dr. C.N.Deshmukh,
HoD, Dept of Electronics and Telecomm,
PRMITR, Badnera,
Amravati(MS), India.

Abstract—Home automation and Surveillance systems are being consistently undergoing changes due to developments in electronics and communication fields. Right from telephone controlled home appliances and simple camera based system, the Home Automation and Surveillance today has entered the IoT era. Home automation makes life easier by providing all home appliances control at single point which is mostly a smart phone. Surveillance requirement is rapidly increasing in domestic and commercial applications due to its low cost and ease of deployment. This paper takes stock of how Home Automation and Surveillance systems have been changed and implemented. Home Automation and Surveillance related literature of last 7-8 years has been referred for the review.

Keywords—*Home automation, Surveillance, Raspberry Pi, OpenCV, CCTV, ZigBee, XBee, SimpleCV, Cloud, Gamma ray IR.*

I. Introduction

The Surveillance and automation systems have become very important and indispensable for security reasons and energy conservation. Home automation and Surveillance system are in use since last 25-30 years. Initially systems were bulky and were not so sophisticated as they are today. Home Automation terminology includes the functioning of all household appliances. For example, a micro-controller based system can have the capability to control everything from Fan, air conditioning, lighting and overall electrical appliances. The home automation will help individual to monitor and control Home appliances remotely through internet. This paper reviews how home automation and surveillance systems developed in last 8-10 years. Different techniques used for surveillance like OpenCV, SimpleCV, Gamma ray correction etc. are discussed and different home automation architectures have also been focused in the paper.

II. Literature Survey:

The brief review of techniques for developing Home automation and surveillance system using IoT based frameworks is presented below.

Dae-Man Han , 2010 (1) addresses a new smart home control system based on sensor networks to make home networks more intelligent and automatic. He developed smart home automation and home energy management system using IEEE 802.15.4 and ZigBee. It gathers sensing information using occupancy sensor, Passive InfraRed (PIR) Sensor and photo sensor.

Jihua Ye, 2012 (2) presented research work on adaptive smart home system. In this system, the central controller uses feedback information from household appliances to learn the habits and to adjust the system automatically. The system uses toddler (used to find out the operation rules of user) and correlation algorithms (used to find out the relation of operations) to learn the habits of the users.

G. V. Vivek , 2015 (3) proposes IoT services using WiFi-ZigBee gateway for a home automation system. A smart home automation is an integration of smaller electrical devices and communicates with each other with a central processing unit. ZigBee nodes communicate wirelessly to the coordinator which is connected to a Linux board at the receiver end or the control panel which is interfaced with a ZigBee

International Journal of Research in Advent Technology, Vol.7, No.6, June 2019
E-ISSN: 2321-9637
Available online at www.ijrat.org

Design & Development of Network Geo-Fencing Model for User Monitoring and it's Alertness in a Security Applications

Minal Barapatre, Dr. C. N. Deshmukh

Abstract— A geo-fencing is a virtual fringe for a genuine geographic domain. A geo-fence can be produced according to client's need by thinking about various sweep, or a geo-fence can be a predefined defined of limits. Geo-fencing is utilization of geo-fence. Geo fencing is an element that uses the worldwide situating framework to characterize land limits. It has broadly expanding extension. Not a lot of utilizations are overseeing geo-admonitions that are proposed to instruct the adaptable/stationary customer proactively about zone express information. The advancement behind proactive region based organizations is called Geo-fencing. This work proposes geo-fencing foundation, in light of geo-fence region strategies. The work also compares the result of intended to demonstrate not only working of location based tracking system but also recommend the user location depending upon the geographical area. This method gives programmed checking of user goes to outside or inside a geo-fenced region. Cautions are produced when item individually enter or leave the limit. The state of the geo-fencing can be a straightforward geometric figure, similar to square or square shape, or a progressively convoluted one, similar to complex polygon.

Index Terms— geo-fence, global positioning system, geo-notifications

I. INTRODUCTION

Geo-fencing is an web based application that uses the worldwide situating framework or radio recurrence recognizable proof to characterize geological boundaries.[1] A geo-fence is a virtual hindrance. Geo-fence applications and devices screen when cell phones or other physical articles enter or leave a set up geo-fenced territory and give heads cautions or warnings when there's an adjustment in status for a gadget. These alarms can be in type of instant messages, mail notices, telephone calls or comparative methods for correspondence. Geo-fencing is executed on the cell phones. It incorporates the persistent situating of the cell phone just as the consistent coordinating of the versatile's situation with a lot of geo-wall. The devices is viewed as a customer that is exclusively dependable to identify itself while the nonstop correlation of the versatile's situation with an enormous arrangement of committed zones, called geo-wall. By and large the geo-fencing alludes to the thought wherein the client characterizes the limits for all intents and purposes over a geological territory, and once the change is identified over a limit the warning is send to played out the ideal activity.

Manuscript revised June 10, 2019 and published on July 10, 2019
Minal Barapatre, *Department of Electronics & Telecommunication* , PRMIT, Badnera Amravati, Maharashtra, India-444701, *Email: barapatreminal77@gmail.com*
Dr. C. N. Deshmukh, *Department of Electronics & Telecommunication* , PRMIT, Badnera Amravati, Maharashtra, India-444701, *Email: cndesh1968@gmail.com*

II. RELATED WORK

Sarifah Putri Raflesia et. al. [1] led to give IT-based kid security that can encourage the guardians and government the kids observing. The usage of identifying module triggers the system to send notice to gatekeepers and structures server. In the interim, the geo-fencing method plans to empower the component of virtual fence which empower the guardians to screen the kids.

Maksim Avdyushkin et. al. [2] proposed a novel structure that consolidates the Wi-Fi passage with NFC innovation to safely confirm client's area. The arrangement can be utilized in numerous application regions including access control frameworks where secure area approval is urgent. The arrangement is practical and does not require foundation changes. We have displayed a casual security investigation of our proposed plan portraying how the convention can relieve understood assaults against validation conventions. Also, we actualized a proof of idea utilizing Python and Java and led execution investigation of our proposed plan. The outcomes are promising as far as speed, stockpiling use and correspondence overheads. Supposedly, this is the primary convention to consolidate NFC with Wi-Fi innovation to give secure area confirmation.

Teduh Dirgahayu et. al. [4] exhibited the component of area based solicitation sending that will be utilized in the administration switch of a LBS design with numerous data specialist organizations. The design permits clients in various geo-fencing regions be served by various specialist organizations. Up to a client remains in the equivalent geo-fencing zone, a similar specialist co-op serves that client. The system considers the clients' present land areas in deciding target specialist co-op. The component incorporates a storing instrument to make proficient the solicitation sending process. They have likewise portrayed a usage of that instrument with a contextual analysis of air terminal data administration provisioning.

Teduh Dirgahayu et. al. [5] present a structural plan of geo-fencing crisis alarms framework for Hajj explorer. Utilizing the framework, a traveler in crisis can send an alarm

DETECTION AND CLASSIFICATION OF DISEASES ON RICE AND SUGARCANE USING COMPUTER VISION TECHNIQUE

[1]Sevakram Tanaji Kumbhare, [2]Mrs. Madhavi S Joshi, [3]Dr. D T Ingole, [4]Mrs. A P Deshmukh

[1]M.E. Research Scholar, [2]Professor, [3]Professor, [4]Asst. Professor

[1] Electronics & Tele. Engg. Department,

[1]Prof. RMIT&R, Badnera, India

Abstract: Rice and Sugarcane are one of the most important crops in Maharashtra. In the agriculture field, disease identification from the crop images and crop protection is one of the interesting research areas. Digital Image Processing can be applied for Disease identification and classification. This project presents a prototype system for detection and classification of rice and sugarcane diseases based on the images of infected plants. Images of the infected rice and sugarcane plants are captured by digital camera. Digital image processing is used to detect infected parts of the plants. Analyzing the infected part, the type of disease is detected. Captured image is in the RGB format which is then converted in HSV format. Color feature is extracted using color histogram technique from the HSV image. Texture feature which is also an important parameter are extracted using GLCM (Gray Level Co-Occurrence Matrix). Random Forest classifier is used to detect the disease on the plant.

IndexTerms **- Computer Vision Technique, disease identification and classification, GLCM, Image processing, rice and sugarcane disease**

I. INTRODUCTION

In India, main source of the income for major population is Agriculture. In India, Almost 70 % of the population depends on farming. Almost 58 percent of the rural people depend on farming. Rice and sugarcane are one of the important foods in India. Sugarcane is one of the important cash crops. Diseases on rice and sugarcane destroy 10 to 15 % of production in Asia resulting in loss of earning. Plant diseases are the main cause for reduction of quality and quantity of agriculture crops. Reduction in both aspects can directly affect the overall production of the crop in a country. Different diseases that occur on rice plants are Bacterial Blight, Blast, and Sheath blight; on sugarcane crop are Leaf scald, rust and smut. Most of farmers are unable to identify disease well in time due to difficulty in identifying the diseases, which lead to loss of the crop. The main problem is a lack of continuous monitoring of the plants. The current approach of disease detection is manual, which means farmers mainly depend on the guide books, use their experiences to identify the diseases or naked eye observation through experts. The accuracy of the decision taken by an expert depends on his/her physical condition, such as work pressure, fatigue and eye sight, climate etc. So this method is time consuming and less efficient. Each plant disease has different stages of growth. Farmers have to keep eyes on the infection, whenever the disease occurs on a plant. This approach of disease detection is time-consuming and requires some precaution during the selection of pesticides.

Probability of occurrence of diseases on any plant is unpredictable. However, a continuous monitoring may prevent disease infection. On any plant, diseases are mainly caused by bacteria, fungi, and viruses. Image processing operations can be used on external appearances of infected plants. However, the symptoms of diseases are different for different plants. Each disease has its own unique characteristics. Diseases differ in shape, size, and color of disease symptoms. Some of the diseases might have the same color, but different shapes; while some have different colors but same shapes. Sometimes farmers get confused and are unable to take proper decision for selection of pesticides resulting in inefficient crop protection. This project attempts to apply concepts of Image Processing to solve the problem of automatic detection and classification of diseases of the rice and sugarcane crop.

II. LITERATURE REVIEW

Different approaches of Rice and Sugarcane leaf diseases have been proposed by various authors or researchers, described below.

Arya M S, Anjali K, et al. [3] proposed an idea of detecting plant diseases using image processing. Image processing toolbox of MATLAB is used for measuring affected area of disease and to determine the difference in the colour of the disease affected area. The algorithm can be used to classify the leaves and the classified outcomes are separated using Arduino based conveyor belt system. This reduces an important task of monitoring of farms crops at very early stage itself to detect the symptom of diseases appear on plant leaves. Framework for early detection of diseases in rice crops from visual symptoms was proposed. Author target rice crops owing to their extensive use in the Indian subcontinent and developed a user-friendly IoT reference architecture to provide on-field disease detection and prediction using cloud analytics [4].

Rakesh Chaware, Rohit Karpe, et al. [5] presented the critical analysis of different plants disease segmentation techniques. This provide description of leaf disease detection using image processing that can recognize problems in crops from images, based on color, texture and shape to automatically detect diseases and give the fast and accurate solutions to farmers. Author proposed the novel automated rice leaf disease identification and detection system using the improved support vector machine with the radial basis neural networks. Histogram equalization is used for image enhancement. Affected region is segmented with the help of the Otsu' thresholding

International Research Journal of Engineering and Technology (IRJET) e-ISSN: 2395-0056
Volume: 06 Issue: 04 | Apr 2019 www.irjet.net p-ISSN: 2395-0072

Solar Panel Cleaning System with Inbuilt Power Supply

Pratiksha Mahore[1], Priyanka Thakare[2], Reeba Mohammad Aslam[3], Ashwini Dhawale[4], Dr. N. N. Khalsa[5]

[1-5]*Electronics and Telecommunication Department, PRMIT&R, Badnera, Maharashtra, India*

Abstract - *Growing interest in renewable energy has lead the solar photovoltaic (PV) industry to expand notably in the last decade. In the year 2014 a staggering a 3.03-million gigawatt hours of electricity was produced in the European Union covering 3 percent of the total electricity demand. Because Photovoltaic energy is an accessible technology, it has become a popular investment for companies as well as for residential users. We have designed and built an automated self-cleaning solar panel. The panel detects the presence of an obstruction shading a cell, and actuates a cleaning mechanism that cleans off the obstruction and, therefore, restores the panel to normal capacity. To power the cleaning mechanism, we built our own power supplies which are supplied by a 8V battery. When required, this battery is charged by solar power when the cleaning mechanism is idle.*

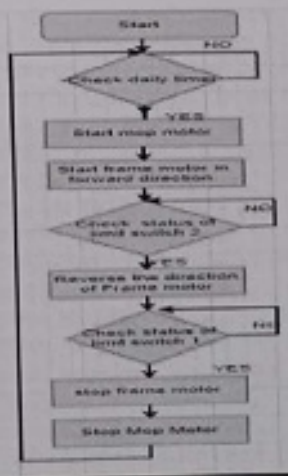
Key Words: **Dust, photovoltaic module, automated cleaning system.**

1. INTRODUCTION

The purpose of this project is to design and develop the cleaning solar panels automatically to increase the efficiency and energy output from these panels. It is shown that panel efficiency may be reduced by up to 5% to 10% from build up dust particles alone. Adding in other factors such as falling leaves, bird dropping and water streaking, the efficiency of these panels can be further reduced to as much as 10 – 30%. Some studies linked about reduction in output. In the case of a commercial installation, this would be a significantly higher cost. For this project, we will focus for more of a smaller scale, as in the case of residential use. There will be several considerations taken when we will design this system. Firstly, in the case of residential use, solar panels are usually placed on the roof or terrace to receive the maximum amount of sunlight. Because of this, cleaning these solar panels would result in the home owner climbing up on to the roof to clean the panels, which can be very hazardous or risky. The other option would be to hire a company to do it for them. The system being designed should be automatic to prevent having to climb up onto the roof or terrace and allowing for the solar panels to be cleaned by others. Another factor taken into consideration was that solar panels tend to be placed in areas where there is a lot of sunshine and very little rain. Therefore, we would not depend upon rainfall to clean the panels, but water usage, for self-cleaning, in these areas may be limited as well. Also, there need to be a way of determining when to clean the solar panel since having it cleaned all the time would be equally a waste of power or energy. Additionally, we could not depend on there being a reduction of power from the panels as a method of determining when it should be cleaned since a whole cloudy day would also result in a reduction in absorption of solar rays. The accumulation of dirt on solar panels ("soiling") can have a significant impact on the performance of PV systems in regions where rainfall is limited for a dry season of several months. This effect is magnified where rainfall is absent in the peak-solar summer months, such as in California and the Southwest region of the United States. This paper describes the effects of soiling on energy production for large grid-connected systems in the US and presents a model for predicting soiling losses. The adverse impact of soiling (dust deposition) on solar collectors, and the mitigation of the related energy

The adverse impact of soiling (dust deposition) on solar collectors, and the mitigation of the related energy yield losses, are the main scopes of this paper. While soiling related losses have been studied more extensively for flat plate photovoltaic (PV) panels, this study focuses primarily on the impact of dust accumulation on concentrated photovoltaic (CPV) and concentrated solar power (CSP) systems. We report on different methods used for cleaning solar collectors: (i) natural cleaning by rain and snowfall, (ii) manual cleaning by water and detergent, and (iii) an emerging method of dust removal by electrodynamic screens (EDS). Development of EDS technology as an automated, low-cost dust removal method which does not require any water or manual labour is presented.

2. METHODOLOGY



International Research Journal of Engineering and Technology (IRJET) e-ISSN: 2395-0056
Volume: 06 Issue: 04 | Apr 2019 www.irjet.net p-ISSN: 2395-0072

Real Time Attendance System using Face Recognition

Gayatri Dhokne[1], Ashwini Dabhade[2], Kanchan Amdare[3], Rushikesh Bawankar[4], Ram Ashtikar[5], S.A. Nirmal[6]

[1,2,3,4,5]Student, PRMITR, Badnera-Amravati
[6]Assistant Professor, Dept. of Extc Engineering, PRMITR, Badnera-Amravati

---

Abstract:- Uniqueness or individuality of an individual is his face. In this project face of an individual is used for the purpose of attendance making automatically. Attendance of the student is very important for every college, universities and school. Conventional methodology for taking attendance is by calling the name or roll number of the student and the attendance is recorded. Time consumption for this purpose is an important point of concern. Assume that the duration for one subject is around 60 minutes or 1 hour & to record attendance takes 5 to 10 minutes. For every tutor this is consumption of time. To stay away from these losses, an automatic process is used in this project which is based on image processing. In this project face detection and face recognition is used. Face detection is used to locate the position of face region and face recognition is used for marking the understudy's attendance. The database of all the students in the class is stored and when the face of the individual student matches with one of the faces stored in the database then the attendance is recorded.

This whole project consists of five modules such as:

1. Capturing the image.

2. Creating database.

3. Detecting faces.

4. Processing.

5. Face recognition and classification.

1. INTRODUCTION

This traditionally attendance is marked manually by teachers and they must make sure correct attendance is marked for respective student.

This whole process wastes some of lecture time and part of correct information is missed due to fraudulent and proxy cases.

The current systems that are used for updating attendance automatically are usually RFID based and Bio-metric based ,but it has some drawbacks such as there can be chances of proxies, they are time consuming and quite complex process.

By considering this drawback, here we proposed an attendance system which is based on face detection and recognition as the Face is the essential recognizable proof for any human.

It will increase accuracy and productivity of class. To make it possible for every platform we choose raspberry pi model. Camera will be interfaced with raspberry pi module for face detection.

This project can also used for different applications where face recognition is necessary for security purpose

In this proposed system we take the attendance using face recognition which recognizes the face of each student and according to this it will mark attendance of present students.

2. LITERATURE SURVEY

We all know that today's attendance marking system is completely manual where teacher calls student's name and relies on his/her reply to mark the attendance. This is very tedious task especially when there is large group of people. There are efforts by various researchers towards automating this task. Different technologies have been tried and implemented for implementing such an automated system which is highly efficient in terms of accuracy, speed and cost. Michael Dobson, Douglas Bernie Di Dario [1] proposed the concept of Automated Attendance System in 2006. The system includes identification tags, with wireless communication capabilities, for each potential attendee. There are scanners for detecting the attendees' tags as they enter a given room, at least one server in communication with the scanners. This study provided a way to get rid of tedious work for marking and recording attendance. Vishal Gahilot, Vijay Gupta [2] proposed the concept of Bluetooth Based Attendance Management System in 2013.Sumita Nainan, Romin Parekh, These systems tend to depend on external devices and tags which are to be externally possessed by students/attendees. One can easily handover these to others and hence there is high probability of fake attendances. For this, biometric based attendance is a good solution. O. Shoewu and O.A. Idowu [4] proposed the concept of Development of Attendance Management System using Biometrics in 2012. The system takes attendance electronically with the help of a finger print device and the records of the attendance are stored in a

International Research Journal of Engineering and Technology (IRJET) e-ISSN: 2395-0056
Volume: 06 Issue: 04 | Apr 2019 www.irjet.net p-ISSN: 2395-0072

ASSISTING SYSTEM FOR PARALYZED AND MUTE PEOPLE WITH HEART RATE MONITORING

Akshay S. Utane[1], Mahesh Thorat[2], Shivam Kale[3], Dakshayani Sangekar[4], Shivani Kondhekar[5]

Assistant Professor, Dept. of EXTC, PRMIT & R Badnera
Dept. of EXTC, PRMIT & R Badnera. , Dept. of EXTC, PRMIT & R Badnera.
Dept. of EXTC, PRMIT & R Badnera, Dept. of EXTC, PRMIT & R Badnera.

Abstract - *The noble aim behind this project is to design a health care system which will be helpful for paralyzed and mute people as well as for the detection of heart attack. A Dumb individual all through the world uses gesture based communication for the correspondence. The progression in implanted framework can give a space to plan and build up an interpreter framework to change over the communication via gestures into discourse. As sign language primarily used by deaf but also used by people who can hear having problem in speaking so the approach used in this analysis is vision based. The glove uses are fitted with flex sensor in three dimensions to collect the data from every position of figure and hand motion to differentiate and distinguish each and every word from a particular sign. Heart attack is the major reason for death among both genders men and women. However, its occurrence cannot be always predictable. Most common device used to detect heart related problems is an EKG machine which is reliable to normal user, but is not mobile enough to be used as a monitoring device for a heart patient continuously. This project is to develop an algorithm for detecting a heart attack and if so, then to alert doctors, family members and emergency services .Hence here we introduce a smart health care system which will take care of problems and need of paralyzed and mute people and will also help in detection of heart attack.*

Key Words: **Heart rate, flex sensor, Mute People, Gesture Recognition, sign language.**

1. INTRODUCTION

Paralysis is defined as the complete loss of muscle function in any part of the body. It occurs when there is a problem with the passage of messages between the muscles and brain .Due to paralysis patients are not able to move their some of body parts and also it is very difficult for them to talk with other person for their need or help. Hence our project will help paralyzed people to convey their messages to doctor or family member .This project will help them to do something by their own [2]. Its very difficult for mute people to convey their message to regular people. Since regular people are not trained on hand sign language, the communication becomes very difficult. In emergency or other times when a mute person travelling or among new people communication with nearby people or conveying a message becomes very difficult. [4]. Here we propose a smart speaking system that helps mute people in conveying the message to regular people using hand motions or gestures. The system makes the use of hand motion reading system equipped with motion along with a speaker unit. This system is powered by a battery powered circuitry to run it [3]. This framework offers voice to voiceless i.e. voice is given to the individual who can't talk. Imbecilic/quiet individuals utilize gesture based communication for correspondence reason. Communication through signing utilizes signals rather than sound to pass on data. This dialect incorporates consolidating hand shapes, hand developments, outward appearances to express person's considerations [7]. In this framework flex sensors assumes the real part. Flex sensors are the sensors whose resistivity changes with the measure of curve. This framework show fill in as an attractive Interpreter used to deciphers Sign Language in type of Gesture by a Dumb Person to Synthesized English Word which has a relating significance in Sign Language which translates a specific thing, as an Audio Output for Normal Person.[8]

2. LITERATURE SURVEY

According to a survey, nearly 1 in every 5000 people are paralyzed. Fully paralyzed patients require 24 hour support. But in this days, it is not possible to constant monitor patient. So they need a person which take care's movement disabled or paralyzed patient. And appliances cannot be handled by them. So they need constant help and they cannot work independently there are various applications which can be drive from eye blink detection and these are not limited. An efficient, real time blink detection can be used for almost any purpose. It can be used for on/off appliances such as lighting devices, fan, television or a microwave oven. Electrooculographic direction of a wheelchair utilizing eye development A convenient remote eye development controlled Human Computer Interface (HCI) for debilitated individual Eye controlled turning on and off the electronic gadgets Launching the rocket utilizing look in war field A few inquires about have been done as of late to develop Human Computer Interface [HCI][4].Human Computer Interface as an assistive innovation helps the general population with engine incapacities and who can't move their arms thus mind boggling human PC interface must be more developed, specific to that of the information charges, adjusted - to the incapacity of the user, designed in a sheltered and straightforward way. Under to human PC interface

International Research Journal of Engineering and Management Studies (IRJEMS)
Volume: 03 Issue: 04 | April -2019 ISSN: 1847-9790 || p-ISSN: 2395-0126

SOLAR SMART FLOWER BASED POWER GENERATION & UTILIZATION IN IRRIGATION SYSTEM USING IOT

A. S. Utane [1], Mrunali Kherde[2], Deepa Sawai [3], Pallavi Rokade[4], Dhnashree Jamnikar [5]
[1]Assistant Professor,Dept. of EXTC, PRMIT & R Badnera
Dept. of EXTC, PRMIT & R Badnera. Dept. of EXTC, PRMIT & R Badnera.
Dept. of EXTC, PRMIT & R Badnera. Dept. of EXTC, PRMIT & R Badnera.

Abstract - *An A new technologies has been introduced and utilized in modern world, there is a need to bring advancement in the field of agriculture, Various types of Researched have been undergone to do this and some are also have been widely used. This proposed system is one of them. In order to improve the crop productivity efficiently with new technologies, it is necessary to monitor the environamental conditions in and around the field. The parameter that have to be properly monitored to enhance the yield is moisture. Moisture sensors will monitor and collect information about the field moisture. So according to the need pump can be start to water the field. This can be done from anywhere with the help of IOT. Internet of Things (IoT) is being used in several real time applications. The introduction of IoT along with the sensor network in agriculture refurbishes the traditional way of farming. Online moisture monitoring using IoT helps the farmers to stay connected to his field from anywhere and anytime. To make this system more farmer friendly an idea of using more and more renewable energy is utilized. This plug-and-play renewable energy alternative is equipped with 6 solar panel petals that follow the daily trajectory of the sun. It unfolds itself sensing the sun light and refolds in the evening. Sensors in the system allow it to protect itself from rain and high wind by unfolding itself after sensing.*

***Key Words*: soil moisture sensor, smart flower, irrigation system ,IOT, cloud networking**

1. INTRODUCTION

The smart flower is an all-in-one ground mounted solar system with a tracker that follows the sun. It name comes from its design – the solar cells are arranged on individual "petals" that open at the beginning of each day. After the sun goes down, the smart flower petals fold up and a self-cleaning process kicks in. In addition to solar cells, the smart flower system contains a dual-axis tracker that makes it possible for its "petals" to follow the sun across the sky throughout the day. The smart flower-plus offers energy storage capabilities via an integrated battery in addition to the standard solar electricity generation that the smart flower offers. The main objective of this paper is to improve and stabilize the crop yields of smallholder olive farmers through the implementation of sustainable irrigation systems. To promote water management practices that optimizes the volume and timing of water distribution. To generate positive economic consequences for farmers and their families. Minimize year to year yield fluctuations, leading to higher and more stable farm income.[6][10]In this paper To make irrigation system more farmer friendly an idea of using more and more renewable energy is utilized. It became possible by using a SMART FLOWER which produces 40% more energy than a traditional photovoltaic panel. This plug-and-play renewable energy alternative is equipped with 6 solar panel petals that follow the daily trajectory of the sun[3][4]. The concept in future can be enhanced by integrating GSM technology, such that whenever the water pump switches ON/OFF, an SMS is delivered to the concerned person regarding the status of the pump. We can also controlled the pump through SMS. The smart flower is an all-in-one ground mounted solar system with a tracker that follows the sun. It name comes from its design – the solar cells are arranged on individual "petals" that open at the beginning of each day[7][9]. After the sun goes down, the smart flower petals fold up and a self-cleaning process kicks in. In addition to solar cells, the smart flower system contains a dual-axis tracker that makes it possible for its "petals" to follow the sun across the sky throughout the day. The smart flower-plus offers energy storage capabilities via an integrated battery in addition to the standard solar electricity generation that the smart flower offers.

2. LITURATURE SURVEY

There are various Solar Powered Irrigation System implemented by various researchers. In one of the research Archana and Priya.et.al considered the humidity and soil moisture sensors which are placed in the root zone of the plant. Based on the sensed values the microcontroller is used to control the supply of water to the field. This system doesn't intimate the farmer about the field status. In another work Sonali D.Gaiswar et al. which uses soil parameters such as pH, humidity, moisture and temperature are measured for getting high yield from soil. This system is fully automated which turns the motor pump ON/OFF as per the level of moisture in the soil. The current field status is not intimated to the farmer[2]. Some another researchers Karan kansara and S.Reshma and B.A.Sarath et.al shows an an automated irrigation system where the humidity and temperature sensors are used to sense the soil conditions and based on the microcontroller will control the water flow. Farmer will be intimated through GSM. This system doesn't monitor the nutrient content in the soil [3] also an IOT based automatic irrigation system using wireless sensor networks in which various sensors are used to measure the soil parameters. This system provides a web interface to the user to monitor and control the system remotely. Weather monitoring is not done in this system [4]. In current research the researchers found that The new scenario of decreasing water , drying up of rivers and tanks, unpredictable environment, present an urgent need of proper utilization of water. To cope up with this use of temperature and moisture, sensors are placed at suitable locations for monitoring the crops.[3][8][9] After research in the agricultural field, researchers found that the

International Research Journal of Engineering and Technology (IRJET) e-ISSN: 2395-0056
Volume: 06 Issue: 03 | Mar 2019 www.irjet.net p-ISSN: 2395-0072

Design Persistence of Vision Control Using Arduino

Prabhu Mamarde[1], Uddhav Thakare[2], Shubham Rangari[3], Saurabh Sambhare[4], Chetan Dahapute[5], Prof. M. K. Shriwas[6]

[1,2,3,4,5]*Department of Electronics & Telecommunication, Prof. Ram Meghe Institute of Technology & Research, Badnera, Amravati, India*

[6]*Assistant Professor, Department of Electronics & Telecommunication, Prof. Ram Meghe Institute of Technology & Research, Badnera, Amravati, India*

Abstract - *This paper mainly emphasizes on the Persistence Of Vision technology. In current era in which energy is the main factor in designing all the applications, maximum and efficient use of the energy is very important. A POV display has many advantages over a traditional CRT, LCD or LED display, like power savings, less complexity, easy configuration, attractiveness etc. To overcome the drawback of old processor we have decided to implement the same display atop a new and advanced microprocessor, the Arduino nano. This platform brings with it newer coding and a different understanding of peripherals. ARDUINO INTERFACE BOARDS provide us with a low-cost, easy-to use technology to create the project. We also aim to build the newer display to work with modern forms of interfaces. To accomplish this, we will be interfacing the display with an Android device. This project can be implemented with help of any Android Smartphone/tablet running Android 4.0+.*

Key Words: POV, Arduino nano, Android, ATMega 328, USB Interfacing, Piranha LED

1. INTRODUCTION

The core phenomenon on which the entire project is based is the Persistence of vision. Persistence of vision is the phenomenon pertaining to the human eye by which an after image is thought to persist for approximately one twenty-fifth of a second on the retina. The way this phenomenon of persistence of vision works is based on the belief that human perception of motion (brain centered) is the result of persistence of vision (eye centered). Any motion that we see around us is the direct implication of persistence of vision phenomenon at work. Persistence of vision is still the accepted term for this phenomenon in the realm of cinema history and theory. Blinky POV is a reprogrammable LED kit that uses persistence of vision to create the illusion of text or a small picture floating in the air. The purpose of this project is to design and create a persistence of vision (POV) display. The display will allow the users to upload an image to be displayed through the wireless communication. A persistence of vision (POV) refers to the phenomenon of the human eye in which an after image exists for a brief time (10ms). A POV display exploits this phenomena by spinning in one dimensional row of LED's through a two dimensional space at such a high frequency that a two dimensional display is visible.

2. WHAT IS PERSISTENCE OF VISION

Persistence of vision refers to the optical illusion whereby multiple discrete images blend into a single image in the human mind. Our eyes offer one of the five specialized means by which our mind is able to form a picture of the world. The eye is a remarkable instrument, having certain characteristics to help us process the light we see in such a way that our mind can create meaning from it. Take the motion picture, the scanning of an image for television, and the sequential reproduction of the flickering visual images they produce. These work in part because of an optical phenomenon that has been called persistence of vision and its psychological partner, the phi phenomenon; the mental bridge that the mind forms to conceptually complete the gaps between the frames or pictures.

3. SYSTEM DESIGN

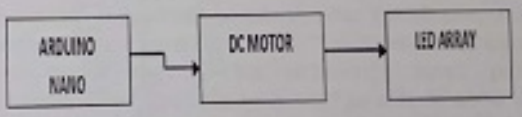


Fig - 1: Proposed Block diagram

Persistence of vision is an optical illusion in which many discrete images are blend into one single image on the human mind. This particular board has a set of 8 inline LEDs that you can program to display the POV effect. We have already implemented a POV display based on Arduino Nano. The display used is based on Arduino Nano that is used to control the switching of 8 red colored LED's

The display consisted of the following components

1. Arduino Nano: Processor used is ATmega328. Arduino Nano consists of 14 Digital input output pins and 8 Analog input pins. It is used for switching theLED's at appropriate time.

International Journal of Advanced Innovative Technology in Engineering (IJAITE), Vol. 4, Issue 1, Jan-2019 ISSN:2455-6491

"STUDY OF PERSISTENCE OF VISION AND ITS APPLICATION"

[1]PRABHU MAMARDE
Department of Electronics & Telecommunication, Prof. Ram Meghe Institute of Technology & Research, Badnera, Amravati, India
prabhu.mamarde@gmail.com

[2]UDDHAV THAKARE
Department of Electronics & Telecommunication, Prof. Ram Meghe Institute of Technology & Research, Badnera, Amravati, India
uddhavthakare97@gmail.com

[3]SHUBHAM RANGARI
Department of Electronics & Telecommunication, Prof. Ram Meghe Institute of Technology & Research, Badnera, Amravati, India
rangarishubham199@gmail.com

[4]SAURABH SAMBHARE
Department of Electronics & Telecommunication, Prof. Ram Meghe Institute of Technology & Research, Badnera, Amravati, India
snsambhare07@gmail.com

[5]CHETAN DAHAPUTE
Department of Electronics & Telecommunication, Prof. Ram Meghe Institute of Technology & Research, Badnera, Amravati, India
chetandahaputе@gmail.com

[6]PROF. M. K. SHRIWAS
Department of Electronics & Telecommunication, Prof. Ram Meghe Institute of Technology & Research, Badnera, Amravati, India

ABSTRACT: *The term persistence of vision has come to be seen as inadequate to fully describe this very complex physiological reality, it remains a standard expression and, as such, it serves as a useful metaphor. In effect, the process know as persistence of vision plays a role in keeping the world from going pitch black every time blink our eyes. Whenever light strikes the retina, the brain retains the impression of that light for about a 10th to a 15th of a second (depending on the brightness of the image, retinal field of view, and color) after the source of that light is removed from sight. This is due to a prolonged chemical reaction. As a result, the eye cannot clearly distinguish changes in light that occur faster than this retention period. The changes either go unnoticed or they appear to be one continuous picture to the human observer.*

Keywords: persistence of vision, metaphor, optical illusion, frames

1. INTRODUCTION

Persistence of vision refers to the optical illusion whereby multiple discrete images blend into a single image in the human mind. Our eyes offer one of the five specialized means by which our mind is able to form a picture of the world. The eye is a remarkable instrument, having certain characteristics to help us process the light we see in such a way that our mind can create meaning from it. Take the motion picture, the scanning of an

International Research Journal of Engineering and Technology (IRJET) e-ISSN: 2395-0056
Volume: 06 Issue: 01 | Jan 2019 www.irjet.net p-ISSN: 2395-0072

A Novel Approach For Content based Image Retrieval by using Histogram

Prof. Manish Shriwas[1], Payal Deotale[2], Ankita Naik[3], Komal Wankhade[4], Arti Marbade[5]

[1-5]*Department of Electronic and Telecommunication Engineering, PRMIT&R Badnera, Maharashtra, India.*

Abstract - *In the world of digital image processing since the need for content- based image retrieval has increased with increment size and volume of digital images. In this paper we implement the effective framework which is used to retrieve most similar images from large images database for the image provided by the user. We proposed methodology, an image present by a set of regions, while comparison of images are posing, each image represent by a histogram, hence the estimation of the region correspondence transform into an histogram matching problem. In addition, by using and image distance concepts, difference between images obtained. Experimental results show that the proposed histogram image matching performance is acceptable.*

Key words **-** Text based image retrieval, texture, color and shape feature, Local tetra pattern

1. INTRODUCTION

As human being get image, sound and any other information by seeing, hearing, perception and analysis. Human judge similarly of images and sound according to their semantic content, for instance the searching for a star's picture is based on his facial character or other content. So the retrieval technique based on text or keywords for the digital multimedia apparently can't meet the claim that human being get multimedia information exactly.

Generally we preferred to search by text on search engine like Google, Yahoo, Mozilla firebox etc. i. e. the images stored in text notation user enter the text thus images are on the basis of these text.

The figure shows that result of search images with text notation.

Fig.1.1 Flowers images search on Google

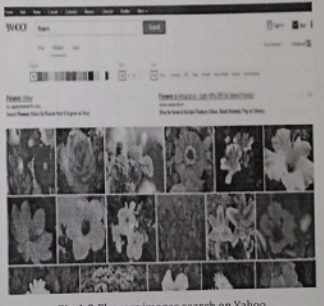


Fig.1.2 Flowers images search on Yahoo

Content based image retrieval (CBIR), also known as query by image content (QBIC) and content based visual information retrieval (CBVIR) is the application of computer vision techniques to the image retrieval

International Research Journal of Engineering and Technology (IRJET) e-ISSN: 2395-0056
Volume: 06 Issue: 04 | Apr 2019 www.irjet.net p-ISSN: 2395-0072

A Review On Implementation of a Fire Fighting Robot Using Arduino

Prof. Vaibhav J. Babrekar, Priya V. Thakur, Ashwini S. Khandal, Pranisha P. Shriwas, Shweta D. Thakare

[1]*Professor, Dept. Of Electronics and Telecommunications, Prof. Ram Meghe Institute of Technology and Research, Badnera, Amravati, Maharashtra, India*

[2]*UG Student, Dept. Of Electronics and Telecommunications, Prof. Ram Meghe Institute of Technology and Research, Badnera, Amravati, Maharashtra, India*

[3]*UG Student, Dept. Of Electronics and Telecommunications, Prof. Ram Meghe Institute of Technology and Research, Badnera, Amravati, Maharashtra, India*

[4]*UG Student, Dept. Of Electronics and Telecommunications, Prof. Ram Meghe Institute of Technology and Research, Badnera, Amravati, Maharashtra, India*

[5]*UG Student, Dept. Of Electronics and Telecommunications, Prof. Ram Meghe Institute of Technology and Research, Badnera, Amravati, Maharashtra, India*

Abstract – *The project is designed to develop a fire fighting robot using XBEE module for remote operation. The wireless communication is used to control the robotic vehicle which is loaded with water tank and a pump to throw water. An Arduino is used for the desired operation. At the transmitting end using GUI, commands are sent through transmitter to the receiver which decodes it before feeding to other Arduino to control the movement of the robot that is to move the robot in forward, backward, left or right directions. At the receiving end three motors are interfaced to Arduino UNO where two of them are used for the movement of the vehicle and remaining one for the pump. The appropriate signals from transmitting end are used to carry out the operation of robot based on the Arduino UNO output. The robot body is mounted with a water tank and a water pump. A motor driver IC is interfaced to the Arduino UNO through which the controller drives the motors. Also a temperature sensor and gas and smoke detector is interfaced so that after crossing the threshold values, the water pump turns on automatically. Further a wireless camera is interfaced so that the person controlling it can view operation of the robot remotely on a screen.*

Key Words: Arduino UNO, XBEE Module, GUI, Fire Sensor, Driver IC

1.INTRODUCTION

A robot is machine which is capable of performing human tasks or behaving like a human. The expertise and complex programming is required to build a robot. It involves building of system and assembling various components together. Advances in economic growth in modern industrialized society have resulted in factories, complex office buildings, and dense apartment blocks located in metropolitan areas. Associated gas stations, oil reservoirs, and LNG storage facilities, which are all vulnerable to fire due to inflammable materials, are also found in these areas. When a fire occurs in such places, fire-fighting is difficult due to mazes of crowded buildings, high temperatures, smoke and the danger of explosion.

Current fire-fighting systems are based on humans using water guns and chemical fire repression systems. However, humans cannot work effectively in all fire environments. In this case, it is desirable to extinguish a fire quickly using fire-fighting robots. A fire-fighting robot is one having a small fire sensing and extinguishing system attached to it. With the help of automation, the robot can be made human controlled. This paper includes the design and construction, working, implementation and future scope of a fire-fighting robot based on Arduino UNO which is used as a controller. The following concepts are implemented in our robot: environmental sensing, proportional motor control.

In order to control fire-fighting robots in remote places, robust radio communication systems are necessary. In our project the XBEE communication system is used for this purpose. The robot is monitored through a wireless camera present on it's top from the remotely situated control station using XBEE module. Thus according to the status of the various sensors of the robot, user can take required action.

Also in the other case, the water pump on the top of robot is automatically switched on and the robot sounds alarm with the help of buzzer provided to it when the output value of temperature and smoke sensor is above a certain threshold. This project helps to create the innovations and interests in the field of robotics while working towards a practical and approachable solution to save lives and mitigate the risk of property damage

2. RELATED WORK

One of the major concern for both industrial and residential areas is the loss due to fire damage. Fire causes enormous damage to life and property. The first fire department was

International Research Journal of Engineering and Technology (IRJET) e-ISSN: 2395-0056
Volume: 06 Issue: 04 | Apr 2019 www.irjet.net p-ISSN: 2395-0072

"IOT BASED DIGITAL CHARGE CONTROLLER"

Miss. Bharti Telrandhe[1], Miss. Rashmi Lasankar[1], Miss. Pranjali Dagwar[1], Miss. Pragati Gawande[1], Prof. Vaibhav Babrekar[2]

[1]Students, Department of Electronics & Telecommunication, Prof. Ram Meghe Institute of Technology and Research College of Engineering, Badnera, India
[2]Associate Professor, Department of Electronics & Telecommunication, Prof. Ram Meghe Institute of Technology and Research College of Engineering, Badnera, India

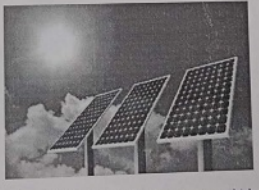
---

Abstract: Solar Inverters are highly in demand for the alternative source of electricity. The home Inverter and off grid inverter are mostly use everywhere. These inverters are not able to monitor online as well as having only one battery bank to provide the backup supply. We propose the system which can be used with these inverters to put the normal inverter online as well as two battery banks to increase the life of battery and to reduce the maintenance cost.

Sometimes, electricity can be cut-off due to natural disasters often happened. So, this type of energy such as wind energy, hydraulic energy and solar energy, they are needed as the source of electricity. The advantages of choosing solar energy by using a solar panel are that the lifetime of solar panel is long lasting than any other source of energy. The solar charging system is very important and necessary to use for people live in rural areas. Now a days, we use the sun as a natural source of energy. Solar resource is unlimited the government is trying to implement the use of solar panels as energy source in rural and suburban areas for lighting the street lights power.

Keyword: NodeMCU, OLED, Relay.

Introduction: Solar home lighting system are photovoltaic systems which offers cost effective solution to supply energy to remote off- grid areas. Solar energy sustains life on Earth for all plants, animals and people because it provides an exciting solution for all the societies to meet their needs for clean, abundant sources of energy in the future. The main source of solar energy is the nuclear reaction at the core of the Sun, where the energy comes from the conversion of hydrogen into helium.



Solar energy is transmitted to the Earth in the form of electromagnetic waves, which can also be represented by photons. The Earth, therefore, is essentially a huge solar energy collector receiving large quantities of solar energy which can be seen in various forms such as plant photosynthesis, and evaporation of the oceans resulting as rain which forms rivers and provides hydropower energy.

International Journal of Latest Trends in Engineering and Technology
Vol.(13)Issue(2), pp.058-061
DOI: http://dx.doi.org/10.21172/1.132.10
e-ISSN:2278-621X

DIABETIC RETINOPATHY INFECTION DETECTION & CLASSIFICATION USING ADVANCE GENETIC ALGORITHM

S. M. Deshmukh[1], M.V. Tiwari[2], Juee Tatte[3]

Abstract-Diabetic retinopathy is a disorder which affects the retina of the eye by effecting or damaging the blood vessels which results in leakage of blood and fluids from eye which causes swelling of retinal tissue and blurred vision. This concept proposes an advance genetic algorithm to segment retinal image so as to get infected region accurately. The main goal is automatic retinal image analysis, which can reduce the workload associated to manual grading as well as save diagnosis costs and time. The aim of this project is to detect the diabetic retinopathy (DR) and to perfectly classify an image is to different stages of a retinal diseases using fuzzy logic also to put necessary prescription against future disease spreading.

Keywords-Diabetic Retinopathy, Advance Genetic Algorithm, fuzzy logic.

I. INTRODUCTION:

Diabetic Retinopathy is a disease of the retina resulting from the effects of diabetes on the retinal blood vessels. It is the leading cause of blindness in those of ages between 20 & 60.
There are 3 main types of diabetic retinopathy:

1.1 Background Diabetic Retinopathy

Diabetic retinopathy is commonly seen in people who have been diabetic for a long time. The patient's vision is normal and his retinal blood vessels are mildly affected.

1.2 Diabetic Maculopathy

Fluid and protein may be leaked from the retina's blood vessels as a result of diabetes. This causes swelling of the retina. Vision will become blurred if the swelling involves the macula (centre of the retina).

1.3 Proliferative Diabetic Retinopathy

The retinal blood vessels are blocked, leading to the formation of new vessels which are abnormal and fragile. This may lead to haemorrhage (rupture of the vessels) in the eyes and cause a sudden vision loss.
In more advanced cases, scar tissue develops. The scarring will pull and distort the retina. This may cause the retinal to detach, resulting in a more severe loss of vision.

Types Of Available Treatments:

A. Laser Treatment

In the case of diabetic maculopathy, laser treatment to the points of leakage can decrease swelling and stabilize the vision. In the early stages of proliferative diabetic retinopathy, more extensive laser treatment can be done to slow down the formation of abnormal blood vessels, thereby preventing the development of more severe complications. Laser treatment has its risks. Some patients may experience a decrease in vision to the sides (peripheral vision). In others, night and colour vision may be affected.

B. Surgery

Surgery such as vitrectomy may be required in more severe cases where the disease continues worsening (persistent bleeding the eye/retinal detachment) despite the laser treatment.
Injection of Medication Inside The Eyes Medications such as Triamcinolone and anti VEGF can be injected inside the eye to help maintain/ improve vision in some patients with diabetic retinopathy.

[1] Professor, Electronics and telecommunication department , Prof. Ram Meghe College of Engineering & Research, Badnera, Maharashtra, India
[2] Professor, Electronics and telecommunication department , Prof. Ram Meghe College of Engineering & Research, Badnera, Maharashtra, India
[3] Student, Electronics and telecommunication department , Prof. Ram Meghe College of Engineering & Research, Badnera, Maharashtra, India

International Research Journal of Engineering and Technology (IRJET) e-ISSN: 2395-0056
Volume: 06 Issue: 04 | Apr 2019 www.irjet.net p-ISSN: 2395-0072

SMART DEVICE TO CONTROL WATER BILLING UNITS

Prof. Ashay I. Rokade[1], Gayatri Mhatarmare[2], Shruti Khajone[3], Yadnyawalkya Phule[4], Karan Bhadange[5]

[1]*Assistant Professor, Dept. of Electronics And Telecommunication Engineering, , Prof. Ram Meghe Institute of Technology and Research, Badnera, Maharashtra, INDIA*
[2]*BE Student, Dept. of Electronics and Telecommunication Engineering, Prof. Ram Meghe Institute of Technology and Research, Badnera, Maharashtra, INDIA*
[3]*BE Student, Dept. of Electronics and Telecommunication Engineering, Prof. Ram Meghe Institute of Technology and Research, Badnera, Maharashtra, INDIA*
[4]*BE Student, Dept. of Electronics and Telecommunication Engineering, Prof. Ram Meghe Institute of Technology and Research, Badnera, Maharashtra, INDIA*
[5]*BE Student, Dept. of Electronics and Telecommunication Engineering, Prof. Ram Meghe Institute of Technology and Research, Badnera, Maharashtra, INDIA*

Abstract - *Automation is a need of time. Today in this modern era automation helps us to save time as well as money. Most of the people prefer fresh water of municipality water pipe line. For that one has to pay for it. Water meter connected to the water pipe line supply at home measure the amount of water used in a particular home and that reading is shown on it. Reading of meter is then noted down for billing purpose. Air pressure 5 to 10 minutes before arrival of water also increases the reading on the meter thus without any consumption of water we pay for it.*

Our project Smart Water Meter is an Arduino based project. It is a prototype in which a valve attached before the water meter remains close until the water reach at meter and automatically gets open up when the water is sensed in a pipe line. We have used various components in this project such as pressure sensor, water sensor, driver IC, relays LCD and Arduino. All these components are controlled using Controller Atmega 328. The main aim of this project is to save out money which we pay for air pressure.

1. INTRODUCTION

Most of the people prefer fresh water of municipality water pipe line. For that one has to pay for it. Water meter connected to the water pipe line supply at home measure the amount of water used in a particular home and that reading is shown on it. . Reading of meter is then noted down for billing purpose. Air pressure 5 to 10 minutes before arrival of water also increases the reading on the meter thus without any consumption of water we pay for it.

In this project the Smart Water Meter is implemented using an Arduino. It is a prototype in which a valve attached before the automatically gets open up when the water is sensed in a pipe line. We have used various components in this project, water meter remains close until the water reach at meter and such as pressure sensor, water sensor, driver IC, relays LCD and Arduino. All these components are controlled using Controller Atmega 328. The main aim of this project is to save out money which we pay for air pressure.

Arduino based system is with automatic water meter which saves our money that we pay for air pressure which passes through the meter that increases our reading on meter. In this system we are using Arduino which controls the operation of our system. Sensors used in this are water sensor and pressure sensor. These sensors will be attached before the water meter to sense water and air pressure. Two valves i.e. water valve and air valve are also attached which will get either open or close depending on the sensor reading. Valves are connected such that water valve will close the pipe line and air valve will be attached on the upper side to allow the air to pass.

2. Literature Review

In a modern world of technology, innovations are made every day for ease of living. While technology is developing from smart phones to artificial intelligence, our project emphasizes on a factor that is used in common man's day-to-day life, water taps. Our project, 'Smart Device to Control Water Billing Units' focuses on the main problem of extra charges that are incurred on water bills due to unnecessary air pressure generated in the water taps. In India, almost every household or at least every locality uses at least one water tap to use the water source provided by the municipality. The main problem that is caused in this process is that when the water is released from the assigned board, it flows through long pipes and travels long distance to finally reach the localities. Due to this long distance of flow, a huge air pressure is generated in the pipes, which practically reaches the water taps first before the water does. This makes the water meter start working even when the actual water flow is yet to reach the taps. Due to this problem, extra readings are measured on the water meter and thus, extra charges are incurred on the water bills. This problem needs to be eradicated and that's the main purpose of our project. Currently, our system uses decade old water

JASC: Journal of Applied Science and Computations ISSN NO: 1076-5131

Raspberry pi Based Self Alignment Chair

Prof. RashmiA.
Wakode[1],AbhilashVinchurkar[2],ShubhamAdsod[3],MangeshHirode[4],TusharPawar[5],
ShubhamKakad[6]

Abstract-We are in a world which is blessed by modern technologies and smart structures that help us in our everyday life by making us familiarized with the invention in computing systems, computerization, artificial intelligence and so on. The world has seen an outbreak of smart systems in the last decade. To keep a significant contribution to the modern technological use, our proposed system enhances the growing need of smart systems. In this paper, a design of self-position aligning chair combined with the features of self-parking independent robot has been proposed. It diminishes both human efforts and time consumption in the process of furnishing and beautifying a conference room. Experimental results showed that the proposed model is more economical and affordable than the systems available till date. This work improves our lifestyles by reducing human efforts, saving time and also by maintaining more attractive working places.

Keywords - Arduino Uno; smart raspberry Pi board, meeting room; self-position aligning chair; object recognition; obstacle finding and escaping; image processing; automation and robotics.

INTRODUCTION

Today's world is now highly dependent on smart systems. Smart devices and equipment have made our lifestyles so comfortable that people all around the world are using these in their lives more than enough. Augmented reality in education, automation in transportation, development of artificial intelligent robots, evolution of IoT , data science and so on have noteworthy influence by introducing ourselves with an unproblematic way of life. The self-alignment wheel chair is used to eliminate the problem occurred in class room or auditorium getting messed up. In this system controlling of chair is depend upon detecting of particular object stored in it's code. The camera fixed on wheel chair capturing the image of eye and track the position of user, motor will be move in the required direction such as left, right and forward. Also the Ultrasonic sensor is mounted in front of wheel chair for safety to detect stagnant or mobile barriers. It will stop the wheel chair movements automatically. A raspberry Pi board is used to control whole system. This is cost effective and independent wheel chair system.

LiteratureSurvey

Oneof the major problem of lining up of chairs afterofficegatherings is now have a solution provided byanotableAutomakers. The Japanese firm has inventedself-fueledofficechairs which are able to arrange themselvesovertheirstoppingpositionwiththe sound sensor. This Japanese organization utilized four movementcamerastowardtheedgesofaroofand utilizedthemtotrackgeneralofficechairson their wheels. This innovationisotherwisecalledpicturehandling.TheWi-Fi orderedcamerasfindeachchair'sareaanditgetsbacktoitsbeginningstage.Theroomstructureispr e-modifiedintotheframework,withsingularseatsallocated theirownpositionatthetable.Theseatshavebeentailored toreacttothesoundsensororthedirectionsofahumanapplaud, with each seat consequently backtracks to its original position.Wewerereallytakingaglanceatofficeseatsasa theme and

International Research Journal of Engineering and Technology (IRJET) e-ISSN: 2395-0056
Volume: 06 Issue: 04 | Apr 2019 www.irjet.net p-ISSN: 2395-0072

ROBOTIC HAND CONTROLLING USING FLEX SENSORS AND ARDUINO UNO

Mrs. Rashmi A. Wakode[1], Vinit A. Grover[2], Saurabh S. Mohod[3], Anuja R. Damdar[4], Rachana S. Gadpal[5]

[1]*Assistant Professor, Dept. of Electronics And Telecommunication Engineering, , Prof. Ram Meghe Institute of Technology and Research, Badnera, Maharashtra, INDIA*

[2,3,4,5]*BE Student, Dept. of Electronics and Telecommunication Engineering, Prof. Ram Meghe Institute of Technology and Research, Badnera, Maharashtra, INDIA*

Abstract - *This paper sightsees the robotic hand by which it is possible to do such kind of tasks where human interventions are not possible. In an environment where human interaction cannot be possible to do a particular job where the robots can do. Here we design a robotic hand with the help of flex sensor, Arduino Uno & servo motor. Robotic applications necessitate sensors with high degree of accuracy and consistency. The advantage of using Flex sensor is that, we can achieve the expected results with high degree of exactness. The above structure works on the standard values return by the flex sensor to the controller and by that degree the hand and the fingers has to move to grasp an entity. The five servo motors for each finger are also provided to control the activity of finger.*

***Key Words*: Arduino Uno, Flex sensors, Analog to digital convertor, Servo motors.**

1. INTRODUCTION

Unfortunately, most of persons met with an accident while working with huge machineries, that results in the loss of their limb. They may also have more of their limbs missing from their birth. But with the advent of technology, there are artificial limbs with that it is possible for those people to do things such as running, walking, holding the things, etc. These tools are called as prosthetics. A robotic hand is a mechanical device, which can perform parallel activities to a human hand. Robotic hands are the significant part of almost all the manufacturing firms. In firms, a robotic hand executes various functions such as welding, pruning, cutting and insertion etc. One of the biggest advantage of this hand is that it can work in dangerous areas and also in the areas where it is difficult to human to reach. The central purpose of this research work is to design and build an artificial part that will be strong enough to execute the assigned task. The hand is the one of the most intricate and weight bearing part of our human body which act as an input and output device to human. These objectives are intended by using flex sensor. A sensor is a device which identifies or measures a physical quantity then record it and after that responds to it. Robotic hand manipulators can have different arrangements. Some of these constrictions can be accurately mimic from the human hand domain to the robot's constrained joint space. In this paper a general method of representing human motions to the robotic hand domain has been verified. The hand moment is replied almost exactly by the robotic hand.

2. RELATED WORK:

Explanation of Inertial sensors in a very stimulating way and their inventive applications have been discussed in[1]. [2]explores an inspection of the effect of the distinct sensors on the working of a navigation system. [5] Provides the strategy of a controller proposed for remote operation, by which it is possible to control an anthropomorphic robotic arm through a LAN or via the Internet. [6] gives a review of relevant mobile robot positioning technologies like Odometry, Inertial Navigation, Magnetic Compasses, GPS Model Matching etc. Pick and place operation by controlling the speed and position using FPGA and sensor circuitry has been discussed in[7-8]. But the important contribution of present work is that any human hand moments can be mapped onto the robotic hand with good exactness. Further the tractability of micro controller coding makes the task much easier.

3. MODELLING:

The objective is to develop procedures that assist users to manage and program a robot, with a high-level of intellection from the robot specific language. Presenting a robotic demonstration in terms of high-level behaviours like gestures, communication, manual navigation, visual observation of human performance, etc., the user will determine the mechanism what it have to do. Programming and controlling an industrial robot through the use of machine is a critical and long task that needs technical knowledge. Therefore, new and a lot of intuitive ways are needed for mechanism programming and management. In this work many determinations are directed towards recognizing human gestures, relevant to finger

Optimum Classification of Stress Types in Speech Using Machine Learning and AI

Mrs. N.P. Dhole and Dr. S.N. Kale

Abstract: **Human speech is many times the reflection of stress through which the person is going through. Proper evaluation of these speech signals into stress types is necessary in order to ensure that the person is in a healthy state of mind. In this work we propose a novel highly accurate speech to stress classification algorithm, which uses machine learning (ML) and artificial intelligence (AI) combined with sophisticated feature extraction techniques. The machine learning and AI based approach introduced in this paper, uses an intelligent combination of feature selection and neural optimization algorithm which assists the system to learn the speech patterns in real time, and self-train itself in order to improve the classification accuracy of the overall system. We compared our approach with standard neural nets and fuzzy inference classifiers and obtained more than 25% improvement in classification performance. The proposed system is suitable for real time speech and is language and word independent.**

Index Terms: Stress Classification, Machine Learning, Feature Selection, Neural Nets, Fuzzy Inference.

1. Introduction

Classification of human stress levels is a critical component of research for many psychologists and related medical practitioners. This classification can be done from user's speech, physical behaviour, sleep patterns and various other human interactions. While speech and physical behaviour are considered to be the primary parameters for evaluation of stress, sleep patterns, heart rate, and other measurements are secondary parameters for the same. Speech and physical behaviour is considered to be primary because of the fact that these parameters give a near-to-instant analysis of the user stress, while the secondary parameters need to perform some level of pattern analysis over a series observations in order to detect the stress levels and stress types. Out of the speech and physical behaviour patterns, the later demands complex level of processing, right from segmentation, pre-filtering & post-filtering, feature extraction, restricted environmental conditions and other parameters which either affect image processing or biomedical signal processing. These effects reduce the signal capturing capability of the system, thereby reducing the overall classification performance. Thus, speech based systems are best suited to perform the task of stress detection and classification in real time.

This paper is solely based on stress detection and classification from human speech, due to the fact that stress causes Diminished Immunity, Headache, Fatigue, Weight gain, Dyslipidemia, Hypertension, Heart Disease, Psoriasis/Eczema, Digestive problems, and many more diseases. In medical terms, stress is a state of disharmony or a threat to homeostasis which causes physiological changes increase alertness, focus, and energy and results in perceived demands which may exceed the perceived resources. Some stress types are fruitful, while others have damaging effects, for example, eustress is manageable stress and can lead to growth and enhanced competence, while distress is uncontrollable, prolonged, or overwhelming stress and is destructive. There is also acute stress which arises due to immediate response to a threat or challenge and chronic stress which is due to ongoing exposure to stress, and may seem unrelenting. Thus, it is necessary to detect and control stress in order to have a healthy lifestyle.

This paper proposes a novel algorithm to detect and classify the human speech into different stress classes, and thereby provide a preliminary analysis of the type of stress which the person might be undergoing. Doing this can help the person to analyze the stress and obtain remedies for the same. The next section describes various approaches which have been proposed for stress classification, the section next to that is dedicated to introduce our novel ML and AI based classification system, and finally the results of our technique are compared with the standard neural network and fuzzy inference classifiers to evaluate the performance of the proposed classifier. In the last section of this text we conclude with our observations, and with a few points of finer research which can be undertaken by the readers of this text.

2. Literature review

While most vendors of VSA (Voice stress analysis) technology omit specific details on how their systems work, by studying the basic literature, key information can be extracted on the theory behind the technology. Voice stress analysis originated from the concept that when a person is under stress, micro-muscle tremors (MMT) occur in the muscles that make up the vocal tract which are transmitted through the speech. VSA literature [2] points to a descriptor as the physiological basis for the MMT. This paper describes "a slight oscillation at approximately 10 cycles per second" (i.e. physiological tremors) during the normal contraction of the voluntary muscle. All muscles in the body, including the vocal chords, vibrate in the 8 to 12 Hz range. It is these MMT that the VSA vendors claim to be the sole source of detecting if an individual is lying. In moments of stress, especially if a person is exposed to jeopardy, the body prepares for fight or flight by increasing the readiness of its muscles to spring into action. This in turn causes the muscle vibrations to increase. According to the Merck Manual [3], "enhanced physiologic tremors may be

paper no. 11

International Journal of Engineering Science Invention (IJESI)
ISSN (Online): 2319 – 6734, ISSN (Print): 2319 – 6726
www.ijesi.org ||Volume 7 Issue 5 Ver. IV|| May 2018 || PP 85-89

Stress Speech Identification Using Various Neural Networks

Mrs. N.P. Dhole[1], Dr. S.N. Kale[2]

[1]Assistant Professor, Department of Electronics and Telecommunication Engineering, PRMIT&R Badnera, Amravati (Maharashtra), India, [2]Associate Professor, Department of Applied Electronics, Sant Gadge Baba Amravati University, Amravati, (Maharashtra), India
Corresponding Author: Mrs. N.P. Dhole1

Abstract: *There has been a Speech Identification technology already available in the market based on different assumptions. The work presented in this paper investigates the feasibility of alternative approaches for solving the problem more efficiently. A Speech Identification particularly Stress component in the research comprised of three distinct blocks, a Feature Extraction Neural Networks and Identifier. The Feature Extractor block uses MFCC which is most prominent and efficient for Stress Speech Identifier. Designs of the Neural Network blocks based on four different approaches are compared. The performance of Support Vector Machine, Multi-Layer Perceptrons, Radial Basis Functions and Recurrent Neural Networks based Identifier is tested on Speech which consists of Stress components Identification problem. Experimental results indicate that applying these neural networks reduces the training complexity and the operation of the Identifier. During the implementation of this all algorithms some results have been obtained in terms of the accuracy and the quality of the Identifier. The comparison between the different approaches to the design of the Identifier conducted here gives a better understanding of the problem and its possible solutions for well being of the society.*

Keywords: *RBF, SVM, MLP, RNN, MFCC, Stress Classification, Feature Extraction.*

Date of Submission: 07-05-2018 Date of acceptance: 22-05-2018

I. Introduction

Through spoken Languages we are able to communicate from person to person. From country to country and even states to states spoken languages are different. So here it becomes compulsory to design a system independent of language barrier and to ensure efficient stress identification. If an efficient speech recognition machine is enhanced by natural language systems and speech producing techniques, it would be possible to produce computational applications that do not require a keyboard and a screen [1]. This would allow incredible miniaturization of known systems facilitating the creation of small intelligent devices that can interact with a user through the use of speech [2].

Stress Identification is remarkably gained high attention in various fields from two decades. The fields are Medical, Forensics, Smart Environments, Teaching Learning Education, Human computer interactions, Emergency services and of course Real Time situations which is utmost crucial. From many years different speech recognition software's [3,4] has been developed to speed up the accuracy using various classifiers on several databases [5]. We have also revised the literature review of numerous researchers for the same work [6,7,8,9,10]. We have used for this work the Berlin database and Humaine database as Benchmark Datasets. Again we have recorded our speech samples using Audacity software with different frequencies. Speech signal recorded was of people having male, female voices including children above eight years and elder's up to age of 58.

It is important to understand that it is not the purpose of this work to develop a full-scale Stress Speech Identifier but only to test new techniques and explore their usefulness in providing more efficient solutions. Doing this can help the person to analyze the stress and obtain remedies for the same. The whole Algorithm is developed in MATLAB Software.

1.1 Berlin Database

The article describes a database of emotional speech. Ten actors (5 Female and 5 Male) simulated the emotions, producing 10 German utterances (5 short and 5 longer sentences) which could be used in everyday communication and are interpretable in all applied emotions [11][12]. The recordings were taken in an anechoic chamber with high-quality recording equipment. In addition to the sound electro-glottograms were recorded. The speech material comprises about 800 sentences (seven emotions * ten actors * ten sentences + some second versions). The complete database was evaluated in a perception test regarding the recognisability of emotions and their naturalness [9]. Utterances recognised better than 80% and judged as natural by more than 60% of the

IOSR Journal of Electronics and Communication Engineering (IOSR-JECE)
e-ISSN: 2278-2834,p- ISSN: 2278-8735.Volume 14, Issue 2, Ser. II (Mar.-Apr. 2019), PP 30-34
www.iosrjournals.org

Wi-Fi Dust Bin System

Prof. Mrs. N.P.Dhole Tejaswini Gawande, Rutuja Raut, Akshay Dhood, Abhishek Kularkar, Dhananjay Gharad
Prof. Ram Meghe Institute of Technology and Research, Badnera, Amaravati.
Corresponding Author: Prof. Mrs. N.P.Dhole

Abstract: *In our country, Garbage is a very big issue. It creates some unhygienic problems and problems related to the society health issue, it creates multiple type of diseases. Careless trashing of garbage on the roads is a common scenario to be found in our country. And also now a days internet is a very important part in our life for digitization. Thus for this kind of issues, a Wi-Fi Dustbin can be use, it is a system that whenever someone throws the garbage or waste into a dustbin then it automatically detects the garbage and gives a temporary access code to the user; to use the Wi-Fi available.*

Keywords: *IR Sensors, Micro-controllers, Wi-Fi Routers, Software Development Kit(SDK).*

Date of Submission: 15-04-2019 Date of acceptance: 30-04-2019

I. Introduction

Many times, in our city we seen that trash was present in out of dustbin. It creates unhygienic conditions for people as well as unclean to that place leaving bad smell and also Realizing the need of the internet in everyday life, we decided to give free Wi-Fi to people in exchange of a cleaner surrounding with an unique initiative.

Now days a very fast growth of urban population in recent time. Due to increasing population of cities or states the city or states can faces many problems like environmental problem in which increasing garbage waste, increasing various type of diseases and create health problem. In recent time Garbage waste collection and its management is very critical issue. For that In India 2 October 2014Indian Prime Minister Mr. Narendra Modi announced Clean India Mission launched by Government of India. In this mission covering 4,041 cities and infrastructure of country.

Inspiring by these mission we proposed the smart Wi-Fi dustbin system for smart garbage waste collection. The work proposed in this paper illustrates how the Smart bin solution empowers cleaning public area like Railway stations, Global store, Colleges, Hotels etc.to detect cleanliness issues in real time. Thus, the system is able to help in increasing overall productivity and cleanliness.

II. Literature Survey

This is not an original idea, for the implementation of Wi-Fi trash bin; the idea has existed for few years, After the Internet of Things (IoT) field finding its grip in our lives.

M. Prasanth , Prapulya Srinivasan et.al proposes system where the sensors in the bin check if the bin is filled up to the brim or not. If it is filled it sends an automated message to the server end of the system, through the Arduino SIM module, which is made use of by the application of the Arduino board. Once the server receives the message it forwards the message to the worker in charge, with respect to the Worker ID that is stored in the worker database. If the worker is available, he will notify of his/her presence by accepting the work and will reach the required destination. If the worker is not available, the work will be transferred to another worker.

P. Suresh, Vijay et.al gave the idea of IoT subject and addition details about IoT. The proper smart environment and various applications. This paper aims in structuring a state of the art review on IoT. The technology, history and applications have been discussed briefly along with various statistics.

SaurabhDugdhe, Pooja Shelaret.al proposes Waste Collection System architecture using Internet of Things has been proposed. The architecture consists of embedded device with sensors and microcontroller for sensing information of Bins and sending to workstation, which is situated at municipal office for finding shortest path. This technique of waste removal will keep the city clean. The proposed system is an attempt to improve current waste collection system in India for the "Clean India Mission". The system will also generate reports about waste gathering and fuel consumption.

Parkash and Prabhu V have implemented real time waste management system by using smart dustbins to check the fill level of smart dustbins whether the dustbin are full or not. In this system the information of all

International Research Journal of Engineering and Technology (IRJET) e-ISSN: 2395-0056
Volume: 06 Issue: 04 | Apr 2019 www.irjet.net p-ISSN: 2395-0072

Smart Irrigation System

Mahesh R.Tapadiya[1], Abhilasha H.Thakur[2], Mayuri S.Futane[3] ,Deepak G.Yadav[4],Prof. N. P. Dhole[5]

[1-5]Department of Electronics & Telecommunication Engineering, Prof.Ram Meghe Institute of Technology & Research,Badnera, Maharashtra, India

---

Abstract - *Most of India's land area is agricultural land. Irrigation is method to the supply of water to the land or soil. It is used to help in the growing of agricultural crops, maintenance of landscapes, and rebuilding of disturbed soils in dry areas and during periods of insufficient rain. With the water requirements in irrigation being large, there is a need for a smart irrigation system that can save the water. It also helps in water conservation by automatically providing water to the plants/gardens depending on their need of water. It's hardly possible that farmer must hold the perfect knowledge about growing identification of plants in case of water supply. In Indian economy most of part is depend on agriculture and under this condition. This focus on saving time and avoiding problems like constant attention provided with animal attack system and short circuit detection. if there will be any system which will help to provide exact level of water to plants then it will definitely lead to beneficial for our economy. So to help them we are making an attempt by introducing our project "Smart irrigation system".*

By using sensors in our project we will make them aware about changing terms of moisture level according to weather so according to changing terms of moisture they will be able to plan the proper timing for water supply.

***Key Words*: Short circuit detection , GSM 900, Animal attack system ,Arduino,Soil Moisture Sensor, Relay.**

1.INTRODUCTION

This an GSM (Global System for Mobile communication) based on Arduino for irrigation. The interface and communication between user and designed system is via Short Message System(SMS) on GSM network if the user is within the range of 10m of designed system. agriculture is backbone of Indian economy. Irrigation is heart of agriculture. Irrigation is used to help growing crops in the field land during the in adequate rainfall period. Pesticide is used preventing, destroying or mitigating any pest. Both of these are very important for good productivity and both need time to time application in the farm field. In India approximately 20% of farmers are dependent on electric water pumps for irrigation in their field. The soil moisture based irrigation control uses Tensiometric and Volumetric techniques, which are relatively simple but these quantities are related through a soil water characteristic curve that is specific to a soil type. Also the sensors used require routine maintenance for efficient performance. Intelligent automatic plant irrigation system concentrates watering plants regularly without human monitoring using a moisture sensor. To improve water efficiency there must be a proper irrigation scheduling strategy. In this paper a simple system is mentioned using a Arduino to automate the irrigation and watering of small potted plants or crops with minimal manual interference.

1.1 Objective

- In the present aeon one of the greatest problems faced by the world is water scarcity and agriculture being a demanding business consumes plenty of water.
- A system is required that uses water sensible. Focus of this system is to overcome this problem by using smart irrigation system.
- Smart irrigation systems estimate and measure reduction of existing plant moisture in order to operate an irrigation system, restoring water as needed while minimizing unwanted water use.

2. LITERATURE REVIEW

On this detail, the existing works "Applied engineering in agriculture"[1], "Data acquisition system and irrigation controller"[12] and "Automation in Micro-Irrigation" [13], employs subsurface drip irrigation using two drip tapes and are time based

RESEARCH ARTICLE OPEN ACCESS

An Overview on Stress Identification in Speech

N.P. Dhole[1], S.N. Kale[2]

[1]Assistant Professor, Department of Electronics and Telecommunication Engineering, PRMIT&R Badnera, Amravati (Maharashtra), India.

Email Id-npdhole34@gmail.com

[2]Associate Professor, Department of Applied Electronics, Sant Gadge Baba Amravati University, Amravati, (Maharashtra), India

Email Id-sujatakale@sgbau.ac.in

Abstract:

Twenty papers are reviewed. Each paper consists of human speech under different stressful or emotional conditions. A basic description of each paper and its applications is provided. The conclusion of this study is that we find different algorithms with various databases and technologies are envisaged to detect stress under speech.

Keywords: Speech Recognition, Speech Databases, Stress Detection

I. INTRODUCTION

Speech signal is that signal in which a person communicates with one another. Speech production consists of sequence of articulatory movements, airflow from respiratory system & timing of vocal system. Again human emotion plays an important role in speech production which can analyze an individual state of mind in which he/she acts or reacts relating to surrounding. It may be termed as human behavior which considers six basic emotions which are happiness, sadness, anger, fear, surprise & disgust. It becomes important to detect emotional state of a person which will be induced by workload, background noise, physical environmental factors (e.g. G-force) & fatigue.

Broadly, stress identification becomes a scientific challenge to analyze a human being interaction with environment .Therefore stress can be defined as a psycho-physiological characterized by emotions, strain & deterioration of performance[1] . Therefore, it has become increasingly important to study speech under stress in order to improve the performance of speech recognition systems, to recognize when people are in a stressed state and to understand contexts in which speakers are communicating.

Following are the areas where identification of stress from speech includes:

A. *Forensics*

Deception detection systems, analysis of 911 phone calls that can include threats [2, 3].

B. *Safety and Security*

Air traffic controllers and pilots in noisy high stress environments, deep sea divers, NASA-space explorations, power system operators [2], military persons facing examination panel [4, 5], law enforcement training.

C. *Psychology*

Emotional state of patients- The levels where speech communication/production occurs and their corresponding Stress order [6, 7].

II. DESCRIPTION OF STRESS SPEECH WORK

The problem of stress identification has been receiving an increasing attention in related research communities due to wider recognition of potential problems caused by several reasons & due to the recent developments of technologies providing non- intrusive ways of collecting continuously objective measurements to monitor stress level.

Following literature review enlights work done by researchers on analyzing stress by different ways using speech.

Hindra Kurniawan, *et.al.* [11] have analyzed that stress level can be judged based on Galvanic Skin Response(GSR) & speech signal. But GSR & speech signal under stress may not be available at same time. The speech was sampled at a sampling rate of 44,100 Hz by using two channels. Facial expression was recorded using Handy cam Camcorders with High Definition (HD) resolution at 1, 440 × 1, 080 pixels .To make a GSR sensor measuring the changes in skin conductance they used the LEGO Mind storms NXT1 and an RCX wire connector sensor, which converts the analog reading to digital raw values in the range of 0 to 1,023.

Xiao Yao, *et.al* [12] have proposed a method for the classification of speech under stress that is based on a physical model for classification of neutral & stressed speech.

Bahador Makkiabadi & Saeid Sanei [13] have proposed a novel tensor factorization method which is developed to solve the under-determined blind source separation (UBSS) and especially under-determined blind identification (UBI) problems in mixed speech signals.

DOI: 10.23956/ijarcsse.v8i7.806 • Corpus ID: 69676280

Performance Analysis of Solar based Induction Motor for Water Pumping System

S. Tiwari, Girish Patil, S. Deshmukh • Published 3 August 2018 • Engineering

Performance analysis of solar photovoltaic array fed single phase induction motor (IM) drive for water pumping system. In the proposed method, the output DC power of the solar PV array is stored in battery and the stored DC energy is directly fed as input to the inverter and output of the inverter is fed to the single phase induction motor for water pumping system. A centrifugal pump connected with the single phase indication motor for water pumping system. The size of PV array and motor rating selected such that the water can also be pumped during the varying in temperature and irradiation level. This study evaluates the performance parameters namely current, speed, temperature and vibrations. The GUI is developed to control the action of motor and monitor the above mentioned parameters values through appropriate sensors and microcontroller. The speed control through microcontroller by varying the pulse ON duration is studied a well as the effect of speed on vibrations is also observed. The critical experimentation is carried out to analyze the above said parameters and examines the effectiveness the single phase induction motor for solar PV based water pumping system. Collapse

Machine Learning an Automotive Intelligent Approach for Text Analysis

Dr. Abrar S. Alvi[1] Pratik K. Agrawal[2]
[1]Department of Information Technology [2]Department of Computer Science & Engineering
[1,2]Prof. Ram Meghe Institute of technology & Research, Badnera, India

Abstract— Today's world is the world of internet and worlds of information. The abundant growth in the information has raised the problem of analysis of text data. The human efforts for analysing the text data is not sufficient as the size and quantity of data is large and lots of efforts are needed in order to efficiently analyse the data in a quick an easy manner. In this paper, a reviewed analysis of Machine learning approach is presented, which is the field of artificial intelligence that has provided a unique opportunity for the analysis of the text data. The machine learning approaches were implied on different domains or various levels of analysis by merging it with various collaborative methods resulted in providing efficient computing solutions for the particular problems.

Key words: Automotive Intelligent, Machine Learning

I. Introduction

In today modern world the development of technology has marked their presence in day to day life of a common man. The technology has provided an opportunity to the human to think in the direction that was not possible back decades. The penetration of information has gained up on the internet as people together are connected to each other and can share their emotions, provide the feedback of their services and products and many more. The vast amount of information available on the internet in an open and free medium contains vital knowledge about the opinion that can be done to make the products/ services more successful. The human capability of analysis is limited as it is not possible to analysis large amount of data in an efficient way and in limited time. This hampers the efficiency of the implemented system as the data was not up to the mark for decision making. These problems have motivated for the automatic analysis and generation of result in an efficient and quick way.

The field of artificial intelligence is quietly explored by many researchers for finding the answers to the questions and many of them were in a position to explore by giving the machine the capabilities to think and perform out of the box which humans failed to do. Many areas of human work are replaced by the machine work for greater efficiency of large production at optimal cost. The decision making power of organization over large volume is possible with good accuracy because analysis of large amount of data in an efficient and easy way can be done today.

Machine learning an important part of Artificial Intelligence deals in providing the abilities to the computers where they can learn on their own without being programmed. It has provided the human brain to think and experiment out of the box ideas. The most important thing the machines are lagging is the no of ways in which the human thinks on a particular problem from its past involvements and then utilizing their abilities in solving those difficulties. The field of artificial intelligence basically deals in improving the competences of the machine by providing them the human skill of intellectual so that they can make proficient and truthful decision.

In this paper, the concept of Machine learning was reviewed, as this field of research has several real-world applications that minimize the kind of real corporate results such as time and money savings that have the capability to intensely influence the future of the society. It has made intense developments in the past few decades, but still it is very far from reaching human performance. Today also, the machine needs the support of human to complete its job.

II. Literature Review

The Machine learning approach was extensively elaborated by large number of academia, individual persons and researchers from the last few decades, as these approaches have changed the human perspective of looking at and solving the large and complex problems in an effective and easy manner. This section elaborated the work of researchers that uses the machine learning approaches for solving the complex problems.

Yunfei Yi et.al presented an effective method for term association from the text corpus by leveraging the two machine learning algorithms to calculate and evaluate the effectiveness of the proposed data mining system. The proposed system improved the performance and efficiency of the text mining system in all respects and the method was quite effective on a large domain and no of groups. The experimental evaluation addresses the need for development of more precise and effective machine learning in combination with artificial and web intelligent approach [1].

Bala et.al uses a Machine learning Support Vector Machine approach for text messages categorization. The proposed method is used for categorization of the article, email products opinions and reviews and email in an online discussion. The experimental results provided that the SVM provides a significant accurate and precise result when it was compared with the human work. The experimental results conveyed that the SVM machine learning approach is best suited for text messages categorization and further development in the machine learning approach can provide more good and accurate results [2].

Nuvet Chaowichitsi implied the machine learning with Support Vector Machine approach for classification of emotion in Thai text. In his research he initiate that Boolean weighting with Support Vector Machine provides an effective result. He also exposed that the Boolean weighting is appropriate for grouping with the Information gain feature selection technique. The Boolean weighting with SVM algorithm provides the best performance with the precision over all algorithms. The experimental outcomes elaborated the uses of machine learning on different languages for classification of emotions in text and for summarization of overall results [3].

Osmi Pranza implemented the machine learning approach in the medical domain for identifying the disease treatment relations in the short texts. The proposed approach uses an automatic learning for the different tasks that are

SmartCom 2019

Third International Conference on

Smart Trends for Computing & Communications

Certificate

This is to certify that

Vijay B. Gadicha and Abrar S. Alvi.

has contributed a paper titled

Preserving Authentication & Access Control by using Strong Passwords through Image Fusion Mechanism.

Third International Conference on Smart Trends for Computing and Communications (SmartCom 2019)
held during January 24-25, 2019 at Hotel Novotel, Siam Square, Bangkok, THAILAND.
The paper has also been selected for publication in the (SmartCom) conference proceedings as per the guidelines issued by Springer.
We wish the authors all the very best for future endeavors.

Nileshsingh Thakur
Editor
SmartCom 2019

Milan Tuba
Supporting Chair
SmartCom 2019

Mihir Chauhan
Conference Secretary
SmartCom 2019

GR FOUNDATION · ifip · Springer

A Review of Opinion Mining and Analysis

Prof. M. S. Deshmukh, Prof. Ms. P. V. Dudhe, Prof. Ms. N. V. Kadam, Dr. N. N. Khalsa

Abstract- **The impact of social media platforms is huge while considering the volume of internet traffic and the content it generates. The Sentiment Analysis is a technique which is widely used in the natural language processing. It is used for determining the sentiments of a text. Opinion mining which is also known as sentiment analysis is a sub field of text mining. In this the main task is to extract views or opinions from content generated by web users while using social media. Opinion Mining is mainly to discover the opinions from unstructured text by combining techniques from Computer Science and natural language processing.**

Keywords-**Opinion Mining, Sentiment Analysis, natural language processing**

I. INTRODUCTION

Internet in today's life is like a lifeline of every individual. Social media is flooded with various forums, blogs, video sharing websites, coding platforms and social networking platforms. The web content is generated by social media platforms, which can also be mentioned as social media data, is diverse, including text, images, audio and videos. Each one has a social media account and are posting various activities from their life on social media. The comment or opinion put on social media also are in huge volume and has to be managed regularly. All the comments put on social media are put in different languages and it's a herculean task to analyze the data which is in terabyte. The opinion needs to be analyzed for a better solution for certain problem in specific area. That's where there is need for opinion analysis, sentiment analysis.

The human language is complex. That is the reason it's necessary to teach a machine, how to analyze the various grammatical mistakes, slang language, cultural differences, misspellings and other nuance things written on social media, is a very difficult process. For a machine it is very difficult to understand the effect of context on tone.

II. LITERATURE SURVEY

Opinion mining deals with on polarity detection and sentiment analysis is related with emotion recognition. For opinion mining and sentiment analysis, data mining and processing techniques are used. Processing technique processes the natural language used for commenting and giving opinion. These techniques help to uncover, retrieve, and refine Opinion from the internet's vast textual information.

Now a days, opinion mining and sentiment analysis research are evolved in both technique sophistication and analysis depth. Bo Pang [1] with her colleagues classified complete documents based on overall positive or negative polarity. They also gave rating scores of reviews. These documents were mainly supervised and labeled samples done manually. Examples samples like a movie or reviews of product explicitly indicating an overall polarity of an opinion.

Liu [7] defines an opinion of a 5-tuple which contains the target, its attribute at which the opinion is directed, the sentiment contained in the opinion whether it is negative or positive or neutral, the opinion holder's name and the date when the opinion was given.

There are other approaches, like A. Neviarouskaya presented in [6], where he attempts to mention the emotional states such as "anger", "fear", "joy", or "interest" instead of just positive or negative. In this case, model given by [7] could be enriched by adding another element to the opinion tuple model to represent this information.

Zhu [8], proposed aspect based opinion polling which are free from the textual customers reviews. The various aspects that are related withterms used for identification of aspects were learnt using a multi-aspect bootstrapping method. Jeonghee Yi et al., proposed a Sentiment Analyzer for extracting opinions about a subject from online data documents [9]. Sentiment analyzer uses natural language processing techniques. Alekh Agarwal et al., proposed a machine learning method incorporating linguistic knowledge gathered through synonyuny graphs, for effective opinion classification. This approach shows the degree of influence among relationships of documents have on their sentiment analysis. Michael et al., presented, a prototype system for mining topics and sentiment orientation from free text customer feed-back. B. Pang did analysis of problems related to opinion mining such as opinion lexicon expansion and target extraction. Opinion targets are entities and their attributes on which opinions have been expressed. Lei Zhang et al., [10] identified domain dependent opinion words. Noun and noun phrases that indicate the

A Review of Opinion Mining and Analysis

Prof. M. S. Deshmukh, Prof. Ms. P. V. Dudhe, Prof. Ms. N. V. Kadam, Dr. N. N. Khalsa

Abstract- **The impact of social media platforms is huge while considering the volume of internet traffic and the content it generates. The Sentiment Analysis is a technique which is widely used in the natural language processing. It is used for determining the sentiments of a text. Opinion mining which is also known as sentiment analysis is a sub field of text mining. In this the main task is to extract views or opinions from content generated by web users while using social media. Opinion Mining is mainly to discover the opinions from unstructured text by combining techniques from Computer Science and natural language processing.**

Keywords-**Opinion Mining, Sentiment Analysis, natural language processing**

I. INTRODUCTION

Internet in today's life is like a lifeline of every individual. Social media is flooded with various forums, blogs, video sharing websites, coding platforms and social networking platforms. The web content is generated by social media platforms, which can also be mentioned as social media data, is diverse, including text, images, audio and videos. Each one has a social media account and are posting various activities from their life on social media. The comment or opinion put on social media also are in huge volume and has to be managed regularly. All the comments put on social media are put in different languages and it's a herculean task to analyze the data which is in terabyte. The opinion needs to be analyzed for a better solution for certain problem in specific area. That's where there is need for opinion analysis, sentiment analysis.

The human language is complex. That is the reason it's necessary to teach a machine, how to analyze the various grammatical mistakes, slang language, cultural differences, misspellings and other nuance things written on social media, is a very difficult process. For a machine it is very difficult to understand the effect of context on tone.

II. LITERATURE SURVEY

Opinion mining deals with on polarity detection and sentiment analysis is related with emotion recognition. For opinion mining and sentiment analysis, data mining and processing techniques are used. Processing technique processes the natural language used for commenting and giving opinion. These techniques help to uncover, retrieve, and refine Opinion from the internet's vast textual information.

Now a days, opinion mining and sentiment analysis research are evolved in both technique sophistication and analysis depth. Bo Pang [1] with her colleagues classified complete documents based on overall positive or negative polarity. They also gave rating scores of reviews. These documents were mainly supervised and labeled samples done manually. Examples samples like a movie or reviews of product explicitly indicating an overall polarity of an opinion.

Liu [7] defines an opinion of a 5-tuple which contains the target, its attribute at which the opinion is directed, the sentiment contained in the opinion whether it is negative or positive or neutral, the opinion holder's name and the date when the opinion was given.

There are other approaches, like A. Neviarouskaya presented in [6], where he attempts to mention the emotional states such as "anger", "fear", "joy", or "interest" instead of just positive or negative. In this case, model given by [7] could be enriched by adding another element to the opinion tuple model to represent this information.

Zhu [8], proposed aspect based opinion polling which are free from the textual customers reviews. The various aspects that are related withterms used for identification of aspects were learnt using a multi-aspect bootstrapping method. Jeonghee Yi et al., proposed a Sentiment Analyzer for extracting opinions about a subject from online data documents [9]. Sentiment analyzer uses natural language processing techniques. Alekh Agarwal et al., proposed a machine learning method incorporating linguistic knowledge gathered through synonyuny graphs, for effective opinion classification. This approach shows the degree of influence among relationships of documents have on their sentiment analysis. Michael et al., presented, a prototype system for mining topics and sentiment orientation from free text customer feed-back. B. Pang did analysis of problems related to opinion mining such as opinion lexicon expansion and target extraction. Opinion targets are entities and their attributes on which opinions have been expressed. Lei Zhang et al., [10] identified domain dependent opinion words. Noun and noun phrases that indicate the

A Review of Opinion Mining and Analysis

Prof. M. S. Deshmukh, Prof. Ms. P. V. Dudhe, Prof. Ms. N. V. Kadam, Dr. N. N. Khalsa

Abstract- **The impact of social media platforms is huge while considering the volume of internet traffic and the content it generates. The Sentiment Analysis is a technique which is widely used in the natural language processing. It is used for determining the sentiments of a text. Opinion mining which is also known as sentiment analysis is a sub field of text mining. In this the main task is to extract views or opinions from content generated by web users while using social media. Opinion Mining is mainly to discover the opinions from unstructured text by combining techniques from Computer Science and natural language processing.**

Keywords-**Opinion Mining, Sentiment Analysis, natural language processing**

I. INTRODUCTION

Internet in today's life is like a lifeline of every individual. Social media is flooded with various forums, blogs, video sharing websites, coding platforms and social networking platforms. The web content is generated by social media platforms, which can also be mentioned as social media data, is diverse, including text, images, audio and videos. Each one has a social media account and are posting various activities from their life on social media. The comment or opinion put on social media also are in huge volume and has to be managed regularly. All the comments put on social media are put in different languages and it's a herculean task to analyze the data which is in terabyte. The opinion needs to be analyzed for a better solution for certain problem in specific area. That's where there is need for opinion analysis, sentiment analysis.

The human language is complex. That is the reason it's necessary to teach a machine, how to analyze the various grammatical mistakes, slang language, cultural differences, misspellings and other nuance things written on social media, is a very difficult process. For a machine it is very difficult to understand the effect of context on tone.

II. LITERATURE SURVEY

Opinion mining deals with on polarity detection and sentiment analysis is related with emotion recognition. For opinion mining and sentiment analysis, data mining and processing techniques are used. Processing technique processes the natural language used for commenting and giving opinion. These techniques help to uncover, retrieve, and refine Opinion from the internet's vast textual information.

Now a days, opinion mining and sentiment analysis research are evolved in both technique sophistication and analysis depth. Bo Pang [1] with her colleagues classified complete documents based on overall positive or negative polarity. They also gave rating scores of reviews. These documents were mainly supervised and labeled samples done manually. Examples samples like a movie or reviews of product explicitly indicating an overall polarity of an opinion.

Liu [7] defines an opinion of a 5-tuple which contains the target, its attribute at which the opinion is directed, the sentiment contained in the opinion whether it is negative or positive or neutral, the opinion holder's name and the date when the opinion was given.

There are other approaches, like A. Neviarouskaya presented in [6], where he attempts to mention the emotional states such as "anger", "fear", "joy", or "interest" instead of just positive or negative. In this case, model given by [7] could be enriched by adding another element to the opinion tuple model to represent this information.

Zhu [8], proposed aspect based opinion polling which are free from the textual customers reviews. The various aspects that are related withterms used for identification of aspects were learnt using a multi-aspect bootstrapping method. Jeonghee Yi et al., proposed a Sentiment Analyzer for extracting opinions about a subject from online data documents [9]. Sentiment analyzer uses natural language processing techniques. Alekh Agarwal et al., proposed a machine learning method incorporating linguistic knowledge gathered through synonyuny graphs, for effective opinion classification. This approach shows the degree of influence among relationships of documents have on their sentiment analysis. Michael et al., presented, a prototype system for mining topics and sentiment orientation from free text customer feed-back. B. Pang did analysis of problems related to opinion mining such as opinion lexicon expansion and target extraction. Opinion targets are entities and their attributes on which opinions have been expressed. Lei Zhang et al., [10] identified domain dependent opinion words. Noun and noun phrases that indicate the

61st IETE Annual Convention 2018 on "Smart Engineering for Sustainable Development"
Special Issue of MECSCISE, ISSN: 2277-9477

A Review paper on various applications of Big data

Prof.Ms.P.V.Dudhe Prof. M. S. Deshmukh Prof.Ms.N.V.Kadam Prof. R. M. Hushangabade

Abstract: **Big data is one of the current affair field for work and future research attractions for the bigger of researches. Big data will changes at a great rate in various fields like business, the scientific research. There are mostly researchers used 3V and 4V for defining the concept of big data. First V is having a specified size data i.e. volume, second V define the frequent rate of data i.e. velocity, third V defines heterogeneity of data types and sources.Last V will be extended by researchers according to special requirement. Forth V can be value, variability or virtual. Big data this is the concept of collection of data sets which is very large in size and very complex behavior so that it has become very difficult to process the data. This paper gives a review on various applications based on big data in various fields.**

Keywords: **Big data**

I.INTRODUCTION

Five V's of big data

1. Volume
2. Variety
   a. Structured (Proper Schema)
   b. Semi-structured
   c. Un-structured
3. Velocity
4. Value
5. Veracity

Problem with Big Data Processing

1. Heterogeneity and Incompleteness

In fact, the a subtle difference in and the quality of being pleasingly deep of natural language can provide valuable depth. However, machine analysis algorithms expect of the same kind of data, and cannot understand differentiate it. In a result, data must be carefully structured as a first step in (or prior to) data analysis. Computer systems work most in a well-organized and competent way. if they has stored multiple items that are all exactly alike in size and structure.

2. Scale

Any one first thought about the size of data so managing very large data is not so easy for any organization. This become very challenging task for every. So this technology having more scope to research.

3. Timeliness

To process large data set it required more time to get the analysis or get value added data. So there is a necessity of system that deals with the size of data and sending the output quickly. Rather, there is an acquisition rate challenge.

4. Privacy

The privacy in the big data is another huge concern, and one that increases scope of the new researchers in the Big Data. For storing records about health in electronic form, there are strict laws governing what can and cannot be done. Managing security in such a manner as to achieve a desired result by both a technical and a sociological problem, which must be representing jointly from both perspectives to realize the promise of big data.

5. Human Collaboration

There are various computational analysis algorithms are available but they may take more time to find the result so it is better to making some patterns, those are easily understand by human and detect output quick.

II. Literature Survey

Samiya Khan , Xiufeng Liu, Kashish A. Shakil , Mansaf Alam they talk about recently trents of big data, there has been a main on focus of organizations and governments towards digitization of academic and technical documents, adding a new concept of digital libraries. They carry out a systematic identification on the existing challenges in development of a big scholarly data platform, with specific focus on directions for future research and maps them to the different phases of the big data lifecycle.[1]

Jharna Majumdar*, Sneha Naraseeyappa and Shilpa Ankalaki researched in agriculture field the farmers and agribusinesses has to make too many to be counted decisions every day and intricate complexities involves the various factors influencing them.

An challenging issue for agricultural planninghaving aim is that accurate yield estimation for the numerous crops. Environmental conditions,different types of soil, input levels, combinations and commodity prices have made it all the more relevant for farmers to use information and get help to make critical farming decisions. [2]

61st IETE Annual Convention 2018 on "Smart Engineering for Sustainable Development"
Special Issue of MECSCISE, ISSN: 2277-9477

A Review paper on various applications of Big data

Prof.Ms.P.V.Dudhe Prof. M. S. Deshmukh Prof.Ms.N.V.Kadam Prof. R. M. Hushangabade

Abstract: **Big data is one of the current affair field for work and future research attractions for the bigger of researches. Big data will changes at a great rate in various fields like business, the scientific research. There are mostly researchers used 3V and 4V for defining the concept of big data. First V is having a specified size data i.e. volume, second V define the frequent rate of data i.e. velocity, third V defines heterogeneity of data types and sources.Last V will be extended by researchers according to special requirement. Forth V can be value, variability or virtual. Big data this is the concept of collection of data sets which is very large in size and very complex behavior so that it has become very difficult to process the data. This paper gives a review on various applications based on big data in various fields.**

Keywords: **Big data**

I.INTRODUCTION

Five V's of big data

1. Volume
2. Variety
   a. Structured (Proper Schema)
   b. Semi-structured
   c. Un-structured
3. Velocity
4. Value
5. Veracity

Problem with Big Data Processing

1. Heterogeneity and Incompleteness

In fact, the a subtle difference in and the quality of being pleasingly deep of natural language can provide valuable depth. However, machine analysis algorithms expect of the same kind of data, and cannot understand differentiate it. In a result, data must be carefully structured as a first step in (or prior to) data analysis. Computer systems work most in a well-organized and competent way. if they has stored multiple items that are all exactly alike in size and structure.

2. Scale

Any one first thought about the size of data so managing very large data is not so easy for any organization. This become very challenging task for every. So this technology having more scope to research.

3. Timeliness

To process large data set it required more time to get the analysis or get value added data. So there is a necessity of system that deals with the size of data and sending the output quickly. Rather, there is an acquisition rate challenge.

4. Privacy

The privacy in the big data is another huge concern, and one that increases scope of the new researchers in the Big Data. For storing records about health in electronic form, there are strict laws governing what can and cannot be done. Managing security in such a manner as to achieve a desired result by both a technical and a sociological problem, which must be representing jointly from both perspectives to realize the promise of big data.

5. Human Collaboration

There are various computational analysis algorithms are available but they may take more time to find the result so it is better to making some patterns, those are easily understand by human and detect output quick.

II. Literature Survey

Samiya Khan , Xiufeng Liu, Kashish A. Shakil , Mansaf Alam they talk about recently trents of big data, there has been a main on focus of organizations and governments towards digitization of academic and technical documents, adding a new concept of digital libraries. They carry out a systematic identification on the existing challenges in development of a big scholarly data platform, with specific focus on directions for future research and maps them to the different phases of the big data lifecycle.[1]

Jharna Majumdar*, Sneha Naraseeyappa and Shilpa Ankalaki researched in agriculture field the farmers and agribusinesses has to make too many to be counted decisions every day and intricate complexities involves the various factors influencing them.

An challenging issue for agricultural planninghaving aim is that accurate yield estimation for the numerous crops. Environmental conditions,different types of soil, input levels, combinations and commodity prices have made it all the more relevant for farmers to use information and get help to make critical farming decisions. [2]

61st IETE Annual Convention 2018 on "Smart Engineering for Sustainable Development"
Special Issue of MECSCISE, ISSN: 2277-9477

A Review paper on various applications of Big data

Prof.Ms.P.V.Dudhe Prof. M. S. Deshmukh Prof.Ms.N.V.Kadam Prof. R. M. Hushangabade

Abstract: **Big data is one of the current affair field for work and future research attractions for the bigger of researches. Big data will changes at a great rate in various fields like business, the scientific research. There are mostly researchers used 3V and 4V for defining the concept of big data. First V is having a specified size data i.e. volume, second V define the frequent rate of data i.e. velocity, third V defines heterogeneity of data types and sources.Last V will be extended by researchers according to special requirement. Forth V can be value, variability or virtual. Big data this is the concept of collection of data sets which is very large in size and very complex behavior so that it has become very difficult to process the data. This paper gives a review on various applications based on big data in various fields.**

Keywords: **Big data**

I.INTRODUCTION

Five V's of big data

1. Volume
2. Variety
   a. Structured (Proper Schema)
   b. Semi-structured
   c. Un-structured
3. Velocity
4. Value
5. Veracity

Problem with Big Data Processing

1. Heterogeneity and Incompleteness

In fact, the a subtle difference in and the quality of being pleasingly deep of natural language can provide valuable depth. However, machine analysis algorithms expect of the same kind of data, and cannot understand differentiate it. In a result, data must be carefully structured as a first step in (or prior to) data analysis. Computer systems work most in a well-organized and competent way. if they has stored multiple items that are all exactly alike in size and structure.

2. Scale

Any one first thought about the size of data so managing very large data is not so easy for any organization. This become very challenging task for every. So this technology having more scope to research.

3. Timeliness

To process large data set it required more time to get the analysis or get value added data. So there is a necessity of system that deals with the size of data and sending the output quickly. Rather, there is an acquisition rate challenge.

4. Privacy

The privacy in the big data is another huge concern, and one that increases scope of the new researchers in the Big Data. For storing records about health in electronic form, there are strict laws governing what can and cannot be done. Managing security in such a manner as to achieve a desired result by both a technical and a sociological problem, which must be representing jointly from both perspectives to realize the promise of big data.

5. Human Collaboration

There are various computational analysis algorithms are available but they may take more time to find the result so it is better to making some patterns, those are easily understand by human and detect output quick.

II. Literature Survey

Samiya Khan , Xiufeng Liu, Kashish A. Shakil , Mansaf Alam they talk about recently trents of big data, there has been a main on focus of organizations and governments towards digitization of academic and technical documents, adding a new concept of digital libraries. They carry out a systematic identification on the existing challenges in development of a big scholarly data platform, with specific focus on directions for future research and maps them to the different phases of the big data lifecycle.[1]

Jharna Majumdar*, Sneha Naraseeyappa and Shilpa Ankalaki researched in agriculture field the farmers and agribusinesses has to make too many to be counted decisions every day and intricate complexities involves the various factors influencing them.

An challenging issue for agricultural planninghaving aim is that accurate yield estimation for the numerous crops. Environmental conditions,different types of soil, input levels, combinations and commodity prices have made it all the more relevant for farmers to use information and get help to make critical farming decisions. [2]

61st IETE Annual Convention 2018 on "Smart Engineering for Sustainable Development"
Special Issue of IJECSCSE, ISSN: 2277-9477

Information Security in Data Collector and Miner in Big Data Mining

Prof. Ms. Niketa V.Kadam, Prof.AnupG.Kadu, Prof. Ms. Preeti V.Dudhe, Prof. Ms. Maithili S. Deshmukh

Abstract- **The actual data mining task is the kind of semi-automatic or automatic analysis of large quantities of for the extra traction of previously unknown, interesting patterns for example, groups of data records (cluster analysis), unusual records (anomaly detection), and dependencies (association rule mining, sequential pattern mining). This can be performed using database techniques such as spatial indices. These patterns can be considered as a kind of the input data, and may be used in further analysis, in machine learning and predictive analytics. This is very useful in data mining step might identify multiple groups in the data, which can then be used to obtain more accurate prediction results by a decision support system.**

Keywords- **Cluster, pattern mining etc.**

I. INTRODUCTION

In large data sets Data mining is useful for discovering patterns . It involves methods at the intersection of machine learning, statistics, and database systems. Data mining is an interdisciplinary subfield of computer science with The main goal of data mining is to extract information (with intelligent method) from a data set and it is used to transform the information into a comprehensible structure which get used for further processing. Data mining is very much helpful for the the analysis of the "knowledge discovery in databases" process, or KDD. Aside from the raw analysis step, it also involves database and data management aspects, datapreprocessing, model and inference considerations, interestingness. To extract previously unknown, interesting patterns such as groups of data records (cluster analysis), unusual records (anomaly detection), and dependencies (association rule mining, sequential pattern mining) this method of data mining is used for the huge data sets. This can be done using database techniques such as spatial indices. [1][2].

II. STAGES OF KNOWLEDGE DISCOVERY MODEL

There are four stages for knowledge discovery in databases (KDD) process as defined bellow:

1. Cleaning and Integration
2. Selection and Transformation
3. Data mining
4. Evaluation and presentation

Data cleaning: noise and inconsistent data get removed at this first step of data cleaning.

Data integration: At this stage, the combination of multiple data sources performed

Data selection: Retrieval of data from the database which is relevant to the analysis task is performed.

Data transformation: where data are summarized or aggregations operations are used at this stage to transformed and consolidate data into forms appropriate for mining.

Data mining: which is an most needed process where with the help of intelligent methods data patterns are extracted.

Pattern evaluation: It is used to identify the truly interesting patterns representing knowledge based on interesting measures.

Knowledge presentation: To present mined knowledge to user's visualization and knowledge representation techniques are used.

The basic form of the data in a table consists of following four types of attributes described bellow.

(i)Explicit Identifiers – it is a set of attributes containing information that identifies a record owner explicitly such as name, SS number etc.

(ii)Quasi Identifiers - is a set of attributes which is used to potentially identify a record owner when combined with publicly available data.

(iii)Sensitive Attributes - is a set of attributes which consists of sensitive person specific information such as disease, salary etc.

(iv)Non-Sensitive Attributes - is a set of attributes that creates

61st IETE Annual Convention 2018 on "Smart Engineering for Sustainable Development"
Special Issue of IJECSCSE, ISSN: 2277-9477

Information Security in Data Collector and Miner in Big Data Mining

Prof. Ms. Niketa V.Kadam, Prof.AnupG.Kadu, Prof. Ms. Preeti V.Dudhe, Prof. Ms. Maithili S. Deshmukh

Abstract- **The actual data mining task is the kind of semi-automatic or automatic analysis of large quantities of for the extra traction of previously unknown, interesting patterns for example, groups of data records (cluster analysis), unusual records (anomaly detection), and dependencies (association rule mining, sequential pattern mining). This can be performed using database techniques such as spatial indices. These patterns can be considered as a kind of the input data, and may be used in further analysis, in machine learning and predictive analytics. This is very useful in data mining step might identify multiple groups in the data, which can then be used to obtain more accurate prediction results by a decision support system.**

Keywords- **Cluster, pattern mining etc.**

I. INTRODUCTION

In large data sets Data mining is useful for discovering patterns . It involves methods at the intersection of machine learning, statistics, and database systems. Data mining is an interdisciplinary subfield of computer science with The main goal of data mining is to extract information (with intelligent method) from a data set and it is used to transform the information into a comprehensible structure which get used for further processing. Data mining is very much helpful for the the analysis of the "knowledge discovery in databases" process, or KDD. Aside from the raw analysis step, it also involves database and data management aspects, datapreprocessing, model and inference considerations, interestingness. To extract previously unknown, interesting patterns such as groups of data records (cluster analysis), unusual records (anomaly detection), and dependencies (association rule mining, sequential pattern mining) this method of data mining is used for the huge data sets. This can be done using database techniques such as spatial indices. [1][2].

II. STAGES OF KNOWLEDGE DISCOVERY MODEL

There are four stages for knowledge discovery in databases (KDD) process as defined bellow:

1. Cleaning and Integration
2. Selection and Transformation
3. Data mining
4. Evaluation and presentation

Data cleaning: noise and inconsistent data get removed at this first step of data cleaning.

Data integration: At this stage, the combination of multiple data sources performed

Data selection: Retrieval of data from the database which is relevant to the analysis task is performed.

Data transformation: where data are summarized or aggregations operations are used at this stage to transformed and consolidate data into forms appropriate for mining.

Data mining: which is an most needed process where with the help of intelligent methods data patterns are extracted.

Pattern evaluation: It is used to identify the truly interesting patterns representing knowledge based on interesting measures.

Knowledge presentation: To present mined knowledge to user's visualization and knowledge representation techniques are used.

The basic form of the data in a table consists of following four types of attributes described bellow.

(i)Explicit Identifiers – it is a set of attributes containing information that identifies a record owner explicitly such as name, SS number etc.

(ii)Quasi Identifiers - is a set of attributes which is used to potentially identify a record owner when combined with publicly available data.

(iii)Sensitive Attributes - is a set of attributes which consists of sensitive person specific information such as disease, salary etc.

(iv)Non-Sensitive Attributes - is a set of attributes that creates

61st IETE Annual Convention 2018 on "Smart Engineering for Sustainable Development"
Special Issue of IJECSCSE, ISSN: 2277-9477

Information Security in Data Collector and Miner in Big Data Mining

Prof. Ms. Niketa V.Kadam, Prof.AnupG.Kadu, Prof. Ms. Preeti V.Dudhe, Prof. Ms. Maithili S. Deshmukh

Abstract- **The actual data mining task is the kind of semi-automatic or automatic analysis of large quantities of for the extra traction of previously unknown, interesting patterns for example, groups of data records (cluster analysis), unusual records (anomaly detection), and dependencies (association rule mining, sequential pattern mining). This can be performed using database techniques such as spatial indices. These patterns can be considered as a kind of the input data, and may be used in further analysis, in machine learning and predictive analytics. This is very useful in data mining step might identify multiple groups in the data, which can then be used to obtain more accurate prediction results by a decision support system.**

Keywords- **Cluster, pattern mining etc.**

I. INTRODUCTION

In large data sets Data mining is useful for discovering patterns . It involves methods at the intersection of machine learning, statistics, and database systems. Data mining is an interdisciplinary subfield of computer science with The main goal of data mining is to extract information (with intelligent method) from a data set and it is used to transform the information into a comprehensible structure which get used for further processing. Data mining is very much helpful for the the analysis of the "knowledge discovery in databases" process, or KDD. Aside from the raw analysis step, it also involves database and data management aspects, datapreprocessing, model and inference considerations, interestingness. To extract previously unknown, interesting patterns such as groups of data records (cluster analysis), unusual records (anomaly detection), and dependencies (association rule mining, sequential pattern mining) this method of data mining is used for the huge data sets. This can be done using database techniques such as spatial indices. [1][2].

II. STAGES OF KNOWLEDGE DISCOVERY MODEL

There are four stages for knowledge discovery in databases (KDD) process as defined bellow:

1. Cleaning and Integration
2. Selection and Transformation
3. Data mining
4. Evaluation and presentation

Data cleaning: noise and inconsistent data get removed at this first step of data cleaning.

Data integration: At this stage, the combination of multiple data sources performed

Data selection: Retrieval of data from the database which is relevant to the analysis task is performed.

Data transformation: where data are summarized or aggregations operations are used at this stage to transformed and consolidate data into forms appropriate for mining.

Data mining: which is an most needed process where with the help of intelligent methods data patterns are extracted.

Pattern evaluation: It is used to identify the truly interesting patterns representing knowledge based on interesting measures.

Knowledge presentation: To present mined knowledge to user's visualization and knowledge representation techniques are used.

The basic form of the data in a table consists of following four types of attributes described bellow.

(i)Explicit Identifiers – it is a set of attributes containing information that identifies a record owner explicitly such as name, SS number etc.

(ii)Quasi Identifiers - is a set of attributes which is used to potentially identify a record owner when combined with publicly available data.

(iii)Sensitive Attributes - is a set of attributes which consists of sensitive person specific information such as disease, salary etc.

(iv)Non-Sensitive Attributes - is a set of attributes that creates

Internet of Things (IOT): An Overview and its Applications

Prof.Ms.P.V.Dudhe[1], Prof.Ms.N.V.Kadam[2], Prof. R. M. Hushangabade[3], Prof. M. S. Deshmukh[4]
Assistant Professor, Dept. of Information Technology, PRMIT&R, Badnera, Amravati-Maharastra
pravin.dudhe@rediffmail.com, nilkanth39@gmail.com, rmhushangabade@mitra.ac.in, msdeshmukh@mitra.ac.in

Abstract- We are entering in a beginning of a new of computing technology i.e. Internet of Things (IOT). IOT is a sort of "universal global neural network" in the cloud which connects various devices. The IOT is an intelligently connected devices and systems which be made up of smart machines interacting and communicating with other machines, environments, objects and infrastructures and the Radio Frequency Identification (RFID) and sensor network technologies will rise up to meet this new challenge. As a result, a very large in size data are being generated, stored, and that data is being processed into useful actions that can "command and control" the things or devices to make our lives much easier and safer—and to reduce our influence on the environment. This paper gives an overview of Internet of Things (IOT) and brief information about IOT applications and challenges in various fields.

Keywords: IOT application

I. INTRODUCTION

The phrase "Internet of Things" was invent by Kevin Ashton in 1999. He made at his place of employment, Proctor & Gamble. During his time there, Ashton came up with the idea of putting a RFID tag on each lipstick and having them communicate with a radio receiver. He put forward as fact that such data collection can be used to solve lots of problems in the real world. At the moment, a lot of connected devices can talk to internet and so our smart phones, and maybe even some similar products, but most of them can't talk to one another because of branded hardware and software with differing standards, languages and communication protocols. For most of the current smart household items, you'll need to use a different app or website to interface with the device. Unless they were especially designed by the manufacturer to work together. K. Rose in 2015 gave reasons that why IOT is possible. He said it is possible due to following reasons: Ubiquitous Connectivity, widespread adoption of IP-based networking, computing economics, advances in Data Analytics, rise of Cloud Computing so, the IOT is the conjunction of a variety of computing and connectivity trends that have been evolving for many decades.

II. Related Work of IOT

Gesu Alex, Benitta Varghese, Jesna G Jose, AllyMol Abraham proposed work on modern healthcare IOT platform with an intelligent medicine box along with sensors for health monitoring and diagnosis the disease. In their proposed work an intelligent home-based medicine box with wireless connectivity with an android application (Health-IOT) is developed that helps patients and doctors to be in a more close communication. Their proposed work has an intelligent medicine box that gives alerts for patients to take their medicine at the right time. The box is wirelessly connected to internet to make timely updates about medicines which will be notified in the android application with in patient's smart phone. Their system automatically gives alarm so that the patient takes the right medicine at the right time. [1]

A.Arun Rajaa, R.Naveedhah, G.Niranjanadevic and V.Roobini proposed in their paper that a security alert system which records a video when a motion is detected and uploads it to the external server and notifies the user via text message is reported. Their application can be used to view the remote activities and notifications can be received whenever the motion is detected. Internet of Things basically deals with transferring of useable data without involving human interferences. In their proposed work they used Raspberry Pi camera module is used for detecting and capturing the motion. Raspberry Pi (Model B+), a credit card sized computer is used for processing the captured video. [2]

T. Balakrishna , r. Naga swetha proposed in their paper to describe the performance and functional characteristics of Arm based wireless sensor node in monitoring the parameters such as CO2, temperature, humidity and light around the pipeline structure. Their system is deployed to monitor any deviations in the system's parameters with the standard atmospheric values eventually alert the user even to a remote location. [3]

Ammar khaleel salman yussof mention the problem in Iraq like many student abduction cases are reported due to the lack of safety mechanisms and the lack of law enforcement. In Iraq many Educational institutions such as primary schools are

978-1-5386-1687-5/17/$31.00 ©2017 IEEE

Internet of Things (IOT): An Overview and its Applications

Prof.Ms.P.V.Dudhe[1], Prof.Ms.N.V.Kadam[2], Prof. R. M. Hushangabade[3], Prof. M. S. Deshmukh[4]
Assistant Professor, Dept. of Information Technology, PRMIT&R, Badnera, Amravati-Maharastra
pravin.dudhe@rediffmail.com, nilkanth39@gmail.com, rmhushangabade@mitra.ac.in, msdeshmukh@mitra.ac.in

Abstract- We are entering in a beginning of a new of computing technology i.e. Internet of Things (IOT). IOT is a sort of "universal global neural network" in the cloud which connects various devices. The IOT is an intelligently connected devices and systems which be made up of smart machines interacting and communicating with other machines, environments, objects and infrastructures and the Radio Frequency Identification (RFID) and sensor network technologies will rise up to meet this new challenge. As a result, a very large in size data are being generated, stored, and that data is being processed into useful actions that can "command and control" the things or devices to make our lives much easier and safer—and to reduce our influence on the environment. This paper gives an overview of Internet of Things (IOT) and brief information about IOT applications and challenges in various fields.

Keywords: IOT application

I. INTRODUCTION

The phrase "Internet of Things" was invent by Kevin Ashton in 1999. He made at his place of employment, Proctor & Gamble. During his time there, Ashton came up with the idea of putting a RFID tag on each lipstick and having them communicate with a radio receiver. He put forward as fact that such data collection can be used to solve lots of problems in the real world. At the moment, a lot of connected devices can talk to internet and so our smart phones, and maybe even some similar products, but most of them can't talk to one another because of branded hardware and software with differing standards, languages and communication protocols. For most of the current smart household items, you'll need to use a different app or website to interface with the device. Unless they were especially designed by the manufacturer to work together. K. Rose in 2015 gave reasons that why IOT is possible. He said it is possible due to following reasons: Ubiquitous Connectivity, widespread adoption of IP-based networking, computing economics, advances in Data Analytics, rise of Cloud Computing so, the IOT is the conjunction of a variety of computing and connectivity trends that have been evolving for many decades.

II. Related Work of IOT

Gesu Alex, Benitta Varghese, Jesna G Jose, AllyMol Abraham proposed work on modern healthcare IOT platform with an intelligent medicine box along with sensors for health monitoring and diagnosis the disease. In their proposed work an intelligent home-based medicine box with wireless connectivity with an android application (Health-IOT) is developed that helps patients and doctors to be in a more close communication. Their proposed work has an intelligent medicine box that gives alerts for patients to take their medicine at the right time. The box is wirelessly connected to internet to make timely updates about medicines which will be notified in the android application with in patient's smart phone. Their system automatically gives alarm so that the patient takes the right medicine at the right time. [1]

A.Arun Rajaa, R.Naveedhah, G.Niranjanadevic and V.Roobini proposed in their paper that a security alert system which records a video when a motion is detected and uploads it to the external server and notifies the user via text message is reported. Their application can be used to view the remote activities and notifications can be received whenever the motion is detected. Internet of Things basically deals with transferring of useable data without involving human interferences. In their proposed work they used Raspberry Pi camera module is used for detecting and capturing the motion. Raspberry Pi (Model B+), a credit card sized computer is used for processing the captured video. [2]

T. Balakrishna , r. Naga swetha proposed in their paper to describe the performance and functional characteristics of Arm based wireless sensor node in monitoring the parameters such as CO2, temperature, humidity and light around the pipeline structure. Their system is deployed to monitor any deviations in the system's parameters with the standard atmospheric values eventually alert the user even to a remote location. [3]

Ammar khaleel salman yussof mention the problem in Iraq like many student abduction cases are reported due to the lack of safety mechanisms and the lack of law enforcement. In Iraq many Educational institutions such as primary schools are

978-1-5386-1687-5/17/$31.00 ©2017 IEEE

Internet of Things (IOT): An Overview and its Applications

Prof.Ms.P.V.Dudhe[1], Prof.Ms.N.V.Kadam[2], Prof. R. M. Hushangabade[3], Prof. M. S. Deshmukh[4]
Assistant Professor, Dept. of Information Technology, PRMIT&R, Badnera, Amravati-Maharastra
pravin.dudhe@rediffmail.com, nilkanth39@gmail.com, rmhushangabade@mitra.ac.in, msdeshmukh@mitra.ac.in

Abstract- We are entering in a beginning of a new of computing technology i.e. Internet of Things (IOT). IOT is a sort of "universal global neural network" in the cloud which connects various devices. The IOT is an intelligently connected devices and systems which be made up of smart machines interacting and communicating with other machines, environments, objects and infrastructures and the Radio Frequency Identification (RFID) and sensor network technologies will rise up to meet this new challenge. As a result, a very large in size data are being generated, stored, and that data is being processed into useful actions that can "command and control" the things or devices to make our lives much easier and safer—and to reduce our influence on the environment. This paper gives an overview of Internet of Things (IOT) and brief information about IOT applications and challenges in various fields.

Keywords: IOT application

I. INTRODUCTION

The phrase "Internet of Things" was invent by Kevin Ashton in 1999. He made at his place of employment, Proctor & Gamble. During his time there, Ashton came up with the idea of putting a RFID tag on each lipstick and having them communicate with a radio receiver. He put forward as fact that such data collection can be used to solve lots of problems in the real world. At the moment, a lot of connected devices can talk to internet and so our smart phones, and maybe even some similar products, but most of them can't talk to one another because of branded hardware and software with differing standards, languages and communication protocols. For most of the current smart household items, you'll need to use a different app or website to interface with the device. Unless they were especially designed by the manufacturer to work together. K. Rose in 2015 gave reasons that why IOT is possible. He said it is possible due to following reasons: Ubiquitous Connectivity, widespread adoption of IP-based networking, computing economics, advances in Data Analytics, rise of Cloud Computing so, the IOT is the conjunction of a variety of computing and connectivity trends that have been evolving for many decades.

II. Related Work of IOT

Gesu Alex, Benitta Varghese, Jesna G Jose, AllyMol Abraham proposed work on modern healthcare IOT platform with an intelligent medicine box along with sensors for health monitoring and diagnosis the disease. In their proposed work an intelligent home-based medicine box with wireless connectivity with an android application (Health-IOT) is developed that helps patients and doctors to be in a more close communication. Their proposed work has an intelligent medicine box that gives alerts for patients to take their medicine at the right time. The box is wirelessly connected to internet to make timely updates about medicines which will be notified in the android application with in patient's smart phone. Their system automatically gives alarm so that the patient takes the right medicine at the right time. [1]

A.Arun Rajaa, R.Naveedhah, G.Niranjanadevic and V.Roobini proposed in their paper that a security alert system which records a video when a motion is detected and uploads it to the external server and notifies the user via text message is reported. Their application can be used to view the remote activities and notifications can be received whenever the motion is detected. Internet of Things basically deals with transferring of useable data without involving human interferences. In their proposed work they used Raspberry Pi camera module is used for detecting and capturing the motion. Raspberry Pi (Model B+), a credit card sized computer is used for processing the captured video. [2]

T. Balakrishna , r. Naga swetha proposed in their paper to describe the performance and functional characteristics of Arm based wireless sensor node in monitoring the parameters such as CO2, temperature, humidity and light around the pipeline structure. Their system is deployed to monitor any deviations in the system's parameters with the standard atmospheric values eventually alert the user even to a remote location. [3]

Ammar khaleel salman yussof mention the problem in Iraq like many student abduction cases are reported due to the lack of safety mechanisms and the lack of law enforcement. In Iraq many Educational institutions such as primary schools are

978-1-5386-1687-5/17/$31.00 ©2017 IEEE

Internet of Things (IOT): An Overview and its Applications

Prof.Ms.P.V.Dudhe[1], Prof.Ms.N.V.Kadam[2], Prof. R. M. Hushangabade[3], Prof. M. S. Deshmukh[4]
Assistant Professor, Dept. of Information Technology, PRMIT&R, Badnera, Amravati-Maharastra
pravin.dudhe@rediffmail.com, nilkanth39@gmail.com, rmhushangabade@mitra.ac.in, msdeshmukh@mitra.ac.in

Abstract- We are entering in a beginning of a new of computing technology i.e. Internet of Things (IOT). IOT is a sort of "universal global neural network" in the cloud which connects various devices. The IOT is an intelligently connected devices and systems which be made up of smart machines interacting and communicating with other machines, environments, objects and infrastructures and the Radio Frequency Identification (RFID) and sensor network technologies will rise up to meet this new challenge. As a result, a very large in size data are being generated, stored, and that data is being processed into useful actions that can "command and control" the things or devices to make our lives much easier and safer—and to reduce our influence on the environment. This paper gives an overview of Internet of Things (IOT) and brief information about IOT applications and challenges in various fields.

Keywords: IOT application

I. INTRODUCTION

The phrase "Internet of Things" was invent by Kevin Ashton in 1999. He made at his place of employment, Proctor & Gamble. During his time there, Ashton came up with the idea of putting a RFID tag on each lipstick and having them communicate with a radio receiver. He put forward as fact that such data collection can be used to solve lots of problems in the real world. At the moment, a lot of connected devices can talk to internet and so our smart phones, and maybe even some similar products, but most of them can't talk to one another because of branded hardware and software with differing standards, languages and communication protocols. For most of the current smart household items, you'll need to use a different app or website to interface with the device. Unless they were especially designed by the manufacturer to work together. K. Rose in 2015 gave reasons that why IOT is possible. He said it is possible due to following reasons: Ubiquitous Connectivity, widespread adoption of IP-based networking, computing economics, advances in Data Analytics, rise of Cloud Computing so, the IOT is the conjunction of a variety of computing and connectivity trends that have been evolving for many decades.

II. Related Work of IOT

Gesu Alex, Benitta Varghese, Jesna G Jose, AllyMol Abraham proposed work on modern healthcare IOT platform with an intelligent medicine box along with sensors for health monitoring and diagnosis the disease. In their proposed work an intelligent home-based medicine box with wireless connectivity with an android application (Health-IOT) is developed that helps patients and doctors to be in a more close communication. Their proposed work has an intelligent medicine box that gives alerts for patients to take their medicine at the right time. The box is wirelessly connected to internet to make timely updates about medicines which will be notified in the android application with in patient's smart phone. Their system automatically gives alarm so that the patient takes the right medicine at the right time. [1]

A.Arun Rajaa, R.Naveedhah, G.Niranjanadevic and V.Roobini proposed in their paper that a security alert system which records a video when a motion is detected and uploads it to the external server and notifies the user via text message is reported. Their application can be used to view the remote activities and notifications can be received whenever the motion is detected. Internet of Things basically deals with transferring of useable data without involving human interferences. In their proposed work they used Raspberry Pi camera module is used for detecting and capturing the motion. Raspberry Pi (Model B+), a credit card sized computer is used for processing the captured video. [2]

T. Balakrishna , r. Naga swetha proposed in their paper to describe the performance and functional characteristics of Arm based wireless sensor node in monitoring the parameters such as CO2, temperature, humidity and light around the pipeline structure. Their system is deployed to monitor any deviations in the system's parameters with the standard atmospheric values eventually alert the user even to a remote location. [3]

Ammar khaleel salman yussof mention the problem in Iraq like many student abduction cases are reported due to the lack of safety mechanisms and the lack of law enforcement. In Iraq many Educational institutions such as primary schools are

978-1-5386-1687-5/17/$31.00 ©2017 IEEE

61st IETE Annual Convention 2018 on "Smart Engineering for Sustainable Development"
Special Issue of IJECSCSE, ISSN: 2277-9477

A Review on Tenders of Genetic Algorithms plus Fuzzy Logic in Temporary Memory Storage

Mr. S. N. Sarda, Mr. A. A. Gulhane, Mr. N. S. Wadhe, Mr. S. D. Thakur

Abstract- **To diminish drawback occur due to page fault and to enhance performance of Storing. Developers of system are always eyeing for an innovative tactic for page replacement policies. This paper, deliberate the numerous neural tactics that were built on creatures and fuzzy logic to enhance the performance of storing .The proposed system we deliberated here is most effective in resolving the problems than a systems used earlier in this problem domain.**

Keywords- **Genetic algorithms, Evolutionary program, Temporary memory storage replacement, Fuzzy logic.**

I. INTRODUCTION

Due to trivial loading capability of temporary store recall, Scheme constantly want to call waste collection at definite time intermission. Sometime waste collection begged at coming of different objects. When allocation of space is become an issue. In place of spare of appropriate thing from cache we looked-for an proper Temporary replacement algorithm. This region is continuously invite peoples operational for organization optimization. In this paper we work for finding the capability of genetic fuzzy based techniques that could be enhancing performance of cache significantly by implementing.

II. A GENERAL VIEW FOR TEMPORARY STORAGE REPLACEMENT BY GENETIC ALGORITHM

Application of genetic algorithms and evolutionary software design is previously studied by various researchers. A. Vakali offered a model that announced the idea of applying genetic algorithms and evolutionary programming to Temporary replacement process[5]. The proposed models adapted the idea of evolutionary computation in order to preserve a consistent cache state of information objects. The aim was to expand the Temporary replacements state in terms of section of orientation. For improved consumption of the temporary storing replacement region, genetic algorithm methodology was considered for the temporary storing replacement process. The reasons for considering the genetic algorithms for temporary storing replacement are given below:

a) Existence of the adequate is an expression that Invented from progression theory. temporary storing replacement should contain the adequate information objects. Adequate object is a object that habitually edited and

b) Temporary storing replacement content that had a huge amount of data objects (stored files) required optimization. The temporary storing replacement things were modeled as fit considered for reproduction. To construct stronger temporary storing replacement group we realistic dissimilar genetic operators. Evolutionary programming methods were similar to genetic algorithm, but they located importance on the behavior of adequate temporary storing replacement objects and their offspring.

By providing proper objective function to the genetic algorithm, one cans achieve significant improvements in cache performance.

III. A SURVEY FOR FUZZY LOGIC

Fuzzy logic is a extension of a form of algebra in which all values are compact to either True or False.

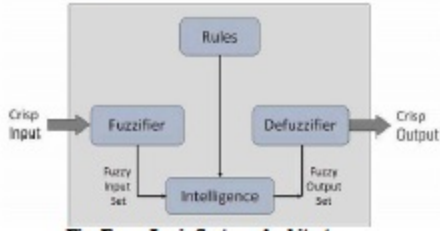


Fig: Fuzzy Logic Systems Architecture

61st IETE Annual Convention 2018 on "Smart Engineering for Sustainable Development"
Special Issue of IJECSCSE, ISSN: 2277-9477

A Review on Tenders of Genetic Algorithms plus Fuzzy Logic in Temporary Memory Storage

Mr. S. N. Sarda, Mr. A. A. Gulhane, Mr. N. S. Wadhe, Mr. S. D. Thakur

Abstract- **To diminish drawback occur due to page fault and to enhance performance of Storing. Developers of system are always eyeing for an innovative tactic for page replacement policies. This paper, deliberate the numerous neural tactics that were built on creatures and fuzzy logic to enhance the performance of storing .The proposed system we deliberated here is most effective in resolving the problems than a systems used earlier in this problem domain.**

Keywords- **Genetic algorithms, Evolutionary program, Temporary memory storage replacement, Fuzzy logic.**

I. INTRODUCTION

Due to trivial loading capability of temporary store recall, Scheme constantly want to call waste collection at definite time intermission. Sometime waste collection begged at coming of different objects. When allocation of space is become an issue. In place of spare of appropriate thing from cache we looked-for an proper Temporary replacement algorithm. This region is continuously invite peoples operational for organization optimization. In this paper we work for finding the capability of genetic fuzzy based techniques that could be enhancing performance of cache significantly by implementing.

II. A GENERAL VIEW FOR TEMPORARY STORAGE REPLACEMENT BY GENETIC ALGORITHM

Application of genetic algorithms and evolutionary software design is previously studied by various researchers. A. Vakali offered a model that announced the idea of applying genetic algorithms and evolutionary programming to Temporary replacement process[5]. The proposed models adapted the idea of evolutionary computation in order to preserve a consistent cache state of information objects. The aim was to expand the Temporary replacements state in terms of section of orientation. For improved consumption of the temporary storing replacement region, genetic algorithm methodology was considered for the temporary storing replacement process. The reasons for considering the genetic algorithms for temporary storing replacement are given below:

a) Existence of the adequate is an expression that Invented from progression theory. temporary storing replacement should contain the adequate information objects. Adequate object is a object that habitually edited and

b) Temporary storing replacement content that had a huge amount of data objects (stored files) required optimization. The temporary storing replacement things were modeled as fit considered for reproduction. To construct stronger temporary storing replacement group we realistic dissimilar genetic operators. Evolutionary programming methods were similar to genetic algorithm, but they located importance on the behavior of adequate temporary storing replacement objects and their offspring.

By providing proper objective function to the genetic algorithm, one cans achieve significant improvements in cache performance.

III. A SURVEY FOR FUZZY LOGIC

Fuzzy logic is a extension of a form of algebra in which all values are compact to either True or False.

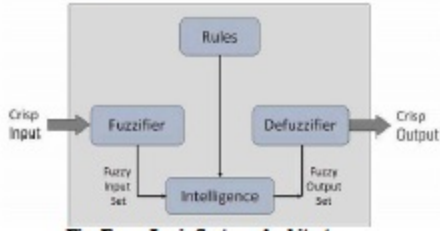


Fig: Fuzzy Logic Systems Architecture

61st IETE Annual Convention 2018 on "Smart Engineering for Sustainable Development"
Special Issue of IJECSCSE, ISSN: 2277-9477

A Review on Tenders of Genetic Algorithms plus Fuzzy Logic in Temporary Memory Storage

Mr. S. N. Sarda, Mr. A. A. Gulhane, Mr. N. S. Wadhe, Mr. S. D. Thakur

Abstract- **To diminish drawback occur due to page fault and to enhance performance of Storing. Developers of system are always eyeing for an innovative tactic for page replacement policies. This paper, deliberate the numerous neural tactics that were built on creatures and fuzzy logic to enhance the performance of storing .The proposed system we deliberated here is most effective in resolving the problems than a systems used earlier in this problem domain.**

Keywords- **Genetic algorithms, Evolutionary program, Temporary memory storage replacement, Fuzzy logic.**

I. INTRODUCTION

Due to trivial loading capability of temporary store recall, Scheme constantly want to call waste collection at definite time intermission. Sometime waste collection begged at coming of different objects. When allocation of space is become an issue. In place of spare of appropriate thing from cache we looked-for an proper Temporary replacement algorithm. This region is continuously invite peoples operational for organization optimization. In this paper we work for finding the capability of genetic fuzzy based techniques that could be enhancing performance of cache significantly by implementing.

II. A GENERAL VIEW FOR TEMPORARY STORAGE REPLACEMENT BY GENETIC ALGORITHM

Application of genetic algorithms and evolutionary software design is previously studied by various researchers. A. Vakali offered a model that announced the idea of applying genetic algorithms and evolutionary programming to Temporary replacement process[5]. The proposed models adapted the idea of evolutionary computation in order to preserve a consistent cache state of information objects. The aim was to expand the Temporary replacements state in terms of section of orientation. For improved consumption of the temporary storing replacement region, genetic algorithm methodology was considered for the temporary storing replacement process. The reasons for considering the genetic algorithms for temporary storing replacement are given below:

a) Existence of the adequate is an expression that Invented from progression theory. temporary storing replacement should contain the adequate information objects. Adequate object is a object that habitually edited and

b) Temporary storing replacement content that had a huge amount of data objects (stored files) required optimization. The temporary storing replacement things were modeled as fit considered for reproduction. To construct stronger temporary storing replacement group we realistic dissimilar genetic operators. Evolutionary programming methods were similar to genetic algorithm, but they located importance on the behavior of adequate temporary storing replacement objects and their offspring.

By providing proper objective function to the genetic algorithm, one cans achieve significant improvements in cache performance.

III. A SURVEY FOR FUZZY LOGIC

Fuzzy logic is a extension of a form of algebra in which all values are compact to either True or False.

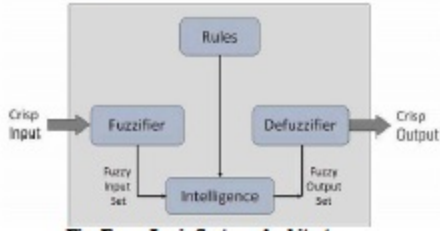


Fig: Fuzzy Logic Systems Architecture

61st IETE Annual Convention 2018 on "Smart Engineering for Sustainable Development"
Special Issue of IJECSCSE, ISSN: 2277-9477

A Review on Tenders of Genetic Algorithms plus Fuzzy Logic in Temporary Memory Storage

Mr. S. N. Sarda, Mr. A. A. Gulhane, Mr. N. S. Wadhe, Mr. S. D. Thakur

Abstract- **To diminish drawback occur due to page fault and to enhance performance of Storing. Developers of system are always eyeing for an innovative tactic for page replacement policies. This paper, deliberate the numerous neural tactics that were built on creatures and fuzzy logic to enhance the performance of storing .The proposed system we deliberated here is most effective in resolving the problems than a systems used earlier in this problem domain.**

Keywords- **Genetic algorithms, Evolutionary program, Temporary memory storage replacement, Fuzzy logic.**

I. INTRODUCTION

Due to trivial loading capability of temporary store recall, Scheme constantly want to call waste collection at definite time intermission. Sometime waste collection begged at coming of different objects. When allocation of space is become an issue. In place of spare of appropriate thing from cache we looked-for an proper Temporary replacement algorithm. This region is continuously invite peoples operational for organization optimization. In this paper we work for finding the capability of genetic fuzzy based techniques that could be enhancing performance of cache significantly by implementing.

II. A GENERAL VIEW FOR TEMPORARY STORAGE REPLACEMENT BY GENETIC ALGORITHM

Application of genetic algorithms and evolutionary software design is previously studied by various researchers. A. Vakali offered a model that announced the idea of applying genetic algorithms and evolutionary programming to Temporary replacement process[5]. The proposed models adapted the idea of evolutionary computation in order to preserve a consistent cache state of information objects. The aim was to expand the Temporary replacements state in terms of section of orientation. For improved consumption of the temporary storing replacement region, genetic algorithm methodology was considered for the temporary storing replacement process. The reasons for considering the genetic algorithms for temporary storing replacement are given below:

a) Existence of the adequate is an expression that Invented from progression theory. temporary storing replacement should contain the adequate information objects. Adequate object is a object that habitually edited and

b) Temporary storing replacement content that had a huge amount of data objects (stored files) required optimization. The temporary storing replacement things were modeled as fit considered for reproduction. To construct stronger temporary storing replacement group we realistic dissimilar genetic operators. Evolutionary programming methods were similar to genetic algorithm, but they located importance on the behavior of adequate temporary storing replacement objects and their offspring.

By providing proper objective function to the genetic algorithm, one cans achieve significant improvements in cache performance.

III. A SURVEY FOR FUZZY LOGIC

Fuzzy logic is a extension of a form of algebra in which all values are compact to either True or False.

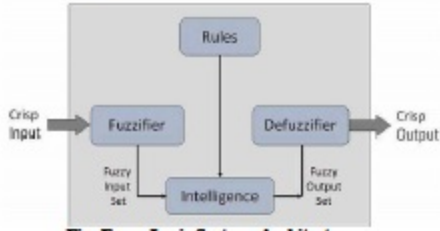


Fig: Fuzzy Logic Systems Architecture

IAETSD - JARAS
JOURNAL FOR ADVANCED RESEARCH IN APPLIED SCIENCES
An ISO : 7021 - 2008 Certified Journal
ISSN NO: 2394-8442 / web : www.iaetsdjaras.org / e-mail : iaetsdjaras@gmail.com
Address : H.NO: C-72, Gali No: 3, Hardev Nagar, Jharoda, Burari, New Delhi - 110084

CERTIFICATE OF PUBLICATION

This is to certify that the paper entitled

Certificate ID : IAETSD-JARAS/675

"SECURING MQTT PROTOCOL IN IOT BY PAYLOAD ENCRYPTION TECHNIQUE & DIGITAL SIGNATURE"

Authored by

UMESH V. NIKAM, Assistant Professor

From

P. R. M. I. T & R, Badnera

Has been published in

IAETSD - JARAS JOURNAL, VOLUME 5, ISSUE 4, APRIL- 2018

DOI : 16.10089/JARAS

CROSSREF.ORG
THE CITATION LINKING BACKBONE

Dr. N. BALASUBRAMANIAN
Editor-In-Chief
IAETSD - JARAS
www.iaetsdjaras.org

5.8 IMPACT FACTOR

ISO International Organization for Standardization 7021-2008

Survey of Intelligent Chat Bots Using Machine Learning

Prof. Anup W. Burange Prof. Yugandhara A. Thakare Prof. Harshal D. Misalkar

Abstract- **Chat bots are intelligent systems that recognize user"s queries in natural language and reply accordingly in a discussion. It is like a virtual assistant, user feels like they are talking with actual person. They can respond in the same language, in which questions are asked. Chat bot would help to replicate the customer service experience with one difference that the customer would be interacting with a bot instead of a real person and yet get the queries attended and resolved. It can help to solve problems of daily life, by providing solutions to help desks, telephone answering systems, customer care centers. A chat bot is just a robot chat that imitates human conversations through voice commands, text chats, or both. It is a virtual dialogue in which one party is an online chatting robot. The artificial intelligence feature within talking robots has been used in different industries to convey information or execute tasks, such as determining the weather, making flight reservations, or purchasing products.**

Keywords- **Chat bot, NLP, Hybrid Approach**

I. INTRODUCTION

Inside the artificial intelligence of a chatbot is machine learning and it is known as natural-language processing (NLP). In different fields machine learning can be applied to create various chatbot algorithms, while NLP has the capability to pick up conversational cadences and mimic human conversation. Generally a chat bot works by a user asking a question or initiating a new topic. Chat bots is nothing but software agents that simulate an entity usually a human. These kinds of software with artificial intelligence which allows them to understand users input and provide meaningful response using predefined knowledge base[1].

Applications

Customer service

One of the most obvious uses for chat bots is customer service and we might have encountered one of these bots already, without realizing it. Many websites, upon visiting, may have a small live chat tool, present on home page to help you discover the information that you need. Historically, these have been prepared by human beings, but it is far more cost efficient now days to have bots fielding simple requirements. If a request happens to be difficult, it may always be forward to a human agent. Customer service chat bots are now getting to be used over the phone, replacing the past mechanical dial tone-based phone menus.

Education

Facebook developed a new trial Artificial Intelligence program that mimicked Albert Einstein, appealing with users in natural conversation and speaking out facts about his life as if you were having a discussion with the man himself. It was not completely immersive, and possibly didn't capture the complexities of his personality, but it show off the capability for chat bots to be use as educational tools. If chat bots can be programmed to behave like historical figures, or even provide users with basic information, they could make education more reachable and more attractive for most of the populations [6].

Assistance

Chat bots are being used as modes of personal assistance, and the best example here is still Siri (and other digital assistants like it). These chat bots are usually linked to an operating system, and are capable of thousands of tasks, including playing music, performing online searches, and even buying products online. Smart speakers like Amazon Echo and Google Home are also becoming more popular, introducing more users to the reality of controlling their daily tasks through voice commands [5].

Developing a chat bot will offer a smart way out to solve the queries, give information as and when required, improve service and increase number of customers. It eliminates human factors included in organization and can give 24/7.

hours service to enhance productivity. Chat bot interfaces for customers which could be available on the web and on any hand-held devices are being developed. Customers can point out their queries in natural language and the chat bot can reply to them with correct answer. As there will be fast reply for

Survey of Intelligent Chat Bots Using Machine Learning

Prof. Anup W. Burange Prof. Yugandhara A. Thakare Prof. Harshal D. Misalkar

Abstract- **Chat bots are intelligent systems that recognize user"s queries in natural language and reply accordingly in a discussion. It is like a virtual assistant, user feels like they are talking with actual person. They can respond in the same language, in which questions are asked. Chat bot would help to replicate the customer service experience with one difference that the customer would be interacting with a bot instead of a real person and yet get the queries attended and resolved. It can help to solve problems of daily life, by providing solutions to help desks, telephone answering systems, customer care centers. A chat bot is just a robot chat that imitates human conversations through voice commands, text chats, or both. It is a virtual dialogue in which one party is an online chatting robot. The artificial intelligence feature within talking robots has been used in different industries to convey information or execute tasks, such as determining the weather, making flight reservations, or purchasing products.**

Keywords- **Chat bot, NLP, Hybrid Approach**

I. INTRODUCTION

Inside the artificial intelligence of a chatbot is machine learning and it is known as natural-language processing (NLP). In different fields machine learning can be applied to create various chatbot algorithms, while NLP has the capability to pick up conversational cadences and mimic human conversation. Generally a chat bot works by a user asking a question or initiating a new topic. Chat bots is nothing but software agents that simulate an entity usually a human. These kinds of software with artificial intelligence which allows them to understand users input and provide meaningful response using predefined knowledge base[1].

Applications

Customer service

One of the most obvious uses for chat bots is customer service and we might have encountered one of these bots already, without realizing it. Many websites, upon visiting, may have a small live chat tool, present on home page to help you discover the information that you need. Historically, these have been prepared by human beings, but it is far more cost efficient now days to have bots fielding simple requirements. If a request happens to be difficult, it may always be forward to a human agent. Customer service chat bots are now getting to be used over the phone, replacing the past mechanical dial tone-based phone menus.

Education

Facebook developed a new trial Artificial Intelligence program that mimicked Albert Einstein, appealing with users in natural conversation and speaking out facts about his life as if you were having a discussion with the man himself. It was not completely immersive, and possibly didn't capture the complexities of his personality, but it show off the capability for chat bots to be use as educational tools. If chat bots can be programmed to behave like historical figures, or even provide users with basic information, they could make education more reachable and more attractive for most of the populations [6].

Assistance

Chat bots are being used as modes of personal assistance, and the best example here is still Siri (and other digital assistants like it). These chat bots are usually linked to an operating system, and are capable of thousands of tasks, including playing music, performing online searches, and even buying products online. Smart speakers like Amazon Echo and Google Home are also becoming more popular, introducing more users to the reality of controlling their daily tasks through voice commands [5].

Developing a chat bot will offer a smart way out to solve the queries, give information as and when required, improve service and increase number of customers. It eliminates human factors included in organization and can give 24/7.

hours service to enhance productivity. Chat bot interfaces for customers which could be available on the web and on any hand-held devices are being developed. Customers can point out their queries in natural language and the chat bot can reply to them with correct answer. As there will be fast reply for

Implementation of Security Algorithm and Achieving Energy Efficiency for Increasing Lifetime of Wireless Sensor Network

Harshal Minalkar, Umesh Nikam(✉), and Anup Burange(✉)

Amravati, India
{hdminalkar,urnikam,avburange}@mitra.ac.in

Abstract. The wireless sensor network is mainly needed for smart network functions or for emergency solutions where human interface is not possible. It is made of large number sensors for monitoring the physical and environmental situations e.g. Temperature, sound and motion etc. Main limitation of WSN is low power and minimum processing as well as they have to self organized as per the requirements of user. If WSN are installed in remote location, it become to much difficult to recharge the battery. In order to increase Lifetime of WSN sustainable consumption of power is required. This paper presents an approach for the cluster Head selection using basic information of node and objective functions. The proposed work minimizes the length of the packet by processing the data at the node. Moreover we emphasize on Node states witching mechanism which helps to increase the lifetime of WSN. With these things, the confidentiality, integrity and authentication of the communicated information becomes vital. In this article, we have focused on a lightweight encryption technique which encompasses faster encryption thereby, bringing down the computing time which increases the duration i.e. lifespan of wireless sensor network. The introduction of both symmetric and asymmetric cryptography in the two phase hybrid encryption algorithm, check marks the main aim of cryptography, i.e., Confidentiality, Integrity and Authenticity. Moreover hybrid encryption attempts to exploit the advantages of both symmetric and asymmetric encryption.

Key words: Sensor nodes · Cluster heads · WSNs · Lifetime · Encryption Decryption

1 Introduction

Wireless sensor network is a field which contains large number of applications such as distributed system processing, embedded systems, wireless communications and have contributed a large revolution in Sensor Network (WSN) [7]. Wireless Sensor Network are a collection of small devices of low power, low cost, light weight sensor nodes working together to capture/monitor a particular event like temperature, pressure, movement etc [8]. Each sensor node sense the event, process it and communicate it with the other nodes present in same network [12]. Wireless sensor network are used in different application areas which includes home automation, healthcare, traffic control, industrial monitoring and many more [1]. A sensor node consists of power unit,

S. Verma et al. (Eds.): CNC 2018, CCIS 839, pp. 298–307, 2019.
https://doi.org/10.1007/978-981-13-2372-0_26

Implementation of Security Algorithm and Achieving Energy Efficiency for Increasing Lifetime of Wireless Sensor Network

Harshal Minalkar, Umesh Nikam(✉), and Anup Burange(✉)

Amravati, India
{hdminalkar,urnikam,avburange}@mitra.ac.in

Abstract. The wireless sensor network is mainly needed for smart network functions or for emergency solutions where human interface is not possible. It is made of large number sensors for monitoring the physical and environmental situations e.g. Temperature, sound and motion etc. Main limitation of WSN is low power and minimum processing as well as they have to self organized as per the requirements of user. If WSN are installed in remote location, it become to much difficult to recharge the battery. In order to increase Lifetime of WSN sustainable consumption of power is required. This paper presents an approach for the cluster Head selection using basic information of node and objective functions. The proposed work minimizes the length of the packet by processing the data at the node. Moreover we emphasize on Node states witching mechanism which helps to increase the lifetime of WSN. With these things, the confidentiality, integrity and authentication of the communicated information becomes vital. In this article, we have focused on a lightweight encryption technique which encompasses faster encryption thereby, bringing down the computing time which increases the duration i.e. lifespan of wireless sensor network. The introduction of both symmetric and asymmetric cryptography in the two phase hybrid encryption algorithm, check marks the main aim of cryptography, i.e., Confidentiality, Integrity and Authenticity. Moreover hybrid encryption attempts to exploit the advantages of both symmetric and asymmetric encryption.

Key words: Sensor nodes · Cluster heads · WSNs · Lifetime · Encryption Decryption

1 Introduction

Wireless sensor network is a field which contains large number of applications such as distributed system processing, embedded systems, wireless communications and have contributed a large revolution in Sensor Network (WSN) [7]. Wireless Sensor Network are a collection of small devices of low power, low cost, light weight sensor nodes working together to capture/monitor a particular event like temperature, pressure, movement etc [8]. Each sensor node sense the event, process it and communicate it with the other nodes present in same network [12]. Wireless sensor network are used in different application areas which includes home automation, healthcare, traffic control, industrial monitoring and many more [1]. A sensor node consists of power unit,

S. Verma et al. (Eds.): CNC 2018, CCIS 839, pp. 298–307, 2019.
https://doi.org/10.1007/978-981-13-2372-0_26

Implementation of Security Algorithm and Achieving Energy Efficiency for Increasing Lifetime of Wireless Sensor Network

Harshal Minalkar, Umesh Nikam(✉), and Anup Burange(✉)

Amravati, India
{hdminalkar,urnikam,avburange}@mitra.ac.in

Abstract. The wireless sensor network is mainly needed for smart network functions or for emergency solutions where human interface is not possible. It is made of large number sensors for monitoring the physical and environmental situations e.g. Temperature, sound and motion etc. Main limitation of WSN is low power and minimum processing as well as they have to self organized as per the requirements of user. If WSN are installed in remote location, it become to much difficult to recharge the battery. In order to increase Lifetime of WSN sustainable consumption of power is required. This paper presents an approach for the cluster Head selection using basic information of node and objective functions. The proposed work minimizes the length of the packet by processing the data at the node. Moreover we emphasize on Node states witching mechanism which helps to increase the lifetime of WSN. With these things, the confidentiality, integrity and authentication of the communicated information becomes vital. In this article, we have focused on a lightweight encryption technique which encompasses faster encryption thereby, bringing down the computing time which increases the duration i.e. lifespan of wireless sensor network. The introduction of both symmetric and asymmetric cryptography in the two phase hybrid encryption algorithm, check marks the main aim of cryptography, i.e., Confidentiality, Integrity and Authenticity. Moreover hybrid encryption attempts to exploit the advantages of both symmetric and asymmetric encryption.

Key words: Sensor nodes · Cluster heads · WSNs · Lifetime · Encryption Decryption

1 Introduction

Wireless sensor network is a field which contains large number of applications such as distributed system processing, embedded systems, wireless communications and have contributed a large revolution in Sensor Network (WSN) [7]. Wireless Sensor Network are a collection of small devices of low power, low cost, light weight sensor nodes working together to capture/monitor a particular event like temperature, pressure, movement etc [8]. Each sensor node sense the event, process it and communicate it with the other nodes present in same network [12]. Wireless sensor network are used in different application areas which includes home automation, healthcare, traffic control, industrial monitoring and many more [1]. A sensor node consists of power unit,

S. Verma et al. (Eds.): CNC 2018, CCIS 839, pp. 298–307, 2019.
https://doi.org/10.1007/978-981-13-2372-0_26

Security in MQTT and CoAP Protocols of IOT's Application Layer

Anup Burange, Harshal Misalkar(✉), and Umesh Nikam(✉)

Amravati, India
{anburange,hdmisalkar,uvnikam}@mitra.ac.in

Abstract. The Internet of Things (IoT) is a framework of interconnected computing devices mechanical and digital machines, internationally identifiable physical objects (or things) or people that are have unique identity and the ability to transfer data over a network without human-to-human or human-to-computer interaction, their combination with the Internet, and their representation in the digital world. The accessibility and availability of cheap components of IoT devices enables a extensive range of applications and provide smart environments. These devices perform actuating and sensing tasks and identified through unique addresses. The IoT devices are connected to the Internet and expected to use the Constrained Application Protocol (CoAP) at the application layer as a main web transfer protocol. Message Queuing Telemetry Transport (MQTT) does not enforce the use of a particular security approach for its applications, but instead leaves that to the application designer. Therefore, IoT solutions can be based on application context and specific security requirements. MQTT is a Client Server publish/subscribe messaging transport protocol. It is lightweight, open, uncomplicated, and designed to make implementation more easier. These characteristics of MQTT make it perfect for use in most of the situations, including communication in Machine to Machine (M2M) and Internet of Things (IoT). In IOT there is major use of Wireless Sensor Networks (WSN) which connects virtual world to physical world. In this paper focus is given to application layer of IOT. In application layer two important protocols are MQTT and CoAP. Security mechanism is proposed in the paper for these protocols.

Keywords: MQTT · CoAP · IOT

1 Introduction

The IoT is built on three main pillars related to the capability of objects which must have communication capability, computational capability and may have interaction capability:

(i) **Communication capability:** Objects in IoT must have a minimal set of communication capability. What we mean by this is not only a communication channel, but also everything related to it, in order to make an efficient communication, such as, an address, identifier, and name. The objects may have all these features or some of them [8].

Security in MQTT and CoAP Protocols of IOT's Application Layer

Anup Burange, Harshal Misalkar(✉), and Umesh Nikam(✉)

Amravati, India
{anburange,hdmisalkar,uvnikam}@mitra.ac.in

Abstract. The Internet of Things (IoT) is a framework of interconnected computing devices mechanical and digital machines, internationally identifiable physical objects (or things) or people that are have unique identity and the ability to transfer data over a network without human-to-human or human-to-computer interaction, their combination with the Internet, and their representation in the digital world. The accessibility and availability of cheap components of IoT devices enables a extensive range of applications and provide smart environments. These devices perform actuating and sensing tasks and identified through unique addresses. The IoT devices are connected to the Internet and expected to use the Constrained Application Protocol (CoAP) at the application layer as a main web transfer protocol. Message Queuing Telemetry Transport (MQTT) does not enforce the use of a particular security approach for its applications, but instead leaves that to the application designer. Therefore, IoT solutions can be based on application context and specific security requirements. MQTT is a Client Server publish/subscribe messaging transport protocol. It is lightweight, open, uncomplicated, and designed to make implementation more easier. These characteristics of MQTT make it perfect for use in most of the situations, including communication in Machine to Machine (M2M) and Internet of Things (IoT). In IOT there is major use of Wireless Sensor Networks (WSN) which connects virtual world to physical world. In this paper focus is given to application layer of IOT. In application layer two important protocols are MQTT and CoAP. Security mechanism is proposed in the paper for these protocols.

Keywords: MQTT · CoAP · IOT

1 Introduction

The IoT is built on three main pillars related to the capability of objects which must have communication capability, computational capability and may have interaction capability:

(i) **Communication capability:** Objects in IoT must have a minimal set of communication capability. What we mean by this is not only a communication channel, but also everything related to it, in order to make an efficient communication, such as, an address, identifier, and name. The objects may have all these features or some of them [8].

Security in MQTT and CoAP Protocols of IOT's Application Layer

Anup Burange, Harshal Misalkar(✉), and Umesh Nikam(✉)

Amravati, India
{anburange,hdmisalkar,uvnikam}@mitra.ac.in

Abstract. The Internet of Things (IoT) is a framework of interconnected computing devices mechanical and digital machines, internationally identifiable physical objects (or things) or people that are have unique identity and the ability to transfer data over a network without human-to-human or human-to-computer interaction, their combination with the Internet, and their representation in the digital world. The accessibility and availability of cheap components of IoT devices enables a extensive range of applications and provide smart environments. These devices perform actuating and sensing tasks and identified through unique addresses. The IoT devices are connected to the Internet and expected to use the Constrained Application Protocol (CoAP) at the application layer as a main web transfer protocol. Message Queuing Telemetry Transport (MQTT) does not enforce the use of a particular security approach for its applications, but instead leaves that to the application designer. Therefore, IoT solutions can be based on application context and specific security requirements. MQTT is a Client Server publish/subscribe messaging transport protocol. It is lightweight, open, uncomplicated, and designed to make implementation more easier. These characteristics of MQTT make it perfect for use in most of the situations, including communication in Machine to Machine (M2M) and Internet of Things (IoT). In IOT there is major use of Wireless Sensor Networks (WSN) which connects virtual world to physical world. In this paper focus is given to application layer of IOT. In application layer two important protocols are MQTT and CoAP. Security mechanism is proposed in the paper for these protocols.

Keywords: MQTT · CoAP · IOT

1 Introduction

The IoT is built on three main pillars related to the capability of objects which must have communication capability, computational capability and may have interaction capability:

(i) **Communication capability:** Objects in IoT must have a minimal set of communication capability. What we mean by this is not only a communication channel, but also everything related to it, in order to make an efficient communication, such as, an address, identifier, and name. The objects may have all these features or some of them [8].

Enhance Energy Efficiency In Smart Phones

P. R. Nerkar R. R. Papalkar N. S. Band

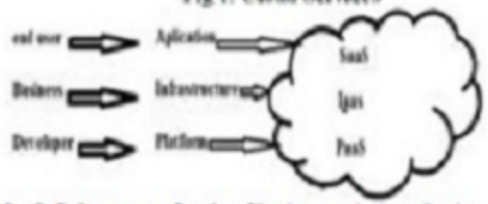
Abstract- **Apart from three basic need of human being fourth one is a smart phone, because its features to make human life more comfort and it generate voluminous data and for processing such data smart phones are not capable due to its limited resources such as battery life, storage capacity and processing capacity. Today users become demanding and expect to execute computational intensive application on their smart phones. For extending capabilities of smart devices we need cloud services, but integrating smart devices with cloud infrastructure is a typical task. In this paper we focus on integrating smart devices with Cloud by offloading computation technique for enhance battery life of smart devices.**

Keywords- **Smart devices, mobile cloud computing, cloud computing.**

I. INTRODUCTION

Cloud computing is the combination of technology such as cluster computing ,Grid Computing. It is also called as ondemand Computing.[1] on demand access to a shared pool of configurable computing resource eg. N/W servers, storage, applications & services.
Cloud Computing defined on the basis of services like Software as a Services(SaaS), Platform as a Services(PaaS) & Infrastructure as a Services.

Fig 1. Cloud Services



SaaS: Software as a Service: Cloud computing popular due to its features, like elasticity, Scalable, pay as you go, multitenant, etc. so in SaaS model Customer need not be installed software, no need of purchasing software, customer can use his own system to run heavy software.
For example. If DTP business man start business & want DTP Software like Microsoft word, MS,influence point for that if he go traditional ,so he first need updated computationable hardware for running this application & need to purchase legal license copy of that software & also have responsibility to upgrade regularly for the security aspects. Means in traditional way customer have entire security of all software as well as data. It is very typical to protect & used from any where of this software for this business, instead of this if this businessman go through Cloud Computing SaaS Service then Customer can access his data from any corner of the word, as well entire responsibility of software is of Cloud service provider(CSP).

For the purpose of accessing Cloud services it need:

- High Speed Internet Connectivity
- Updated Java Script Enable Browser

In Cloud Computing all Services access through internet & using application software called as Web Browser, that's why there is no need of installation of software, as well no need of upgrading old system like p4 etc. In cloud computing customer only answerable for the operational of service i.e. data security & we can say 90% Provider is answerable for entire security of Software.
a PaaS solution should include the following elements:

- A PaaS development studio solution should be browser based.
- An end-to-end PaaS solution should provide a high productivity integrated development environment (IDE) running on the actual target delivery platform so that debugging and test scenarios run in the same environment as production deployment.

A PaaS solution should provide integration with external web services and databases.
- A PaaS solution must provide comprehensive examining of application and user activity, to help developers understand their applications and effect improvements.
- Scalability, reliability, and security should be built into a PaaS solution without requiring additional development, configuration, or other costs.

Enhance Energy Efficiency In Smart Phones

P. R. Nerkar R. R. Papalkar N. S. Band

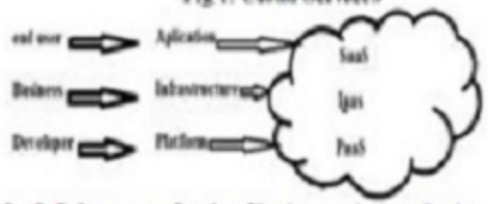
Abstract- **Apart from three basic need of human being fourth one is a smart phone, because its features to make human life more comfort and it generate voluminous data and for processing such data smart phones are not capable due to its limited resources such as battery life, storage capacity and processing capacity. Today users become demanding and expect to execute computational intensive application on their smart phones. For extending capabilities of smart devices we need cloud services, but integrating smart devices with cloud infrastructure is a typical task. In this paper we focus on integrating smart devices with Cloud by offloading computation technique for enhance battery life of smart devices.**

Keywords- **Smart devices, mobile cloud computing, cloud computing.**

I. INTRODUCTION

Cloud computing is the combination of technology such as cluster computing ,Grid Computing. It is also called as ondemand Computing.[1] on demand access to a shared pool of configurable computing resource eg. N/W servers, storage, applications & services.
Cloud Computing defined on the basis of services like Software as a Services(SaaS), Platform as a Services(PaaS) & Infrastructure as a Services.

Fig 1. Cloud Services



SaaS: Software as a Service: Cloud computing popular due to its features, like elasticity, Scalable, pay as you go, multitenant, etc. so in SaaS model Customer need not be installed software, no need of purchasing software, customer can use his own system to run heavy software.
For example. If DTP business man start business & want DTP Software like Microsoft word, MS,influence point for that if he go traditional ,so he first need updated computationable hardware for running this application & need to purchase legal license copy of that software & also have responsibility to upgrade regularly for the security aspects. Means in traditional way customer have entire security of all software as well as data. It is very typical to protect & used from any where of this software for this business, instead of this if this businessman go through Cloud Computing SaaS Service then Customer can access his data from any corner of the word, as well entire responsibility of software is of Cloud service provider(CSP).

For the purpose of accessing Cloud services it need:

- High Speed Internet Connectivity
- Updated Java Script Enable Browser

In Cloud Computing all Services access through internet & using application software called as Web Browser, that's why there is no need of installation of software, as well no need of upgrading old system like p4 etc. In cloud computing customer only answerable for the operational of service i.e. data security & we can say 90% Provider is answerable for entire security of Software.
a PaaS solution should include the following elements:

- A PaaS development studio solution should be browser based.
- An end-to-end PaaS solution should provide a high productivity integrated development environment (IDE) running on the actual target delivery platform so that debugging and test scenarios run in the same environment as production deployment.

A PaaS solution should provide integration with external web services and databases.
- A PaaS solution must provide comprehensive examining of application and user activity, to help developers understand their applications and effect improvements.
- Scalability, reliability, and security should be built into a PaaS solution without requiring additional development, configuration, or other costs.

Enhance Energy Efficiency In Smart Phones

P. R. Nerkar R. R. Papalkar N. S. Band

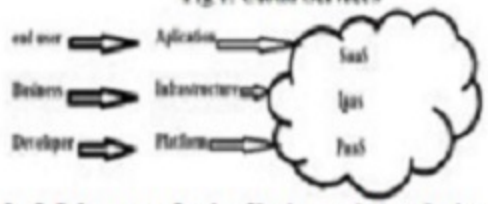
Abstract- **Apart from three basic need of human being fourth one is a smart phone, because its features to make human life more comfort and it generate voluminous data and for processing such data smart phones are not capable due to its limited resources such as battery life, storage capacity and processing capacity. Today users become demanding and expect to execute computational intensive application on their smart phones. For extending capabilities of smart devices we need cloud services, but integrating smart devices with cloud infrastructure is a typical task. In this paper we focus on integrating smart devices with Cloud by offloading computation technique for enhance battery life of smart devices.**

Keywords- **Smart devices, mobile cloud computing, cloud computing.**

I. INTRODUCTION

Cloud computing is the combination of technology such as cluster computing ,Grid Computing. It is also called as ondemand Computing.[1] on demand access to a shared pool of configurable computing resource eg. N/W servers, storage, applications & services.
Cloud Computing defined on the basis of services like Software as a Services(SaaS), Platform as a Services(PaaS) & Infrastructure as a Services.

Fig 1. Cloud Services



SaaS: Software as a Service: Cloud computing popular due to its features, like elasticity, Scalable, pay as you go, multitenant, etc. so in SaaS model Customer need not be installed software, no need of purchasing software, customer can use his own system to run heavy software.
For example. If DTP business man start business & want DTP Software like Microsoft word, MS,influence point for that if he go traditional ,so he first need updated computationable hardware for running this application & need to purchase legal license copy of that software & also have responsibility to upgrade regularly for the security aspects. Means in traditional way customer have entire security of all software as well as data. It is very typical to protect & used from any where of this software for this business, instead of this if this businessman go through Cloud Computing SaaS Service then Customer can access his data from any corner of the word, as well entire responsibility of software is of Cloud service provider(CSP).

For the purpose of accessing Cloud services it need:

- High Speed Internet Connectivity
- Updated Java Script Enable Browser

In Cloud Computing all Services access through internet & using application software called as Web Browser, that's why there is no need of installation of software, as well no need of upgrading old system like p4 etc. In cloud computing customer only answerable for the operational of service i.e. data security & we can say 90% Provider is answerable for entire security of Software.
a PaaS solution should include the following elements:

- A PaaS development studio solution should be browser based.
- An end-to-end PaaS solution should provide a high productivity integrated development environment (IDE) running on the actual target delivery platform so that debugging and test scenarios run in the same environment as production deployment.

A PaaS solution should provide integration with external web services and databases.
- A PaaS solution must provide comprehensive examining of application and user activity, to help developers understand their applications and effect improvements.
- Scalability, reliability, and security should be built into a PaaS solution without requiring additional development, configuration, or other costs.

Privacy issue in mobile cloud computing- Review

Rahul R. Papalkar Nilkhil S. Band Pravin R. Nerkar Gaurav K.Wadnere

Abstract- **Today Most of the People use smart application on their smart devices, but smart devices have limited resources and for avoid such limitation cloud computing play key role, hence integration of smart devices with cloud services is essential. Usermostly use intensive application those generate confidential data & we need to upload these data on cloud, hence privacy &security is the main issue. In this article we investigate the privacy & security of data in Mobile cloud computing.**

Keywords- **Mobile cloud computing, security, Privacy, Cloud services.**

I. INTRODUCTION

Cloud computing play key role in Mobile for extending the capability of mobile device. Cloud computing improve energy efficiency, scalability, Processing & storing capacity. Although mobile cloud computing can offer several important benefits such as extended battery life and higher storage, scalability, and reliability, several key challenges continue to be a major impediment to mobile cloud computing adoption. These challenges include security and privacy, bandwidth and data transfer, data management and synchronization, energy efficiency, and heterogeneity that need to be resolved [1]. Mobile cloud computing (MCC) is a concept that refers to the integration of cloud computing into the mobile environment [2] In this way, MCC allows for a rich user experience, since client applications run remotely in the cloud infrastructure, applications use fewer resources in the user's mobile devices Mobile cloud computing architecture is shown in figure 1.1

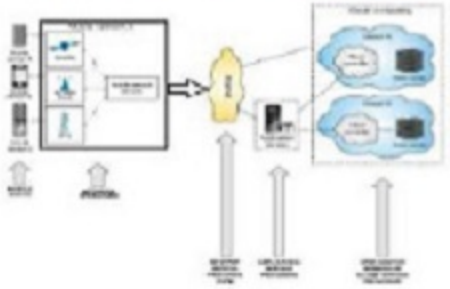


Figure 1.1 MCC Architecture

We investigate multiple research article for finding various challenges in mobile cloud computing for preserving privacy & security & other issue for research in Mobile cloud computing. To study these research architectures, we recognize several evaluation criteria. As well, we provide a holistic view of the current state of art in mobile cloud computing by presenting a quantitative analysis. The rest of paper is organized as follows in section II Literature Survey & compare abstract of different research article, In Section III. We present current state of art in mobile cloud computing specially in privacy concern. In section IV we present objectives & methodology to tackle with this issue. And finally we make some concluding remarks.

II. LITERATURE SURVEY

Mobile cloud computing has been an dynamic research area in recent years and numerous investigation have been published on this topic, conducted one of the first surveys that focus on mobile cloud computing issues. This survey presents an overview about how mobile cloud computing works, discusses some problems and possible solutions related to mobile cloud computing, and outlines the advantages of mobile cloud computing. Furthermore, the survey presents some research issues that needs to be addressed such as absence of standards, access schemes, security, and the need for elastic mobile applications [3].

Background of mobile cloud computing

Mobile computing depends on the ability to use computer resources through mobile devices. Moreover, mobile computing enables the execution of tasks that have been traditionally done by normal desktops. In general, mobile computing is supported by three basic concepts: hardware, Privacy issue in mobile cloud computing-Review

software, and communication [7][8]. Hardware constitutes devices (e.g., tablet PCs and smart phones) that can be utilized by users. Software includes applications designed and developed to execute tasks in a mobile environment and communication which includes networks and protocols that

Privacy issue in mobile cloud computing- Review

Rahul R. Papalkar Nilkhil S. Band Pravin R. Nerkar Gaurav K.Wadnere

Abstract- **Today Most of the People use smart application on their smart devices, but smart devices have limited resources and for avoid such limitation cloud computing play key role, hence integration of smart devices with cloud services is essential. Usermostly use intensive application those generate confidential data & we need to upload these data on cloud, hence privacy &security is the main issue. In this article we investigate the privacy & security of data in Mobile cloud computing.**

Keywords- **Mobile cloud computing, security, Privacy, Cloud services.**

I. INTRODUCTION

Cloud computing play key role in Mobile for extending the capability of mobile device. Cloud computing improve energy efficiency, scalability, Processing & storing capacity. Although mobile cloud computing can offer several important benefits such as extended battery life and higher storage, scalability, and reliability, several key challenges continue to be a major impediment to mobile cloud computing adoption. These challenges include security and privacy, bandwidth and data transfer, data management and synchronization, energy efficiency, and heterogeneity that need to be resolved [1]. Mobile cloud computing (MCC) is a concept that refers to the integration of cloud computing into the mobile environment [2] In this way, MCC allows for a rich user experience, since client applications run remotely in the cloud infrastructure, applications use fewer resources in the user's mobile devices Mobile cloud computing architecture is shown in figure 1.1

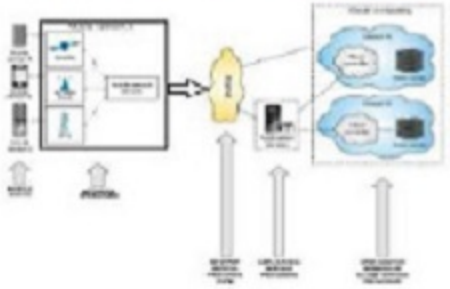


Figure 1.1 MCC Architecture

We investigate multiple research article for finding various challenges in mobile cloud computing for preserving privacy & security & other issue for research in Mobile cloud computing. To study these research architectures, we recognize several evaluation criteria. As well, we provide a holistic view of the current state of art in mobile cloud computing by presenting a quantitative analysis. The rest of paper is organized as follows in section II Literature Survey & compare abstract of different research article, In Section III. We present current state of art in mobile cloud computing specially in privacy concern. In section IV we present objectives & methodology to tackle with this issue. And finally we make some concluding remarks.

II. LITERATURE SURVEY

Mobile cloud computing has been an dynamic research area in recent years and numerous investigation have been published on this topic, conducted one of the first surveys that focus on mobile cloud computing issues. This survey presents an overview about how mobile cloud computing works, discusses some problems and possible solutions related to mobile cloud computing, and outlines the advantages of mobile cloud computing. Furthermore, the survey presents some research issues that needs to be addressed such as absence of standards, access schemes, security, and the need for elastic mobile applications [3].

Background of mobile cloud computing

Mobile computing depends on the ability to use computer resources through mobile devices. Moreover, mobile computing enables the execution of tasks that have been traditionally done by normal desktops. In general, mobile computing is supported by three basic concepts: hardware, Privacy issue in mobile cloud computing-Review

software, and communication [7][8]. Hardware constitutes devices (e.g., tablet PCs and smart phones) that can be utilized by users. Software includes applications designed and developed to execute tasks in a mobile environment and communication which includes networks and protocols that

Privacy issue in mobile cloud computing- Review

Rahul R. Papalkar Nilkhil S. Band Pravin R. Nerkar Gaurav K.Wadnere

Abstract- **Today Most of the People use smart application on their smart devices, but smart devices have limited resources and for avoid such limitation cloud computing play key role, hence integration of smart devices with cloud services is essential. Usermostly use intensive application those generate confidential data & we need to upload these data on cloud, hence privacy &security is the main issue. In this article we investigate the privacy & security of data in Mobile cloud computing.**

Keywords- **Mobile cloud computing, security, Privacy, Cloud services.**

I. INTRODUCTION

Cloud computing play key role in Mobile for extending the capability of mobile device. Cloud computing improve energy efficiency, scalability, Processing & storing capacity. Although mobile cloud computing can offer several important benefits such as extended battery life and higher storage, scalability, and reliability, several key challenges continue to be a major impediment to mobile cloud computing adoption. These challenges include security and privacy, bandwidth and data transfer, data management and synchronization, energy efficiency, and heterogeneity that need to be resolved [1]. Mobile cloud computing (MCC) is a concept that refers to the integration of cloud computing into the mobile environment [2] In this way, MCC allows for a rich user experience, since client applications run remotely in the cloud infrastructure, applications use fewer resources in the user's mobile devices Mobile cloud computing architecture is shown in figure 1.1

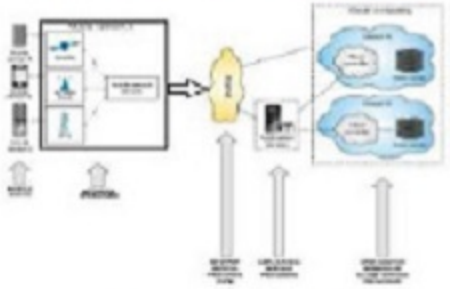


Figure 1.1 MCC Architecture

We investigate multiple research article for finding various challenges in mobile cloud computing for preserving privacy & security & other issue for research in Mobile cloud computing. To study these research architectures, we recognize several evaluation criteria. As well, we provide a holistic view of the current state of art in mobile cloud computing by presenting a quantitative analysis. The rest of paper is organized as follows in section II Literature Survey & compare abstract of different research article, In Section III. We present current state of art in mobile cloud computing specially in privacy concern. In section IV we present objectives & methodology to tackle with this issue. And finally we make some concluding remarks.

II. LITERATURE SURVEY

Mobile cloud computing has been an dynamic research area in recent years and numerous investigation have been published on this topic, conducted one of the first surveys that focus on mobile cloud computing issues. This survey presents an overview about how mobile cloud computing works, discusses some problems and possible solutions related to mobile cloud computing, and outlines the advantages of mobile cloud computing. Furthermore, the survey presents some research issues that needs to be addressed such as absence of standards, access schemes, security, and the need for elastic mobile applications [3].

Background of mobile cloud computing

Mobile computing depends on the ability to use computer resources through mobile devices. Moreover, mobile computing enables the execution of tasks that have been traditionally done by normal desktops. In general, mobile computing is supported by three basic concepts: hardware, Privacy issue in mobile cloud computing-Review

software, and communication [7][8]. Hardware constitutes devices (e.g., tablet PCs and smart phones) that can be utilized by users. Software includes applications designed and developed to execute tasks in a mobile environment and communication which includes networks and protocols that

Role of Artificial Intelligence, Cloud and Internet of Things to Become Smart City Secure and Safe- a Review

Nikhil S. Bond, P. R. Nerkar, R. R. Papalkar, S.P. Thakare

Abstract- As we know urbanization continues to enlarge due to world population. According to recent research, a population is estimated to double by 2050 and with over 40% of people preferring cities for living in search of better opportunities. Keeping up with the technology advancement have become the way forward. With this objective, to raising the quality of life the solution to problems in cities need to be smart to form a smart city. The smart solution created a smart city. However, our prime goal is to promote safety and security in such cities in the future. In this paper we investigate Role of Artificial Intelligence, Cloud and Internet of Things to become smart city secure and safe.
Keywords- Artificial Intelligence, Cloud, Internet of Things ,Smart City, Secure City and Safe City.

I. INTRODUCTION

A. Smart City

As in everything, progress and adaptation require change, many existing urban infrastructures are outdated or simply can't keep up to speed with the advancements in technology and human needs. According to Caragliu, the city becomes smart, when investments in human and social capital and traditional and modern Information and Communication Technology (ICT) fuel sustainable economic growth and a high quality of life, with a wise management of natural resources, through participatory governance. [1]. Mohanty considers Smart City as a place where traditional networks and services are made more flexible, efficient, and sustainable with the use of information, digital and telecommunication technologies, to improve its operations for the benefit of its inhabitants. Smart cities are greener, safer, faster and friendlier [2]. Based on these and more varied sources, we formed our own characteristics of Smart City, to set a base ground for our further research. For us, the Smart City by the integration of technology and natural environment increases the effectiveness of processes in every field of its functioning, in order to achieve sustainable development, safety and health of inhabitants with the aim for increasing the quality of life of citizens, near community and environment [3]. Smart cities also include a clean and sustainable environment and application of a smart solution, the focus begins sustainable and inclusive development. With the ability to harness technology leading to a smart solution.

B. Artificial Intelligence

The term AI was coined in 1970, by John McCarthy., can be defined as the "the science and engineering of making intelligent machine"[4].Artificial Intelligence (AI) is the intelligence of machines and the branch of computer science that aims to create it. AI is study of how to make computers do things which at a moment, people do better. Artificial Intelligence aims to improve machine behavior in tackling such complex tasks. The importance of artificial intelligence is the ability to create a never-ending thought process and collective that could solve our problems. Accomplishing this by thinking of every possible solution. The study into the development of artificial intelligence has long been hindered because of disinterest show by governments and capitalists alike. Despite the many challenges, there have been significant creation in the field like-

- Fraud detection system
- Advanced sensing system
- Drug detection
- Advanced computing and human computer
- Advanced speech recognition software [4].

AI is what makes a smart city. Due to its vast applications, AI has filtered into many general purpose uses, speech and pattern recognition in smart devices have become an everyday use. In today's digital age, every person generates may be terabytes of digital information. As Donald Power notes in one of his articles "Will Smart Cities need AI to flourish? [5].

C. Internet of things

The term Internet of Things was first coined by Kevin Ashton in 1999 in the context of supply chain management [6]. However, in the past decade, the definition has been much more inclusive covering a wide range of applications like health care, utilities, transport, etc. [7]. Although the definition

Role of Artificial Intelligence, Cloud and Internet of Things to Become Smart City Secure and Safe- a Review

Nikhil S. Band, P. R. Nerkar, R. R. Papalkar, S.P. Thakare

Abstract- As we know urbanization continues to enlarge due to world population. According to recent research, a population is estimated to double by 2050 and with over 60% of people preferring cities for living in search of better opportunities. Keeping up with the technology advancement have become the way forward. With this objective, to raising the quality of life the solution to problems in cities need to be smart to form a smart city. The smart solution created a smart city. However, our prime goal is to promote safety and security in such cities in the future. In this paper we investigate Role of Artificial Intelligence, Cloud and Internet of Things to become smart city secure and safe.
Keywords- Artificial Intelligence, Cloud, Internet of Things ,Smart City, Secure City and Safe City.

I. INTRODUCTION

A. Smart City

As in everything, progress and adaptation require change, many existing urban infrastructures are outdated or simply can't keep up to speed with the advancements in technology and human needs. According to Caragliu, the city becomes smart when investments in human and social capital and traditional and modern Information and Communication Technology (ICT) fuel sustainable economic growth and a high quality of life, with a wise management of natural resources, through participatory governance. [1]. Mohanty considers Smart City as a place where traditional networks and services are made more flexible, efficient, and sustainable with the use of information, digital and telecommunication technologies, to improve its operations for the benefit of its inhabitants. Smart cities are greener, safer, faster and friendlier [2]. Based on those and more varied sources, we formed our own characteristics of Smart City, to set a base ground for our further research. For us, the Smart City by the integration of technology and natural environment increases the effectiveness of processes in every field of its functioning, in order to achieve sustainable development, safety and health of inhabitants with the aim for increasing the quality of life of citizens, near community and environment [3]. Smart cities also include a clean and sustainable environment and application of a smart solution, the focus begins sustainable and inclusive development. With the ability to harness technology leading to a smart solution.

B. Artificial Intelligence

The term AI was coined in 1970, by John McCarthy, can be defined as the "the science and engineering of making intelligent machines"[4].Artificial Intelligence (AI) is the intelligence of machines and the branch of computer science that aims to create it. AI is study of how to make computers do things which at a moment, people do better. Artificial Intelligence aims to improve machine behavior in tackling such complex tasks. The importance of artificial intelligence is the ability to create a never-ending thought process and collective that could solve our problems. Accomplishing this by thinking of every possible solution. The study into the development of artificial intelligence has long been hindered because of disinterest show by governments and capitalists alike. Despite the many challenges, there have been significant creation in the field like-

- Fraud detection system
- Advanced sensing system
- Drug detection
- Advanced computing and human computer
- Advanced speech recognition software [4].

AI is what makes a smart city. Due to its vast applications, AI has filtered into many general purpose uses, speech and pattern recognition in smart devices have become an everyday use. In today's digital age, every person generates may be terabytes of digital information. As Donald Power notes in one of his articles "Will Smart Cities need AI to flourish? [5].

C. Internet of things

The term Internet of Things was first coined by Kevin Ashton in 1999 in the context of supply chain management [6]. However, in the past decade, the definition has been much more inclusive covering a wide range of applications like health care, utilities, transport, etc. [7]. Although the definition

Role of Artificial Intelligence, Cloud and Internet of Things to Become Smart City Secure and Safe- a Review

Nikhil S. Band, P. R. Nerkar, R. R. Papalkar, S.P. Thakare

Abstract- As we know urbanization continues to enlarge due to world population. According to recent research, a population is estimated to double by 2050 and with over 60% of people preferring cities for living in search of better opportunities. Keeping up with the technology advancement have become the way forward. With this objective, in raising the quality of life the solution to problems in cities need to be smart to form a smart city. The smart solution created a smart city. However, our prime goal is to generate safety and security in such cities in the future. In this paper we investigate Role of Artificial Intelligence, Cloud and Internet of Things to become smart city secure and safe.

Keywords- Artificial Intelligence, Cloud, Internet of Things ,Smart City, Secure City and Safe City.

I. INTRODUCTION

A. Smart City

As in everything, progress and adaptation require change, many existing urban infrastructures are outdated or simply can't keep up to speed with the advancements in technology and human needs. According to Caragliu, the city becomes smart when investments in human and social capital and traditional and modern Information and Communication Technology (ICT) fuel sustainable economic growth and a high quality of life, with a wise management of natural resources, through participatory governance. [1]. Mohanty considers Smart City as a place where traditional networks and services are made more flexible, efficient, and sustainable with the use of information, digital and telecommunication technologies, to improve its operations for the benefit of its inhabitants. Smart cities are greener, safer, faster and friendlier [2]. Based on these and more varied sources, we formed our own characteristics of Smart City, to set a base ground for our further research. For us, the Smart City by the integration of technology and natural environment increases the effectiveness of processes in every field of its functioning, in order to achieve sustainable development, safety and health of inhabitants with the aim for increasing the quality of life of citizens, near community and environment [3]. Smart cities also include a clean and sustainable environment and application of a smart solution, the focus begins sustainable and inclusive development. With the ability to harness technology leading to a smart solution.

B. Artificial Intelligence

The term AI was coined in 1956, by John McCarthy, can be defined as the "the science and engineering of making intelligent machines"[4].Artificial Intelligence (AI) is the intelligence of machines and the branch of computer science that aims to create it. AI is study of how to make computers do things which at a moment, people do better. Artificial Intelligence aims to improve machine behavior in tackling such complex tasks. The importance of artificial intelligence is the ability to create a never-ending thought process and collective that could solve our problems. Accomplishing this by thinking of every possible solution. The study into the development of artificial intelligence has long been hindered because of disinterest show by governments and capitalists alike. Despite the many challenges, there have been significant creation in the field like-

- Fraud detection system
- Advanced sensing system
- Drug detection
- Advanced computing and human computer
- Advanced speech recognition software [4].

AI is what makes a smart city. Due to its vast applications, AI has filtered into many general purpose uses, speech and pattern recognition in smart devices have become an everyday use. In today's digital age, every person generates may be terabytes of digital information. As Donald Power notes in one of his articles "Will Smart Cities need AI to flourish? [5].

C. Internet of things

The term Internet of Things was first coined by Kevin Ashton in 1999 in the context of supply chain management [6]. However, in the past decade, the definition has been much more inclusive covering a wide range of applications like health care, utilities, transport, etc. [7]. Although the definition

Role of Artificial Intelligence, Cloud and Internet of Things to Become Smart City Secure and Safe- a Review

Nikhil S. Bond, P. R. Nerkar, R. R. Papalkar, S.P. Thakare

Abstract- As we know urbanization continues to enlarge due to world population. According to recent research, a population is estimated to double by 2050 and with over 60% of people preferring cities for living in search of better opportunities. Keeping up with the technology advancement have become the way forward. With this objective, to raising the quality of life the solution to problems in cities need to be smart to form a smart city. The smart solution created a smart city. However, our prime goal is to generate safety and security in such cities in the future. In this paper we investigate Role of Artificial Intelligence, Cloud and Internet of Things to become smart city secure and safe.
Keywords- Artificial Intelligence, Cloud, Internet of Things ,Smart City, Secure City and Safe City.

I. INTRODUCTION

A. Smart City

As in everything, progress and adaptation require change, many existing urban infrastructures are outdated or simply can't keep up to speed with the advancements in technology and human needs. According to Caragliu, the city becomes smart, when investments in human and social capital and traditional and modern Information and Communication Technology (ICT) fuel sustainable economic growth and a high quality of life, with a wise management of natural resources, through participatory governance. [1]. Mohanty considers Smart City as a place where traditional networks and services are made more flexible, efficient, and sustainable with the use of information, digital and telecommunication technologies, to improve its operations for the benefit of its inhabitants. Smart cities are greener, safer, faster and friendlier [2]. Based on these and more varied sources, we formed our own characteristics of Smart City, to set a base ground for our further research. For us, the Smart City by the integration of technology and natural environment increases the effectiveness of processes in every field of its functioning, in order to achieve sustainable development, safety and health of inhabitants with the aim for increasing the quality of life of citizens, new community and environment [3]. Smart cities also include a clean and sustainable environment and application of a smart solution, the focus begins sustainable and inclusive development. With the ability to harness technology leading to a smart solution.

B. Artificial Intelligence

The term AI was coined in 1970, by John McCarthy, can be defined as the "the science and engineering of making intelligent machine"[4].Artificial Intelligence (AI) is the intelligence of machines and the branch of computer science that aims to create it. AI is study of how to make computers do things which at a moment, people do better. Artificial Intelligence aims to improve machine behavior in tackling such complex tasks. The importance of artificial intelligence is the ability to create a never-ending thought process and collective that could solve our problems. Accomplishing this by thinking of every possible solution. The study into the development of artificial intelligence has long been hindered because of disinterest show by governments and capitalists alike. Despite the many challenges, there have been significant creation in the field like-

- Fraud detection system
- Advanced sensing system
- Drug detection
- Advanced computing and human computer
- Advanced speech recognition software [4].

AI is what makes a smart city. Due to its vast applications, AI has filtered into many general purpose uses, speech and pattern recognition in smart devices have become an everyday use. In today's digital age, every person generates may be terabytes of digital information. As Donald Power notes in one of his articles "Will Smart Cities need AI to flourish? [5].

C. Internet of things

The term Internet of Things was first coined by Kevin Ashton in 1999 in the context of supply chain management [6]. However, in the past decade, the definition has been much more inclusive covering a wide range of applications like health care, utilities, transport, etc. [7]. Although the definition

Smart parking stratagem based on IoT

Ms.Saleha Saudagar
Assistant Professor
P.R.M.I.T.&R. Badnera,Amravati.
salehasaudagar@gmail.com

Ms. Radhika P. Fuke
Assistant Professor
P.R.M.I.T.&R. Badnera,Amravati.
radhika.fuke@gmail.com

Ms . Sonika A. Chorey
Assistant Professor
P.R.M.I.T.&R. Badnera,Amravati.
sonikachorey@gmail.com

Ms. Gayatri Jagnade
gajgayatrijagnadee@gmail.com

***Abstract*- In this paper, we initiate a narrative stratagem that increases the efficiency of the current Smart parking stratagem and extend a network architecture based on the Internet-of-Things knowledge. Here the stratagem proposed a work that helps users without human intervention find a free parking room at the slightest asking price based on new performance metrics to calculate the user parking asking price by considering the distance and the total number of free places in each car park. This asking price will be used to offer a solution of finding an obtainable parking room upon a request by the user and a solution of suggesting a new car park if the recent car parking room is full. The flow of data in proposed algorithm helps improve the probability of successful parking and minimizes the user waiting time.**

***Keywords*-Slightest, Stratagem, internet of Things**

I. INTRODUCTION

In the development of traffic management systems, an intelligent parking system was created to reduce the asking price of hiring people and for optimal use of resources for car-park owners. At present, the frequent method of finding a parking room is manual where the driver usually finds a space in the street through coincidence and acquaintance. This practice is time perceptible and can cause useless efforts and may lead to the worst case of failing to find any parking room if the driver is driving in a city with high vehicle compactness. The alternative is to find a predefined car park with high competence. As such car parking may be far away from the user destination, this may not be an optimal solution. In recent years, research has used vehicle-to-vehicle and vehicle-to-infrastructure interaction with the support of various wireless network technologies such as radio frequency identification (RFID), Zigbee, wireless mess network, and the Internet. This paper intended to make available information about in close proximity for parking rooms to the driver and making reservation minutes earlier using supported devices such as smartphones or tablet PCs. in addition, the services use the ID of each vehicle in booking a parking room. However, the present intelligent parking system does not provide an overall optimal solution in finding an available parking space, does not solve the problem of load balancing, does not provide economic gain, and does not plan for vehicle-refusal service.

To solve the above mentioned problems and take benefit of the noteworthy progress in technology, the Internet-of-Things technology has created a revolution in many fields in life as well as in Smart parking stratagem technology. The present architecture propositions and introduces an effective cloud-oriented SPS solution pedestal led on the Internet of Things. Our stratagem constructs each car park as an IoT network, and the data that include the vehicle GPS location, distance between car parking areas and number of free slots in car park areas will be transfered to the information hub. The information hub serves as a cloud server to calculate the asking prices of a parking request, and these asking prices are frequently updated and are accessible any time by the vehicles in the network. The SPS is based on several pioneering strategies and can automatically monitor and manage car parks. moreover, in the proposed stratagem, each car park can function autonomously as a established car park. This stratagem also implements a system prototype with wireless mode in an open-source actual computing platform based on Adriano with RFID technology using a Smartphone leading to the efficient communication and user interface for the control system as well as the vehicles to verify the achievability of the proposed stratagem.

II. RELATED WORK

In studies the authors proposed a new algorithm for treatment planning in real-time parking. At First, they used an algorithm to schedule the online problem of a parking system into an offline problem. Secondly, they set up a mathematical model describing the offline problem as a linear problem. Thirdly, they designed an algorithm to solve this linear problem. At the end they evaluated the proposed algorithm using experimental simulations of the system. The experimental results Shows timely and efficient performance. These papers don't mention the resource reservation mechanism, the mechanism for assessing the resources system and the mechanism to guide vehicles to the parking space and the mechanism for handling situations when the request for service is denied and don't calculate the average waiting time and average total time that each vehicle spends on the system.

CIKITUSI JOURNAL FOR MULTIDISCIPLINARY RESEARCH

An ISO : 7021 - 2008 Certified Journal

ISSN NO: 0975-6876 / web : http://cikitusi.com/ / e-mail : submitcikitusi@gmail.com

Address : # 013 - 157, Katraj-Dehu Road, Pune, Maharastra - 412101

CERTIFICATE OF PUBLICATION

Certificate ID: CJMR/680

This is to certify that the paper entitled

"Smart parking stratagem based on IoT"

Authored by

Sonika A. Chorey

From

P.R.M.I.T.&R. Badnera,Amravati

Has been published in

CJMR JOURNAL, VOLUME 6, ISSUE 4, APRIL - 2019

Dr. K. M. Pandey
Editor-in-Chief
CJMR
www.cikitusi.com

ISO International Organization for Standardization 7021-2008

DOI:10.30899/CJMR

CIKITUSI JOURNAL FOR MULTIDISCIPLINARY RESEARCH

An ISO : 7021 - 2008 Certified Journal

ISSN NO: 0975-6876 (Web : http://cikitusi.com/ / e-mail : submitcikitusi@gmail.com

Address : # 101 - 157, Katraj-Dehu Road, Pune, Maharastra - 412105

CERTIFICATE OF PUBLICATION

Certificate ID: CJMR/680

This is to certify that the paper entitled

"Smart parking strategem based on IoT"

Authored by

Radhika P. Fuke

From

P.R.M.I.T.&R. Badnera,Amravati

Has been published in

CJMR JOURNAL, VOLUME 6, ISSUE 4, APRIL - 2019

Dr. K. M. Pandey
Editor-in-Chief
CMR
www.cikitusi.com

ISO International Organization for Standardization 7021-2008

Study of Tribological analysis of PTFE and its filler using Taguchi Approach

A D Diwate[1] Dr S B Thakre[2]

[1]Assistant Professor, Mechanical Department, TSSM's Bhivarabai Sawant College of Engineering and Research Narhe, Pune, India,
[2]Professor, Mechanical Department, Prof. Ram Meghe Institute of Technology and Research, Badnera, Amravati. India
[1]addiwate@gmail.com, [2]sbthakre2007@gmail.com

Abstract. Polytetrafluroethylene (PTFE) is self-lubricating tough, waxy, non-flammable synthetic resin produced by the polymerization of tetrafluroethylene. Pure PTFE is widely used as bearing material and many such applications which is subjected to high wear rate, can be reduced by adding suitable fillers. PTFE exhibits poor wear and abrasion resistance, leading to early failure and leakage problem in the machine parts. This paper present the experiment l analysis of three composites (PTFE + 35% Carbon, PTFE + 35% Glass, PTFE + 35% Bronze) showing how properties of PTFE can be improved by the addition of filler content. The effects of varying load, sliding distance, sliding velocity and filler content on wear in PTFE are studied. The results of experiments are proved that the wear is strongly influenced by the composition of filler content.

Keywords: PTFE composite, Pin-On-Disc Apparatus, Orthogonal Array, Minitab.

1 Introduction

Polytetrafluroethylene (PTFE) because of its properties like resistance to chemical hit, high melting point and low frictional coefficient, it is a popular polymer solid lubricant. It is used in many applications as bearing, seals, gaskets, vessel linings, pump interiors, washers, rings, spacers, dip tubes and well-drilling components. By the addition of suitable fillers and because of the relative softness the load carrying capacity and its resistance to wear of PTFE might be enhanced. It available in white or grey color[1].

Researchers were tried several fillers in combination with this plastic, including disulphide, carbon, bronze, fiber glass, graphite, silicon, molybdenum, titanium dioxide, silver, copper, tungsten and molybdenum [2]. Polytetrafluroethylene (PTFE) is an ideal bearing and polymer based engineering material having high rate of wear when rub against a hard material but coefficient of friction is low. H. Unal et al.[2], study and analyze the effect of set speed and load on the friction and wear behaviour of pure Polytetrafluroethylene (PTFE), bronze and carbon filled PTFE polymers, glass fiber reinforced. Adding glass fiber and bronze in PTFE, hard, waxy non-flammable synthetic resin produced by the polymerization of tetrafluroethylene Known as Teflon, Polyflon, Fluon, and Hostaflon.

Deepak Bagale et al. [3] study the influence of load, distance of sliding and sliding velocity on friction and wear of PTFE and PTFE composites. After adding carbon filler and bronze to the plain PTFE the results show the decreases wear rate considerably and coefficient of friction increases slightly. For 40% carbon filled PTFE the wear resistance was high than for 40% bronze filled PTFE

International Journal on Recent Technologies in Mechanical and Electrical Engineering (IJRMEE)
Volume: 5 Issue: 5

ISSN: 2349-7947
18 – 24

Productivity Improvement Through Ergonomics Approach

Ms. Aarti P. Umarkar
Prof. Ram Meghe Institute of Technology & Research
Badnera, Amravati, India.
aartitatte@ymail.com

Mr. Atul B. Tatte*(Lecturer)*
Government Polytechnic, Arvi
Wardha, India
atultatte@yahoo.co.in

Dr. H M. Deshmukh
Associate Professor
Deptt of ME, Prof. Ram Meghe Institute of Technology and Research,
Badnera Amravati Maharashtra.

Abstract—Stamping of company logo, name and specification of grinding wheel is laborious work and also lower down productivity by some percentage, there is scope of mechanization of the task to enhance the resource utilization in plant, reduce cycle time, decrease cost per production. With reduction in labor the employee moral will grow leads to enhancement of productivity and so the profit to the organization.
The productivity of the process is improve by 1. Mechanization 2. Standardization 3. Workstudy In mechanization of the process a stamping machine is suggested which when used will increase productivity and reduce energy expenditure of labour. Standardization part included of various changes regarding workplace environment and working procedure. workstudy part comprised of the suggestion about effective and efficient method of doing work by identifying the most ineffective one.
The process can be upgraded by any of the recommended changes in last chapter of the thesis and take the advantage of productivity improvement and improve employee morale.

*****

I. INTRODUCTION

The problem which we are trying to solve is to make stamp on materials or work pieces very maturely. In many industries the spray painting work is done, but there is a lot of wastage of paints and lot of workers are required in the industries to perform that operation. Again labour intensive work causing a regular problems based on fatigue and muscular damage. This traditional procedure are ergonomically very back dropped. So, the study explained below is endeavour to innovative approach to find solution to this existing problem. Which will reduce time for stamping, save energy and human effort, make work safe and lessen efforts to great limit

II. RECOMMENDATION FOR ACTION

In many cases, the person who solves the problem is not the one who will either use the recommended solution or give final approval for its adoption. Therefore, after the preferred solution has been found, it must be communicated to other persons. The most common form of communication is the written or oral report. In some cases, a formal and carefully prepared presentation is needed, including the use of charts, diagrams, photographs, three-dimensional models, or working models.

In any event, the presentation should be made in a logical and strait forward manner. It should be easy to follow and to understand. The source of all facts should be indicated, and any assumptions should be clearly stated. A concise written summary should be a part of every report. In the industrial situation, the complete cycle might include a follow-up to ensure that the proposed solution has actually been put into effect. Then an audit or a check from time to time might be made to determine what difficulties were being encountered and to evaluate the over-all results of the installation. It is desirable to know whether the actual operating method is producing the results claimed for it in the proposal.

To continue further, a re-evaluation or restudy of the method might be made with the purpose of finding further possibilities for improvement, and so the problem-solving cycle would be repeated. In most business and industrial operations there is no final solution to a problem. A given solution may be put into effect and used until a better one can be found.

List of ideas to improve productivity in stamping shop:

1. Workstudy
2. Mechanization
3. Standardization

WORK ELEMENT

The Pie chart above shows the work elements of traditional process of stamping in which findings are shown with average percentage of cycle time as made with ten consecutive observations. While though the Stamping machine is comprised of only two elements i.e. loading and unloading and whole process is continuous. The complete cycle operated on machine in 8.958 sec which is much lesser and required human for feeding and stacking arrangement only.

International Journal of Interdisciplinary Innovative Research & Development (IJIIRD)
ISSN: 2456-236X
Vol. 02 Issue 02 | 2018

Review of Design,Analysis of Four Wheeler Alloy Material Rim using FEA Method under Cornering Fatigue Test

Rahul B. Chopade[1], Prof Ajitabh Pateriya[2], *Dr.* A. D. *Shirbhate*[3]

[1] *PG Student, Mechanical Engineering Department,V.B.K.C.O.E.Malkapur,M.S. India*
[2] *Associate Professor, Mechanical Engineering Department, V.B.K.C.O.E.Malkapur,M.S. India*
[3] *Associate Professor, Mechanical Engineering Department, PRMITR, Badnera,M.S. India*

ABSTRACT

Automotive wheel, as a critical component in the vehicle, has to meet the strict requirements of driving safety. Traditionally, the new designed wheel is tested in the laboratory for its life through an accelerated fatigue test before the actual production starts. However, a physical prototype test time lasts at least 7 days and an average design period is 6 months or more depending on the requirement, so the time to test and inspect wheel during development is very consuming. At the same time, because steel wheel is designed for variation in style and has very complex shape, it is difficult to assess fatigue life by using analytical methods. In the last decade, many scholars and wheel manufacturers have been taking increasing attention to numerical analysis of wheel fatigue life.

Development of finite element analysis model of Wheel Rim to get a better understanding of the influences of stress condition on the mechanisms of the crack initiation and propagation in steel wheel. A Multi-objective analysis concept is carried out to optimize the weight of the Rim. Also, to determine whether the moment is applied at mounting holes or at Hub also. Work is carried out in steps by step manner. We tried to minimize the number of Experiments and levels of Experiments.

Keyword : - FEA, CAD, DFCT,CFT

1. INTRODUCTION

In auto industries, wheels are considered as most critical components as it play a vital role in human safety. From past decades, wheel producers are using new materials and manufacturing technologies in order to improve the wheel's aesthetic appearance and design. Steel wheels are widely used for wheels due to their excellent properties, such as lightweight, good forge ability, high wear resistance and mechanical strength. Ensuring the reliability and safety of wheel is very important. [1]

Analysis of the rims consists of numerically analyzing the stress levels that rims experience during operating conditions. These stress levels will then serve as input parameters for a fatigue analysis of the rims to evaluate their respective fatigue life. Additionally, the load bearing capacity of the bolt pattern will be evaluated for conditions of severe loading. The finite element (FE) method is implemented for all rim analysis. The reliability of FEA approach is based on their previous experience in fatigue analysis studies .The magnitude of the static load and pressure contributes to increasing the stresses on the rim components. [2]

The wheel with tires takes full load, provides the cushioning effect to vehicle by absorbing vibration of the road surface unevenness and also assist in steering control. The alloy wheel has better aesthetic looks and easy of manufacturing than disc and wire wheel. The main requirements of an automobile wheel are;

International Journal of Interdisciplinary Innovative Research & Development (IJIIRD)
ISSN: 2456-236X
Vol. 02 Issue 02 | 2018

Design and Analysis of Four Wheeler Alloy Material Rim using FEA Method under Cornering Fatigue Test

Rahul B. Chopade[1], *Dr.* A. D. Shirbhate [2], Prof Ajitabh Pateriya[3]

[1] *PG Student, Mechanical Engineering Department,V.B.K.C.O.E.Malkapur,M.S. India*
[2] *Associate Professor, Mechanical Engineering Department, PRMITR, Badnera,M.S. India*
[3] *Assistant Professor, Mechanical Engineering Department,V.B.K.C.O.E.Malkapur,M.S. India*

ABSTRACT

Development of finite element analysis model of Wheel Rim to get a better understanding of the influences of stress condition on the mechanisms of the crack initiation and propagation in steel wheel. A Multi-objective analysis concept is carried out to optimize the weight of the Rim. Also, to determine whether the moment is applied at mounting holes or at Hub also. Work is carried out in steps by step manner. We tried to minimize the number of Experiments and levels of Experiments. All experiments were considered at First Test, then proper Finite Element Analysis is done. Then Experimentation for the same test is done and compared. In this way a filter is applied to extensive Experimentation. For the safe combinations we carried DCFT with FEA as well as Experimentation.

Keyword : - FEA, CAD, DFCT,CFT

1. INTRODUCTION

In auto industries, wheels are considered as most critical components as it play a vital role in human safety. From past decades, wheel producers are using new materials and manufacturing technologies in order to improve the wheel's aesthetic appearance and design. Steel wheels are widely used for wheels due to their excellent properties, such as lightweight, good forge ability, high wear resistance and mechanical strength. Ensuring the reliability and safety of wheel is very important. [1]

Analysis of the rims consists of numerically analyzing the stress levels that rims experience during operating conditions. These stress levels will then serve as input parameters for a fatigue analysis of the rims to evaluate their respective fatigue life. Additionally, the load bearing capacity of the bolt pattern will be evaluated for conditions of severe loading. The finite element (FE) method is implemented for all rim analysis. The reliability of FEA approach is based on their previous experience in fatigue analysis studies .The magnitude of the static load and pressure contributes to increasing the stresses on the rim components. [2]

The wheel with tires takes full load, provides the cushioning effect to vehicle by absorbing vibration of the road surface unevenness and also assist in steering control. The alloy wheel has better aesthetic looks and easy of manufacturing than disc and wire wheel. The main requirements of an automobile wheel are;

i. It should be as light as possible so that unsprung weight is least
ii. It should be strong enough to perform the above functions.

International Journal of Engineering Technology Science and Research
IJETSR
www.ijetsr.com
ISSN 2394 – 3386
Volume 5, Issue 4
April 2018

Solar Powered Stirling Engine

Mohit P. Vyas, Raj S. Khatri, Prof. S. G. Bahaley
PRMIT&R, Badnera

ABSTRACT

This Research work was set out to with an objective to explore the practicality of power production from a Hybrid Stirling engine. This would include research, design and fabrication. Hybrid here meant that the engine model would run on different sources of sufficient external heat to generate the desired motion. This was done to supplement the government's efforts to provide affordable electricity to rural and marginalized parts of India.

With this end in sight, a thorough and comprehensive research was carried out on the working and configurations of Stirling engines. Research sources included the internet, engineering books on thermodynamics and engine machines as well consulting the project supervisor.

From the theoretical analysis, the Stirling engine designed had and efficiency of about 7.7%. This was pointed out that there were energy losses, which were attributed to friction and the engine having some out-of-balance masses. To rectify this, it was proposed that a kinematic assessment of the engine be carried out to eliminate any out of balance masses.

Upon completion of the project, it was recommended that more investment in the Stirling engine project needs to be made. Emerging economies such as India have turned to use of Stirling engines to provide electricity to the rural poor. In addition, developed economies such as the United States are taking advantage of this technology to generate electricity in 'solar farms' using large solar powered Stirling engines.

Keywords

Solar, Engine, Stirling, Hybrid, Efficiency

INTRODUCTION

This project was set out to explore the practicality of power production from a Hybrid Stirling engine. This would include research, design and fabrication.

"Hybrid" in this sense means that, unlike conventional Stirling engines that are designed with one mode of heating in mind, our engine model would run on different sources of sufficient external heat to generate the desired motion.In carrying out this project, we were focused on creating an engine model that could utilize heat from biomass, as well as take a "green turn" and take advantage of solar heat by use of solar concentrators.

Our target beneficiaries would be Indians living in the marginalized areas with little hope of getting access to electricity. Seeing as these people use biomass for their ordinary energy needs, the success of this project would afford these people a chance to have sustainable subsistent power in their homes.

A Stirling engine is a heat engine operating by cyclic compression and expansion of air at different temperature levels such that there is a net conversion of heat energy to mechanical work.Like the steam engine, the Stirling engine is traditionally classified as an external combustion engine, as all heat transfers to and from the working fluid take place through the engine wall. This contrasts with an internal combustion engine where heat input is by combustion of a fuel within the body of the working fluid. Unlike a steam engine's (or more generally a Rankine cycle engine's) usage of a working fluid in both of its liquid and gaseous phases, the Stirling engine encloses a fixed quantity of air.[1]

As is the case with other heat engines, the general cycle consists of compressing cool gas, heating the gas, expanding the hot gas, and finally cooling the gas before repeating the cycle. The efficiency of the process is narrowly restricted by the efficiency of the Carnot cycle, which depends on the temperature between the hot and cold reservoir.

IRA-International Journal of Technology & Engineering
ISSN 2455-4480; Vol.10, Issue 03 (March, 2018)
Pg. no. 23-40.
Institute of Research Advances
https://research-advances.org/index.php/IRAJTE

Design and Development of Plastic Filament Extruder for 3D Printing

Mamta H. Wankhade[1], Satish G. Bahaley[2]
[1]PG Student, Mechanical Engineering Department, PRMIT&R, Badnera, Amravati, India.
[2]Professor, Mechanical Engineering Department, PRMIT&R, Badnera, Amravati, India.

Type of Review: Peer Reviewed.
DOI: http://dx.doi.org/10.21013/jte.v10.n3.p1

How to cite this paper:
Wankhade, M.H., Bahaley, S.G. (2018). Design and Development of Plastic Filament Extruder for 3D Printing. *IRA International Journal of Technology & Engineering* (ISSN 2455-4480), 10(3), 23-40. doi:http://dx.doi.org/10.21013/jte.v10.n3.p1

Design of Bicycle Handle using Ergonomic Aspects A Review

[1]Pradeep M. Ingole, [2]Dr. Nilesh S. Pohokar, [3]Dr. Atul B. Borade
[1]Associate Professor,[2]Assistant Professor,[3]Professor
[1]Department of Mechanical Engineering,
[1,2]Prof. Ram Meghe Institute of Technology and Research Badnera, Amravati, Maharashtra,India
[3]Jawarharlal Darda Insitite of Engineering and Technology, Yevatmal, Maharashtra, India

Abstract— **The name is also called a bike of rural people. Bicycles have evolved significantly over the past decades in pace with technological advancement. However the comfort of cyclists has not much attempted in many designs. Although ample research has been reported on comfort for other means of transportation, cyclist's perception of comfort has received scant attention in the scientific literature. This paper discusses the ergonomic aspects that can be incorporated in the design of a bicycle handle. The first step is to determine which factors contribute to comfort when riding a bicycle which results in human performance and fatigue. It has been found out by means of a survey with enthusiast cyclists that comfort is influenced by factors related to the cyclist (driver position, handle adjustments, body parts). This paper classified into three parts, in the first part the ergonomic aspects of bicycle handle, in second the factors responsible for fatigue and in the third analysis for the comfort positions. The most of the researchers presents there work in change seating position whereas this work focuses on the comfort position of bicycle handles.**

IndexTerms— **Bicycle, Ergonomic study, comfort positions, Fatique.**

I. Introduction

A bicycle or bike is a vehicle composed of two wheels held in a frame one behind the other, propelled by pedals and steered with handlebars attached to the front wheel. Karl von Drais of Paris invented the first bicycle in 1817[56,57]. The Draisienne was a steerable bicycle[30]. It was almost entirely made of wood, had no pedals, and was propelled down the street by riders who would push their feet against the ground. The record speed was 15 km/h. [1] Ergonomics is the investigation about humans and work, especially when optimizing the physical contact between humans and engine [100].

Even in this 21st century, the century of modern machines and fast moving automobiles, the cycle has its own identity and importance[54]. Apart from the fact that it is eco-friendly and economical, helping the riders to keep fit and healthy[89]. There have been several changes in the bicycle design since its inception, many attempts were made over the years[78]. Today various designs and styles of bicycles have been introduced like sport/road bicycles, mountain bicycles, BMX (Bicycle Motocross) cycles etc. Throughout the world bicycles are used by school students, University students to go around in the University campus, proletariats to go to work and old aged people for physiotherapy[55]. It is important to keep in mind the widespread use of bicycles necessitates the design should match the anthropometric data to be ergonomic[84]. It is also important to keep a check on the production costs of the bicycle because it is generally considered an economic product[4]. It is crucial to ensure a good industrial design procedure for the bicycle while making substantial ergonomic changes in the conceptual design[60]. An effort has been made to identify the possible inconvenience caused to the rider and propose a design to solve the problems reducing the inconvenience of the bicycle riders [99]. A concise overview of relevant studies is presented here[73]. According to three distinct areas contribute to comfort when riding a bicycle i.e.; environmental, mechanical and biomechanical factors, and physiological factors [96].

A bicycle is a pedal driven , human-powered vechicle with two wheels attached to a frame, one behind the other. Bicycle is a mode of transportation. It is a good exercise machine[74]. It can move around or get good exercise. Complety it is a good source of excercise. Comfort when riding a bicycle can be identified through a number of key elements such as seats, handles, paddle and bicycle frame design[9,10]. More specifically, the goal is to look at the notion of dynamic comfort[55]. Bicycle is a popular and economical mode of human powered transportation[52]. This also enables it to be used as effective equipment towards fitness and rehabilitation[11]. However, bicycling demands one to bend forward while pedaling; this prolonged forward flexion posture may increase the risk of chronic injuries such as musculoskeletal disorders (MSD), compression neuropathies, and so on[13]. Hence, proper bicycle design is necessary to reduce MSD and enhance comfort for rider[79]. Cyclists adopt a round-back or flat-back posture to reach the handlebars by flexing their pelvis and spine. Cyclists who maintain a prolonged awkward posture experience pronounced stress on their shoulder, neck and low back pain[14].

The term 'comfort' might be used to describe a feeling of contentment, a sense of cosines or a state of physical and mental well-being. In engineering term, comfort is generally presumed to be a definable human condition or attribute, with each new innovation bringing society closer to the achievement of ideal indoor conditions[61,76]. Comfort is a concept of rather subjective nature but it can generally be defined as the absence of pain and any other similar nuisance and is usually associated

International Open Access Journal
I No: 2456 - 6470 | Volume - 3 | Issue – 1 | Nov – Dec 2018

Design and Analysis of Liquid Cooled Cold Plates using CAD Modeling

Pratik N. Raut[1], Prof. Mahendra P. Nawathe[2]
[1]PG Student, [2]Associate Professor
Department of Mechanical Engineering,
Prof. Ram Meghe Institute of Engineering & Technology, Badnera, Maharashtra, India

ABSTRACT
For cooling electronic systems new techniques are invented. Cold plate is liquid cooling system used in electronic components. In present work, the modification is done in design of cold plate to reduce its cost and also to increase the heat dissipation rate. Water at various flow rates is supplied for given power inputs and heat removing capacity of each flow rate at that particular heat load is calculated. It is found that water is best working fluid for all flow rates. Methanol and acetone are best suited for high mass flow rates. The cold plate is used to provide a "cold wall" to which individual electronic components are mounted. The design and performance evaluation of a cold plate follows a prescribed procedure that depends on the heat loading and whether the heat loading is on one or two sides of the cold plate. Due to transmission of applied current and voltage sometimes the temperature of the circuit plate goes increasing. This temperature limits the electronic operation. Thus it is necessary to control such temperature, in order to maintain speed of electronic devices.

KEYWORDS: *Liquid Cooling, Cold Plates, Temperature, Heat Transfer, Electronic Application*

1. INTRODUCTION

In heavy electronic equipped industries, high temperatures are attained in working conditions. The safe temperature limit for the electronic equipment's 90°C. This raise in temperature will take an adverse effect on the equipment's and sometimes fails at these conditions. This is due to the electronic equipment's life time will be reduced. So the equipment maintain safe temperature condition which is below 90°C, maintain the desired condition liquid cooling is provide effectively. Liquid cooling is a convective heat transfer process.

The cold plates are classified as follows:
1. Formed Tube Cold Plate (FTCP)
2. Deep Drilled Cold Plate (DDCP)
3. Machined channel Cold Plate (MCCP)

Form tube liquid cold plates ensure minimum thermal resistance between the device and the cold plate by placing the coolant tube in direct contact with the device base plate. In this design, copper plate is generally used, although aluminum is sometimes employed in low power applications. In Deep drilled cold plate the heat flux and power dissipation increases, the contact resistance of the plate and the tube wall become unacceptably high. In this design, deep holes are drilled in the plane of the substrate plate. In Machined channel cooling plate, the heat flux increase, it becomes necessary to improve the thermal performance of the channels. In this design, channels are machine-cut into the base plate and a cover is soldered in place to form the flow passages. In the literature thermal analysis of form tube, machined channel and Deep drill cold plates at different working environment has been done. This shows there is a lack of study in the behavior of three different cold plates at same working environment.

In this work the Optimization is achieved by comparing the thermal characteristics of three types of cold plates at same working environment and proposed the best method that can be adopted in different industrial equipment for safe conditions. The Finite Element Analysis and experimental work has been carried out to validate the results. The

In heavy electronic equipped industries, high temperatures are attained in working conditions. The safe temperature limit for the electronic equipment's 90°C. This raise in temperature will take an adverse

In this work the Optimization is achieved by comparing the thermal characteristics of three types of cold plates at same working environment and proposed the best method that can be adopted in different industrial equipment for safe conditions.

International Open Access Journal
I No: 2456 - 6470 | Volume - 3 | Issue – 1 | Nov – Dec 2018

Design and Analysis of Liquid Cooled Cold Plates using CAD Modeling

Pratik N. Raut[1], Prof. Mahendra P. Nawathe[2]
[1]PG Student, [2]Associate Professor
Department of Mechanical Engineering,
Prof. Ram Meghe Institute of Engineering & Technology, Badnera, Maharashtra, India

ABSTRACT
For cooling electronic systems new techniques are invented. Cold plate is liquid cooling system used in electronic components. In present work, the modification is done in design of cold plate to reduce its cost and also to increase the heat dissipation rate. Water at various flow rates is supplied for given power inputs and heat removing capacity of each flow rate at that particular heat load is calculated. It is found that water is best working fluid for all flow rates. Methanol and acetone are best suited for high mass flow rates. The cold plate is used to provide a "cold wall" to which individual electronic components are mounted. The design and performance evaluation of a cold plate follows a prescribed procedure that depends on the heat loading and whether the heat loading is on one or two sides of the cold plate. Due to transmission of applied current and voltage sometimes the temperature of the circuit plate goes increasing. This temperature limits the electronic operation. Thus it is necessary to control such temperature, in order to maintain speed of electronic devices.

KEYWORDS: *Liquid Cooling, Cold Plates, Temperature, Heat Transfer, Electronic Application*

1. INTRODUCTION

In heavy electronic equipped industries, high temperatures are attained in working conditions. The safe temperature limit for the electronic equipment's 90°C. This raise in temperature will take an adverse effect on the equipment's and sometimes fails at these conditions. This is due to the electronic equipment's life time will be reduced. So the equipment maintain safe temperature condition which is below 90°C, maintain the desired condition liquid cooling is provide effectively. Liquid cooling is a convective heat transfer process.

The cold plates are classified as follows:
1. Formed Tube Cold Plate (FTCP)
2. Deep Drilled Cold Plate (DDCP)
3. Machined channel Cold Plate (MCCP)

Form tube liquid cold plates ensure minimum thermal resistance between the device and the cold plate by placing the coolant tube in direct contact with the device base plate. In this design, copper plate is generally used, although aluminum is sometimes employed in low power applications. In Deep drilled cold plate the heat flux and power dissipation increases, the contact resistance of the plate and the tube wall become unacceptably high. In this design, deep holes are drilled in the plane of the substrate plate. In Machined channel cooling plate, the heat flux increase, it becomes necessary to improve the thermal performance of the channels. In this design, channels are machine-cut into the base plate and a cover is soldered in place to form the flow passages. In the literature thermal analysis of form tube, machined channel and Deep drill cold plates at different working environment has been done. This shows there is a lack of study in the behavior of three different cold plates at same working environment.

In this work the Optimization is achieved by comparing the thermal characteristics of three types of cold plates at same working environment and proposed the best method that can be adopted in different industrial equipment for safe conditions. The Finite Element Analysis and experimental work has been carried out to validate the results. The

In heavy electronic equipped industries, high temperatures are attained in working conditions. The safe temperature limit for the electronic equipment's 90°C. This raise in temperature will take an adverse effect on the equipment's and sometimes fails at

In this work the Optimization is achieved by comparing the thermal characteristics of three types of cold plates at same working environment and proposed the best method that can be adopted in different industrial equipment for safe conditions.

International Journal of Science and Research (IJSR)
ISSN: 2319-7064
ResearchGate Impact Factor (2018): 0.28 | SJIF (2018): 7.426

Second Law Analysis of Diesel Engine by Using Different Ignition Delay Models

A. P. Thakare

Mechanical Engineering Department, Prof. Ram Meghe Institute of Technology & Research, Badnera-Amravati, India

Abstract: ***A mathematical model is developed for comparing different ignition delay models for compression ignition engine fuelled with the diesel under different operating load. The model developed is single zone zero dimensional model. The different ignition delay models are used to compare the different. Once the heat release rate is modelled the pressure and temperature are predicted for every crank position. The diesel engine is considered as closed system for thermodynamics analysis. The cylinder gases are assumed as ideal gas the different developed ignition delay model is validated against the data obtained by experimentation at laboratory. This study again elaborated how properties of cylinder charge gases varying with the crank angle position. By performing the experimentation on diesel engine, experimental results have been compared with models given by Arrhenious, Wolfer, Watson and Hardenberg. It is found that experimental results are in good agreement with Arrhenious model. Heat transfer to the cylinder wall from cylinder gas has taken into account to find the gross heat release rate. Heat transfer coefficient correlation given by Hohenberg has been used to calculate convective heat transfer. Radiative heat transfer has been neglected. For predictive analysis two functions have been used, one for premixed part and Wiebe function for diffusion part. Different ignition delay correlation to predict start of combustion has been used, i. e. Watson, Wolfer, Arrehenius and Hardenberg and Hase. Simulated curve for ROHR has been tuned with experimental curve for various load conditions to find out the shape parameters of the functions. Correlation for these shape parameters are modified with adjusting coefficients, using the least square curve fitting method. The properties of in-cylinder gas have been calculated by various polynomial equations which are the main function of temperature. The ignition delay correlations are compared.***

Keywords: Ignition Delay Model, zero dimensional model, compression ignition engine, thermodynamics analysis, etc

1. Introduction

Investigations and reports that have used the second law of thermodynamics to analyze the combustion process in internal combustion engines have been published for more than 40 years. Representative results are presented for both compression-ignition and spark-ignition engines to illustrate the type of information obtained by use of second law analysis and instantaneous values for the engine availability or exergy and the overall values for energy and availability are described. A brief description of most of these methods is provided in this work. The use of second law analysis is not necessarily intended for general performance computations but for understanding the details of the overall thermodynamics of engine operations. The second law of thermodynamics is a powerful statement of related physical observations that has a wide range of implications with respect to engineering design and operation of thermal systems. The second law can be used to determine the direction of process, establish the condition of equilibrium, to specify the maximum possible performance of thermal systems and identify those aspects of processes that are significant to overall performance. Related to the analysis based on the second law of thermodynamics is the concept of availability or exergy.

Availability or energy is a thermodynamic property of a system and its surroundings and is a measure of the maximum useful work that the given system may obtain as the system is allowed to reversible transition to a thermodynamic state which is in equilibrium with its environment. A very important aspect of availability or exergy is the fact that a portion of a given amount of energy is available to produce useful work, while the remaining portion of the energy is unavailable for producing useful work. During the combustion process, thermal, mechanical and chemical processes are very important for availability analysis. An example of the thermal aspect of availability analysis is an ideal case where the system temperature is above the environmental temperature, and the availability from the system could be converted to work until the system temperature, equaled the environmental temperature while the remaining energy is an unavailable part of the energy. The mechanical aspect of availability analysis is a system which is at pressure above the environmental pressure. By utilizing an ideal expansion device, the energy of the system could be converted to work until the system pressure equaled the environmental pressure. A third aspect of availability analysis is a chemical aspect, which considers the potential to complete work by exploiting the concentration differences of the various species relative to the related concentrations in the environment. The consideration of the species concentration component of availability is often neglected due to the practical difficulties of implementing such a system and the relatively small amounts of work produced. Availability or exergy is not a conserved property and can be destroyed by irreversible processes such as heat transfer through a finite temperature difference, combustion, friction and mixing processes. The majority of different reports and studies have investigated the influence of heat transfer, combustion, friction and mixing processes on availability destruction suggesting different options to reduce energy degradation and increase portion of energy available for useful work. [2]

To interpret the second law analysis results, the desired output is brake work and increases in this quantity (for a given fuel flow) represent improved performance. All other availability terms represent losses or undesirable transfers from the system; decreasing these terms constitutes an improvement. These undesirable available energy transfer and destruction terms fall into five categories: (1) heat

REVIEW OF RESEARCH
IMPACT FACTOR : 5.7631(UIF) UGC APPROVED JOURNAL NO. 48514 ISSN: 2249-894X
VOLUME - 7 | ISSUE - 12 | SEPTEMBER - 2018

INTERACTING DARK FLUIDS IN LRS BIANCHI TYPE-V UNIVERSE

V. G. Mete[1], P. B. Murade[2], A. S. Bansod[3] and V.M.Ingle[4]
[1,4]Department of Mathematics, R.D.I.K & K.D. College, Badnera - Amravati, INDIA.
[2]Department of Applied Science, PRMIT&R, Amravati , INDIA.
[3]Department of Applied Science, V.Y.W.S. Polytechnic, Badnera , INDIA.

ABSTRACT:

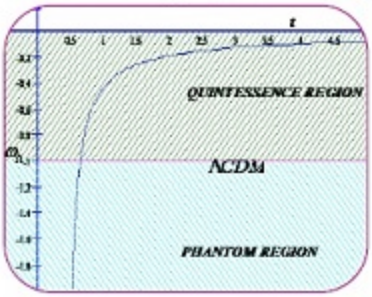
This paper deals with the study of interacting holographic dark energy (DE) and cold dark matter (CDM) in Locally Rotationally Symmetric (LRS)Bianchi type-V. Thesolutions have been obtained for Einstein's field equations. Also,the behaviors of the obtained solutions have been discussed.

KEYWORDS: *LRSBianchi types-V space-time;statefinder parameters;interacting dark fluids.*

1. INTRODUCTION

The universe is expanding in an accelerating manner indicated by recent observations of SNeIa (Type Ia supernovae) [1, 2]. Many observations of CMB (cosmic microwave background) [3, 4]in coherence with LSS (Large Scale Structure) [5, 6] denote that the universe is spatially flat. An exotic component is known as 'Dark energy' (DE) having huge negative pressure dominated the universe. Analysis of cosmological observations under the study of Wilkinson Microwave Anisotropy Probe (WMAP)[7-10] state that $\frac{2}{3}^{rd}$ ofthe total energy of the universe is occupied by dark energy whereas remaining $\frac{1}{3}^{rd}$ is taken up by dark matter (DM) and baryonic matter(ordinary matter). The term 'Dark Energy' is specially used for the unknown form of energy which is not detected directly and do not cluster as other ordinary matter does. This observation can be explained by assuming that at large scale the Einstein gravity model of general relativity (GR) break down and a more general action describes the gravitational field. The simplest component of DE which is supported by current observational data is the cosmological constant (Λ) having equation of state $\omega = -1$. For the satisfaction of the current value of DE, it should be fine-tuned [9-11].

In recent years many dark energy models have been studied including quintessence scalar field models [12, 13], tachyon field [14, 15], K-essence [16-18], phantomfield [19-21], Chaplygin gas [22, 23], Quinton[24] andso on [25-27]. Various DE cosmologies (isotropic) having early deceleration and delayed acceleration was previously reviewed by Bamba et al. [28]. The increasing expansion with the phantom /quintessence characteristic in detail together with cosmography test has been represented by cosmological model like Holographic dark energy, coupled dark energy, scalar field theory, $f(T)$ gravity, $f(R.T)$ gravity, $f(R)$ gravity and ΛCDM cosmological model. These models have been studied by Bamba et al. [28]. The scalar tensor theory of gravitation consisting of five dimensional DE was thoroughly investigated by Reddy et al. [29].



Toinvestigate the problem of dark energy,holographic dark energy model provides a more simple and reasonable frame. The principle known as the holographic principle [25,27, 30-31] emerged as a new paradigm in quantum gravity in relation to black hole physics, it was

Open Access Library Journal
2018, Volume 5, e4900
ISSN Online: 2333-9721
ISSN Print: 2333-9705

Interacting Dark Fluids in LRS Bianchi Type-II Universe

Vijay Gulabrao Mete[1], Pratiksha Brahmadeo Murade[2], Abhijit Shankarrao Bansod[3]

[1]Department of Mathematics, R. D. I. K. & K. D. College, Amravati, India
[2]Department of Applied Science, PRMIT & R, Amravati, India
[3]Department of Applied Science, V. Y. W. S. Polytechnic, Badnera, India
Email: vmete5622@gmail.com, pratikshamurade@gmail.com, bansodabhijit@yahoo.com

How to cite this paper: Mete, V.G., Murade, P.B. and Bansod, A.S. (2018) Interacting Dark Fluids in LRS Bianchi Type-II Universe. *Open Access Library Journal*, **5**: e4900.
https://doi.org/10.4236/oalib.1104900

Received: September 12, 2018
Accepted: October 28, 2018
Published: October 31, 2018

Abstract

At the present paper, Locally Rotationally Symmetric (LRS) Bianchi type-II cosmological model with interacting dark matter (DM) and holographic dark energy (DE) have been discussed. In order to obtain solutions of the field equations, it is assume that the shear scalar (σ) is proportional to expansion scalar (θ). To have a general description of holographic dark energy and dark matter, a phenomenological parameterization of dark energy in terms of its equation of state (EoS) has been taken. Statefinder diagnostic pair *i.e.* $\{r, s\}$ is adopted to separate other existing dark energy models from this model. Here we discuss two models: when $n = 1/2$, we obtain acyclic universe and the model converges into phantom region whereas when $n = 3/2$, we get a expanding universe and the model converges into quintessence region. Some important geometrical and physical features regarding to this model have also been studied.

Subject Areas

Particle Physics

Keywords

LRS Bianchi Type-II Space-Time, Interacting Dark Fluids, Statefinder Parameters

1. Introduction

The phase of accelerating expansion of the universe is indicated by Type Ia Supernovae (SNeIa) [1], [2], the Sloan Digital Sky Survey (SDSS) (Seljack *et al.* [3]) and Wilkinson Microwave Anisotropy Probe (WMAP) [4]. The astrophysical

Hindawi
Advances in High Energy Physics
Volume 2018, Article ID 2854567, 11 pages
https://doi.org/10.1155/2018/2854567

Research Article

Bianchi Type-I Dark Energy Cosmology with Power-Law Relation in Brans-Dicke Theory of Gravitation

S. D. Katore[1] and D. V. Kapse[2]

[1]*Department of Mathematics, SGBAU, Amravati 444 602, India*
[2]*Department of Mathematics, PRMITeR, Badnera, Amravati 444 701, India*

Correspondence should be addressed to D. V. Kapse; dipti.kapse@gmail.com

Received 3 February 2018; Revised 17 April 2018; Accepted 4 June 2018; Published 9 July 2018

Academic Editor: Edward Sarkisyan-Grinbaum

We have studied the interacting and non-interacting dark energy and dark matter in the spatially homogenous and anisotropic Bianchi type-I model in the Brans-Dicke theory of gravitation. The field equations have been solved (i) by using power-law relation and (ii) by assuming scale factor in terms of redshift. Here we have considered two cases of an interacting and non-interacting dark energy scenario and obtained general results. It has been found that for suitable choice of interaction between dark energy and dark matter we can avoid the coincidence problem which appears in the ΛCDM model. Some physical aspects and stability of the models are discussed in detail. The statefinder diagnostic pair, i.e., $\{r, s\}$, is adopted to differentiate our dark energy models.

1. Introduction

The recent cosmological observational data of Type Ia Supernovae (SNeIa) (Riess et al. [1]; Perlmutter et al. [2]), Cosmic Microwave Background (CMB) (Bennett et al. [3]; Spergel et al. [4]), Large Scale Structure (LSS) (Tegmark et al. [5, 6]), the Sloan Digital Sky Survey (SDSS) (Seljak et al. [7], Adelman-McCarthy et al. [8]), Wilkinson Microwave Anisotropy Probe (WMAP) (Knop et al. [9]), and Chandra X-ray observatory (Allen et al. [10]) strongly suggests that our universe is dominated by a component with large negative pressure called dark energy (DE).

The study of DE is possible through its equation of state (EoS) parameter $\omega^{de} = p^{de}/\rho^{de}$ which is not necessarily constant, where p^{de} is the pressure and ρ^{de} is the energy density of DE. The DE candidate which can simply explain the cosmic acceleration is a vacuum energy ($\omega^{de} = -1$), which is mathematically equivalent to the cosmological constant (Λ). The other conventional alternatives, which can be described by minimally coupled scalar fields, are quintessence ($-1 < \omega^{de} < -1/3$), phantom ($\omega^{de} < -1$), and quintom (that can cross from phantom region to quintessence region). From observational results coming from SNe Ia data (Knop et al. [9]) and combination of SNe Ia data with CMBR anisotropy and galaxy clustering statistics (Tegmark et al. [8]), the limits on EoS parameter are obtained as $-1.67 < \omega^{de} < -0.62$ and $-1.33 < \omega^{de} < -0.79$, respectively. Recently, DE models with variable EoS parameter have been studied by Ram et al. [11, 12], Katore et al. [13], Reddy et al. [14], and Mahanta et al. [15].

Interaction between DE and dark matter (DM) leads to a solution to the coincidence problem (Cimento et al. [16]; Dalal et al. [17]; Jamil and Rashid [18, 19]). By considering a coupling between DE and DM, we can explain why the energy densities of DE and DM are nearly equal today. Due to interaction between two components, the energy conservation cannot hold for the individual components. Recent observations (Bertolami et al. [20]; Le Delliou et al. [21]; Berger and Shojaei [22]) provide the evidence for the possibility of such an interaction between DE and DM. Zhang [23, 24], Zimdahl and Pavon [25], Pradhan et al. [26, 27], Saha et al. [28], Amirhashchi et al. [29–33], Adhav et al. [34, 35], and Fayaz [36] have investigated various cosmological models with interacting DE.

The Brans-Dicke theory [37] is a generalized form of general relativity and it is one of the most enchanting

'RESEARCH JOURNEY' International E- Research Journal
Impact Factor - (SJIF) – 6.261, (CIF) - 3.452(2015), (GIF)–0.676 (2013)
Special Issue 110 (F)- Mathematics
UGC Approved Journal
ISSN : 2348-7143
February-2019

LRS Bianchi Type II Cosmological Model With Binary Mixture of Perfect Fluid and Dark Energy in Lyra Manifold

D. V. Kapse,
Department of Mathematics,
Sant Gadge Baba Amravati University,
Amravati 444 602, India.
E-mail: dipti.kapse@gmail.com
N. M. Tade, & S. P. Saraogi
Department of Mathematics,
PRMIT&R, Badnera-Amravati-444 701, India.
, nayna24tade@gmail.com, shalakasaraogi@gmail.com

Abstract:

In this paper, we have studied the solutions of locally rotationally symmetric (LRS) Bianchi type II cosmological models filled with perfect fluid and dark energy (DE) components in Lyra manifold. The exact solution of Einstein's field equations are obtain by assuming the expansion scalar (θ) in the model is proportional to the shear scalar (σ). It has been found that the displacement vector β behaves like cosmological term Λ in the normal guage treatment and the solutions are consistent with recent observations.

Keywords: Dark energy, LRS Bianchi type II models, Lyra's manifold.

Introduction:

The accelerating expansion of the universe is driven by mysterious energy with negative pressure known as Dark Energy (DE). This was observed by SNe Ia (Perlmutter 1999), WMAP (Bennett 2003), SDSS (Tegmark 2004a, 2004b) and X-ray (Allen 2007). This acceleration is triggered by more than 70% of dark energy. There are many proposals to explain the dark energy (DE). The nature of dark energy as well as dark matter is unknown and many radically different models have been proposed, such as, a tiny positive cosmological constant, quintessence (Caldwell et al. 1998; Steinhardt et al.1999), DGP branes (Dvali et al. 2000; Deffayet 2001), the non-linear E(R) models (Capozziello et al. 2003; Carroll et al. 1992; Nojiri and Odintsov 2003). Since the observation of small anisotropies in the microwave background radiation (CMB) (Dunkley 2009) and the large scale structures (Tegmark 2004a) it becomes clear that a pure Friedmann-Lemaitire-Robertson-Walker (FLRW) cosmology could not explain all the properties of universe. It is therefore natural to consider anisotropic cosmological models that allow FLRW universes as special cases.

Einstein proposed his general theory of relativity, in which gravitation is described in terms of geometry; it motivated the geometrization of other physical fields. One of the first attempts in this direction was made by Weyl (1918) who proposed a more general theory in which gravitation and electromagnetism is also described geometrically. Later Lyra (1951) suggested a modification of Riemannian geometry by introducing a gauge function which removes the non-integrability condition of the length of a vector under parallel transport. Halford (1972) pointed out that the constant displacement vector field ϕ in Lyra's geometry plays the role of a cosmological constant in the normal general relativistic treatment. Halford (1974) showed that the scalar-tensor treatment based on Lyra's geometry predicts the same effects,

Anticipation of Distributed denial of service Attack Using Four- Tier CAPTCHA

Ms.Sonika A. Chorey
P.R.M.I.T.&R.
sonikachorev@gmail.com

Ms. Priyanka A. Chorey
P.R.M.I.T.&R.
privankachorev@rediffmail.com

Ms. Saleha I. Saudagar
P.R.M.I.T.&R.
salehasaudagar@gmail.com

Abstract—**DDOS (Distributed Denial of Service Attack) found to be one of the leading menace of availability in cloud computing Service. In denial of service attack by utilizing bandwidth or flood of network, the attacker restrict the access of original users. And hence substantiation is necessary to make a distinction between original user from illicit users, which can be performed through strong cryptographic verification (for a private server) or graphical Turing tests. By tracing the IP address of that server, the attacker take away all the right of entry over that application make that user out-of-the- way, where the substantiation & security is performed by Graphical Turing examination for public server, which is widely used to tell apart human users from robots through their retort. A CAPTCHA is a type of challenge-response test used in computing to identify the user whether he is human or not. The CAPTCHA technique that we have related here requires that the user enter the letters of a prearranged mystified image, sometimes with the addition of an prearranged mystified letters or digits that appears on the screen. The main reason behind this CAPTCHA to explore security in cloud computing network. In result the user get ease of access to service without any stoppage. Because the test is administered by a computer system, in opposite to the standard Turing test that is controlled by a human, a CAPTCHA is sometimes described as a reverse or Graphical Turing test. This term is hazy because it could also mean a Turing test where the participants are endeavoring to prove they are the computer.**

Keywords— **Cloud computing services, Security flaws, Distributed Denial of Service, Prevention of DDOS, CAPTCHA**

1. INTRODUCTION

Cloud Computing services are nothing but assembly of resources and can utilized through internet. It is well known word in top IT companies like Google and yahoo develop cloud computing system and related products for customer. There are few impediments for user to agree to cloud computing network as customer has to belief on third party for its confidential information. This study aims to know the most hot security issue in cloud computing service. We will thrash out security necessities and its allied issues in cloud computing.

A. Brief of cloud computing

It proffer high yield with less outlay at the same time. Shortage in security is the chief stumbling block in wide acceptance of cloud computing. Cloud computing has many issues like sheltering information, and examining the consumption of resources and provide services to its certified user. The wide acceptance raised security risks along with the uncountable benefits. [1].Cloud computing offers 3 different kinds of services:

1. **Software as a Service**

SaaS are applications over Internet. As a rule the user can utilize these applications using a web- browser. Users are intangible about the hardware and software that is using and simply access to an interface through a web browser and from there he has admittance to some useful data and functionalities. It's dedicated to current users; an case in point to this sort of services can be Google Docs.

2. **Platform as a Service**

PaaS are paying attention to the exploitation of applications or services online letting to the developer manage the hardware or software necessary, including also a solution stack. This service embraces all the life-cycle of the exploitation of application or service such as design, implementation, testing, exploitation, collarging with databases, etc.

There are three characteristic points in this services

1. Services for exploitation, testing and upholding of applications
2. Multi-user architecture, in other words extensibility.
3. Collaborative tools.

An case in point of these services is Google App engine.

Combustion synthesis and luminescence properties of Dy (III) activated $NaBaBO_3$ phosphor for solid state lighting applications

Zamir Khan[1, a)], Z. S. Khan[2,b)], N. B. Ingale[3, c)] and S. K. Omanwar[4, d)]

[1]*Department of Applied Physics, Anjuman College of Engg. & Tech., Nagpur-440001 India*
[2]*Department of Physics and Electronics, GVISH, Amravati-444604 India*
[3]*Prof. Ram Meghe College of Engineering and Research, Badnera-444702 India*
[4]*Department of Physics, SGB Amravati University, Amravati-444602 India*

[b)] Corresponding author: zakirskhan@gmail.com, [a)]zamirsk75@gmail.com
[c)]nabingale@gmail.com, [d)]omanwar@rediffmail.com

Abstract. Polycrystalline samples of $NaBaBO_3:Dy^{3+}$ were prepared by employing modified solution combustion synthesis method. The phase formation was confirmed by X-ray powder diffraction (XRD) measurements. The prepared sample was characterized by using SEM and FTIR Techniques. The photoluminescence excitation and emission spectra were measured on HITACHI F-7000 fluorescence spectrometer. Under the excitation of near-UV light, Dy^{3+} doped $NaBaBO_3$ presents the PLE spectra show the excitation peaks from 300 to 400 nm is due to the 4f–4f transitions of Dy^{3+}. This mercury-free excitation is useful for solid state lighting and light-emitting diodes. The emission of Dy^{3+} ions upon 350 nm excitation is observed at 482 nm due to the $^4F_{9/2} \rightarrow {}^6H_{15/2}$ transitions and 574 nm due to $^4F_{9/2} \rightarrow {}^6H_{13/2}$ transitions. The CIE chromaticity coordinates for $NaBaBO_3:Dy^{3+}$ phosphors are simulated and located in the bluish-white region. The phosphor shows an excellent thermal stability on temperature quenching effects. The effect of concentration of Dy^{3+} ions on the PL intensity has also been investigated. It has been observed that the powder sample exhibits highest PL emission intensity for Dy^{3+} concentration of about 0.01 moles. The results were discussed on the relationship between the structure and the luminescence properties.

INTRODUCTION

Large numbers of compounds doping with different rare earths were prepared by the researchers till dateusing different synthesis methods [1-6]. Apart from them, rare earth doped borates phosphors have attracted attention due to considerable belongings including high luminous efficiency, low synthesis temperature, high chemical stability and high color purity reputations [7-9]. Dy^{3+}doped phosphors have been treated as promising single-phase white emitting materials. The yellow emission of Dy^{3+} is rather hypersensitive to the local environment, whereas the blue emission of Dy^{3+} is not very sensitive to the local environment. A white light emission with appropriate color temperature and chromaticity coordinates can be achieved through suitable adjustment of the yellow/blue intensity ratio in Dy^{3+} doped phosphors [10]. Divalent / Trivalent rare earth ions doped inorganic compounds phosphors are found to be applicable for white light emitting diodes [11]. Low energy consumption, higher lifetime and higher efficiency made these LEDs protagonist materials [12]. The structure of $NaBaBO_3$ was firstly reported by Tu et al. in 1995 [13]. However, there is very few report about the luminescence property of Dy^{3+} doped $NaBaBO_3$. White light-emitting diodes (WLEDs) as a next-generation lighting source have appeared to be the most promising in a typical form of solid-state lighting owing to their superior properties such as low power consumption, high brightness, and long working lifetime, durable energy saving capability, and eco-friendly feature with mercury-free

International Conference on "Multidimensional Role of Basic Science in Advanced Technology" ICMBAT 2018
AIP Conf. Proc. 2104, 030035-1–030035-6; https://doi.org/10.1063/1.5100462
Published by AIP Publishing. 978-0-7354-1836-3/$30.00

SOLUTION OF ORDINARY DIFFERENTIAL EQUATIONS WITH VARIABLE COEFFICIENTS USING KAMAL TRANSFORM

[1]A.S.Khan, [2]I.I.Khan, [3]M.M. Janolkar

[1,2,3]First Year Engg. Department,

[1,2,3]Prof Ram Meghe College Of Engg & Management, Badenra,Amravati -India.

alimkhan3101@gmail.com

imrani.147@rediffmail.com

m_janolkar@rediffmail.com

ABSTRACT:

Abdelilah Kamal is a new integral transforms introduced by the names the"Kamal transform" to facilitate the solution of differential and integral equations.In this study a new integral transform, namely Kamal transform was applied to solve linear ordinary differential equations with variable coefficients by using the modified versions of Laplace and Sumudu transforms . The Kamal transform, whose fundamental properties are presented in this paper. The various examples are presented to give the effectiveness of its applicability.

Keywords: **Kamal transform and Differential equations with variable coefficients**

INTRODUCTION

The differential equation have played an important role in every aspect of applied mathematics for every long time and with the approach of the computer, their importance has increased father. Ordinary differential equations have important applications and are a powerful tool in the study of many problems in the natural sciences and in technology; they are extensively employed in mechanics, astronomy, physics, and in many problems of chemistry and biology.Thus investigation and analysis of differential equations cruising in applications led to many deep mathematical problems; therefore, there are so many different techniques in order to solve differential equations. The integral transform generally used and it's applications such as the Laplace, Foureir, Mellin, Hankel and Sumudu, to name but a few.Presently, Abdelilah Kamal found a new integral transform, called the Kamal transform, and then applied to the solution of ordinary and partial differential equations.

Integral transforms are mathematical tools for solving differential and integral equations for centuries. However, this old area has recently got a center stage among many researchers by introducing many integral transforms among which are [1-6].

In this paper, the recently introduced integral transforms by Abdelilah Kamal [7] closely studied in relation to the some existing famous integral transforms that are defined in the time domain. Kamal Transform was successfully applied to integral equations, partial differential equations [8], ordinary differential equations with variable coefficients [9] and system of all these equations. In this paper we drive the formulate for Kamal transform of ordinary derivatives and apply them in solving some types of differential equations with variable coefficient using Kamal Transform.

The Kamal transform defined for function of exponential order, we consider functions in the set A defined by,

Research article Available online www.ijsrr.org ISSN: 2279–0543

International Journal of Scientific Research and Reviews

On the Mahgoub Transform and Ordinary Differential Equation with Variable Coefficient

[1]Khan I. I., [2]Khan A. S., [3] Khan S. N.

Department of Mathematics
[1,2,3]RMIT&R, Badnera, Maharashtra, India
Email: imrani.147@rediffmail.com, alimkhan3101@gmail.com
siraj.khan@prmceam.ac.in

ABSTRACT:

The Mahgoub Transform, whose fundamental properties are presented in this paper .Here we apply new integral transform named as “Mahgoub Transform” to solve some ordinarydifferential equation with variable coefficient.

KEYWORDS : Mahgoub Transform – Differential Equation

***Corresponding author**

A. S. Khan,

Department of Mathematics

RMIT&R, Badnera, Maharashtra, India

Email:alimkhan3101@gmail.com

PERFORMANCE INVESTIGATION OF SOLAR AIR HEATER BY VARYING RIBS IN BOTH FREE AND FORCED CONVECTION

[1]Prof. Kishor R. Gawande, [2]Niraj A. Dakhore, [3]Dr. Mangesh R. Dharme, [4]Prof.S.M.Tondre
[1]Assistant Professor, [2]PG Scholar, [3]Associate Professor, [4]Assistant Professor
[1,2,3,4]Department of Mechanical Engineering
[1,2,3,4]Dr. Rajendra Gode Institute of Technology & Research, Amravati, India

Abstract: In Solar Air Heater, collector plate is the important component which is mainly responsible for heat transfer through convection. Attached ribs to the collector plate will also improve the thermal efficiency of the solar air heater. It is also proved with an experiment that the rate of heat transfer can be increased by using variety of ribs. This paper investigates the thermal efficiency of solar air heater by using two different types of ribs in both free and forced convection. The results obtained will gives the extra dimension in study of solar air heater. Slight increment of thermal efficiency by using perforated ribs is the key-stone in this investigation, while the basic v-shape ribs are taken as it is. Experimental setup is duly calibrated and the place, day (sunny) and time was chosen in such a way that the maximum intensity of solar radiation can be achieved so as to obtain better results.

IndexTerms - **Solar Air Heater, Ribs, Solar Energy, Performance Analysis**

I. INTRODUCTION

Solar energy is the important source of power which freely available. Even though the fluctuation in the intensity is the major problem associated with this source, there are so many methods available to convert solar energy into required work in considerable range. We are now able to utilize this solar power by means of electricity, light or heat which is further used to heat the water or air. Photo-voltaic cell is the key part for conversion of solar radiation into electricity.

Solar Air Heater is the one the device which converts solar energy into thermal energy. This energy can be utilized in various applications like warming the room, dry heated air for industrial applications, removing moisture content in food industry etc. Hence it is important device and it consists of insulated box and collector plate which is placed on the top of the box. On the bottom plate and top plate v-shaped ribs were mounted for better convection of heat. This type of rib mounting is also called as increasing surface roughness. Figure 1.1 (a) shows the insulated box and collector plate. Figure 1.1 (b) shows the complete assembly along with inlet and outlet pipes.

Figure 1.1 (a): Insulated Box with collector plate.

Figure 1.1 (b): Complete assembly of Solar Air Heater

In this investigation we have used same solar air heater to carry out experiments. There are different types of solar air heaters are available, but generally they are classified into two groups.

1) Smooth Plate Solar Air Heater.
2) Ribbed Plate Solar Air Heater.

Smooth plate solar air heaters are usually less thermal efficient compared with ribbed plate solar air heater. Construction of smooth plate solar air heater is simple but the only difference in between the smooth plate and ribbed plate is the ribs which are given on collector plate. All other construction is same and the thermal efficiency is greater in case of ribbed plate solar air heater. To investigate this fact and other performance characteristics experimentations are carried out. Air inlet is taken by two ways free air stream and air stream by means of blower to obtain free and forced convection.

Roughness provided on collector plate gives better thermal efficiency and it also gives better heat transfer rate. Intake air comes on room temperature which is further heated by solar heater and comes out from outlet pipe. Figure 1.2 shows the types of ribs

International Journal of Research in Advent Technology, Vol.7, No.1, January 2019
E-ISSN: 2321-9637
Available online at www.ijrat.org

Experimental setup of Solar Air Heater with Rib Modification: A Review

Dr. Mangesh R. Dharme[1], Niraj A. Dakhore[2], Prof. Kishor R. Gawande[3], Prof.S.M.Tondre[4]
Department of Mechanical Engineering[1,2,3,4], Dr. Rajendra Gode Institute of Technology & Research, Amravati, India [1,2,3,4]
Email: mangeshdharme@yahoo.co.in[1], *nirajdakhore01@gmail.com[2], kishorrgawande@gmail.com[3], tondresomdatta@gmail.com[4]*

Abstract- Solar Air Heaters are utilized in variety of forms and types. They are cost effective, efficient and their performance is remarkable. It directly utilizes the solar energy to keep air warm and can maintain required temperature. This review focuses on the utilization of solar air heater in different places with their performance efficiency. The various types of solar air heater with ribs are also discussed. Most of the authors have focuses on effectiveness of solar air heater for long term duration. But fluctuation in solar energy is to be considered for studying effectiveness of solar air heater.

This review also focuses on the study which have done with solar air heater capabilities to know the possible fields where it can work successfully. Modification in ribs is done rarely and if we find a performance analysis with modification in ribs then it could be a new edge of study on solar air heater.

Index Terms- Solar Air Heater, Ribs, Solar Energy, Performance Analysis

1. INTRODUCTION

Solar air heaters are being used for many applications at low and moderate temperatures. Some of these are crop drying, timber seasoning, space heating, cooking etc. The thermal efficiency of solar air heater has been found to be low due low thermal capacity of air and because of low convective heat transfer coefficient between absorber plate and flowing air in the duct. The use of solar panel for storing the sun radiation can be the solution for this in our future research work. Attempts has been made to enhance the heat transfer rate by use of extending surface in form of fins but the heat transfer is accompanied by pressure drop penalty. In another approach use of artificial roughness is the most effective and economic way for improving performance of solar air heater. In this approach turbulence is created by roughened surface in viscous sub layer to obtain heat transfer enhancement. Several roughness geometry has been tested so far to enhance heat transfer with consumption of pumping power [1].Energy is the one of the most important need of mankind, be it proving light or be it to run machines. Energy in different forms and functions has portrayed a very important role in the extensive economic boom and industrialization. For coming generations, we need to depend on the source which can provide infinite energy. Solar energy can be said to be one of those forms which is freely available, and easily accessible and of course is non- polluting in nature. It is considered to be an indispensable source of energy to meet the growing demand for the sustainable development and to control the global climate change. The need to enhance the thermal performance of heat exchangers, consequently, effecting energy, material, and cost savings as well as a consequential mitigation of environmental degradation had led to the development and use of many heat transfer enhancement techniques. There are several devices like solar water heater and solar air heater are used to harness the solar energy. Many researchers have conducted numerical study of solar air heater. CFD is a vital tool to analyze thermal systems [7]. Solar Air Heater is the one the device which converts solar energy into thermal energy. This energy can be utilized in various applications like warming the room, dry heated air for industrial applications, removing moisture content in food industry etc.

2. EXPERIMENTAL SET-UP

Research experimental setup consists of insulated box and collector plate made of solar panel which is placed on the top of the box. On the bottom plate and top plate v-shaped ribs were mounted for better convection of heat. This type of rib mounting is also called as increasing surface roughness.

- Insulated box with collector plate
- Complete assembly along with inlet and outlet pipes

There are different types of solar air heaters are available, but generally they are classified into two groups.

- Smooth Plate Solar Air Heater

'RESEARCH JOURNEY' International E- Research Journal
Impact Factor - (SJIF) - 6.261, (CIF) - 3.452(2015), (GIF)-0.676 (2013)
Special Issue 110 (F)- Mathematics
UGC Approved Journal
ISSN : 2348-7143
February-2019

Two-Fluid Cosmological Model in Einstein-Rosen Inflationary Universe

S.R.Sawarkar,
Department of Mathematics,
P.R.M.I.T&R,
Badnera e-mail: sonalisawarkar25@gmail.com
V.G.Mete,
Department of Mathematics
R.D.I.K&K.D.College,
Badnera-Amravati, India vmete5622@gmail.com
A.S.Bansod
Department of Mathematics
V.Y.W.S Polytechnic, Badnera
bansodabhijit@yahoo.com

Abstract:

In this paper, we have studied universe filled with two-fluid in an anisotropic and homogeneous Einstein – Rosen metric. For an inflationary universe, we have considered one fluid which represents the matter content of the universe and other fluid is chosen to model the CNB radiation. The physical and geometric cosmological parameter are studied and discussed.

Keyword: Einstein – Rosen metric, inflationary universe, two-fluid.

Introduction:

In the present stage, many authors have been interested in cosmological models of the universe because of the early stages of its evolution.Inflationary universe in general relativity has been investigated by Guth[1], Linde[2] and La and Steinhardt[3]. Burd and Barrow [4], Wald[5], Barrow[6]studied different aspects of scalar field.Bianchi type-I model with a two fluid source has been investigated by Oli[7] with and without variable G and Λ. Pant and Oli[8] investigated two fluid cosmological models using Bianchi type-II space time. Two fluid Bianchi type-VI models are studied by Coley and Dunn [9]. Beesham[10],Chakraborty and Roy [11] explored the Bianchi type cosmological models for perfect fluid. Einstein's field equations with varying G and Λ has been investigated by Kalligas et al.[12], Arbab[13], Beesham et al.[14] and Kilinc[15]. Vishwakarma[16] examined Bianchi type-I model with varying G and Λ.Adhav et al.[17] investigated the power law solution of two fluid cosmologicalfield equation in Bianchi type–III space time in absence of variable gravitational and cosmological constant (G & Λ).They showed that the model admit point singularity. Singh et al.[18] constructed anisotropic homogeneous two-fluid cosmological models usingBianchi type-V space time without variable G and Λ.This work is an extension of Adhav et al.[17] by introducing variable gravitational and cosmological constant (G & Λ).Katore [19] explored the Bianchi type-III inflationary universe with constant deceleration parameter in general relativity. Recently Mete et al. [20] have studied Kasner cosmological model with two fluid source in general relativity.

This motivates us to investigatetwo fluid models in Einstein – Rosen inflationary universe in general relativity. Some important geometrical and physical features of the model have also been discussed.

Metric and field equations:

We have considered the cylindrically symmetric Einstein – Rosen metric in the form

$$ds^2 = e^{2\alpha-2\beta}\left(dt^2 - d\phi^2\right) - \rho^2 e^{-2\beta} d\varphi^2 - e^{2\beta} dz^2, \qquad (1)$$

where α and β are functions of cosmic time t only and $x^1 = \phi, x^2 = \varphi, x^3 = z, x^4 = t$.

'RESEARCH JOURNEY' International E- Research Journal
Impact Factor - (SJIF) - 6.261, (CIF) - 3.452(2015), (GIF)-0.676 (2013)
Special Issue 110 (F)- Mathematics
UGC Approved Journal
ISSN : 2348-7143
February-2019

Kantowski-Sachs Modified Holographic Ricci Dark Energy Model in Lyra Geometry

V.G.Mete,
Department of Mathematics, R.D.I.K & K.D.
,Badnera- Amravati (444701), INDIA.
-mail: vmete5622@gmail.com
P.B.Murade,
Department of Applied Science, PRMIT&R,
Amravati (444701), INDIA.
-mail: pratikshamurade@gmail.com
A.S. Bansod,
Department of Applied Science,
V.Y.W.S. Polytechnic,
Bandera (Rly), (444701), INDIA.
e-mail: bansodabhijit@yahoo.com

Abstract:

*In this paper, we have studied Kantowski-Sachs space-time in presence of anisotropic modified Ricci dark energy and matter as a source in Lyra manifold (Math. Zeitschrift **54**,52 1951). Solutions of the Einstein field equations have been obtained with the help of hybrid expansion law proposed by Akarsu et al. (2014). Some physical and kinematical parameter of the models are also discussed.*

Keywords: Kantowski-Sachs space-time, anisotropic modified holographic Ricci dark energy, statefinder parameter, Lyra manifold.

Introduction:

At present, the universe is in the stage of accelerated expansion, which has been confirmed by distance type Ia supernovae team [1-3]. The term responsible for the accelerated expansion of a universe is called as 'dark energy' (DE) having negative pressure, which is still a cosmological mystery [4]. The universe is filled with DE with negative pressure as well as dark matter (DM) without pressure. The equation of state (EoS) parameter $\omega = p/\rho$, where p is pressure and ρ is energy density gives the study of dark energy. The current value of EoS parameter is still unknown. Therefore many candidates are introduced for the dark energy. Cosmological constant (Λ) is supposed to be the simplest candidate for DE, but it has fine tuning as well as coincidence problem. Few other candidates presented to construct DE models like quintessence model [5], phantom model [6], k-essence [7], and so on.

Recently, holographic dark energy (HDE) models have been obtained considerable attention to explain DE cosmological models. According to holographic principle, the number of degree of freedom in a bounded system should be finite and is related to the area of its boundary [8]. This principle content that HDE model can solve this cosmological constant problem and other issues. Fischer and Susskind [9] and Cohen et. al.[10] put forword the cosmological version of this principle. In recent years, a new holographic Ricci dark energy model having density $\rho_\Lambda = 3M^2{}_{pl} = \eta H^2 + \xi\dot{H}$ was proposed by Granda and Oliveros [11]. Further, Chen and Jing [12] reconstructed this model by considering the density of DE includes the Hubble

A STUDY OF BRAND AWARENESS AND BRAND PREFERENCES FOR SOAP & TOILETRIES PRODUCTS AMONG RURAL CUSTOMERS IN AMRAVATI REGION

* Prof. Pratiksha Ashokrao Kalmegh
**Prof. Ashish V. Deshmukh
*Assistant Professor, Department of Management Studies, PRMIT&R,Badnera-Maharashtra-444701
*Assistant Professor, Department of Management Studies, PRMIT&R,Badnera-Maharashtra-444701

ABSTRACT:

There is a huge potential in the rural markets companies are trying to tap in rural areas because there is a tight competition in urban markets if we look the present situation of the rural consumer. In this research work efforts has been taken to analyze the behavior of rural consumer while purchasing toiletries items.

Keywords- Rural consumer, brand reference, brand awareness, consumer behavior.

1. INTRODUCTION

1.1 Brand:

A brand is defined as a "name, term, sign symbol (or a combination of these) that identifies the maker or seller of the product". Brand is a marketing tool which allows consumers to recognize the maker of product. A brand name helps an organisation differentiate itself from its competitors. In today's competitive world customers expect products to have branding. Customers often build up a relationship with a brand that they trust and will regularly purchase products from that brand. Some people will only purchase a particular brand even though there are acceptable alternatives on the market.

1.2 Brand Awareness:

Brand awareness refers to the extent to which customers are able to *recall* or *recognize* a brand. Brand awareness is a key consideration in consumer behavior, advertising management, brand management and strategy development. The consumer's ability to recognize or recall a brand is central to purchasing decision-making. Purchasing cannot proceed unless a consumer is first aware of a product category and a brand within that category. Awareness does not necessarily mean that the consumer must be able to recall a specific brand name, but he or she must be able to recall sufficient distinguishing features for purchasing to proceed. For instance, if a consumer asks her friend to buy her some gum in a "blue pack", the friend would be expected to know which gum to buy, even though neither friend can recall the precise brand name at the time.

1.3 Brand Preference:

Brand preference is the brand that a customer chooses for a particular product category. It is often expressed as the percentage of target customers who prefer your brand. Brand preference can be measured by self-reported unaided survey questions such as "what is your favorite type of orange juice?" It can also be tested with user interfaces that ask a customer to pick a product from several competitors. The position of choices may be randomized.

International Journal of Latest Technology in Engineering, Management & Applied Science (IJLTEMAS)
Volume VIII, Issue IV, April 2019 | ISSN 2278-2540

A Study of Customer Perception about Online Food Ordering Services in Amravati City

Nimad Gawande, Gajanan Pachaghare, Ashish Deshmukh

Department of Management Studies (MBA), Prof. Ram Meghe Institute of Technology & Research, Amravati (MH State), India

Abstract: **This study focused upon Online Food Ordering Apps available for Amravati City. As, the Online Ordering systems have newly introduced in the City, this study tries to judge people's perception about it on primary level. Researcher have made an effort of considering few demographic presumptions and restrictions to get valid data from the sample size.**

Keywords: **Online Ordering System, Digital Payment, Smartphone Applications, Consumer Preferences**

I. INTRODUCTION

A. About Online Food Ordering Business:

The application of technology in every business has grown up as excitedly as it made everything look possible. Electronic info-medium especially the Smart phones have brought various dimensions of market place at once. This includes fields such as customer relationship management, Supply Chain and Logistics Management, Secure Payment and efficient Settlements Systems the industry is like e-ticketing, entertainment, travelling, learning, any sort of agency businesses. These are all possible because of the dynamic use of data and its transmission from various saints to various users. Search data consists of product information sales distribution channels customer support delivery extra.

Specifically looking at the hotel industry main concern of a hotel is its service ambience and most importantly the food. But the nature of perception varies from customer to customer. Therefore, not necessary every customer is interested only to have good service or enjoy the ambience. In fact, majority of the people genuinely enjoy eating restaurant food only because of its taste. Contrary, Restaurant owners also seem very keen about maintaining their Food taste and quality of serve to customer each time.

Therefore on various demographic levels, grooming of e-business specifically in delivery of quality food to the customer at his will and within his specified time became basic criteria.

B. Factors Driving Online Food Ordering business:

a. Application designing & user interface
b. Interactive offers by various restaurants
c. Providing security
d. Providing secure payment system
e. Measurement of distances using maps
f. Estimation of service and delivery time
g. Packaging & Transporting Food
h. Using safe routes & equipments for delivery people
i. Retention of customer satisfaction, etc

C. Operations of Online Food Ordering System:

This system includes few basic operations such as, Feeding real time Menu and availability at restaurants' Data with the App, Offering & Highlighting Food Menus and Discounts, Receiving the Order, Confirming the Order after deciding Mode of Payment and Getting Customer Details, Specifying about Time of Delivery, Placing the Order and Finally Delivering the order within mentioned Time.

Fig. 1 Online Food Ordering System[9]

D. Advantages and disadvantages of Online food ordering:

a. Advantages:

- It is the perfect virtual marketplace which involves customer as well as the the restaurants
- There is enough amount of flexibility for customer that when he want to eat and only at that time he will order his food.
- On the restaurant level there are all the specification necessary given to the customer to avoid all inconvenience such as time of opening, menu, prices, offers, etc.
- Restaurant by this way can certainly curtail their cost of serving at their doorstep and maintaining much people than necessity.

International Journal of Latest Technology in Engineering, Management & Applied Science (IJLTEMAS)
Volume VIII, Issue IV, April 2019 | ISSN 2278-2540

A Study of Customer Perception about Online Food Ordering Services in Amravati City

Nimad Gawande, Gajanan Pachaghare, Ashish Deshmukh

Department of Management Studies (MBA), Prof. Ram Meghe Institute of Technology & Research, Amravati (MH State), India

Abstract: **This study focused upon Online Food Ordering Apps available for Amravati City. As, the Online Ordering systems have newly introduced in the City, this study tries to judge people's perception about it on primary level. Researcher have made an effort of considering few demographic presumptions and restrictions to get valid data from the sample size.**

Keywords: **Online Ordering System, Digital Payment, Smartphone Applications, Consumer Preferences**

I. INTRODUCTION

A. About Online Food Ordering Business:

The application of technology in every business has grown up as excitedly as it made everything look possible. Electronic info-medium especially the Smart phones have brought various dimensions of market place at once. This includes fields such as customer relationship management, Supply Chain and Logistics Management, Secure Payment and efficient Settlements Systems the industry is like e-ticketing, entertainment, travelling, learning, any sort of agency businesses. These are all possible because of the dynamic use of data and its transmission from various saints to various users. Search data consists of product information sales distribution channels customer support delivery extra.

Specifically looking at the hotel industry main concern of a hotel is its service ambience and most importantly the food. But the nature of perception varies from customer to customer. Therefore, not necessary every customer is interested only to have good service or enjoy the ambience. In fact, majority of the people genuinely enjoy eating restaurant food only because of its taste. Contrary, Restaurant owners also seem very keen about maintaining their Food taste and quality of serve to customer each time.

Therefore on various demographic levels, grooming of e-business specifically in delivery of quality food to the customer at his will and within his specified time became basic criteria.

B. Factors Driving Online Food Ordering business:

a. Application designing & user interface
b. Interactive offers by various restaurants
c. Providing security
d. Providing secure payment system
e. Measurement of distances using maps
f. Estimation of service and delivery time
g. Packaging & Transporting Food
h. Using safe routes & equipments for delivery people
i. Retention of customer satisfaction, etc

C. Operations of Online Food Ordering System:

This system includes few basic operations such as, Feeding real time Menu and availability at restaurants' Data with the App, Offering & Highlighting Food Menus and Discounts, Receiving the Order, Confirming the Order after deciding Mode of Payment and Getting Customer Details, Specifying about Time of Delivery, Placing the Order and Finally Delivering the order within mentioned Time.

Fig. 1 Online Food Ordering System[9]

D. Advantages and disadvantages of Online food ordering:

a. Advantages:

- It is the perfect virtual marketplace which involves customer as well as the the restaurants
- There is enough amount of flexibility for customer that when he want to eat and only at that time he will order his food.
- On the restaurant level there are all the specification necessary given to the customer to avoid all inconvenience such as time of opening, menu, prices, offers, etc.
- Restaurant by this way can certainly curtail their cost of serving at their doorstep and maintaining much people than necessity.

International Journal of Latest Technology in Engineering, Management & Applied Science (IJLTEMAS)
Volume VIII, Issue IV, April 2019 | ISSN 2278-2540

A Study of Customer Perception about Online Food Ordering Services in Amravati City

Nimad Gawande, Gajanan Pachaghare, Ashish Deshmukh

Department of Management Studies (MBA), Prof. Ram Meghe Institute of Technology & Research, Amravati (MH State), India

Abstract: **This study focused upon Online Food Ordering Apps available for Amravati City. As, the Online Ordering systems have newly introduced in the City, this study tries to judge people's perception about it on primary level. Researcher have made an effort of considering few demographic presumptions and restrictions to get valid data from the sample size.**

Keywords: **Online Ordering System, Digital Payment, Smartphone Applications, Consumer Preferences**

I. INTRODUCTION

A. About Online Food Ordering Business:

The application of technology in every business has grown up as excitedly as it made everything look possible. Electronic info-medium especially the Smart phones have brought various dimensions of market place at once. This includes fields such as customer relationship management, Supply Chain and Logistics Management, Secure Payment and efficient Settlements Systems the industry is like e-ticketing, entertainment, travelling, learning, any sort of agency businesses. These are all possible because of the dynamic use of data and its transmission from various saints to various users. Search data consists of product information sales distribution channels customer support delivery extra.

Specifically looking at the hotel industry main concern of a hotel is its service ambience and most importantly the food. But the nature of perception varies from customer to customer. Therefore, not necessary every customer is interested only to have good service or enjoy the ambience. In fact, majority of the people genuinely enjoy eating restaurant food only because of its taste. Contrary, Restaurant owners also seem very keen about maintaining their Food taste and quality of serve to customer each time.

Therefore on various demographic levels, grooming of e-business specifically in delivery of quality food to the customer at his will and within his specified time became basic criteria.

B. Factors Driving Online Food Ordering business:

a. Application designing & user interface
b. Interactive offers by various restaurants
c. Providing security
d. Providing secure payment system
e. Measurement of distances using maps
f. Estimation of service and delivery time
g. Packaging & Transporting Food
h. Using safe routes & equipments for delivery people
i. Retention of customer satisfaction, etc

C. Operations of Online Food Ordering System:

This system includes few basic operations such as, Feeding real time Menu and availability at restaurants' Data with the App, Offering & Highlighting Food Menus and Discounts, Receiving the Order, Confirming the Order after deciding Mode of Payment and Getting Customer Details, Specifying about Time of Delivery, Placing the Order and Finally Delivering the order within mentioned Time.

Fig. 1 Online Food Ordering System[9]

D. Advantages and disadvantages of Online food ordering:

a. Advantages:

- It is the perfect virtual marketplace which involves customer as well as the the restaurants
- There is enough amount of flexibility for customer that when he want to eat and only at that time he will order his food.
- On the restaurant level there are all the specification necessary given to the customer to avoid all inconvenience such as time of opening, menu, prices, offers, etc.
- Restaurant by this way can certainly curtail their cost of serving at their doorstep and maintaining much people than necessity.

A CONSUMER AWARENESS AND INVESTMENT PATTERN TOWARDS SUKANYA SAMRUDDHI YOJANA

***Prof. Kamini S. Bijawe**

**** Prof. G. D. Pachaghare**

***Assistant Professor, Department of Management Studies, PRMIT&R,Badnera-Maharashtra-444701.**

ABSTRACT:

Sukanya Samruddhi Yojana/Scheme is one of the most popular government schemes launched by the Indian Prime Minister, Shri. Narendra Modi. The scheme is aimed at betterment of girl child in the country. Sukanya Samruddhi scheme has been launched to offer a means of saving to the girl child in every family. The money saved via this scheme is to provide for higher education of girl and for her wedding expenses. The scheme has been accepted very well by the public since this is a great step towards providing financial security and financial dependence to women.

Key words: Sukanya Samruddhi Yojana, consumer awareness

1. INTRODUCTION

Gender inequality is one of the most pressing issues in the country today and hence, this scheme is being seen as a great step towards eliminating gender related issues, hi a country like India, where education of male child is given preference and where wedding expense 01 gins is seen as a great liability the launch of this gin child specific is a massive step. The scheme will help girls achieve financial independence and help them have money at hand for higher education as well as wedding expenses. One of the most distinguishing features of the scheme is that Sukanya Samruddhi deposit amount can only be withdrawn by the girl child and not even the depositor (parent or guardian) is allowed to withdraw money on behalf of the girl.

There are a host of public and private sector banks as well as post offices which have been authorized by the Finance Ministry for offering **Sukanya Samruddhi Account.** The scheme was launched in 22nd January, 2015 and since then seen a huge surge in the number of customers who have applied for it.

A CONSUMER AWARENESS AND INVESTMENT PATTERN TOWARDS SUKANYA SAMRUDDHI YOJANA

***Prof. Kamini S. Bijawe**

**** Prof. G. D. Pachaghare**

***Assistant Professor, Department of Management Studies, PRMIT&R,Badnera-Maharashtra-444701.**

ABSTRACT:

Sukanya Samruddhi Yojana/Scheme is one of the most popular government schemes launched by the Indian Prime Minister, Shri. Narendra Modi. The scheme is aimed at betterment of girl child in the country. Sukanya Samruddhi scheme has been launched to offer a means of saving to the girl child in every family. The money saved via this scheme is to provide for higher education of girl and for her wedding expenses. The scheme has been accepted very well by the public since this is a great step towards providing financial security and financial dependence to women.

Key words: Sukanya Samruddhi Yojana, consumer awareness

1. INTRODUCTION

Gender inequality is one of the most pressing issues in the country today and hence, this scheme is being seen as a great step towards eliminating gender related issues, hi a country like India, where education of male child is given preference and where wedding expense 01 gins is seen as a great liability the launch of this gin child specific is a massive step. The scheme will help girls achieve financial independence and help them have money at hand for higher education as well as wedding expenses. One of the most distinguishing features of the scheme is that Sukanya Samruddhi deposit amount can only be withdrawn by the girl child and not even the depositor (parent or guardian) is allowed to withdraw money on behalf of the girl.

There are a host of public and private sector banks as well as post offices which have been authorized by the Finance Ministry for offering **Sukanya Samruddhi Account.** The scheme was launched in 22nd January, 2015 and since then seen a huge surge in the number of customers who have applied for it.

STUDIES ON DETERMINANTS OF EMPLOYEE LOYALTY TO THE ORGANIZATION-A STATE OF ART

*** Prof.Pratiksha Ashokrao Kalmegh ,** Prof. Minal M. Nistane,**
***Assistant Professor, Department of Management Studies, PRMIT&R,Badnera-Maharashtra-444701**
****Assistant Professor, Department of Management Studies, PRMIT&R,Badnera-Maharashtra-444701.**

Abstract: Today's businesses are facing many challenges & one of these are recruiting & retaining competent & committed workforce. The biggest portion of company's budget goes to manpower management. Thus an organization needs to be very careful while dealing with this key resource i.e. human resource. In today's era of cutthroat competition company needs not only competent but also committed workforce in order to deliver required results and achieve profitability even they create healthy work environment. Loyal & committed employees are those who are self driven, motivated, satisfied & possess sense of belongingness to the organization. In this paper the determinants of employee loyalty are explained.

Key Words: Employee Loyalty, Employee retention, Performance Management, Work environment.

INTRODUCTION

Walt Disney once said: "You can dream, create, and build the most wonderful place in the world, but it requires people to make the dream a reality. This depicts the pivotal role of employees in organization.

"The speed at which today's economy changes has totally altered how you must go about recruiting, hiring and training new and existing staff to your way of doing business. As in order to organization be an efficient & effective it need to maintain healthy work environment, and healthy work environment will exist if an organization will be an able to attract & retain not only competent, well qualified & skilled but committed and loyal workforce. Loyal employees can reinforce the motivation of other employees & are the vital source of productivity to the organization.

Now a day's we are witnessing that the labor market is shifting continually and dramatically, which forces employers to adopt new strategies for managing workforce. Hiring & retaining competent & committed employees is the challenge for organizations.

Most likely, the greatest portion of company's budget goes to Human Resource costs as they represent significant investment in term of locating, recruiting, training let alone salaries, welfare plans, bonuses and rewards etc. Thus it becomes more obvious for an organization to create loyalty amongst these competent employees in order to achieve productivity and profitability.

Employee Loyalty

Loyalty is a strong feeling of support or allegiance. It signifies a person's devotion, sentimental of attachment to a particular object, which may be another person or group of persons, an ideal, a duty, or a cause. It expresses itself in both thought and action and strives for the identification of the interests of the loyal person with those of the object.

STUDIES ON DETERMINANTS OF EMPLOYEE LOYALTY TO THE ORGANIZATION-A STATE OF ART

*** Prof.Pratiksha Ashokrao Kalmegh ,** Prof. Minal M. Nistane,**
***Assistant Professor, Department of Management Studies, PRMIT&R,Badnera-Maharashtra-444701**
****Assistant Professor, Department of Management Studies, PRMIT&R,Badnera-Maharashtra-444701.**

Abstract: Today's businesses are facing many challenges & one of these are recruiting & retaining competent & committed workforce. The biggest portion of company's budget goes to manpower management. Thus an organization needs to be very careful while dealing with this key resource i.e. human resource. In today's era of cutthroat competition company needs not only competent but also committed workforce in order to deliver required results and achieve profitability even they create healthy work environment. Loyal & committed employees are those who are self driven, motivated, satisfied & possess sense of belongingness to the organization. In this paper the determinants of employee loyalty are explained.

Key Words: Employee Loyalty, Employee retention, Performance Management, Work environment.

INTRODUCTION

Walt Disney once said: "You can dream, create, and build the most wonderful place in the world, but it requires people to make the dream a reality. This depicts the pivotal role of employees in organization.

"The speed at which today's economy changes has totally altered how you must go about recruiting, hiring and training new and existing staff to your way of doing business. As in order to organization be an efficient & effective it need to maintain healthy work environment, and healthy work environment will exist if an organization will be an able to attract & retain not only competent, well qualified & skilled but committed and loyal workforce. Loyal employees can reinforce the motivation of other employees & are the vital source of productivity to the organization.

Now a day's we are witnessing that the labor market is shifting continually and dramatically, which forces employers to adopt new strategies for managing workforce. Hiring & retaining competent & committed employees is the challenge for organizations.

Most likely, the greatest portion of company's budget goes to Human Resource costs as they represent significant investment in term of locating, recruiting, training let alone salaries, welfare plans, bonuses and rewards etc. Thus it becomes more obvious for an organization to create loyalty amongst these competent employees in order to achieve productivity and profitability.

Employee Loyalty

Loyalty is a strong feeling of support or allegiance. It signifies a person's devotion, sentimental of attachment to a particular object, which may be another person or group of persons, an ideal, a duty, or a cause. It expresses itself in both thought and action and strives for the identification of the interests of the loyal person with those of the object.

A study of Work behaviour of generation Y employees - An Overview

* Prof. Minal Mahavir Nistane **Prof. Shrikant B. Diwan
*Assistant Professor, Department of Management Studies, Prof. Ram Meghe Institute of technology & research, Badnera-Amravati, Maharashtra.
**Assistant Professor, Department of Management Studies, Prof. Ram Meghe Institute of technology & research, Badnera-Amravati, Maharashtra.

ABSTRACT

Generation Y is the new generation after generation X that can be classified as a person who was born between 1980's and 1990's. This generation is the new generation or known as millennial who will fully enter the workforce and lead the organization. The objectives of this study are to get better understanding on the generation Y behaviour at the workplace.

A generation has been defined as a cluster of people who shares both the same birth years and significant life events. So, a generation arises with the birth rate increase and ends, when it drops and it represents a group who have a similar world view grounded in defined society or historical events that have occurred during that generation's development year. Followers of this specific thought discuss that those who grow up in different time periods have very different sets of beliefs, values, attitudes and expectations which in turn impact their behaviour generally and in the workplace. There are four generational groups in the time spanning more than 60 years: Traditionalists, Baby Boomers, Generation X and Generation Y, with the latter three being the primary generations. Despite all the variations in how they are described in the literature and how their start and end dates are categorized, there are some common thought among practitioners and academics about how these different generations are characterized and on the consequences of this for the way they are managed Generation Y, which is the most technically literate, educated and ethnically diverse generation in and at the graduate level there has been considerable interest not only in attracting, and retaining this talent but in developing it as well, is the latest generation in the workplace. At the same time, there have some indications that this generation of graduates plays a great deal of importance on personal development and continuous learning.

Keywords:
Generation Y employees, Work behaviour, Work place, Cultural

INTRODUCTION

The generation born in the 1980s and 1990s, comprising primarily the children of the baby boomers and typically perceived as increasingly familiar with digital and electronic technology.

The generation of people born during the 1980s and early 1990s. The name is based on **Generation X**, the generation that preceded them. Members of Generation Y are often referred to as "echo **boomers**" because they are the children of parents born during the baby boom (the "**baby boomers**").

Generation Y is used to refer to people born in the 80s and 90s. Their archetype is the Hero generation, an honor they share with the "G.I. Generation" who fought WWII. Compared to Xers they practically led a

A study of Work behaviour of generation Y employees - An Overview

* Prof. Minal Mahavir Nistane **Prof. Shrikant B. Diwan
*Assistant Professor, Department of Management Studies, Prof. Ram Meghe Institute of technology & research, Badnera-Amravati, Maharashtra.
**Assistant Professor, Department of Management Studies, Prof. Ram Meghe Institute of technology & research, Badnera-Amravati, Maharashtra.

ABSTRACT

Generation Y is the new generation after generation X that can be classified as a person who was born between 1980's and 1990's. This generation is the new generation or known as millennial who will fully enter the workforce and lead the organization. The objectives of this study are to get better understanding on the generation Y behaviour at the workplace.

A generation has been defined as a cluster of people who shares both the same birth years and significant life events. So, a generation arises with the birth rate increase and ends, when it drops and it represents a group who have a similar world view grounded in defined society or historical events that have occurred during that generation's development year. Followers of this specific thought discuss that those who grow up in different time periods have very different sets of beliefs, values, attitudes and expectations which in turn impact their behaviour generally and in the workplace. There are four generational groups in the time spanning more than 60 years: Traditionalists, Baby Boomers, Generation X and Generation Y, with the latter three being the primary generations. Despite all the variations in how they are described in the literature and how their start and end dates are categorized, there are some common thought among practitioners and academics about how these different generations are characterized and on the consequences of this for the way they are managed Generation Y, which is the most technically literate, educated and ethnically diverse generation in and at the graduate level there has been considerable interest not only in attracting, and retaining this talent but in developing it as well, is the latest generation in the workplace. At the same time, there have some indications that this generation of graduates plays a great deal of importance on personal development and continuous learning.

Keywords:
Generation Y employees, Work behaviour, Work place, Cultural

INTRODUCTION

The generation born in the 1980s and 1990s, comprising primarily the children of the baby boomers and typically perceived as increasingly familiar with digital and electronic technology.

The generation of people born during the 1980s and early 1990s. The name is based on **Generation X**, the generation that preceded them. Members of Generation Y are often referred to as "echo **boomers**" because they are the children of parents born during the baby boom (the "**baby boomers**").

Generation Y is used to refer to people born in the 80s and 90s. Their archetype is the Hero generation, an honor they share with the "G.I. Generation" who fought WWII. Compared to Xers they practically led a

'RESEARCH JOURNEY' International E- Research Journal | ISSN : 2348-7143
Impact Factor (SJIF) – 6.261, (CIF) – 3.452(2015), (GIF)-0.676 (2013) | February-2019
Special Issue 110 (C)- Computer Science
UGC Approved Journal

Security Threats To Social Networking Sites: A Review

Miss.Nilima D. Bobade & Miss.Snehalata D. Ulhe
Email Id- bobade1nilima@gmail.com &
Email Id - snehal.ulhe9@gmail.com
Mrs.Rupali R. Sherekar & Mrs.Preeti P. Deshmukh
Email Id – rupali.sherekar@gmail.com &
Email Id - preeti.deshmukh39@gmail.com

Abstract:-

Social Networking sites are at the heart of everyone now days. Everyone is sharing their personal information like images, videos on these sites. People are finding new and innovative ways to create an impact through these social networking sites and several businesses are also now thriving on such websites.

There are many security attacks which are possible on these sites to steal personal information which can be misused. Phishing is most common attack on social engineering sites. Social media offer many benefits to attacker than email or any other sites.Social networks provide a wealth of information about users. Depending on a person's privacy settings, an attacker might be able to see their contacts, location, and topics of interest.
In this paper we discussed different possible attacks on social networking sites and their preventive measures.

Keywords: Social networking ,Security attacks,Privacy.

Introduction:-

In this day and age, when most of our days begin with fiddling with our phones and logging onto social networking websites to check on latest updates about friends and the world around, social media is our source of news and entertainment.

These websites are a great way to connect with people from all over the world, stay in touch, share pictures, videos and other media and have a virtual connection with people with same interest.

Popular Social Networking Websites are:

Facebook

It is one of the most widely used social networking website where people make new friends, communicate and share media with them.

People can express feelings and views through status messages and tell the whole world about current updates like travel location and activity.

Nowadays it is used as a tool to promote product , companies , businesses,movies and shows.

WhatsApp

Every smart phone is having Whatsapp, the day starts and ends with whatsapp. With whatsapp one can do chatting with individuals or with group, Video call, whatsapp call and sharing stories. Whatsapp user uploads status which is viewed by everyone in phonebook.

YouTube

It is popular app from kids to senior citizen. Just give any topic to search it will provide us numbers of videos. Even one can create own YouTube channel, post videos and can get earning. Video become viral in very less time on YouTube .

'RESEARCH JOURNEY' International E- Research Journal | ISSN : 2348-7143
Impact Factor (SJIF) – 6.261, (CIF) – 3.452(2015), (GIF)-0.676 (2013) | February-2019
Special Issue 110 (C)- Computer Science
UGC Approved Journal

Security Threats To Social Networking Sites: A Review

Miss.Nilima D. Bobade & Miss.Snehalata D. Ulhe
Email Id- bobade1nilima@gmail.com &
Email Id - snehal.ulhe9@gmail.com
Mrs.Rupali R. Sherekar & Mrs.Preeti P. Deshmukh
Email Id – rupali.sherekar@gmail.com &
Email Id - preeti.deshmukh39@gmail.com

Abstract:-

Social Networking sites are at the heart of everyone now days. Everyone is sharing their personal information like images, videos on these sites. People are finding new and innovative ways to create an impact through these social networking sites and several businesses are also now thriving on such websites.

There are many security attacks which are possible on these sites to steal personal information which can be misused. Phishing is most common attack on social engineering sites. Social media offer many benefits to attacker than email or any other sites.Social networks provide a wealth of information about users. Depending on a person's privacy settings, an attacker might be able to see their contacts, location, and topics of interest.
In this paper we discussed different possible attacks on social networking sites and their preventive measures.

Keywords: Social networking ,Security attacks,Privacy.

Introduction:-

In this day and age, when most of our days begin with fiddling with our phones and logging onto social networking websites to check on latest updates about friends and the world around, social media is our source of news and entertainment.

These websites are a great way to connect with people from all over the world, stay in touch, share pictures, videos and other media and have a virtual connection with people with same interest.

Popular Social Networking Websites are:

Facebook

It is one of the most widely used social networking website where people make new friends, communicate and share media with them.

People can express feelings and views through status messages and tell the whole world about current updates like travel location and activity.

Nowadays it is used as a tool to promote product , companies , businesses,movies and shows.

WhatsApp

Every smart phone is having Whatsapp, the day starts and ends with whatsapp. With whatsapp one can do chatting with individuals or with group, Video call, whatsapp call and sharing stories. Whatsapp user uploads status which is viewed by everyone in phonebook.

YouTube

It is popular app from kids to senior citizen. Just give any topic to search it will provide us numbers of videos. Even one can create own YouTube channel, post videos and can get earning. Video become viral in very less time on YouTube .

'RESEARCH JOURNEY' International E- Research Journal | ISSN : 2348-7143
Impact Factor (SJIF) – 6.261, (CIF) – 3.452(2015), (GIF)-0.676 (2013) | February-2019
Special Issue 110 (C)- Computer Science
UGC Approved Journal

Security Threats To Social Networking Sites: A Review

Miss.Nilima D. Bobade & Miss.Snehalata D. Ulhe
Email Id- bobade1nilima@gmail.com &
Email Id - snehal.ulhe9@gmail.com
Mrs.Rupali R. Sherekar & Mrs.Preeti P. Deshmukh
Email Id – rupali.sherekar@gmail.com &
Email Id - preeti.deshmukh39@gmail.com

Abstract:-

Social Networking sites are at the heart of everyone now days. Everyone is sharing their personal information like images, videos on these sites. People are finding new and innovative ways to create an impact through these social networking sites and several businesses are also now thriving on such websites.

There are many security attacks which are possible on these sites to steal personal information which can be misused. Phishing is most common attack on social engineering sites. Social media offer many benefits to attacker than email or any other sites.Social networks provide a wealth of information about users. Depending on a person's privacy settings, an attacker might be able to see their contacts, location, and topics of interest.
In this paper we discussed different possible attacks on social networking sites and their preventive measures.

Keywords: Social networking ,Security attacks,Privacy.

Introduction:-

In this day and age, when most of our days begin with fiddling with our phones and logging onto social networking websites to check on latest updates about friends and the world around, social media is our source of news and entertainment.

These websites are a great way to connect with people from all over the world, stay in touch, share pictures, videos and other media and have a virtual connection with people with same interest.

Popular Social Networking Websites are:

Facebook

It is one of the most widely used social networking website where people make new friends, communicate and share media with them.

People can express feelings and views through status messages and tell the whole world about current updates like travel location and activity.

Nowadays it is used as a tool to promote product , companies , businesses,movies and shows.

WhatsApp

Every smart phone is having Whatsapp, the day starts and ends with whatsapp. With whatsapp one can do chatting with individuals or with group, Video call, whatsapp call and sharing stories. Whatsapp user uploads status which is viewed by everyone in phonebook.

YouTube

It is popular app from kids to senior citizen. Just give any topic to search it will provide us numbers of videos. Even one can create own YouTube channel, post videos and can get earning. Video become viral in very less time on YouTube .

'RESEARCH JOURNEY' International E- Research Journal | ISSN : 2348-7143
Impact Factor (SJIF) – 6.261, (CIF) – 3.452(2015), (GIF)-0.676 (2013) | February-2019
Special Issue 110 (C)- Computer Science
UGC Approved Journal

Security Threats To Social Networking Sites: A Review

Miss.Nilima D. Bobade & Miss.Snehalata D. Ulhe
Email Id- bobade1nilima@gmail.com &
Email Id - snehal.ulhe9@gmail.com
Mrs.Rupali R. Sherekar & Mrs.Preeti P. Deshmukh
Email Id – rupali.sherekar@gmail.com &
Email Id - preeti.deshmukh39@gmail.com

Abstract:-

Social Networking sites are at the heart of everyone now days. Everyone is sharing their personal information like images, videos on these sites. People are finding new and innovative ways to create an impact through these social networking sites and several businesses are also now thriving on such websites.

There are many security attacks which are possible on these sites to steal personal information which can be misused. Phishing is most common attack on social engineering sites. Social media offer many benefits to attacker than email or any other sites.Social networks provide a wealth of information about users. Depending on a person's privacy settings, an attacker might be able to see their contacts, location, and topics of interest.
In this paper we discussed different possible attacks on social networking sites and their preventive measures.

Keywords: Social networking ,Security attacks,Privacy.

Introduction:-

In this day and age, when most of our days begin with fiddling with our phones and logging onto social networking websites to check on latest updates about friends and the world around, social media is our source of news and entertainment.

These websites are a great way to connect with people from all over the world, stay in touch, share pictures, videos and other media and have a virtual connection with people with same interest.

Popular Social Networking Websites are:

Facebook

It is one of the most widely used social networking website where people make new friends, communicate and share media with them.

People can express feelings and views through status messages and tell the whole world about current updates like travel location and activity.

Nowadays it is used as a tool to promote product , companies , businesses,movies and shows.

WhatsApp

Every smart phone is having Whatsapp, the day starts and ends with whatsapp. With whatsapp one can do chatting with individuals or with group, Video call, whatsapp call and sharing stories. Whatsapp user uploads status which is viewed by everyone in phonebook.

YouTube

It is popular app from kids to senior citizen. Just give any topic to search it will provide us numbers of videos. Even one can create own YouTube channel, post videos and can get earning. Video become viral in very less time on YouTube .

RESEARCH ARTICLE OPEN ACCESS

Performance Comparison of RandomForest and Hoeffding Tree classifier using WEKA data mining tool on Car reviews data

S.A.Ghogare*, Dr.S.R.Kalmegh**
**(Shri.JJT University, Research Scholar,*
*** (Associate Professor, Dept. of Computer Science, SGBAU, Amravati, M.S.,*
Corresponding Author; S.A.Ghogare

ABSTRACT
The Size of data base is increasing day by day with rapid speed. The WEKA is data processing tool contain organized collection of state of art machine learning algorithm. However, convenient interactive graphical user interfaces are provided for data exploration, for setting up large-scale experiments on distributed computing platforms, and for designing configurations for streamed data processing. This paper has been carried out to make a performance evaluation of RandomForest and Hoeffding Tree classification algorithm. The paper sets out to make comparative evaluation of two Tree classifiers from WEKA RandomForest and Hoeffding Tree in the context of dataset of car reviews to maximize true positive rate and minimize false positive rate. The WEKA tool used for result processing. The results in the paper on dataset of car reviews also show that the efficiency and accuracy of RandomForest is excellent than Hoeffding Tree**.**
Keywords- Classification, Data mining, Hoeffding Tree, RandomForest, WEKA.

Date of Submission: 28-02-2019 Date of acceptance: 25-03-2019

I. INTRODUCTION

Today the rapid growth of internet, product related word-of-mouth conversation have migrated to online markets, creating active electronic communication that provide a wealth of information. The huge amount of data is generated from various resources. Disks and online storage make it too easy to postpone decisions about what to do with all this stuff, we simply get more memory and keep it all. In data mining, the data is stored electronically and the search is computerized or at least augmented by machine. Data mining is a topic that involves learning in a practical, non theoretical sense. We are interested in techniques for finding and describing structural patterns in data, as a tool for helping to explain that data and make predictions from it. Experience shows that in many applications of machine learning to data mining, the explicit knowledge structures that are acquired and the structural descriptions are at least as important as the ability to perform well on new examples. People frequently use data mining to gain knowledge, not just predictions [8].

Nowadays, more and more e-commerce platforms offer product reviews. A product review is a textual review of a customer or expert, who describes the characteristics of a product. A product rating on the other hand represents the customer's and expert opinion on a specified scale. In the given research paper we have used car review data set. Form Comparative analysis of RandomForest and Hoeffding Tree classifier.

II. DATA MINING TOOL

Data Mining is a powerful technology with great ability to help organizations focus on the most important information in their data center. It also predict future trends, behavior and with result. It also contains variety of analytical tools that used for data analysis. It allows users to analyze the data from many different aspects, categorize it, and summarize the identified relationships. There are many Data Mining tools are available such as the WEKA, KNIME, Orange, SPSS Clemantine, MATLAB, and NeuroShell etc. These tools provide a set of Data Mining methods and algorithms that help in better implementation of data and information available to users. The available Data Mining tools can be divided into two types which are open source/non-commercial software and commercial software. These types of tools have their own strengths and weaknesses in terms of data types and the application methods. From the given set of tool in my research work we have used WEKA tool.

III. WEKA

WEKA was developed at the University of Waikato in New Zealand; the name stands for Waikato Environment for Knowledge Analysis The system is written in Java and distributed under the terms of the GNU General Public License. It runs on