Dr. Nitin W. Ingole

He has published about 123 research papers in National and InternationalJournal of repute He is working as Professor & Dean (R&D) at PRMIT&R, Badnera and participated in number of conferences and symposia's. He has guided 38 students for their M.E. Thesis and 5 students awarded with Ph.D. under his guidance. He is recipient of various academic and professional awards of national/ international repute. He has more than 32 years of experience in teaching, research and development .

Dr. Milind V. Mohod

Milind Vishwas Mohod works as an Assistant Professor in Department of Civil Engineering at PRMIT&R, Badnera. He is also associated with research / design consultant at Civil Converge Solutions specializing in structural design. He has completed his PhD in Civil-Structural Engineering from SGBAU, Amravati.He has authored two books "Finite Element analysis of annular sector plate" and "Soil structure interaction by Finite Element Method". He is a reviewer for two Journals of repute. He has more than 10 years of experience in teaching, research and consultancy

Dr. Shrikant M. Harle

He joined Larsen & Toubro as Post graduate Engineer Trainee in 2010,promoted as senior design engineer and then Assistant Engineering Manager till 2012. Later he joined as Assistant Professor in Department of Civil Engineering Prof Ram Meghe College of Engineering and Management, Badnera. He has more than 10 years of experience in teaching, research and industry.

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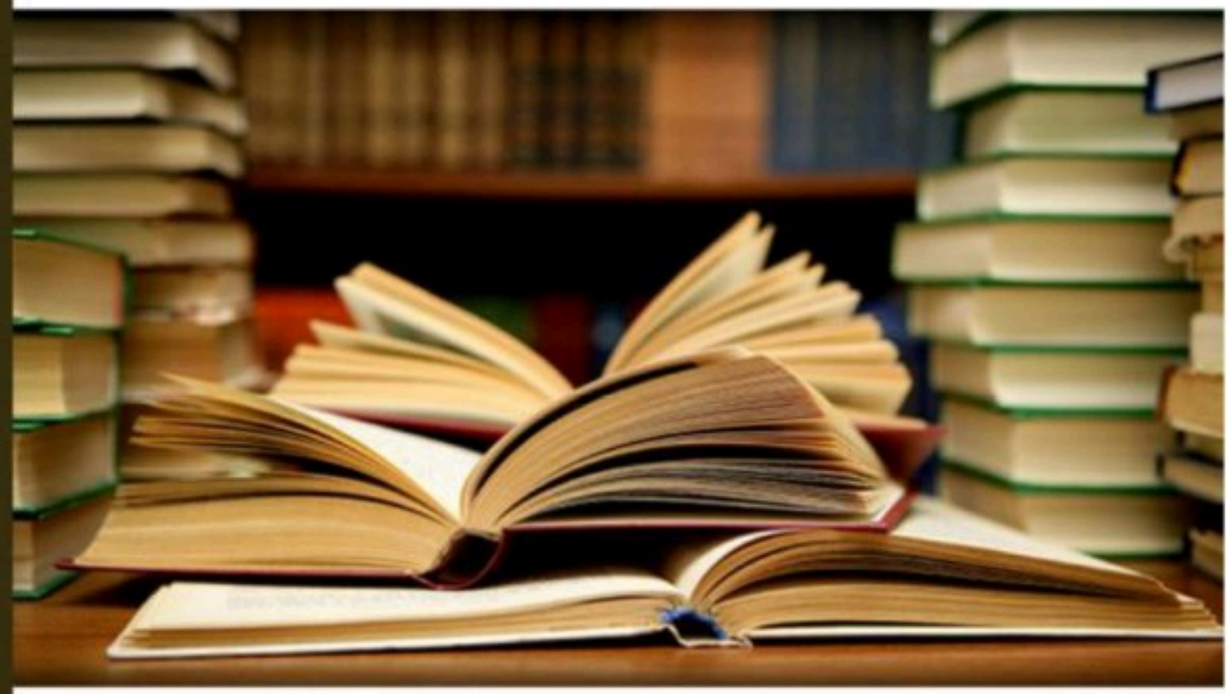

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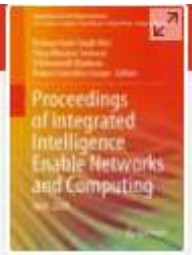

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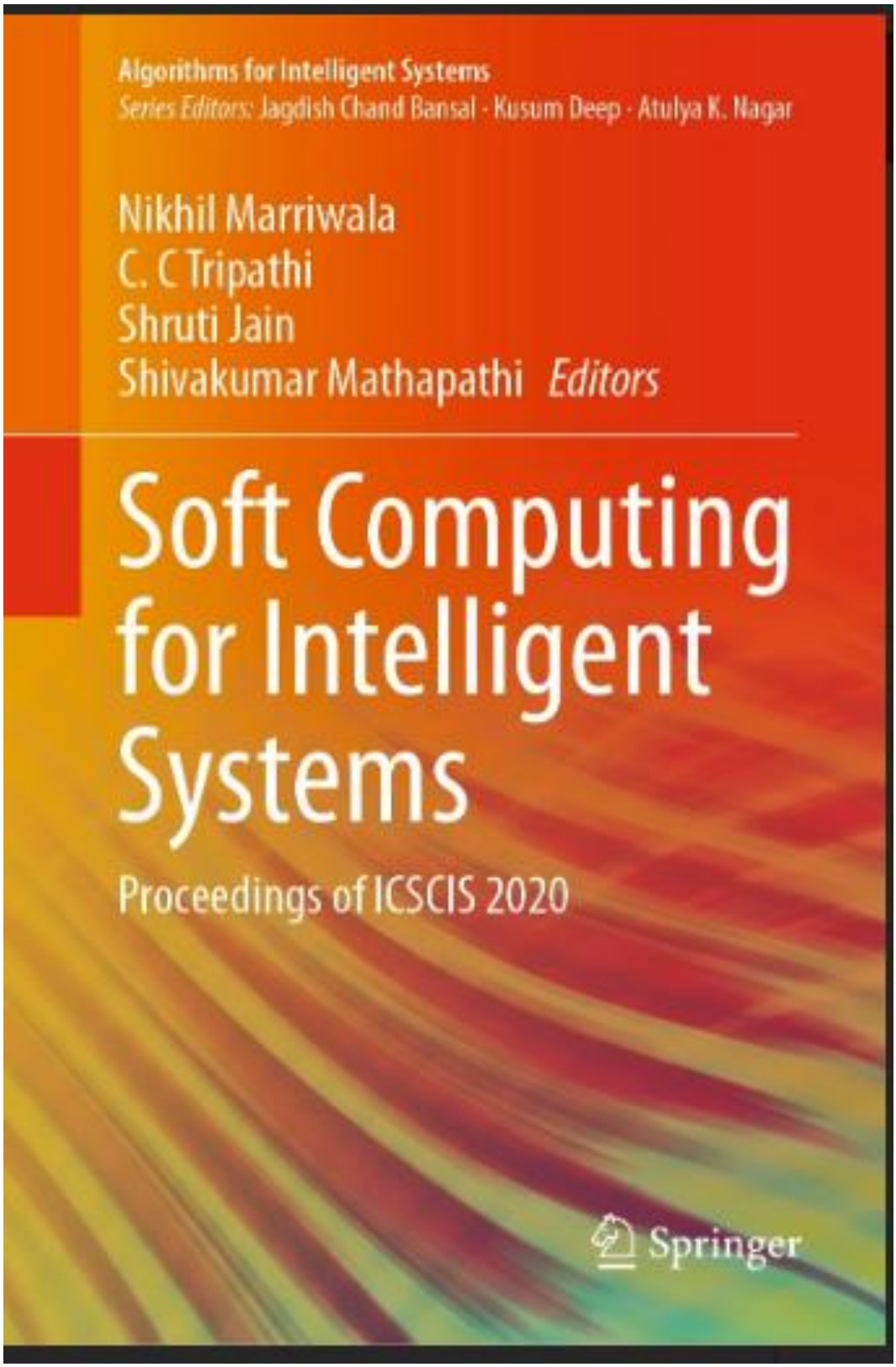
An Early Disease Prediction and Risk Analysis of Diabetic Mellitus using Electronic Medical Records

Rutuja A Gulhane[1] and Sunil R Gupta[2]

[1]Research Scholar, PRMIT&R, Badnera, Maharashtra, India
[2]Assistant Professor, PRMIT&R, Badnera, Maharashtra India

E-mail: gulhanerutuja@gmail.com, sunilguptacse@gmail.com

Abstract. In the world today, the fourth leading disease is Diabetes that could lead to other serious complicating diseases. Diabetes is one of the most common chronic disease which can also be the cause of death in many cases. An efficient system for early disease prediction and risk analysis of diabetic mellitus is very much needed as it has the major adverse effects. The large amount of medical data is collected by healthcare industry in the form of Electronic Medical Records. The Electronic Medical Records is communal database for clinical disease and risk prediction that are useful in accurately predicting multiple medical events using machine learning approach. Therefore, this research presents an efficient technique for early prediction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Jaikumar M. Patil & Sunil R. Gupta

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Abstract

Educational Data Mining (EDM) and Learning Analytics (LA) investigation has emerged as an attractive domain of study. The valuable unfolding experience from institutional databases for several determinations such as prophesying learners achievement rate, enforcement, coordination and improving the teaching–learning manner. The principal intention of learning organizations is to impart high-quality knowledge to their students. One way to produce quality instruction in the education arrangement is by identifying knowledge within EDM. It is

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Abstract:

Misinformation isn't definitely new thing; it is way before the inception of social media. It is evolving since 14th century but the term like "fake news", "post truth" are used commonly during movement of 2016 US presidential election. People use social media to read news as it is lost cost and user friendly platform; also it is possible to share news on social media with one click. With this merit, it is also having major disadvantage. If the news is false or

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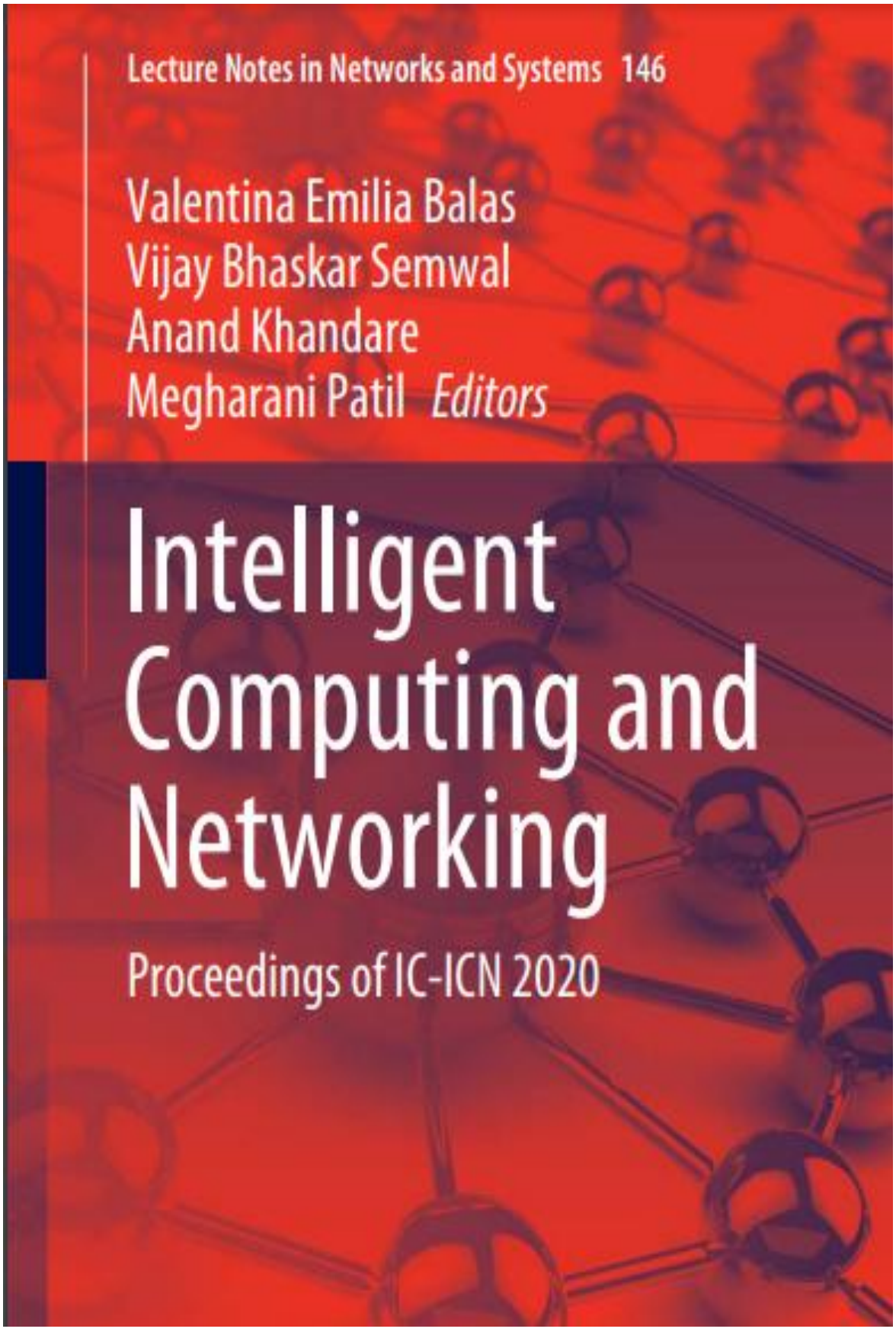
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Development of Agriculture Field Using Machine Learning

Rupali A. Meshram and A. S. Alvi

Abstract Indian farmers are behind as compared to other countries just not because of economic condition, but it has many reasons like they are lacking in the latest technologies, unaware about soil analysis, plant diseases, water table, quality of seeds and most important is a traditional way of farming. Indian farmers are not aware of modern way of farming. Various machine learning techniques are developed to improve farming techniques. The farmers can improve fruits quality and crop production with the help of machine learning. In this paper, we review agriculture problems that solved by using machine learning and also provide common steps that used to identify the objects from image dataset. In a nutshell, smart farming is the need of today's farmer.

Keywords Machine learning · Deep learning · Big data · Deep convolutional neural networks (CNNs) · Support vector machine (SVM)

1 Introduction

Farmers are facing various crop problems like diseases on plant, fruits ripeness, diseases on flowers, etc. Machine learning techniques are used to solve agriculture problems. Machine learning is an imminent field of computer science which can be

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An Analysis on Detection of Plant Diseases using Soft Computing Techniques

Ms. Archana B. Pahurkar [1]
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(abpahurkar@mitra.ac.in)

Dr. Ravindra M. Deshmukh [2]
DRGIT & R Amravati
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Abstract: As we know that in India most of the population is involved in agriculture field. So that plant disease detection is needed automatically in the early stage of disease as they adversely affected on production and quality of agriculture produce. Plant diseases affected on the leaf between seeding and picking which returns to enormous harm on the production of crop and reasonable value of market. Now a day's various soft computing techniques are developed to improve farming methods. Analysis on detection of plant diseases and their problems mostly consider in this article.

Keywords: Soft computing techniques, Support vector machine (SVM).

1. Introduction

To increase economic growth of India agriculture is the main source. The farmer chooses the essential crop grounded on the soil form, the location's weather situation, and economic rate. Traditionally farmers used naked eye method which requires massive man power, time consuming and inaccurate as it requires continuous monitoring by expert people so it is very expensive. Hence it is needed to detect the plant diseases automatically in their premature phase. Machine learning, deep learning and artificial neural network these are a trustworthy prediction approaches are used for identifying different diseases of plant leaves affected by fungus, bacteria and viruses.

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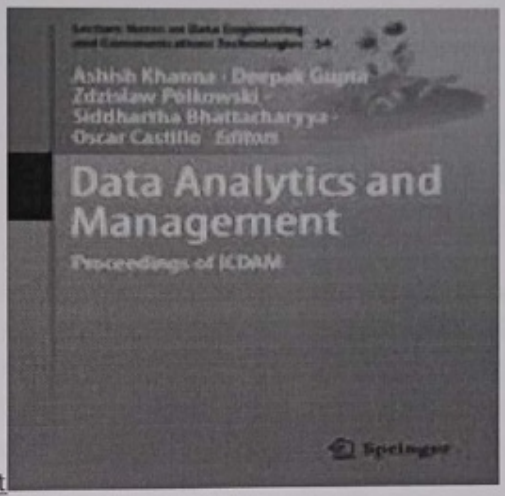

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Numerous techniques have been evolved for the detection of violence in human beings. Prior detection of human action can help to prevent and control suspicious and criminal activities. The offline video processing system has been used for post-action analysis. We address the violence detection trouble of humans in real-time visual surveillance such as punching, fighting. The present research work proposes a novel framework that processes real-time video data received from fixed cameras installed area of interest under surveillance. To determine the security level, we developed a new algorithm based on the decision-making classifier to recognize the violent situation in real time. In the view of human violence detection, the proposed work is simple and unique. The transition effects observed during violence detection

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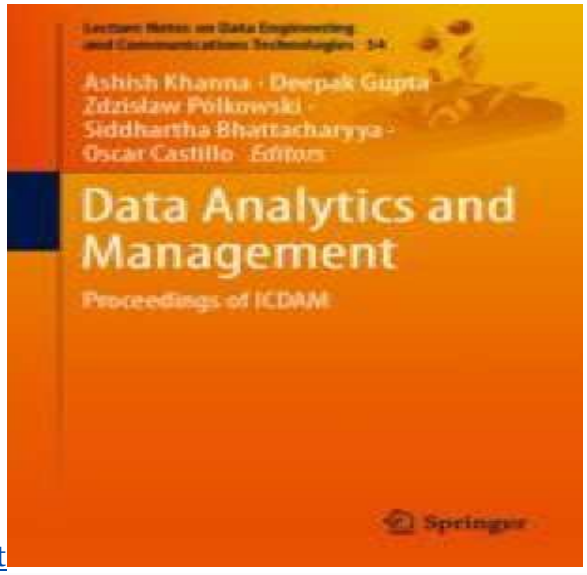

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are deliberated in detail. It has wide applications in the area of visual indexing, biometrics, telehealth, and human–computer interaction.

Keywords

Action recognition Surveillance Computer vision Violence detection Feature extraction Histogram Surveillance camera Classifier Human–computer interaction

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- **First Online**05 January 2021

- **DOI**https://doi.org/10.1007/978-981-15-8335-3_56
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- **Print ISBN**978-981-15-8334-6
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A new privilege of biometrics help to reduce the stress of user, Which comes along with the traditional access methods of passwords and token. Using the biometrics limitations and weaknesses can be knocked out. However, biometrics has raise privacy risks and new security since they cannot be easily revoked. Due to the spoofing attack on biometrics. Thus, to protect biometric traits against spoofing attack a multimodal biometric jammer scheme for the security enhancement have been developed and suggested in this paper. Firstly, we analyze why the multimodal biometric system have attracted attention for high security-demanding schemes. Secondly, security of biometric system is increasing and prevented it from spoofing attack developing a machine learning system model. We show that these machine learning algorithms perform pre-processing of biometric traits images. Further we analyze user identification with the increase precision and reliability using biometric features. Where feature extraction of each one trait of biometric is done and then all features are concatenation to get a single feature. With the aid of machine learning classifier using extracted features the algorithm predict the result of the system.

Published in: 2020 5th IEEE International Conference on Recent Advances and Innovations in Engineering (ICRAIE)
Date of Conference: 1-3 Dec. 2020
Date Added to IEEE *Xplore*: 26 February 2021
ISBN Information:
INSPEC Accession Number: 20393534
DOI: 10.1109/ICRAIE51050.2020.9358289
Publisher: IEEE
Conference Location: Jaipur, India

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Biometric Jammer: A Security Enhancement Scheme using SVM Classifier

Publisher: IEEE

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Priya Deshmukh; Sharad Mohod All Authors

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Abstract

Abstract:
A new privilege of biometrics help to reduce the stress of user, Which comes along with the traditional access methods of passwords and token. Using the biometrics limitations and weaknesses can be knocked out. However, biometrics has raise privacy risks and new security since they cannot be easily revoked. Due to the spoofing attack on biometrics. Thus, to protect biometric traits against spoofing attack a multimodal biometric jammer scheme for the security enhancement have been developed and suggested in this paper. Firstly, we analyze why the multimodal biometric system have attracted attention for high security-demanding schemes. Secondly, security of biometric system is increasing and prevented it from spoofing attack developing a machine learning system model. We show that these machine learning algorithms perform pre-processing of biometric traits images. Further we analyze user identification with the increase precision and reliability using biometric features. Where feature extraction of each one trait of biometric is done and then all features are concatenation to get a single feature. With the aid of machine learning classifier using extracted features the algorithm predict the result of the system.

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I. Introduction

“Fingerprints cannot lie, but a liar can make fingerprints”. [24]This statement by Mark Twain of an old quote has manifest on numerous occasions now as we have started use of biometrics more often in our day to day life. As the research and implementation has increased in the biometric field the demand for biometric based application has increased. Law enforcement, controlling boarder, residential and customer services and in financial services biometrics are used. This are the most prominent field of application of a biometric system. One of the noticeable applications of the fingerprint for authentication purpose is mostly use in the smart phones, PC'S, laptops. The fingerprint use, in smart phone has reach has upto 80%[3]. Along with this the security of personal devices and personal data is compromised due to the fake biometrics attack. To stimulate the efficiency of the system or devices we have to jam such attacks and make a secure user friendly system.

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Modeling For Multicore System Simulator for Computer Architecture

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ABSTRACT

This research discusses the various issues regarding the accurate and fast and automated system architecture which gives specific information about the various parameters and there effects on the simulation of the structure for the efficient processing of the system modeling. As there is a great demand of the simulation of the system architecture this research gives the better idea for the simulation and various components involved and how the process is followed superior quality of design and development components regarding the efficient utilization of the multicore processor. This research also discusses the various components like basic structure for simulation and for the efficient operation of the system using the various components and parameters which are closely related to each other. The detail analysis of these parameters is also done which are so intensely attached to each other that they may affect each other.

Keywords - Multi-core x86 CPU simulator; Emulator; Full- System simulator; Heterogeneous Multi-core systems; Processor Modeling.

I. INTRODUCTION

Now a days there is a great demand of the high end, fast and versatile devices which involves the high end processor and which also leads to different kinds of applications such as hard real time and soft real time. Any processor system before being implemented practically needs much iteration of up-gradations through simulation. The hard real time processors are those in which the deadline for the task assigned has to be completed within the specific and accurate timing constraints. Hence there is a great requirement for the high end processor and the cost of such processor design is very high. As it involves the number of critical issues which includes the design, development and implementation of such high end processors.

Hence before the actually implementing the hardware in to the hard core processor the various parameters regarding the processor must be studied and analyzed for the proper operation of the system and the overall functionality of the system architecture must be understood for the accurate functionality. Thus there is a great demand of such design which will fulfill all the design requirements which are in continuous demand for the application like military applications.

Another important aspect in the design and development of such system architecture involves the proper memory management. As all the data or information on which the processor is going to

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Detection and Prevention of Malicious Activities in Vulnerable Network Security Using Deep Learning

Maithili S. Deshmukh and A. S. Alvi

Abstract In today's environment, application protection is most critical because of the progression and sharing of data and knowledge techniques that generate new value-added services across various potential attacks. As a consequence, they have established numerous internet platforms. A Network Intrusion Detection System (NIDS) allows administrators within network processes to identify network security breaches. That being said, when a robust and reliable NIDS is built for unpredictable and unpredicted attacks, several issues arise. It is verified by the test conducted that the convolutional neural network is successful for NIDS. In this work, a deep-learning methodology to integrate quite a robust and scalable different cloud detection system has been highlighted. The device uses a recurrent neural network (RNN) monitored by a training algorithm to detect visible and invisible assaults. Initially, the information is preprocessed for input to both the neural network utilizing Data Balancing and standardization. To construct a learning model by preprocessing, the RNN technique was implemented to the refined data. The entire KDD Cup 99 was used to validate that. The false alarm rate, accuracy and detection rate have been measured to assess the detection accuracy of the RNN model when all is said and done. In comparison, we test and compare various algorithms for deep learning, i.e. Cloud environment RNN, CNN, DNN and PNN algorithm for network intrusion detection.

Keywords Recurrent neural network · KDD · WSN trace dataset · Deep learning · Intrusion detection system · Long short term memory

1 Introduction

Various kinds of attacks every day is faced by industries. And the best solution for it to use the Intrusion detection system (IDS). The machine interfaces protection has been in the concentration of research for times. The industry has appeared to understand that knowledge and network protection technology has converted required

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Virtual Memory Management using Memory Ballooning in OpenStack Cloud Platform

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Abstract—Management of memory in an efficient manner is one of the very important topics these days in Cloud environment. Optimized memory management techniques play the important role to handle the large amount data and processes in cloud environment. The smart memory management techniques should be integrated in cloud computing to do to memory optimization. The load balancing issues and the problem of latency can be resolved with the memory optimization. The efficiency of data optimization in cloud depends upon the resource allocation based on user demand. This is the key factor of resource optimization. As the allocation of resources are done as per the user demand then in most of the case resources are underutilized and remain idle. It causes the unused resources across the cloud platform. To get rid on this problem there is need to have continues resource monitoring and check system which will monitor the idle resources across the cloud. The various virtual memory optimization techniques are available. The cloud hypervisors uses the different memory optimization techniques which follows different principal. To handle memory optimization. The Ballooning is one of the important memory management technique in which memory of ideal virtual machine is used for the virtual machines which needs more memory to run the application.

Keywords—Virtual Memory, Memory Ballooning, Virtual machine

I. INTRODUCTION

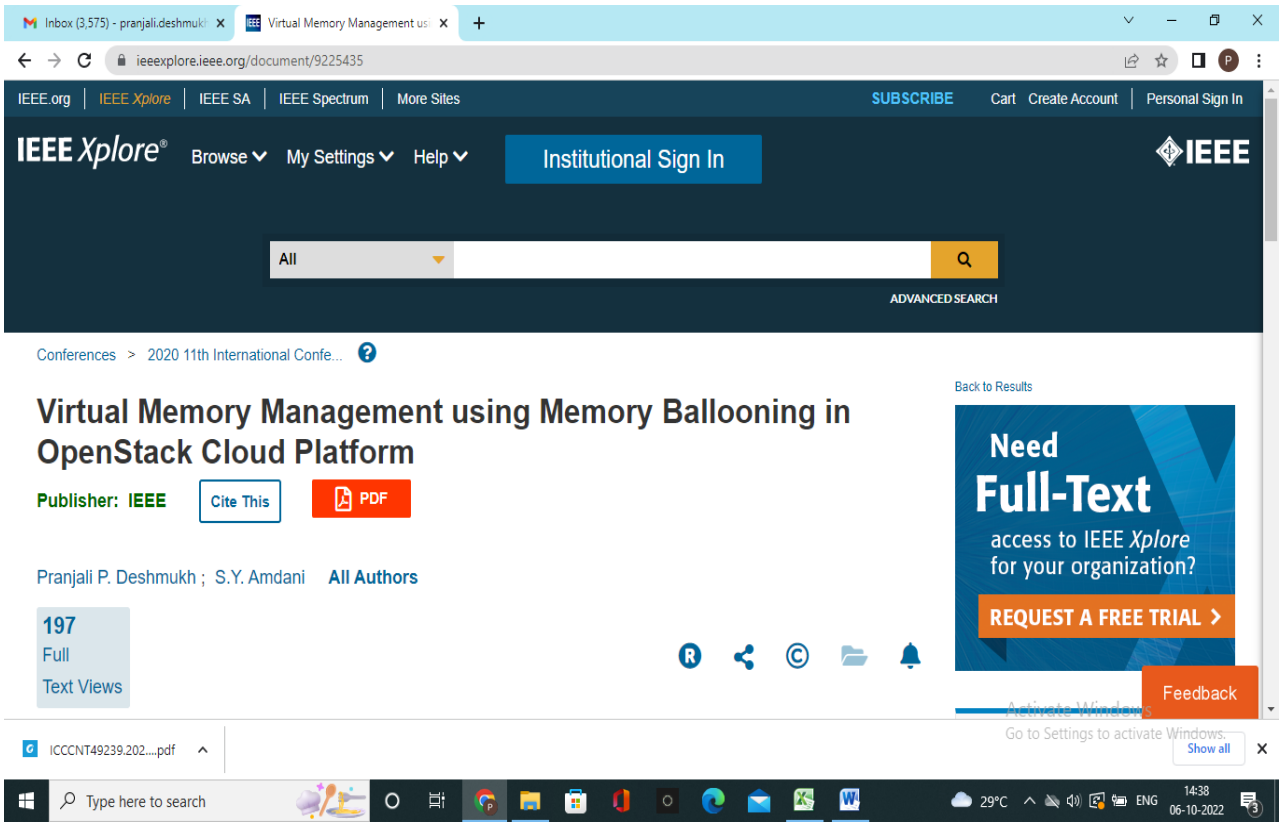
The term cloud can be called as large pool of resources. The cloud computing is the technique through which all those virtualized resources are easily accessible to cloud users. The resources can be hardware, software, development platforms or services. These resources are scalable and on demand available to end user [1]. The scalability and flexibility are the important features of cloud. The total cost of infrastructure can be reduced due to these features of cloud. This area becomes the top most research area and researchers are working on cloud security, cloud load balancing and memory management. Cloud has capability to provision resources dynamically amongst end users. So that resources can be scaled as per the demand of cloud users. The cloud computing provides various services like infrastructure as service, platform as service and software as service. Right from big industry to single user can access these services as per their need.

Virtualization is a foundation technology platform fostering cloud computing. Virtualization is the other term to cloud computing. The abstraction of compute resources are like memory, CPU, network, database is provided through virtualization. Virtualization is a most important part of cloud computing which helps any organization to optimize infrastructure and ultimately cost. It provides the ease to access of physical resources by hiding their physical characteristics to other system or end users. The virtualizations are of different types called server virtualization also called as hardware virtualization and other virtualizations are network virtualization, desktop and storage [9].

VIRTUAL MEMORY MANAGEMENT & NEED

Virtual memory is an integral part of modern computer architecture. In all general purpose operating system virtual memory plays the important role to manage process data. All the hardware resources support the virtual memory management in modern operating system. Address translation between virtual address space and physical address is done by operating system and it supported by virtual memory by creating uniform virtual address space for application programs. The virtual memory management is inbuilt feature of operating system. It uses various methods to manage virtual memory. Main memory is very small in size so to compensate shortage of main memory can be done with the help of secondary storage. The data can be transferred temporally on high speed disk area. Virtual address space which is temporary storage space is increased using active memory in RAM and inactive memory in computer hard disk drives to form contiguous addresses that hold both the application and its data.

Management of memory in an efficient manner is one of the very important topics these days in Cloud environment. Optimized memory management techniques play the important role to handle the large amount data and processes in cloud environment. The smart memory management techniques should be integrated in cloud computing to do to memory optimization. The load balancing issues and the problem of latency can be resolved with the memory optimization. The efficiency of data optimization in cloud depends upon the resource allocation based on user demand.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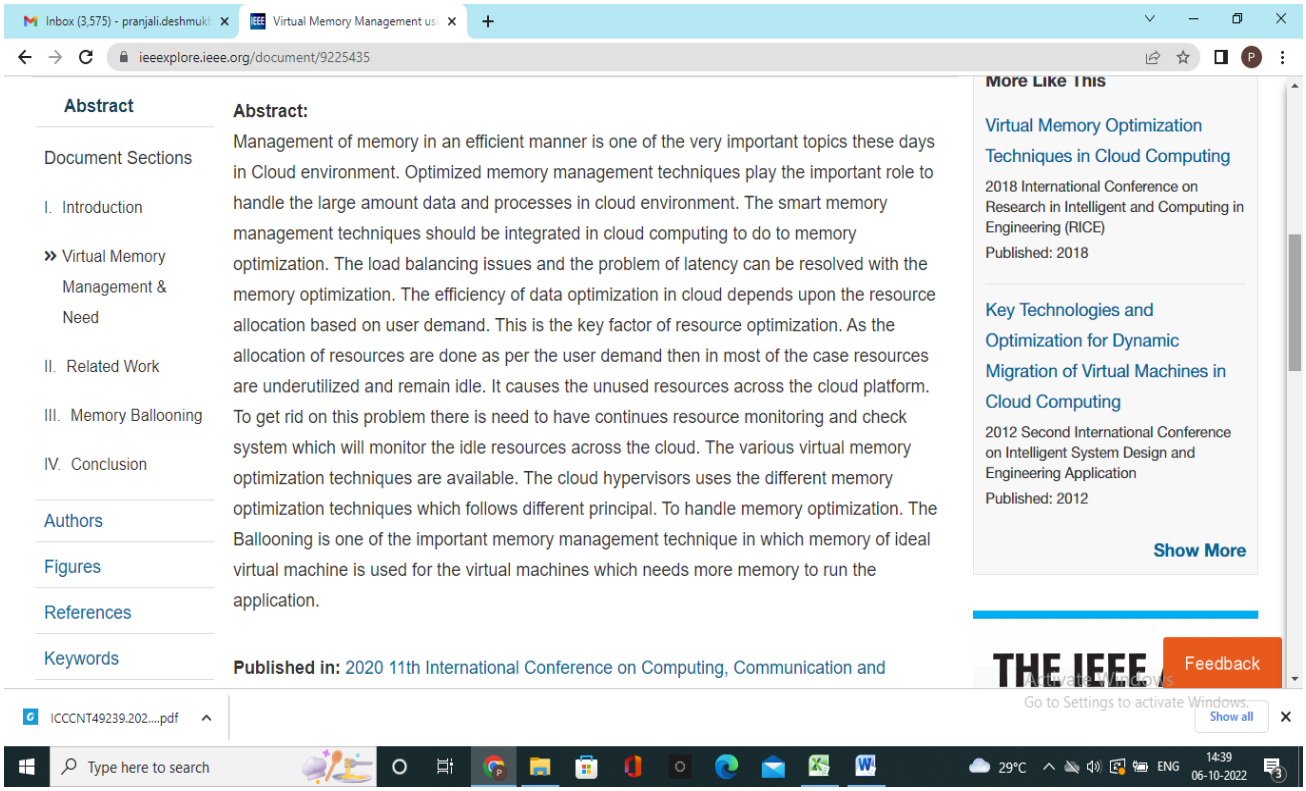
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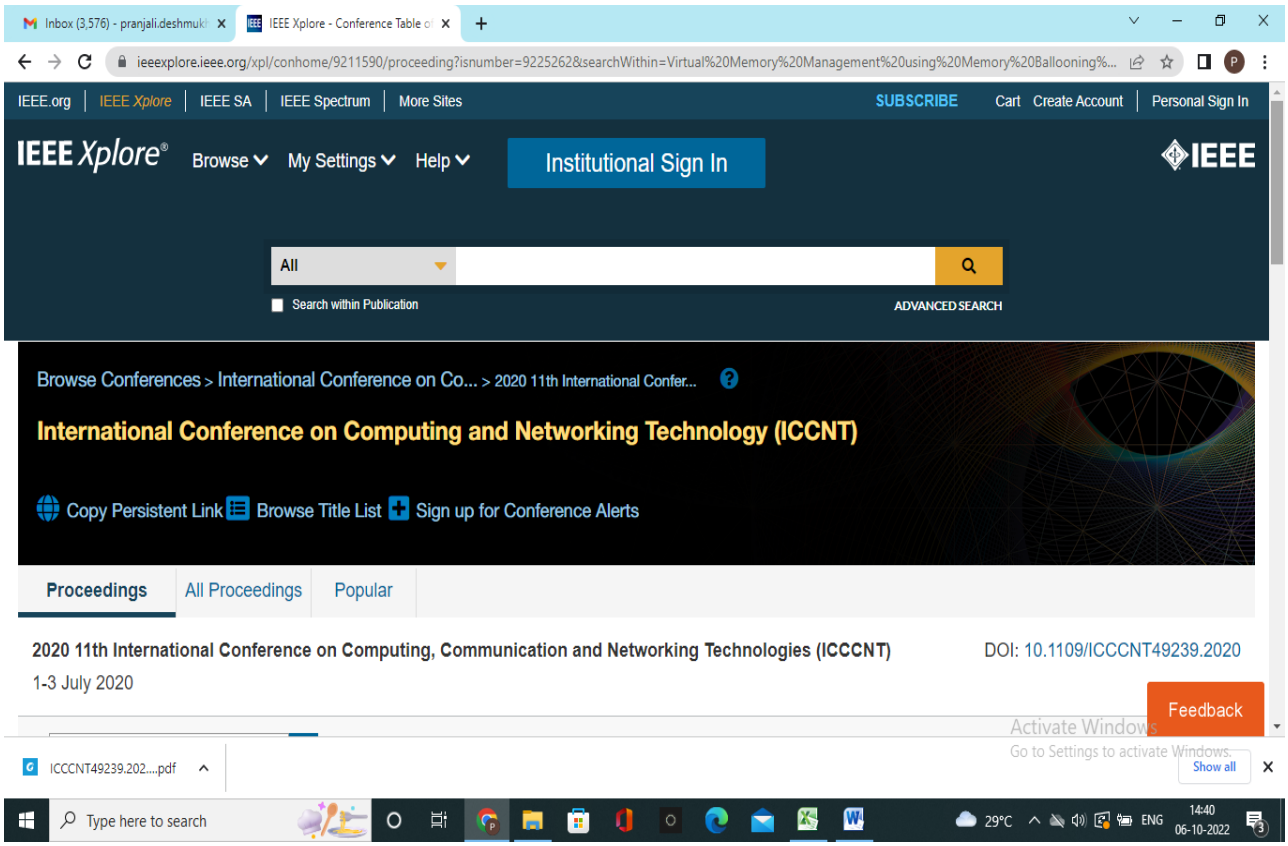
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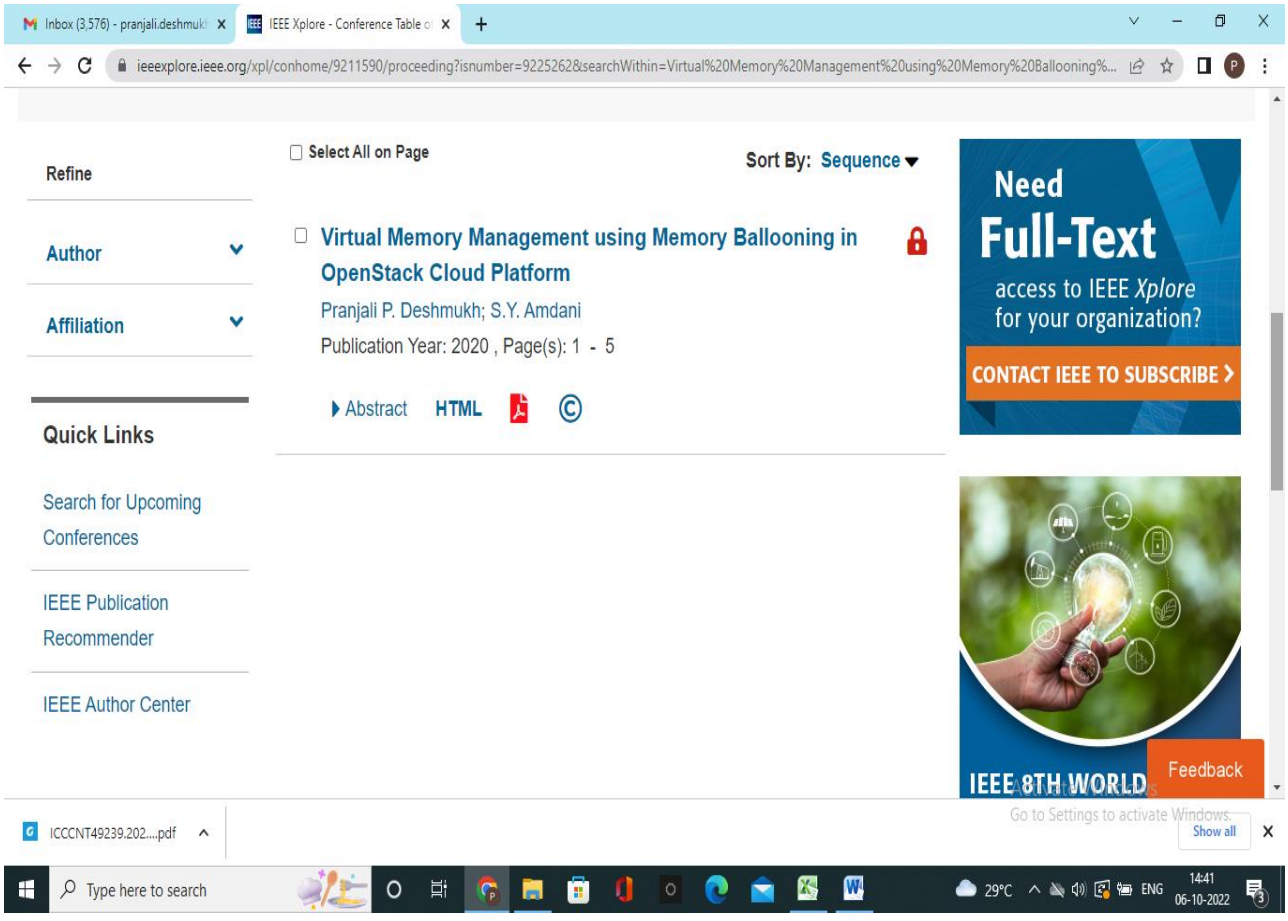
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Cannibalisation of Kaplan Turbine Runner Blades – A Case Study

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ABSTRACT

The failure of the components leads expensive maintenance activities, huge down time generation loss till it is restored its operational mode and incurs time consuming for its restoration as it falls under capital expenditure and needs sanction of energy regulatory authorities for tariff amendment due to the basic cost put on the maintenance of the generation units. A case study of frequent blade failure of a Kaplan turbine unit of DudhGanga hydroelectric plant (2X12 MW) is analyzed. The root cause of the failure of blade was identified and the most effective method of cannibalisation of old runner blade was undertaken in order to save huge generation loss due to down time for the replacement of new blades considering resultant risks involved in the safe operation and upkeep of the unit under generation mode. A huge saving of energy of about 100 million units were generated till to date by the process of cannibalisation. The resultant risks involving continuous close monitoring of healthy condition of turbine by noise and vibration, scheduled inspection and maintenance on unit rewarded in saving of huge generation loss due to the breakdown failure of the turbine.

Keywords: Hydro Turbine, High mechanical Loading, Noise and Vibration, Cannibalisation, Generation

1. INTRODUCTION

The demand for renewable energy sources such as hydro, solar and wind has been rapidly growing over the last few decades due to the increasing environmental issues and the predicted scarcity of fossil fuels. In view of that the global renewable energy production is steadily increasing to meet demands for clean and reliable energy. Among the renewable energy sources, hydropower generation is one of the primary sources which date back to 1770s. Presently, Hydropower contributes 16- 20% of total electricity generation in world and turbine being the power conversion component in hydropower plant. The International Hydropower Association (IHA) reports that renewable comprise 23%of the global electricity mix as of 2014, with 16% of the world's energy production coming from hydropower [1]. A study by the World Energy Council (WEC) shows the hydro power. The International Hydropower Association (IHA) reports that renewable comprise 23% of the global electricity mix as of 2014, with 16%of the world's energy production coming from hydropower [1]. A study by the World Energy Council (WEC) shows the hydro power generation accounts about 71% of all renewable energy [2]. Hence, hydro power plays a vital energy player in a world scenario with its outstanding characteristics of sustainable, clean and environmental source of energy.

2. LITERATURE REVIEW AND OBJECTIVE

Kaplan turbines are exploited effectively worldwide in low head and high discharge conditions. The turbine displays reasonable performance during the range of operations [3]. Kaplan turbines are double – regulated by which the adjustment of both guide vane and runner blade angle are synchronized to deliver a best efficiency point is above 90% efficiency at low head and larger flow rate. During the wide ranges of operation cycle, the Kaplan turbines are subjected to both static and dynamic loads [4]. The discharge flows through the runner at the given net head contributes the static pressure head whereas the rotor and stator interaction induce dynamic loads on the turbine. Research studies [4-5] have shown that these loads have caused a high stress concentration at the root area of the blade and the control mechanisms.

Life of a Kaplan turbine runner blades is around 30 years where as the blades of hilly regions have been replaced in a short span due to the erosion thinning of blades. Another type of failure encountered by the hydro turbines is the cases of resonances. When the frequencies of the runner coincide with the dynamic pressure frequencies of nature will substantially increase the blade vibration which will result in severe mechanical damages. In this paper, a case study of a non-common mechanical failure

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ISSN 2454-3187, Volume 05, Issue (IV)

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