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Comparative Study of Stock Price Prediction using Machine Learning

Parag P. Kadu; G. R. Bamnote

Publication Year: 2021 , Page(s): 1200 - 1204

Abstract HTML

Proceedings of the 6th International Conference on Communication and Electronics Systems (ICCES-2021)
IEEE Xplore Part Number: CFP21AWO-ART; ISBN: 978-0-7381-1405-7

Comparative Study of Stock Price Prediction using Machine Learning

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2nd Dr. G. R. Bamnote
Dept. Computer Science &Engg
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***Abstract*—The stock market is mainly an aggregation of different sellers and buyers of stock. "A stock (also known as shares more commonly) in general represents ownership claims on business by a particular individual or a group of people". The effort to find out the upcoming stock market value is recognized as a stock market prediction. The forecast is anticipated to be efficient, accurate and robust. The system should function based on the real-life circumstances and it have to be well-matched to realistic surroundings. The system is also expected to consider the entire constraints, which may have an effect on the stock's value and performance. In stock market the selection of stock is very important for trading and investment, if fundamentally the stock is good but if the sector of that stock is down then ultimately the one will lose its trade for buy position. That's why there is need to continuously know the updated knowledge of current situation, News that has direct or indirect impact on stock or sector. The recent example is due to covid-19 pandemic the auto sector was underperforming as the sell-value of vehicles are dropped down and the pharmacy sector is performing well due to covid-19 medicine. During past years many researchers have given contribution in this field but there is still a need to do the research for stock selection based on fundamental and technical analysis, this provides strong motivation for a system that can efficiently extract data from different web sources can be done using web crawling and capable of prediction of stock price, which would be helpful for individual for selection of stock for trading and investment.**

A further inspiration for analysis in this domain is that it holds numerous experimental and theoretical challenges. EMH (Efficient Market Hypothesis) is the most commonly accepted investment theory in economics. It is stated that all the related data about the stock will be reflects in the stock's prices in the market and the current value of stock cannot be affected by the past value [6]. As a result, the perfect mediation is maintained for the stock market and having no possibility for the cost on research, enthusiastic profits and trading are considered as the consumption of energy and resource [10]. Many individuals pay out certain time daily, obtaining the data, analysing that data and deciding to invest based on the obtained data in the investment management industry. Therefore, the stock market price can be analysed by two methods such as sentiment analysis and by the mathematical indicator [16, 17].

Sentiment analysis is the process of analysing the financial data which is available in the social media like news articles and tweets on the basis of stock prices [28]. The sentiments from news article and twitter over a period are extracted using the feature extraction process. The sentiments can deserve short-term market fluctuation that may cause disconnection between the true value and the price of the company shares. The extracted features are compared with the change in stock price for the identical period for a particular firm [29].

In the sentiment dictionary, there are various positive and

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Performance Evaluation of Machine Learning Classifiers in Malware Detection

in the IEEE International Conference on Distributed Computing and Electrical Circuits and Electronics (ICDCECE-2022), organized by the Ballari Institute of Technology and Management, Ballari, India in association with IEEE Bangalore Section and IEEE Information Society on 23rd-24th April, 2022.

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Performance Evaluation of Machine Learning Classifiers in Malware Detection

Umesh V. Nikam; Vaishali M. Deshmuh

Publication Year: 2022 , Page(s): 1 - 5

Abstract HTML

Performance Evaluation of Machine Learning Classifiers in Malware Detection

Publisher: IEEE

Umesh V. Nikam ; Vaishali M. Deshmuh **All Authors**

Abstract

Document Sections

I. Introduction

II. Related Work

Abstract:
Nowadays to gain illegal access of android devices or to cause harm to the system, attackers build many malicious software's. Theses malicious software's are known as malware. Once device is affected by malware, its performance degrades and more to that there is a risk that your data may be misused by attackers. Over the period of time these malwares have also evolved themselves and detecting a new & generic kind of malwares using conventional

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MACHINE LEARNING-BASED IMPROVEMENT IN QUALITY OF LEARNING USING 4Q & S APPROACH

at the

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organized by JCT College of Engineering and Technology, Coimbatore, India

on 23-25, February 2022.

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Machine Learning-based Improvement in Quality of Learning using 4Q & S Approach

Ruchita A. Kale; Manoj K. Rawat

Publication Year: 2022 , Page(s): 284 - 289

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Abstract HTML

Machine Learning-based Improvement in Quality of Learning using 4Q & S Approach

Publisher: IEEE

Ruchita A. Kale ; Manoj K. Rawat **All Authors**

Abstract

Document Sections

I. Introduction

II. Literature Review

Abstract:

Learning concepts have been extensively used in the manufacturing education sector, but practitioners have shown less interest in transferring learning theory to the educational sector. This work aims to demonstrate the critical nature of incorporating learning principles into educational institutions via the 4Q & S Model. The learning process for getting good outcomes by improving the overall performance. Eliminating waste in the organization, preparation, and

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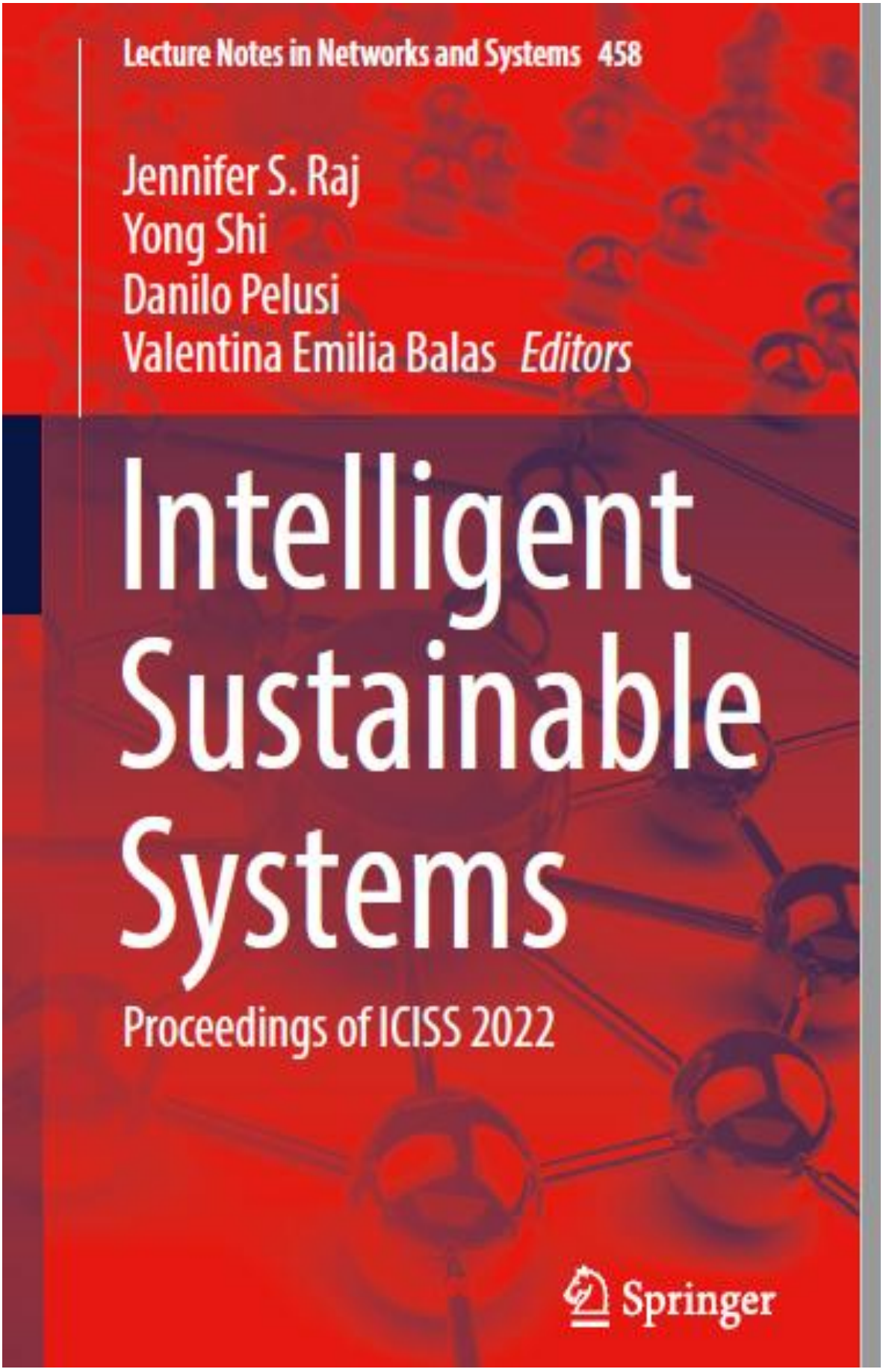
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Crop Disease Prediction Using Computational Machine Learning Model

Rupali A. Meshram and A. S. Alvi

Abstract The crop yield disease identification plays a significant role for improving overall crop production in agriculture field. Sustainable production in agriculture field conventionally depends on environment change, quality of soil and global warming. All prominent parts of cultivated plants get naturally affected by various diseases, and that diseases can be found in growing, flowering, fruiting phases of the plant. In this paper, an alternative approach proposed the training model which is used to accurately detect the various diseases occurring merely on plant's life span. In machine learning process, properly training the dataset is reliably to gain precise accuracy. During training, various factors are considered functionally to achieve precisely more appropriate performance of the experimental model. The training and validation efficiently implemented on cultivated crop disease dataset by considering the contemporary approach.

Keywords Machine learning · Cultivated crop diseases · Training–testing ratio · Augmentation and overfitting

1 Introduction

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PDMBM: Design of a High-Efficiency Plant Disease Classification Method using Multiparametric Bio Inspired Modelling

Archana Pahurkar; Ravindra Deshmukh

Publication Year: 2022 , Page(s): 1607 - 1615

Abstract HTML

PDMBM: Design of a High-Efficiency Plant Disease Classification Method using Multiparametric Bio Inspired Modelling

Publisher: IEEE

Archana Pahurkar ; Ravindra Deshmukh **All Authors**

Abstract

Document Sections

I. Introduction

II. Literature Review

Abstract:

A wide variety of machine learning and deep learning models are proposed by researchers, which assist in effective plant segmentation, feature extraction & selection, disease classification and post-processing operations. But these models are designed for disease-specific applications, which limits their scalability & performance when applied to larger plant datasets. To improve this scalability, a novel two stage bioinspired model that assists in high-

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Synthetic Image Classification Using ML

Publisher: IEEE

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Nupoor M. Yawale ; Neeraj Sahu ; Nikkoo N. Khalsa **All Authors**

Abstract

Document Sections

I. Introduction

II. Literature Review

III. Research Methodology

IV. Conclusion

Abstract:

Machine learning approaches typically need large volumes of training data and often demand costly manual etiquette to achieve their maximum ability. The value of images produced solely by visual means is on the increase. The color histogram is commonly used for the image classification challenge as a significant color characteristic that indicates the material. Since synthetic representations are an essential means through which visual knowledge is collected and presented. It is increasingly critical that these images are accurately classified in sub-categories – such as symbols, diagrams, figures and tables, logos, etc. The proposed research work aims at classifying synthetic images into sub-categories. The essential features of images shall be extensively analyzed and processed. When the web begins, photographs are used to convey content and beautify, shape, and align. In particular, the work is directed to

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Synthetic Image Classification Using ML

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Publication Year: 2021 , Page(s): 1 - 5

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Synthetic Image Classification Using ML

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Nupoor M. Yawale ; Neeraj Sahu ; Nikkoo N. Khalsa **All Authors**

Abstract

Document Sections

I. Introduction

II. Literature Review

III. Research

Abstract:
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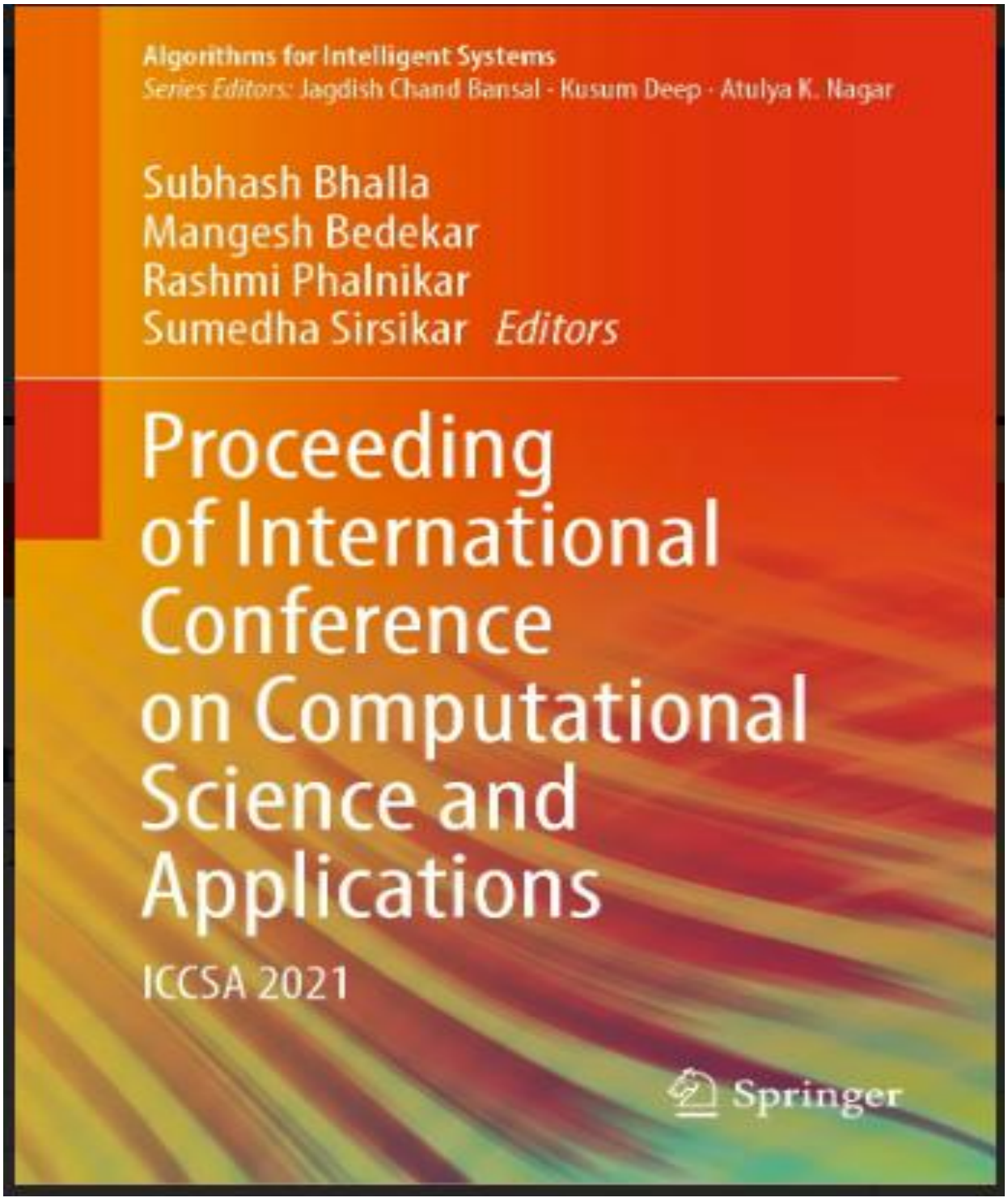
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Nilima V. Pardakhe, V. M. Deshmukh
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Secure Hybrid Approach for Sharing Data Securely in VANET

Atul Kathole, Dinesh Chaudhari
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Machine Intelligence

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MetaEfficientNet: A Few-Shot Learning Approach for Lung Disease Classification

Shravani Nimbolkar, Anuradha Thakare, Subhradeep Mitra, Omkar Biranje, Anant Sutar
Pages 225-242

Use of Blockchain for Securing Electronic Health Records During COVID-19 Pandemic

Nilima V. Pardakhe & V. M. Deshmukh

Conference paper | First Online: 27 April 2022

Part of the Algorithms for Intelligent Systems book series (AIS)

Abstract

Electronic health records (EHRs) are utilized to protect and exchange health data in most healthcare facilities, replacing paper-based systems. EHRs are real-time, patient-centered records that enable authorized users to access information quickly and securely. Apart from the fundamental standards of information secrecy, confidentiality, and integrity, there is a requirement for interoperability and user control over entree to their information. There are still concerns about the Electronic Health Record (EHR) system, such as data security, trust, and

Analysis of Hyperspectral Image Denoising Using Deep Neural Network (DNN) Models

Vaibhav J. Babrekar and Shirish M. Deshmukh

Abstract Image denoising is considered a common preprocessing step in the analysis and interpretation of hyperspectral images. Nevertheless, most of the methods developed and used previously was adopted for HSI denoising exploit architectures originally developed for grayscale and RGB images which limit the processing of high-dimensional HSI data cubes. As rich spectral information is present in HSI which is to be fully exploited considering the high degree of spectral correlation between adjacent bands in HSIs which gives in resulting poor image denoising, HSI denoising is the most important preprocessing step before the image is being classified. End to end mapping is needed between the clean and noisy images for the dataset by the deep learning method. Conventional low-rank methods lack flexibility for considering the correlation between different HSI which results to loss of information. This paper gives a brief review and analysis of the state-of-the-art available methods for hyperspectral image de-noising with the major advancements, benefits and obstacles in denoising an HSI. Due to limited availability of real time dataset of HSI and equipment expenses, researchers rely on the freely available hyperspectral datasets. This research proposes Hyperspectral image denoising for efficient classification of objects on the earth surface.

Keywords Hyperspectral image denoising · Remote sensing · Deep neural networks · HSI classification · Feature extraction

1 Introduction

HSI is extensively used in numerous applications such as agriculture planning, urban locality planning, monitoring the changes occurring in environment, anomaly detection. Because of some factors, these images are usually tarnished with noise which are type casted in regions of salt and pepper, stripes, Gaussian or dead-line noise, which is primary cause of the degradation of HSIs [1, 2]. Hyperspectral imaging

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M. S. Kaiser et al. (eds.), *Proceedings of Trends in Electronics and Health Informatics*, Lecture Notes in Networks and Systems 376,
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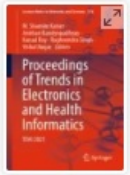

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Vaibhav J. Babrekar & Shirish M. Deshmukh

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Analysis on vehicular control system in self-driving cars using artificial intelligence and machine vision

Akshay Utane[1] and Dr. S. W. Mohod[2]
1Phd research scholar, Department of EXTC, PRMIT & R Badnera, Amravati, India ,
Email:akshay.utane11@gmail.com
[2]Professor , Department of EXTC, PRMIT & R Badnera, Amravati, India

Abstract: Due to the very dynamic environment and difficult to perform a required system in the vast range of situations that it may meet after deployment, developing a controller for autonomous cars capable of giving appropriate performance across all driving conditions is tough. Artificial intelligence technologies, on the other hand, have showed considerable promise in terms of not only delivering exceptional results for difficult and non-linear control issues, but also in generalizing previously taught principles to new circumstances. Artificial intelligence for vehicle control has become progressively popular as a result of these factors. Although much progress has been made in this sector, these efforts have yet to be properly described. This study reviews a wide range of research studies that have been published in the literature that attempt to operate a vehicle using artificial intelligence in self-driving cars. Unlike other review studies, we look at the theory behind self-driving vehicles from an artificial intelligence standpoint, as well as contemporary implementations and critical assessments.

Keywords: Autonomous vehicles, Artificial Intelligence, Deep Learning, Intelligent control, Computer vision

1. Introduction

Various applications of artificial intelligence (AI) have acquired popularity and come to the fore as a result of recent developments in AI. Self-driving vehicles are one such application that is expected to have a significant and revolutionary influence on people and the role people commute. Despite the fact that adoption and adoption of technology can be difficult at first, these automobiles will be the first significant incorporation of personalized robots into human civilization. Over the last decade, there has been an increase in research interest in using AI to drive automobiles. Cars are eventually set to transform into intelligent machines associated with human lives, resulting in a diversified socio-economic effect, thanks to rapid breakthroughs in AI and related technologies. [1] However, in order for these automobiles to become a reality, they must be endowed with the perception and cognition necessary to deal with high-pressure real-life events, make right judgments, and adopt safe and appropriate action at all times. Computer vision in self-driving car's is one of the most complex and difficult AI models to date, relying on computer vision to visualize the scene and make the car feel at ease while travelling from one location to another. For autonomous cars, computer vision in AI allows them to see all that is normally observable in their natural surroundings. Computer vision systems (CVS) are part of the AI in self-driving cars, and they include picture categorization, segmentation, object identification, and positioning for fundamental ocular functionality. Object detection is developing as a computer vision (CV) sub domain that can benefit from AI. To be able to replace a human driver, a self-driving automobile must essentially do three activities as perceive, think, and act as indicated in figure 1. [2-3]

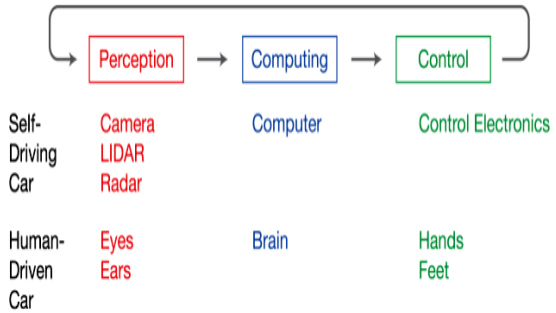

Fig 1: Task to be performed by a car

Most technical specialists will relate to levels of maturity when discussing self-driving automobiles. Figure 2 depicts the level of autonomy; a self-driving car's autonomy refers to how many of the piloting is conducted by a computer rather than a human. The higher the rate, the more computer-assisted driving there is.

Comparative Study on Plant Leaf Disease Detection and Classification, Based on Machine Learning Techniques

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Prof. Ram Meghe Institute of Technology & Research, Badnera, Amravati, India
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Abstract— **Plants are a major source of food for the world population. Plant diseases contribute to production loss, which can be tackled with continuous monitoring. Manual plant disease monitoring is both laborious and error-prone. Early detection of plant diseases using computer vision and artificial intelligence (AI) can help reduce the adverse effects of diseases and overcome the shortcomings of continuous human monitoring. To identify the recent advancements in the development of plant disease detection and classification system based on Machine Learning (ML) and Deep Learning (DL) models [5]. An organized way of analysis of various plant disease classification models has been shown in well-formed tables. In this paper, we have conducted a systematic literature study on the applications of the state-of-the-art ML and DL algorithms such as Support Vector Machine (SVM), Convolutional Neural Network (CNN), K-Nearest Neighbor (KNN), Naïve Bayes (NB), other few popular ML algorithms and AlexNet, GoogLeNet, VGGNet, and other few popular DL algorithms respectively for plant disease categorization. Each stated algorithm is characterized through the corresponding processing methods such as image segmentation, feature extraction, along with the standardized experimental-setup metrics such as total number of training/testing datasets employed, number of diseases under consideration, type of classifier utilized, and the percentage of classification accuracy.**

Keywords— *Plant Disease, Machine Learning, Deep Learning, Support Vector Machine, K-Neurest Neighbor, Convolutional Neural Network.*

I. INTRODUCTION (*HEADING 1*)

One of the important sectors of the Indian Economy is Agriculture. Employment to almost 50% of the countries workforce is provided by the Indian agriculture sector. India is known to be the world's largest producer of pulses, rice, wheat, spices, and spice products[7].Farmer's economic growth depends on the quality of the products they produce, which relies on the plant's growth and the yield they get. Therefore, in the field of agriculture, the detection of disease in the early stage of plants plays an instrumental role[10]. Plants are highly prone to diseases that affect the growth of the plant which in turn affects the ecology of the farmer.

To detect a plant disease at the very initial stage, the use of an automatic disease detection technique is advantageous. The symptoms of plant diseases are conspicuous in different parts of a plant such as leaves, stems, branches, etc. Manual detection of plant disease using leaf images is a tedious job. Hence, it is required to develop computational methods that will make disease detection and classification using leaf images automatic &time-consuming.

Despite the challenges in plant disease detection, it is still an active area of research. Numerous approaches have been proposed over the years. In traditional systems approach for detection and differentiation of plant, diseases can be achieved using deep learning with CNN & ALDD (orange Leaf disease dataset) for real-time detection of apple leaf diseases using deep learning approach based on improved convolution neural networks, which has got an accuracy of 78.80% & 23.13FPS. Another approach is Support Vector Machine (SVM) algorithms [2] like LSVM, QSVM, CKNN, ESD (Ensemble Subspace Discriminative) are used. This technique was implemented for grape leaf diseases and depending on the type and stage of disease, the classification accuracy was between 90% and 92%. Another approach based on leaf images and using CNNs as a technique for automatic detection and classification of plant diseases was used with K-means is a clustering procedure. CNN consisted of 10 hidden layers. The number of outputs was 6 which was the number of classes representing five diseases along with the case of a healthy leaf.

Having diseases is quite natural in crops due to changing climatic and environmental conditions. Diseases affect the growth and production of crops and are often difficult to control. To ensure good quality and high production, it is necessary to have accurate disease diagnosis and control actions to prevent them in time. In India, we have a wide variety of crops and they may be affected by different types of diseases on leaf, stem, and fruit. Leaf diseases are the early symptoms caused due to fungi, bacteria, and viruses. So, there is a need to have an automatic system that can detect the type of diseases and take appropriate actions.

II. COMPARISION OF TECHNIQUES FOR PLANT DISEASE CATEGORIZATION

This section summarizes 15 papers are compared for plant disease categorization with respective to methodology, parameter consider, advantages and drawbacks for various plants leaf diseases. Summary of comparison is given in following table.

CERTIFICATE

(Co-author - S.V. Pattalwar)

This is to certify **Prasad W. Bhombe** of Prof Ram Meghe Institute and Technology, Research Badnera has presented the paper titled "Comparative Study on Plant Leaf Disease Detection and Classification, Based on Machine Learning Techniques" in AICTE sponsored National Conference on **Multidisciplinary Research and Innovation-21 (NCMRAI-21)** organized by Department of Electronics and Telecommunication Engineering, Sipna College of Engineering & Technology, Amravati held during 28-29 January 2022.

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Grenze International Journal of Engineering and Technology, Jan Issue

Review on Classification of Natural & Synthetic Images

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Abstract—**The classification of image system mainly focuses on photographic and non-photographic i.e. natural & synthetic images. The semantic description-based on classification of images is a more interesting and significant problem in involuntary image identification. An algorithm for natural and synthetic image classification system has been established. In order to adventure the difference, the color pattern and spatial correlation of pixels in natural and synthetic images, some of the features are removed from the database of images. If these features are used alone, they have low accuracy but when it combined together and used for image classification forms a more multifaceted and appropriate classification and their exactness can be improved. Proposed image classification for natural and synthetic images algorithm will be use these low-level features of images such as edge map, color map, threshold ratio, nearest neighborhood & energy level for classification of the images into synthetic and natural.**

Index Terms— **Natural Image, Synthetic Image Color map, Edge map, Energy Level, Threshold value and nearest neighborhood.**

I. Introduction

Differentiating between a photograph and a graphic is always a simple task, for human being. It is often just matter of a glance. But unfortunately, it is not simple task for a computer, there is no simple and easy feature are available to extract and process the images. The amount of colors, edge map, edge location, energy level, & threshold ratio is taken from the raw image data available in different ways. These features are collected together to build a solid classifier. If it is used individually, they can lead to poor or incorrect results. The main motive of proposed system i.e. image classification is used to separate images into dissimilar classes [1].

The ideal systems are able to distinguish different images with no unwillingness like a human being. Unfortunately, sometimes the classification task is more complicated and unclear even for a human. The entirely images are created by digital means, are increasing is more important. These types of synthetic images are more important for recording and provides visual evidences. The correct classification for these images such as icons, maps, figures and charts are more important. The images which are downloaded from of the internet, are not used for just communicate the contented but also used for decoration, formatting and alignment. The image classification system can improve image examination and recovery engines and act as an input filter for down streaming for internet processing as well as image sympathetic systems [2].

In another side, it is very frequently a natural image describe the actual objects and subjects. They usually have textures, smooth angles, larger variety of colors but less saturated by making these problems are more

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This is to certify that Nilesh S Wadhe *of* SAGE University, Indore, India *author of a Research Paper titled* Review On Classification Of Natural & Synthetic Images *has submitted the paper which has been approved and presented for publication in the Sixth International Joint Colloquiums on Computer Electronics Electrical Mechanical and Civil, CEMC 2021, which is Jointly organized by the ACEECom, AMAE and ACEE – sub divisions of The IDES.*

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Analysis of Precise Green House Management System using Machine Learning based Internet of Things (IoT) for Smart Farming

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***Abstract* - Currently, wireless connectivity is replacing the existing wired system present in smart farming, which was difficult to maintain and install. Greenhouse is integrated with smart farming to improve agricultural growth management and, as a result, diverse conditions should be observed at precision agriculture. This paper has suggested a system and conducted an analysis on the present and previous research works that discuss about the greenhouse system's major elements, benefits, and challenges. The primary purpose of this work is to show and identify existing research gaps, as well as greenhouse characteristics that are considered in each system. Due to limited solutions, Agriculture growth on completely controlled systems is not yet capable of being monitored in greenhouses. This research proposes a smart greenhouse system for implementing remote monitoring and control in precision agriculture domain.**

***Keywords*— Smart Farming, Artificial Intelligence (AI), Internet of Thing (IoT), Greenhouse Management.**

I. INTRODUCTION

Growing plants has turned out to be an interesting challenge, given the field and quality of the plants as critical boundaries now and then, whether for money harvests or food crops. One of the major challenges in today's agriculture is the lack of knowledge about farming boundaries and data about the increasing advancements. In the previous agribusiness structure, ancestors have avoided the use of a specific improvement in explicit plant development, instead utilized the normal wonder for all plants [4]. The mechanical change in the agribusiness can help to grow plants under extraordinary typical conditions, likewise this creates explicit plants under explicit condition, which help to get more yield and less manure. Natural reasonableness of plant crops is the gigantic utilization of manures, water and pesticides [8] [22] [31]. In the concentrated greenhouse conditions, producers can regularly apply the agrochemicals to surpass the genuine yield needs by subsequently causing ecological contamination and waste. The above issue mainly occurs due to two fundamental segments: i) the expense for agrochemicals and also the water is low whenever contrasted and complete creation costs; ii) crops are dealt with a serious extent of induction without contemplate target estimations that are achieved consequently through cutting edge gadgets for performing crop checking. In India, a large portion of the populace is reliant on the agriculture area for employment, as 53% populace and 61.5 % of the populace of India is basically subjected to the horticulture area for its occupation [4]. Focusing on marketplace size, India is the second-biggest organic product maker on the planet. In light of certain information and insights, the cultivating pay in India is relied upon to twofold by 2022.

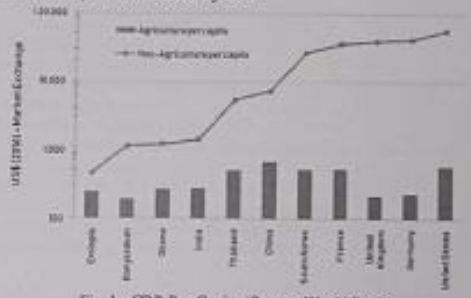
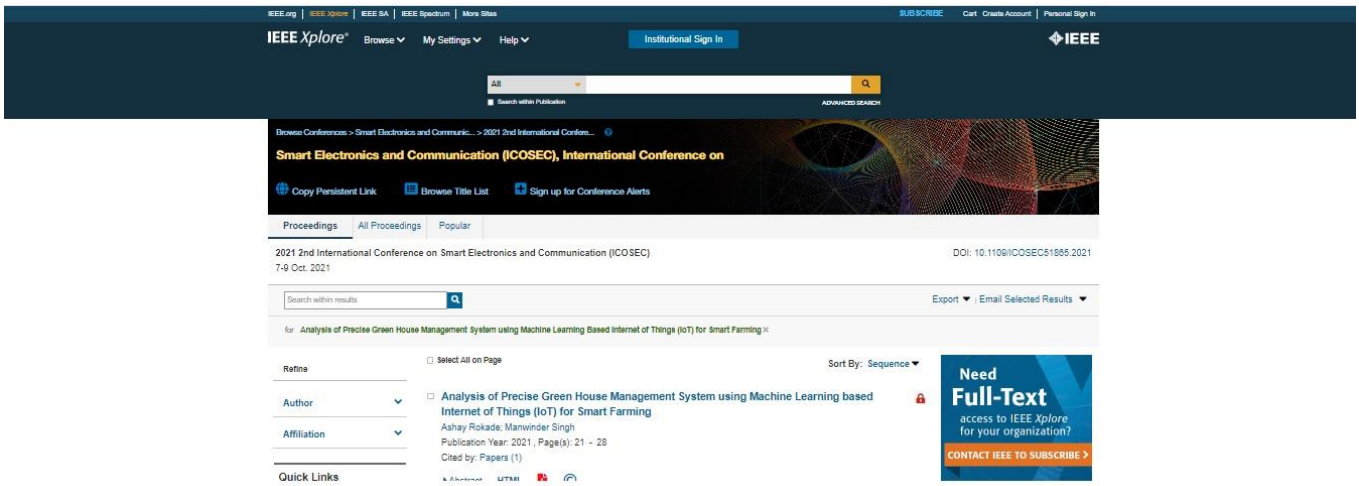


Fig 1. GDP Per Capita (Source: World Bank)

Intelligent Agriculture (IA) 4.0 [16] are emergent words to recognize this pattern in today's cultivating and horticulture creation measures. Agriculture capita plays an essential and vital part in practically every developed and developing country, as demonstrated in Figure 1. It is critical to priorities the development of agriculture as a primary source of national development. Unmanned Aerial Vehicles (UAVs), self-driving farm vehicles, and satellite frameworks are just a few of the inventive developments that will be associated with future conditions in SA. Internet of Things (IoT) and Precision Agriculture (PA) advances, in particular, will play an increasingly important role for today's ranchers. In truth, a completely enhanced and more reasonable horticulture creation framework is required to effectively address upcoming patterns, such as climate change, total population growth, and common assets consumption, as suggested by a few legislative associations. As a result, research and mechanical development are seen as critical to overcoming these challenges. Huge designing difficulties regularly spike large arrangements through problematic innovations, and Agriculture 5.0 [34] is anticipated to be the one for the first half of the twenty-first century. Ranches are adopting Precision Agriculture standards and using technology that includes automated activities and independent decision emotionally supported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This is to certify that Rashmi A Wakode of Prof. Ram Meghe Institute Of Tech. & Research/Extc Dept., Badnera, Amravati, India author of a Research Paper titled An Empirical Study Of Safety Models Used In Driver Assistance Systems From A Statistical Perspective has submitted the paper which has been approved and presented for publication in the Twelfth International Joint Conference on Advances in Engineering and Technology, AET 2021, which is Jointly organized by the ACEEComm, AMAE and ACEE – sub divisions of The IDES.

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Grenze International Journal of Engineering and Technology, Jan Issue

An Empirical Study of Safety Models used in Driver Assistance Systems from a Statistical Perspective

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***Abstract*—Driving assistance systems (DAS) are responsible for enhancing the on-road driver experience in terms of lane safety, speed monitoring/control, drowsiness detection, vehicle to vehicle communication for incident alerts, etc. Each of these systems requires large amounts of input temporal data that is processed via machine learning algorithms. For instance, lane safety systems use a combination of image and depth data to analyze whether vehicles are following lane-rules or not. For this analysis, algorithms like convolutional neural networks (CNN), support vector machines (SVMs), and etc. is used. Each of these input-to-algorithm combinations has different advantages and nuances for each application. Thus, it is very difficult for system designers to identify best practices to evaluate and select these algorithms. In order to simplify selection of these algorithms for given systems, this text evaluates different recently proposed & highly efficient systems for each of these applications. This will assist researchers and system designers to select application-algorithm pairs for deploying highly efficient and customized driving assistance systems. The text also suggests various optimizations that can be done in these algorithms to further improve their performance when deployed in new or existing real-time systems.**

***Index Terms*— Driving assistance, on-road, machine learning, lane, speed, control.**

I. Introduction

Driving assistance includes a multitude of driver-related operations which include [1], but are not limited to, speed monitoring/control, drowsiness detection, lane detection/correction, driver-to-driver communications, parking assistance, etc. In order to perform these operations a series of steps are followed by system designers, these steps can be observed from figure 1, wherein the following blocks are used,

- Acquisition or sensing block, wherein data from different sources is collected. This block includes sensors like Camera, Radar, Infra-red camera, global positioning systems, vehicle to vehicle (V2V) and vehicle to infrastructure (V2I or V2X) communication systems.
- All these sensing elements are responsible for effective data reading and keeping it pre-processed for further processing.
- Data processing block, wherein data from acquisition block is taken and processed using systems like computer vision, radar processors, infra-red processors, V2V and V2X processors. This data processing requires a large number of algorithms, which include but are not limited to,
    - Data clustering algorithms for segregation of data
    - Classification algorithms for finding out different data patterns

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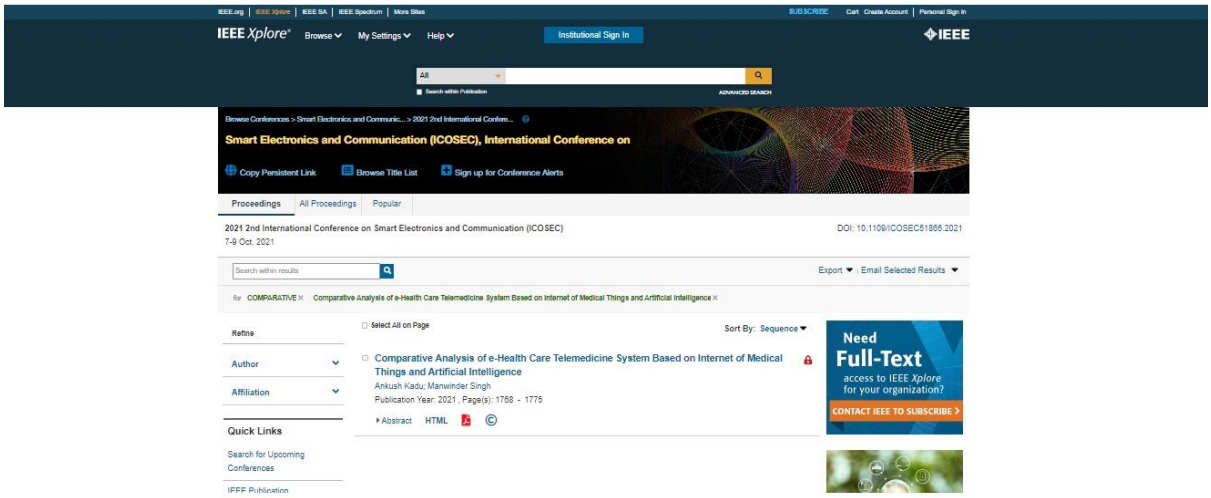
Karan S. Belsare & Manwinder Singh

Conference paper | First Online: 16 July 2022

Part of the Lecture Notes on Data Engineering and Communications Technologies book series (LNDECT,volume 126)

Abstract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Comparative Analysis of e-Health Care Telemedicine System Based on Internet of Medical Things and Artificial Intelligence

at the 2nd International Conference on
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Principal

Comparative Analysis of e-Health Care Telemedicine System Based on Internet of Medical Things and Artificial Intelligence

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Ankush Kadu ; Manwinder Singh All Authors

Abstract
Document Sections
I. Introduction
II. Challenges And Issues In IoT & Telemedicine
III. Limitation
IV. Monitoring of Physiological Parameters and technology in Telemedicine Application
V. Related Work
Show Full Outline
Authors
Figures
References

Abstract:
With the advancement and widespread use of artificial intelligence (AI) in a variety of fields, experts in the field of medicine have begun to actualize their powers in handling and analyzing data for telemedicine. Outpatients who require medical treatment but are unable to obtain it due to a lack of finances or limited access might benefit from telemedicine platforms, which provide unique and creative alternatives. Due to the difficulties in using telemedicine, it is necessary to develop its capacities and adaptability in order to overcome telemedicine problems. The Internet of Things (IoT) is a steady progress in technology that allows for the extension of relationships across the internet (IoT), and the development of the capacity to manage information has created more significant chances for the global health sector, notably telemedicine. The advantages of combining telemedicine and AI provided limitless chances for advancement, and this article surveyed the literature on existing work. Information analysis cooperation, intelligent aid diagnosis, healthcare information technology, and patient monitoring are the four most recent developments in this field. This paper also discusses how AI and telemedicine have been used to improve continuous monitoring, as well as the difficulties they are meant to address.

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Chapter

A Survey of Fifth-Generation Cellular Communications Using MIMO for IoT Applications

By Sanket A. Nirmal, Richa Chandel

Book Microstrip Antenna Design for Wireless Applications (https://www.taylorfrancis.com/books/mono/10.1201/9781003093558/microstrip-antenna-design-wireless-applications?refId=8c808199-3ed9-4207-9e3d-956523ece542&context=ubx)

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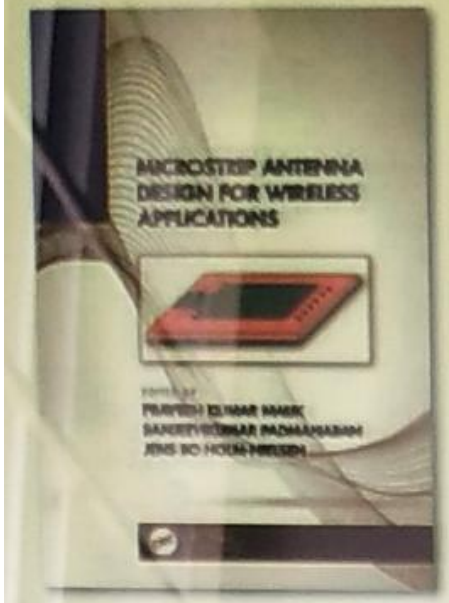

Book

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Performance Evaluation of Machine Learning Classifiers in Malware Detection

in the IEEE International Conference on Distributed Computing and Electrical Circuits and Electronics (ICDCECE-2022), organized by the Ballari Institute of Technology and Management, Ballari, India in association with IEEE Bangalore Section and IEEE Information Society on 23rd-24th April, 2022.

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Performance Evaluation of Machine Learning Classifiers in Malware Detection

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***Abstract*—Nowadays to gain illegal access of android devices or to cause harm to the system, attackers build many malicious software's. Theses malicious software's are known as malware. Once device is affected by malware, its performance degrades and more to that there is a risk that your data may be misused by attackers. Over the period of time these malware have also evolved themselves and detecting a new & generic kind of malwares using conventional techniques is cumbersome and ineffective also.**

Therefore, it is a need of an hour to make use of some latest approach for detecting malware efficiently. Use of machine learning based techniques can be effective in this purpose. Effectiveness of various machine learning algorithms can be checked by evaluating their performance through certain experiment.

In this paper performance of 10 different machine learning classifiers is evaluated on a kaggle dataset containing 15036 malware and benign applications. All the classifiers are evaluated using parameters like Accuracy, AUC, FPR and FNR.

Keywords— Malware, Machine Learning, Malware Detection, Classifiers, Performance.

I. INTRODUCTION

Every individual nowadays is totally dependent on computers, Smartphone's and the internet. Use of all these devices is tremendously increased due to various services provided over internet [1]. But at the same time, all these devices knowingly unknowingly collect our private information and are vulnerable to various attacks. A malware attack may damage a system by stealing or altering a data available in the system [2]. Smartphone's are the easy target for the attackers as we store a lot of private information on it. In the recent study of 2019, it is found that android devices are the most susceptible to virus attacks [3]. Once a device is affected by malware, its performance degrades and more to that there is a risk that your data may be misused by attackers. Over the period of time these malware have also evolved themselves and detecting a new & generic kind of malware using conventional techniques is cumbersome and also ineffective.

Therefore, it is a need of an hour to use some latest approach for detecting malware efficiently. Various studies have revealed that, use of machine learning based techniques can be effective in this purpose [4]. Therefore exploring and working on various machine learning algorithms is necessary which could provide an effective solution for detecting malware. Taking into consideration above facts, different 10 machine learning algorithms are studied & experimented for malware detection and their performance in terms of various parameters is presented in this paper.

This paper presents a performance evaluation of various machine learning algorithms. For this research work, 10 machine learning classifiers are used. In order to train and test the models, a kaggle dataset is used which contains 5,560 malware samples and 9,476 benign samples [5]. Performance of the classifiers is evaluated using few parameters like accuracy, AUC, false positive rate and false negative rate.

This paper is organized as follows: Section II of the paper talks about a related work going on in the research world for malware detection. Section III explains the research methodology of the proposed work. Section IV describes the evaluation criteria's used for evaluating machine learning algorithms, results obtained and a discussion about performance of algorithms used. Section V provides the conclusion of the paper.

II. RELATED WORK

Xinang Jin et. al. [6] has proposed a malware detection technique using deep learning. Considering a fact that use of supervised learning methods in malware detection does not provide any information about behavioral characteristics of malware; in this approach, they have designed an autoencoder. This autoencoder learns about the functional characteristics of malware and by observing size of error value generated by each file, they decide whether a file is malicious or benign. Achieved accuracy in this work is 93%.

Kamalkanta Sethi et. al. [7] has developed a framework for malware detection. For dynamic analysis of files, a sandbox is used named as Cuckoo. This sandbox creates a report based on runtime system activities. Chi Square and

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COMPARATIVE APPROACH TO STUDY THE EFFECT OF SOUND FREQUENCIES ON PLANTS GROWTH WITH DIP*

BY

NIKETA V KADAM♣

ADYPU, Pune, Maharashtra, niketa.kadam@adypu.edu.in

DR. HARSHAL PATIL

Associate Professor, ADYPU, Pune, Maharashtra, patil.harshal@adypu.edu.in

ABSTRACT

Plants are always have diversified effect of number of environmental parameters in their growth cycle and these sound waves effects the plants' growth, and it influences the yield result and crop quality. The demand of the efficient technology in the agriculture science sector has

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Professor, HOD, Centre for Research
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IN ASSOCATION WITH

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Securing the Crash Failures and Accidentally Destroyed of Large Data using Checkpoint Approach

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***Abstract*—The lenders struggle to win a strategic advantage over one another in modern globalization and reduced choke rivalry. In addition to conducting product development, the development and use of the data repository for banking becomes a policy method to contend with as a multiple-store repository for electronic technology, caseloads with data transactions can accommodate enormous transaction rates. Even so, restoration through collision crashes and the misuse of information is a possible flaw in these repositories. The progress of storage technology and the rapidly increasing volume of data produced have changed the country into information technology. Throughout this context, several information extraction methods would be used and are unsuitable for the processing and retrieving of information computer workforces.A standard way for data analytics was its banking architecture. It uses methods for working memory that render Spark equally quick as Hadoop a hundred times. It requires a while to evaluate the same kind of Big Data software. Sadly, programmers do not have a sound test system to ensure the accuracy of their information processing programs while preserving**

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