

#### DAYANANDA SAGAR ACADEMY OF TECHNOLOGY AND MANAGEMENT

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#### International Conference On Current Trends in Science, Engineering & Technology (ICCTSET-2022)

May 27<sup>th</sup> & 28<sup>th</sup>, 2022



#### Organized by DEPARTMENT OF INFORMATION SCIENCE & ENGINEERING and

## DEPARTMENT OF ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING

#### ABOUT THE INSTITUTION

Dayananda Sagar Academy of Technology and Management is approved by all India Council for Technical Education (AICTE), Govt. of India and affiliated to Visvesvaraya Technological University. It has widest choice of Engineering Branches. The Institution is accredited by NAAC with A+ Grade and offers 9 UG Courses: CSE, ISE, ECE, ME, CE, AI&ML, EEE, CSD and B. Arch and 2 PG Courses MCA and MBA along with 8 VTU recognized R&D centers.

#### ABOUT THE DEPARTMENTS

**Department of ISE** was established in 2011. The department is accredited by NBA, New Delhi with intake of 180. Teaching faculty with proficiency in various subjects motivates students to participate in research activities and skill development programme. The department has well equipped and state of the art infrastructures supported with Cyber Security Center of Excellence, Industry Center of Excellence, CISCO Networking Academy, IOT Lab and Robotic Lab. ISE department regularly organizes workshops, faculty development programs and conferences. Information Science is an inter-disciplinary field which is mainly concentrated on cognitive science, commerce, communication and management. The asset of an ISE major lies in his/her ability to apply the knowledge of information systems and technology to help organizations compete more positively in the marketplace or to streamline present operations.

**Department of AI&ML** was established in the year 2020, offers UG course in Artificial Intelligence and Machine Learning with an intake of 60. Department is having qualified faculty and it has well-established laboratories. The department has MoU with AI Tech Park Sdn. Bhd. Penang, Malaysia. The department regularly organizes workshops. The Vision of the department is to Excel in the Emerging Technology of Artificial Intelligence & Machine Learning by imparting quality education.

#### **OBJECTIVES OF THE CONFERENCE**

- To provide a platform for expression of interest & cognitive thoughts and promote research among all the active participants in the conference.
- To provide an opportunity to all the participants to upgrade their knowledge in context of global business.

#### **RELATED TOPICS**

- Machine Learning
- Artificial Intelligence
- Networking
- Big Data Analytics
- Image Processing
- Internet of Things
- Data Science
- Any other topics related to Computer Science.

#### IMPORTANT DATES

Last Date to submit paper: 16.05.2022 Confirmation through E-Mail: 19.05.2022 Start Date for Registration: 19.05.2022 Last Date for Registration: 21.05.2022

#### REGISTRATION

- Full length paper should be submitted through EasyChair of ICCTSET-2022 or icctset2022@dsatm.edu.in
- Paper should be in IEEE format and not more than 6 pages. Plagiarism should be less than 15%.

**Registration fee Rs. 750/- (includes Publication charges and Certificates).** 

All accepted Papers will be published in Google Scholar indexed International Journal of Engineering Research in Computer Science and Engineering with ISSN No.-2394-2320 and Publication Partner (Technoarete research and development association).

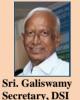


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Dr. D. HemaChandra Sagar Chairman, DSI Chancellor, DSU





#### **KEYNOTE SPEAKER**

**Sujatha Visweswara,** Co-Founder DigiNxtHlt Solutions, A digital healthcare company, Bangalore,Karnataka,India.

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> Signature of the Principal/ Head of the Department with seal

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## POST-HARVEST ON CITRUS FRUIT ANALYZING THE DISEASE TYPE IN EARLY STAGES USING THE IMAGE PROCESSING

#### Lakshmi J V N

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#### ABSTRACT

Image processing is a significant scientific tool for assessing food quality by using computer vision techniques. Plants are susceptible to diseases while practicing post-harvest technology. Detecting the diseases using the hyperspectral image segmentation technique by interpreting the external appearance and segmenting the diseased fruit is the current study. Particularly oranges the citrus fruits are highly vulnerable to post-harvest diseases such as brown rot, canker, scab, and greening due to high cold storage and also some of the pre-harvest factors. Classification of citrus typically orange fruit by identifying the disease by using the feature extraction by discovering different dimensions. Early detection of the diseases in the fruit prevents the fast spread and also reduces damage and financial loss. In the contemporary study on postharvest disease detection in citrus fruits, a dataset of citrus diseased images is used and are easily classified with 79% of accuracy.

## AUTOMATED PARKING SYSTEM UTILIZING IOT AND ANDROID APP

#### Mohitsinh Parmar, Dhruv Kansara, Keval Shah

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#### ABSTRACT

To take the advantage of modern wireless connectivity, we have designed and developed a new parking system based on IOT especially for the Malls and other places where parking plays an important role with a simple parking system. This design solves the problem of the over parking in the parking slot at populated areas like streets, Malls and other business area and also it helps to check the free slot before you arrive on the place or slot using Android app. Here new module is added if any sector wants their personal parking then they will be having a new module in application with login where the authenticated user will be allowed to allocate their parking slot to any other person if that person is not available for a couple of days. To allocate the slot to other people the user should make sure that his/her car must be outside the parking slot otherwise at the time of allocation be the message that "to apportion your leaving space to others, your vehicle should be outside the leaving opening, Thank You!" We additionally have a Map office for new clients to follow the stopping spaces.

## EB: EYE BIOMETRICS BASED A NOVEL HUMAN RECOGNITION SYSTEM FOR CARDLESS ONLINE PAYMENT SECURITY IMPROVEMENT IN ATMS Shubham Vermaa,\* Dipti Ranjan b

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#### ABSTRACT

Here we are introducing a novel approach for enhancing the security of traditional transactions of ATM .Individual confirmation is quite possibly the main ways to deal with work on the security. Be that as it may, the conventional individual validation techniques or advance hybrid. Biometrics, which naturally utilizes the physiological or social quality of individuals to perceive their characters, is one of the powerful procedures to defeat these issues. Biometrics is a field of programmed individual ID dependent on physiological and social attributes of people. A conduct trademark is progressively an impression of an individual's physiological cosmetics Validations. We used Eye Biometric Recognition System using OpenCV for cardless transaction & Identity Verification after ATM Transactions. We proposed EB verification model in the research for final compilation of transaction. Though it may require more time for verification but security is prior to time & cyber thefts. The efficiency of Software we Proposed came out to be 98.52%, 95.75%, 98.86% while performing an extensive testing of our algorithm with 3 datasets named UBIRIS.V1, UBIRIS.V2, IITD and the algorithms we have used in OpenCV For feature detection & extraction are ORB, brute force algorithms. With the hope of Interest in youth and additional feature of security to be embedded in online transaction is the motivation of the research.

### TERRORIST DISTINGUISHMENT WITH MILITARY PERSONNEL ON ATTACK IN AIR BASE CAMPS – 3 CHAMBER APPROACH: USING REAL TIME MONITORING – ARDUINO SENSOR DETECTORS, IRIS RECOGNITION SYSTEM & WIRELESS COMMUNICATING NODES DEPLOYED IN UNMANNED DRONES

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#### ABSTRACT

#### ICCTEST-2022

The security in the air base camps containing the nuclear assets and aircrafts has become a concern after interagency attacks from neighbouring countries. Manned Approach has proven to be of less efficiency in previous attacks. The research proposed 3C Chamber approach which is to be embedded into unmanned drones that will fly in the sky and recognise the terrorist intergencies. 1 st chamber constitutes the 3 sensors connected with Arduino named EMAX 5300 which detects the explosives , DHT11 which is used to catch the humidity and body temperature of the running terrorists in the base camps and OV7670 is the Image sensor which will give the clear image and send to the second chamber which deals iris recognition with the image data so obtained and third chamber is basically the communication chamber that contains the database and deals with regional clusters in wireless communications, localisation of suspect area through network topology so mentioned in the later paper in form of clusters , alarm dissemination phase and to be time efficient we have time synchronisation in the third chamber. All the 3 chambers work simultaneously being connected to each other and respond to the centralised node with deals with action & response. In the second chamber experiment is carried out with UBRIS.V1 database and OpenCv with Training: Testing ratios as 60:40, 50-50, 40-60 – the accuracy came out to be approximately 96.54%. Pre-registration phase involves the registration of the military personnel and later this data is retrieved and matched to catch and differentiate terrorists which is the main issue and concern of the research. The research is a combination of Biometrics, electronic sensors - internet of things, wireless network communication.

### AI VIRTUAL PAINTER USING OPENCV AND MEDIAPIPE

#### Dr. S. Nandagopal., M.E., PhD.

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#### ABSTRACT

Recognition of hand gestures has great importance for Human-computer interaction (HCI). The human hand is very small with complex junctions compared with the entire human body, hence recognizing the human hand is not an easy task. By using the hand gesture recognition the hand point/coordinates of hands can be detected using which we can make many impossible happens. Our work indicates one such finding, that is, VIRTUAL PAINTER. In our project, the main objective is to display the words on the monitor screen which we write on air in front of the webcam. This is done by recognizing the human hand through the normal webcam of a computer and the hand points are detected using the MediaPipe python library. Using the detected hand points the count of opened fingers is stored. When the index and middle fingers are open it means it is in Selection mode and when only the index finger is open it is in drawing mode. In Selection mode, the colors using which we want to draw can be selected from the list of colors that are made displayed on the screen. In drawing mode, the content that is written in front of the camera on air is drawn on the monitor screen. The application of this implementation can be used in many places where immediate implementation or explanation is needed.

## ARTIFICIAL INTELLIGENCE FOR MITIGATING PATENT PROCESS HURDLES

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#### ABSTRACT

New thrust by the government to develop skill sets and entrepreneurship has resulted in massive inventions and rapid advancement of science and technology. complexity in monitoring, managing adapting, and registering innovations is becoming increasingly difficult due to a massive number of inventions. Maintaining standards for new innovations along with increased time for their scrutiny is causing delays in the adaptation of new inventions. The Intellectual property rights scrutiny towards judging the uniqueness of a particular innovation and prior art search has been made considerably easy by using artificial intelligence and machine learning. This latest technology can help to overcome the cumbersome processes for the allotment of intellectual property rights. This technology eases the burden of managing a large number of innovations filed as patent applications. Data mitigation becomes easy in the area of prior art searches. The world trade organization has announced certain stipulations in the form of law to avoid overlapping of the inventions and grant patents in line with the geographical restrictions. This article makes a concrete proposal to understand the complex interrelationship between trade law, jurisprudence, and the application of artificial intelligence in overcoming the hurdles concerning the patent grant process. The paper also proposes the use of artificial intelligence for patent-related dispute settlement in line with Trade-related aspects of intellectual property rights agreements. The paper advocates the use of artificial intelligence in the area of application and grant of patents.

### THERMAL ATTACK IN LINUX SYSTEM

#### Naveen J[1], Mohit Raj[2], Naya Bhatt[3], Rakshitha M[4], Poornima Arya[5]

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#### ABSTRACT

Many operating systems now a days make use of thermal sensors for monitoring the CPU temperature. The monitoring of CPU temperature mainly includes measuring the frequency, energy consumption temperature of the CPU. Some unprivileged users can make use of this thermal sensor to gain access to some secret information. The unprivileged users used to execute programs in order to generate heat within the CPU in order to generate the covert channel in which leakage of information may take place.

## ISLANDING DETECTION IN MICROGRID SYSTEM USING CURRENT COMPONENTS OF A-B TRANSFORMATION

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#### ABSTRACT

This paper introduces a novel islanding detection technique(IDT), which is based on the current components of  $\alpha\beta$  transformation. Index defined in the proposed technique is the reciprocal of the product of alpha and beta components of current. The proposed technique is designed with three photovoltaic systems as distributed generations (DG). The proposed method distinguishes the islanding events(IE) from non-islanding events even at zero power mismatch (ZPM) and fifty percent active power mismatch(APM). It identifies the islanding events as soon as possible and also limits the unwanted tripping due to various types of non-islanding events. General cases of IE and non-islanding events have been simulated. The simulation results show the proposed technique's flexibility and efficiency based on the MATLAB(Simulink) platform.

## ANDROID-BASED MOBILE DEVICES COMMUNICATION USING PEER 2 PEER NETWORK CHANNELS

#### Prajjwal Kumar[1] , Lakshmi Sahithi V[2] , Manoj K V[3], Md Saif Hasmi[4],Kshitij Kumar[5]

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#### ABSTRACT

the interest grew between scholars and researchers for exploring some of the facts about how we can channelize the usage of P2P to a wide variety of modern day applications. The usages namely for P2P applications includes Instant Messaging, file Sharing, Voice over IP, Video streaming and social media. This paper tells about the methodologies on how P2P works in general for getting a complete Abstraction for below application protocols and even a summarized description on how P2Pised applications work. Moreover, this paper tells about peering and how sharing is done in P2P application for easing work of developers. Furthermore, the paper provides the limitations and different obstacles in adoption of P2P in the cellphone's technological environment. Lastly, there is a conclusion on a bit of presentation of direction for future research so that appropriate middleware can be developed and decided for appropriate usecases for implementation in Android OS.

## COMPARISON AND REVIEW OF DIFFERENT CLOUD ERP SYSTEMS

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#### ABSTRACT

The aim of this paper is to make a comparative study between the existing cloud ERP(enterprise resource planning) System and review the same cloud ERP that serves as the backbone of the majority of companies. It collects data and information from different departments and generates reports from them. This paper gives a comparative study and review of three main cloud ERP service providers. The 3 systems are SAP, Epicor and Oracle ERP cloud.

### PROPHECY IN FINANCIAL EXCHANGES USING ML MODELS

#### Sahil Singh[1], Prashant Yadav[2], Ronit Asawa[3], Muskaan Agarwal[4], Rishu Raj[5]

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#### ABSTRACT

Since the financial exchange is volatile and non-linear in nature, prediction is a very difficult endeavour. Machine learning and artificial neural networks have been used to perform victory in a variety of areas, as described in this paper. It's a complicated system in which a lot of people make money or lose money. This generation has been technically entered, with investors, analysts, and researchers. This paper develops a support for vector machine for financial exchange that is improved and evolved. It's a more complex and global method of conducting business. When pursuing a course of study, it is one of the most effective ways to make money. An experiment is carried out in these tasks to predict the direction of money exchange. To comprehend the future as long term, a concatenation appeal of analysis and machine language data has been constructed. The system keeps track of the stock exchange trend's perfection. This covers both fundamental and technical analysis, both of which explain the increasing and decreasing ratios in which the share and funds are calculated. This would be beneficial for newcomers and freshmen to understand the direction because it is described in straightforward terms.

## THE ROLE OF DATA ANALYTICS IN SOCIAL MEDIA: A REVIEW

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#### ABSTRACT

Social media has millions of users around the world, engaging with each other and sharing information. The information shared in these platforms can be collected and analyzed. This paper is a review on the the collection and analysis of data from social media platforms and the advantages & disadvantages of data analysis in social media platforms.

## **REVIEW: USE OF ROBOTICS, IOT AND AI IN THE MODERN AGRICULTURAL PRACTICES**

#### Lekhan HY[1], Pappu Saicharan[2], R Dhanush[3], Montu[4]

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#### ABSTRACT

This study provides an overview of several agricultural activities and elements that can be now automated via the use of robots, the Internet of Things (IoT), and Artificial Intelligence (AI). besides from that, present and future views are discussed, with an emphasis on important technological advances such as smart farming, precision agriculture, vertical farming, modern greenhouse methods, autonomous and robotic workforce, drones, and the 'connected farm.' Automation of the agriculture business has grown even more significant to the new norm imposed as a result of labor migration and scarcity since Covid-19.

## SURVEY OF LITERATURE ON VARIOUS HYBRID INTELLIGENCE APPROACHES IN AUI

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#### ABSTRACT

Human intelligence (HI) and artificial intelligence (AI) are combined in augmented intelligence (AuI) to maximize their strengths and minimize their weaknesses. As HI and AI are combined, both human and machine capabilities are improved, and performance is improved when compared to separate HI and AI approaches. In this paper, we present a check of literature to understand how AuI has been applied in the literature, including the roles of HI and AI, AI approaches, features, and operations. Due to the limited literature related to this content, we also present a check of expert opinion to answer four main questions to understand the experts' suggestion on AuI, including a) the description of AuI and the significance of HI in AuI b) the roles of HI in AuI c) the current and unborn operations of AuI in industry, research, and public, as well as the benefits and drawbacks of AuI.

## A STUDY ON VARIOUS TECHNIQUES ON DATA PARTITIONING AND SAMPLING IN BIG DATA ANALYSIS

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#### ABSTRACT

Computer clusters with the shared-nothing architecture are the main computing platforms for large processing and analysis. In cluster computing, data partitioning and sampling are two fundamental strategies to hurry up the computation of massive data and increase scalability.

During this paper, we present a comprehensive survey of the methods and techniques of knowledge partitioning and sampling with reference to big processing and analysis. We start with an outline of the mainstream big data frameworks on Hadoop clusters. the fundamental methods of knowledge partitioning are then discussed including three classical horizontal partitioning schemes: range, hash, and random partitioning. Data partitioning on Hadoop clusters is additionally discussed with a summary of recent strategies for giant data partitioning, including the new Random Sample Partition (RSP) distributed model. The classical methods of knowledge sampling are then investigated, including simple sampling, representative sampling, and reservoir sampling. Two common methods of huge data sampling on computing clusters are discussed: record-level sampling and block- level sampling. Record-level sampling isn't as efficient as block-level sampling on big distributed data. On the opposite hand, blocklevel sampling on data blocks generated with the classical data partitioning methods doesn't necessarily produce good representative samples for approximate computing of massive data. during this survey, we also summarize the prevailing strategies and related work on samplingbased approximation on Hadoop clusters. We believe that data partitioning and sampling should be considered together to create approximate cluster computing frameworks that are reliable in both the computational and statistical respects.

## SENSORS, INTERNET AND CLOUD COMPUTING-BASED SMART AGRICULTURE

#### Abhijna K C1, Bhargavi2, Ganavi G S3, Keerthi Prasanna R G4, Debapriya A Ghosh5, DR. Pooja Nayak6

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#### ABSTRACT

With the help of review papers published from 2016 to 2019, this review paper was created based on the impact of the Internet of Things (IoT) on the agriculture area. These papers are organized into four categories: sensor layer, network layer, middleware layer, and application layer, all of which are concerned with the use of sensors, data collection, and transmission, and data storage in agriculture. It examines the evolution of agriculture and the issues that have arisen as a result of the rapid adoption of IoT technology in order to transition from the conventional approach to the modern method. We require energy as humans to carry out our daily tasks.

## THE INTERNET OF THINGS IN CRUDE OIL PRODUCTION: A SYSTEMATIC REVIEW

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#### ABSTRACT

The crude oil production is becoming more innovative and deploying smart field techniques to enhance operational and capital efficiency, minimize health, safety, and environmental (HSE) risks, enhance asset portfolio,reduce investment and operational costs, and maximize capital productivity as a result of the low oil price environment. To achieve these goals, the internet of things (IoT) is at the vanguard of this digital revolution, enablingseamless real-time data collecting, processing, and analysis from a variety of equipment, processes, and activities. However, various hurdles are slowing the use of IoT technology for routine upstream, middle, and downstream operation. This review article gives an overview and assessment of IoT adoption in the crude oil sector, including itsrole, effect, potential, obstacles, and present state.

#### **ON-TIME : THE IDEA FOR TEXT AND POST AUTOMATION**

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#### ABSTRACT

Sending messages automatically without the involvement of human input is known as Message Automation or Text Automation. With the help of automation of text messages, it gets a lot easier to send a right message to the right person at the right time. It all gets effortless when we chose automation over human interference. Text Automation can include generating an appropriate answer by reading the keywords given by the user or sending various suggestions

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automatically once we shop online, etc. Rather than replying one person at one time, or instead of forwarding numerous messages, we can automate messages in such a way that we save a lot of time doing multiple tasks at a same time. Automating messages makes work easy and it keeps your tone of voice same throughout the conversation. A survey reveals that 9 out of 10 customers talk business via messaging/texting. This makes work less obstructive, makes it faster and user convenient. Instead of waiting for some message to be received, or some message to be sent, why can't we automate messages/texts in such a way that we can be carefree about the time we spend in texting, do not put efforts in waiting for some message to come or be sent, schedule messages to be sent automatically? Finally, when we are able to automate sending messages online, we can also try automating posts that we put in social media. Social media, being the vast and busiest platform worldwide, people can sometimes get disturbed with their mental health due to spending lot of time in it.

### **WEB 3.0: EMERGENCE OF A DECENTRALIZED NETWORK**

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#### ABSTRACT

Web is known to be the best futuristic and implicit way of communication in the present day of the connected world. It was hypothesized in the early development of the internet that the web would greatly affect the working of the internet. Web 2.0, and now Web 3.0, may bring immense prosperity to the Internet sector in such a short time. For almost a decade, the transition from Web 1.0 to Web 2.0 has been completed. In any case, not long after Web 2.0, another Web 3.0 arose, raising fervor as well as many inquiries among pioneers, users, and regulators. Is it actually necessary at this point, what could be the driving forces, and how does it vary from Web 2.0?

## A Study on Identifying and Categorising Students based on Personal Learning Traits for Adaptive Learning Systems

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#### ABSTRACT

This study aims to identify and Categorise students based on Personal Learning Traits for Adaptive Learning Systems. Despite the growing academic research in the field of adaptive learning, its various applications and implementations, the field lacks a comprehensive literary analysis that categorises users of adaptive learning apparatuses depending on independent understanding abilities in these settings. This study provides an overview of various student personality attributes and methods for grouping them together to provide better and improve adaptive learning environments and systems to cater to a larger user base.

## NEURAL BIOMARKERS FOR DYSLEXIA DETECTION USING MACHINE LEARNING: A REVIEW

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#### ABSTRACT

Dyslexia can be defined as a neurological disease that is branded by sloppy word understanding and overall deprived interpretation skills. It impacts a large number of school-aged kids, with boys being disproportionately affected, placing them at risk for poor academic achievement for the rest of their lives. Long-term, researchers want to develop a dyslexia diagnostic tool based on neural biomarkers. In this regard, a significant range of machine learning and, more recently, deep learning approaches have been deployed with above-chance classification accuracy across diverse types of data sets. In this paper, we carefully examine the latest machine learning techniques to detect this disease and its biomarkers.

## A PEEK AT THE DATA LEAKED FROM YOUR SMARTPHONE

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#### ABSTRACT

Applications pay a very important role in our lives today. However, these applications have a huge access to the private information of their users which can pose a serious risk on the privacy of the users. To implement a Man-in-the-Middleproxy to note down the network traffic that the 20 most popular free applications generate, research has been done. This work describes the requirement along with the technical considerations that were used to deploy the monitoring WiFi Networks during the conduction of the experiment. The result of the research depicts how the user's personal information or data is leaked by applications during the process of installation.

## Comparative study between DALL.E and DALL.E 2

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Abstract- The most fundamental requirement to get realistic image through AI is that the amount of processing power under its reach. Traditionally DALL.E needed relatively more information about the image while DALL.E 2 performs better with the identical or lesser amount of knowledge. DALL.E primarily focused on text-to-image conversion supported transformers that autoregressively models the text and image as one stream of knowledge whereas DALL.E 2 works on two stage model. DALL.E 2 founded a brand new standard for image manipulation and generation. With only short text prompt, DALL-E 2 can generate completely new images that combine distinct and unrelated objects in semantically plausible ways. This paper analyses DALL.E and DALL.E 2 supported their performance and limitations

## TECHNICAL SHORTCOMINGS OF ARTIFICIAL INTELLIGENCE IN DIAGNOSIS AND TREATMENT IN THE MEDICAL FIELD, A REVIEW

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#### ABSTRACT

With the medical field being largely result-oriented, researchers have taken an increasing amount of interest in the topic of AI with reference to medicine. Artificial Intelligence has largely dominated the sphere of conversations surrounding the future of healthcare. However, the potential of AI in the medical field has not been implemented smoothly with few reports on the limitations that it presents. At present, for the most part, the algorithms required in AI are not executable at the frontlines of clinical practice. The hype surrounding AI currently precedes its implementation.

This article touches upon the various limitations in the implementation of Artificial Intelligence in clinical practice, mainly the technical aspects.

## REVIEW ON DDOS ATTACK AND ITS GLOBAL EFFECTS AND PREVENTION MEASURES

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#### ABSTRACT

The current era is completely reliable on Internet services which serves as a global information source for all users. Therefore the availability of internet is important. Distributed denial- of-service is one kind of the most widely used cyber attacks of today's world. This paper mainly focuses on the review of DDoS attack which obstruct the network availability by overflowing the host with high volume of illegal traffic disrupting its bandwidth, overburdening it to prevent valid traffic to get through. We have also described about the DDoS attack techniques that are inflicted upon the ISPs. The study of this research is to find out the various techniques to prevent these attacks along with any possible solution.

## Forensic Data Analysis Using the Case Studies on Anti Forensic Devices

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#### ABSTRACT

The way people communicate with machines is changing. The process that began with buttons has progressed to the touchscreen, where individuals may now command machines. merely conversing with them. The usage of intelligent home assistants (IHAs), which allows users to operate their smart homes and check their email and even ordering, is growing in popularity. As a result, it's possible that they'll be discovered at a crime scene shortly for this reason. and are capable of carrying the weight of digital evidence. The most popular Alexa Echo and Google Home products were investigated in this study. When it comes to forensic evidence and data comprising digital information, Evidence was discovered. Then, by fabricating operations, Changing the device's name, establishing a bogus routine, and so on talent improvement on an individual basis. As a consequence of the investigations, information was provided to cyber security specialists or academics working in this sector regarding the types of digital evidence that could be located in the activities of smart home assistants. Anti forensic was also used to elicit the distinction between actual and false activities.

## **Chatbot in Healthcare**

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#### ABSTRACT

Chat bots are clean to apply and simulate a human communique through textual content or voice through smartphones or computers. The present-day wave of studies has taken up the assignment of selling wholesome life with advances in synthetic intelligence (AI). In the sphere of fitness, chat bots can enhance affected person information, monitoring, or remedy adherence. This paper offers a complete assessment on AI chat bots as a revolutionary technique providing greater simplicity and facilitating long-time period adherence to fitness advertising interventions. Additionally, this assessment offers a state of affairs wherein chat bots are powerful and safe, they may be prescribed like a drug to enhance affected person information, monitoring, or remedy adherence.

#### Early detection of Alzheimer's using blood plasma proteins with Recurrent Neural Networks

Monisha M<sup>[1]</sup>, Harshitha K M<sup>[2]</sup>, Dhanalakshmi N H<sup>[3]</sup>, KokatamSaiPrakash Reddy<sup>[4]</sup>, Nagarathna C R<sup>[5]</sup>, Dr. Kusuma M<sup>[6]</sup> <sup>1,2,3,4</sup>BE Students, <sup>5</sup>Assistant Professor, <sup>6</sup>Professor, Department of Information and Science, DayanandaSagar Academy of Technology and Management, Bengaluru – 560082 <sup>[1]</sup>monishasmekala@gmail.com, <sup>[2]</sup>harshithakmurali@gmail.com, <sup>[3]</sup>dhanalakshminh.work@gmail.com, <sup>[4]</sup>saiprakash2610@gmail.com ABSTRACT

Alzheimer's disease (AD) which is a disease that belongs to the group of neurodegenerative diseases and is considered one of the most destructive and severe diseases of the human nervous system. Presently there is no quick cost

effective method for routinely screening of persons with Alzheimer's disease. The problem is how to diagnose it at the earliest possible stage before specific symptoms begin to appear. The main idea is to build an intelligent system that will be able to answer, based on certain biomarkers from the subject, whether the disease is present or not. This paper presents how machine learning concepts are used that have upgraded the detection of Alzheimer's disease in the early stage. In addition, the proposed does hierarchal classification into stages: CN, EMCI, LMCI and AD. Experimental results show that the proposed method achieves classification accuracy of 92-95 % for AD demonstrating the promising performance for RNN analysis.

*Keywords* - Alzheimer's disease, Cognitive Normal, predictive testing, Positron emission tomography, Support vector machine, Machine learning.

### Analysis Of Market Obligation Using AI: A Survey

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#### ABSTRACT

Artificial intelligence (AI) is projected to have a significant impact on marketing strategies and client behavior in the future. The authors present a multidimensional paradigm for assessing the impact of AI that includes intelligence levels, task types, and whether AI is implanted in a robot, based on not only existing research but also substantial contact with practice. Prior research has mainly concentrated on a subset of these characteristics; however, this study incorporates all three into a single paradigm. Then comes the authors propose a study agenda that looks at not only how marketing tactics and customer behaviors will change in the future, but also how they will change now. However, it also raises crucial policy issues such as privacy, bias, and ethics. Finally, the authors predict that AI will become more prevalent. If it complements, it will be more effective (rather than replaces) human supervisors.

#### AR BASED PRODUCT VISUALISATION FOR ONLINE SHOPPING

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#### ABSTRACT

The augmented reality (AR), is nothing but combining the both real world and the artificial environment using computer vision technology. The most recent handheld devices are able to providing an artificial world around us. The most developments in AR algorithms have also play major role for its expansion. This project aid us to get a clear aware of that how a new product will fit in our room or a place, we don't need to close our eyes to imagine it. With using our Android mobile, we can plainly open AR application to saw the products, and after that we need to select one product that we need, and we need to wait until the product 3D model gets downloaded after the download finished, the camera will open on your smart phone and now you can fix the product anywhere you need to fix. It will decrease the return rate and also it will save the time to make decision. So finally it will improve the shopping experience on the use

## **NEXT GENERATION TECHNOLOGY: 5G**

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#### ABSTRACT

This paper discusses about the 5G wireless networks and its coming challenges in the near future, including increasing demand for network capacity to support a large number of devices running applications that require high data rates and always-on connectivity; and supporting emerging business models in the wireless network market that require networks to be more open. New issues necessitate new solutions, including revised plans for network location, management, and operation of future 5G wireless networks, which are comparable to current wireless networks. One of the main goals of future 5G wireless networks is to deliver service customized networks to a wide range of services using integrated cloud reserves and wireless/wired network assets, which might be provided by a variety of infrastructure suppliers and/or operators.

A Study On Optical Character Recognition And Its Tools H. Vaishnavi<sup>1</sup>, Mohammed Zabiullah C<sup>2</sup>, Nihal Ranjan Gowda<sup>3</sup>, K Tarun Sai Teja<sup>4</sup>, Dr. Sandhya N<sup>5</sup>

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## Abstract

OCR stands for Optical Character Recognition. It is an electronic or mechanical conversation of image into text (images should contain text messages) OR it is a device that can convert the printed text or written into machine understandable

text. It is mostly used in data entry process in varies sectors like banks, passport, gmails etc. OCR is most common and useful method of digitalizing printed text, that can be used for electronical edit, search, store more Compactly, displayed on line and used in machines such as cognitive computing, machine translation, text to speech, key data and text mining. OCR is also a field of research for pattern recognition, artificial intelligence and computer vision

#### IOT in Improving the Standards of Food and Farming

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#### ABSTRACT

Information & communication technology provide tremendous services to all the sectors including food technologies. On the other hand, this world fighting against hunger, food wastes, health and nutrition-less food. There are way more technologies increase not only the profitability, but also quality and production rate. IoT technologies use by the food technologies in many countries for food safety, transportation, packaging, temperature monitoring, nutrition analysis, and find the defective foods using IoT devices and applications via smart phones and computers in real time. This studies focused on IoT in food technologies in terms of the food production, security issues and possible solutions for those issues. For that, a systematic literature review was conducted and analyzed using qualitative and quantitative method. Findings have confirmed that, IoT and relevant technologies positively provide its full support to increase the demand and quality of food production process. Meanwhile, The data privacy issues and provide immediate technical solutions were the major security issues faced by those IoT devices and application. In addition to that, neither of these articles found conducted in Sri Lanka related to this study and none of the studies found related to IoT, Food technology, Food-destroying robes. Apart from these all, this study suggested developing IoT system and application based on cloud computing to drive away from the food-destroying robes. Finally, it is planned to conduct a statistical analysis to find the expectations of food scientists, food production industrialists, and farmers. This paper purely based on research works from famous Journals and conferences.

## COST EFFECTIVE RESOURCE PROVISIONING ALGORITHM USING FOR JOB SCHEDULING TASK

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#### ABSTRACT

The novelist explained a different scheduling process in the analysis which incorporates i) client fair and ii) naive first algorithm iii) priority fair scheduling this makes better suitability of both together buyer and also flexible scheduling job. Generally this editable or operation could be downloaded come from i) Cloud computing (internet

predicating) to Edge computing (fog computing) or ii) user-devices to Edge nodes.such that a cloudhosted provide could be delivered nearer to buyer systems at the edge to reduce explanation delay. The creators examined the scheduling of a broad range of little running task demands at similar time to the given edge resource that is taking task priorities missing reality biased to especially type of approaching job requests. A number of customers have individual various tasks, the creator announced which job of a customer are scheduling Iran cloud node for assuring honesty for every buyer. In inclusion, this searched announcement scheduling procedures and resource provisioning for scientific systems in both a) IaaS and b) PaaS. This project explained an algorithm which is scope to reduce the All-inclusive system execution budget while viewing limit constraints. The subsidiary of the project is used to finding good obtainable resources in cloud.. The project finally consider of all-inclusive time of the task (project) and also calculating the all-inclusive

budget of the task (project). So, process between one method to different method.

## Sensors, Internet and Cloud computing-Based Smart Agriculture

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With the help of review papers published from 2016 to 2019, this review paper was created based on the impact of the Internet of Things (IoT) on the agriculture area. These papers are organized into four categories: sensor layer, network layer, middleware layer, and application layer, all of which are concerned with the use of sensors, data collection, and transmission, and data storage in agriculture. It examines the evolution of agriculture and the issues that have arisen as a result of the rapid adoption of IoT technology in order to transition from the conventional approach to the modern method. We require energy as humans to carry out our daily tasks.

That's correct.

## A Study on various techniques on data partitioning and sampling in Big Data Analysis

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Abstract: Computer clusters with the shared-nothing architecture are the main computing platforms for large processing and analysis. In cluster computing, data partitioning and sampling are two fundamental strategies to hurry up the computation of massive data and increase scalability. During this paper, we present a comprehensive survey of the methods and techniques of knowledge partitioning and sampling with reference to big processing and analysis. We start with an outline of the mainstream big data frameworks on Hadoop clusters, the fundamental methods of knowledge partitioning are then discussed including three classical horizontal partitioning schemes: range, hash, and random partitioning. Data partitioning on Hadoop clusters is additionally discussed with a summary of recent strategies for giant data partitioning, including the new Random Sample Partition (RSP) distributed model. The classical methods of knowledge sampling are then investigated, including simple sampling, representative sampling, and reservoir sampling. Two common methods of huge data sampling on computing clusters are discussed: record-level sampling and block- level sampling. Record-level sampling isn't as efficient as block-level sampling on big distributed data. On the opposite hand, block-level sampling on data blocks generated with the classical data partitioning methods doesn't necessarily produce good representative samples for approximate computing of massive data. during this survey, we also summarize the prevailing strategies and related work on sampling-based approximation on Hadoop clusters. We believe that data partitioning and sampling should be considered together to create approximate cluster computing frameworks that are reliable in both the computational and statistical respects.

## SURVEY OF LITERATURE ON VARIOUS HYBRID INTELLIGENCE APPROACHES IN AuI

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#### ABSTRACT

Human intelligence (HI) and artificial intelligence (AI) are combined in augmented intelligence (AuI) to maximize their strengths and minimize their weaknesses. As HI and AI are combined, both human and machine capabilities are improved, and performance is improved when compared to separate HI and AI approaches.

In this paper, we present a check of literature to understand how AuI has been applied in the literature, including the roles of HI and AI, AI approaches, features, and operations. Due to the limited literature related to this content, we also present a check of expert opinion to answer four main questions to understand the experts' suggestion on AuI, including a) the description of AuI and the significance of HI in AuI b) the roles of HI in AuI c) the current and unborn operations of AuI in industry, research, and public, as well as the benefits and drawbacks of AuI.

## Restoring Deteriorated Images using Deep Learning Techniques: Region Filling, Median Filter

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*Abstract*— Image restoration is a technique for recovering images from corrupted images that have blur and noise, lowering the image's quality. Motion blur, low resolution, moisture in the atmosphere, and other factors can all contribute to image noise. For noise removal, there are a variety of restoration techniques and a spatial domain filter. To eliminate blur and scratches in deteriorated photographs, an image restoration method has been developed. Deep learning has gained popularity as a method for image restoration during the last few years. Denoising and other image restoration operations are necessary steps in many image processing applications. Image fusion using the stacked median operator, low resolution detail improvement using guided super sampling, and repeated visual consistency assessment and refining are the three processes in the restoration process. Two VAEs (Variational Autoencoders) are trained in this model to translate old and clean pictures into two latent spaces, respectively. This is due to the fact that they are all using supervised learning, which is a difficulty created by the domain gap between the original image and the ones synthesized for training. The suggested project offers a cost-effective solution that can deal with noise, picture rotations, and occlusions

## Smart urbanization using IOT technology +

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#### ABSTRACT

IOT of ers systems that combine more than one disparate additive towards their synergistic use. Most of the world's population today lives in cities. By 2030, the population of the cities around the arena is predicted to grow from three. Three billion to five billion people. Due to aid constraints, there may be a hassle inside the destiny to provide all the of erings to the residents. To serve and improve the standard of dwelling of the developing population, it's essential to expand clever towns. The Smart City ambitions to make the most fulfilling and sustainable use of all sources, even as retaining the correct stability among social, environmental and financial expenses. The wireless sensors are connected to road lamps, water tanks, parking areas, dustbins and site visitors lights. Sensors are then connected to an arduino microcontroller board in which every and each essential parameters for the city are monitored and updated to cloud by way of a PC. The cloud is connected with the app server in turn that's connected to the integrated Blynk software of the consumer's Android cellphone. Here we are developing a project based on IOT. IOT is generally a sensor to sensor communication which communicates with the help of the internet. The sensors are connected together to a microcontroller over the internet to focus on five parameters of the city. Emphasis is given on how sensing and communication technologies of IOT can effectively be utilized in clever metropolis monitoring. The project aims at developing a device which facilitates the gathering of information with the assistance of interconnected modules inclusive of a couple of sensors beneficial to the city.

# Damage Detection of An Automobile

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#### ABSTRACT

As a result of the proliferation of automobile in dustries today. There have been an increasing number of car accidents, not all of which are serious, but the automobile is damaged. Detecting automobile damage at the site of an accident using images is exceptionally beneficial as it may significantly lower the cost of processing the insurance reimbursement process while also providing more convenience to automobile users. In most cases, this damage is detected and assessed manually from the car's images during the car evaluation process. In this paper, we worked on the problem of automation of vehicle damage detection which can be used by insurance companies to automate the process of vehicle insurance claims in a rapid fashion. The recent advances in computer vision largely due to the adoption of fast, scalable, and end-to-end trainable Convolutional Neural Networks make it technically feasible to recognize vehicle damages using semantic segmentation. We manually collected and annotated images from various online sources containing different types of vehicle damages and we used U-NET architec ture to detect the damage of an automobile.

## Effective Classroom Application for Online Education during Era of Covid19

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*Abstract-* The covid pandemic has impacted numerous areas like the business area and education areas. In particular, in the education area, the point is heaps of switches in techniques for education in addition to training. Online participation computation is a significant issue for educators on the grounds that various Learning Management frameworks instruments are utilized. Large numbers of themselves give the list of participation and numerous are not. An Android build system for versatile clients is suggested and intended to deal with all activities in the classroom

## Virtual Mouse Control Using Hand Gesture

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Abstract - This research proposes a way for controlling the cursor's placement using only one's hands and no electronic equipment. While movements like clicking and dragging things will be done using various hand gestures. The suggested system will just require a webcam as an input device. OpenCV and Python, as well as additional tools, will be required for the suggested system.

## IoT Applications in Health Care demonstrated using Smart Health Monitoring and Management Systems

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#### ABSTRACT

The exponential advancements in the IT industry have led to the various applications of IoT. In the evergrowing field of digital medicine smart health monitoring systems powered by IoT play an important role. Data is recorded and relayed by electronic devices such as smart watches, which then facilitates various interoperability methods in IoT. Patients with abnormal health conditions can be quickly monitored through such smart health care systems and a swift and possibly life-saving response can be provided to such patients. This can further lead to IoT playing a major role in connecting doctors to their patients by using health monitoring devices. The basic feature of IoT is that it acts as a repository and also showcases and divulges the appropriate information. Such monitoring systems associated with IoT are adapted for distant patient monitoring on a continual basis and this data is then aggregated and analyzed. This can bring about a massive positive transformation in the field of e-Smart health management for patients in both rural and urban areas. In this paper, the application of IoT in healthcare has been demonstrated using three examples- A novel IoT

system developed with the help of oxygen saturation (SpO2) measurement sensor, temperature sensor, blood pressure sensor, Bluetooth, Arduino, and APP technologies/techniques for people with poor access to medical services, using gadgets such as smart watches for personal health monitoring and methods that monitor the wellbeing of the elderly.

## A comparative study on Decision Tree and Random Tree approach in predicting Heart Diseases

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A. Abstract— Heart disease is one of the leading causes of death in the globe. All doctors cannot be equally proficient in every domain and well versed and skillfull doctors can't be available at all time. An automated medical diagnosis system would improve medical treatment while simultaneously lowering expenses. Predicting the course of illness is a difficult endeavor. Data mining is used to infer diagnostic principles automatically and assist professionals in making the diagnosis process more trustworthy. Researchers employ a variety of data mining approaches to assist health care practitioners in predicting cardiac disease. A classification model would be a fit model for predicting diseases accurately. We present you with a comparison of two classification models, Decision trees and Random Forest Models. We find that Random Forest method performs better than Decision Tree model.