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International Level Virtual Conference
18th & 19th June 2021

ICETCST – 2021

International Conference on Emerging Trends in Computer Science &Technology

BOOK OF ABSTRACT

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NOTE

All papers presented in the conference will be published in the Proceeding Book after review with ISBN Number.

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Dr. CA. A. Raghavendra Rao
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Date : 18-06-2021　　　　　　　　　　　　　　　**Time: 08.30 AM**

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International Level Virtual Conference On

Emerging Trends in Computer Science &Technology

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Paper 001

EMERGING TRENDS IN BANKING SECTOR IN INDIA

Bhadrappa Haralayya[1] and P.S. Aithal[2]

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ABSTRACT

The spine of the monetary machine, especially the Bank quarter, has seen enormous changes nowadays. Typically the new changes might be a results of financial changes for the explanation that flexibility. Monetary quarter change gives the considerable operational adaptability and utilitarian self-rule for banks, in this way developing delivery, efficiency and output. In the current period, the agreement of globalization is similarly having an effect at the Indian Banking Market. Because of the developing increment of worldwide exchange and move - range monetary premium, bank side interest has likewise increased and banks are at present entering new financial games. The Economic Sector that the Banking zone is the greatest player, has a predominant capacity inside the money related improvement of men and women just as global areas. Banks have command over a lot of money in supply. He could be a major upgrade for the monetary advancement of a rural. Hence, a strong bank and monetary area is considerable for the of the usa to visit be a high level you. S. A.. This is certainly important to develop, make occupations, make riches, dispose of destitution, empower landmark side interest and increment net home item. Presently bank is called modern banking. Data advancement is prompting new advancements in object design and transfer in the bank and account businesses. Client transporter and client delight are the key outcomes. In the end the financial 1 / 4 should get a handle on the new endeavor model with the guide to build customer the board and conduire with a distribution of product and cost control to live eventually and contributions.

Keywords: Digitization ,Mobile Banking, UPI, SWIFT CHIPS, CHAPS, CHATS, EFM, ECS, RTGS, NEFT, ATM, Internet Banking.

Paper 002

SURVEY OF APPLICATIONS OF DEEP LEARNING IN MEDICAL IMAGE PROCESSING

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ABSTRACT

Medical practitioners all around the world make extensive use of medical imaging diagnosis and treatment of different diseases and conditions. The use of machine learning to identify patterns from images produced stellar results, thus acting as a decision support system for medical practitioners. Later, as the complexity and quantity of the data grew abound, traditional ML algorithms became insufficient to handle the problem. Advances in high performance computing and machine learning set the stage for deep learning to go main stream. A deep learning approach to medical image processing will enable a system to choose and extract the ideal feature set. It can diagnose the disease based on the example data and can provide actionable information to the medical consultant. Earlier algorithms suffered from several drawbacks. They were time consuming, based on expert knowledge and required a lot of time in identifying and tuning the features. As for deep learning, feature extraction is automatic and fast. Deep learning models can efficiently handle the complex nature of medical images. This paper examines the application of deep learning techniques in various phases of medical image processing and conducts a study of some cases where such systems have been successfully implemented.

Keywords: Deep Learning, Medical Image Processing, CNN, Feature based ML.

Paper 003

A STUDY ON INTRUSION DETECTION SYSTEM FOR IOT ENVIRONMENT BASED ON MACHINE LEARNING

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ABSTRACT

IoT is now becoming an inevitable part of everyone's life. Internet of Things connects many devices, sensors, applications via wireless or mobile networks to fulfil the required tasks. IoT invests interest in various fields like agriculture, healthcare, smart cities, homes, cars, transportation, etc. Today IoT is being used extensively to lessen the burden of humans. Even though IoT eases human life but also opens to different security challenges. Security must be a priority while across the value chain from the device manufacturers, IoT Service providers, Retailers and consumers. Adopting IoT in a sensitive environment is really a challenging task because of subtle data. This may cause hazards for the nourishment of IoT in the coming days. In light of this, we try to examine the various factors that contribute to the challenges of IoT security. Intrusion Detection System can be used for the security of data as well as devices over the internet. In recent years Machine Learning techniques are applied in the detection of threats in IDS. The main objective of this paper is to make a comparative study on various machine learning algorithms that can be applied in IDS.

Keywords: IoT, IDS, Machine Learning, Vulnerability.

Paper 004

APPLICATION OF ARTIFICIAL INTELLIGENCE IN HEALTHCARE: PRESENT USAGE AND OPPORTUNITIES IN FUTURE

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ABSTRACT

Artificial Intelligence (AI) is the branch of computer sciences that emphasizes the development of intelligence machines, thinking and working like humans. It is bringing a paradigm shift to healthcare, powered by increasing availability of healthcare data and rapid progress of analytics techniques. AI can be applied to various types of healthcare data (structured and unstructured). Forms of Artificial Intelligence (AI), like deep learning algorithms and neural networks and classical support vector machine are can be used for structured data. As well as natural language processing for unstructured data. Using these data AI can be used to automatically spot problems and threats to patient safety, such as patterns of sub- optimal care or outbreaks of hospital-acquired illness with high accuracy and speed. The goal of the research is to make a representation of current usage of AI in healthcare and its future use.

Keywords: Artificial Intelligence, Healthcare, Human, Machine Learning, Technology.

Paper 005

A COMPARATIVE ANALYSIS OF LOGISTIC REGRESSION ALGORITHM, K MEANS CLUSTERING ALGORITHM AND HIERARCHICAL CLUSTERING ALGORITHMS FOR CLASSIFICATION OF DIABETES

Muna Alrubaiai and C. Jayakumari
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ABSTRACT

Diabetes is one of the leading diseases that cause blindness, and it can occur when the blood glucose level goes beyond an acceptable range. The diabetes can lead into many complications like Eye disease, Foot problems, Gum disease, heart disease etc. Generally, Diabetes is asymptotic in nature, so it is very much necessary to diagnose the result at an early stage itself to avoid the complications. This paper discusses about the binary classification of diabetes (ie) is the patient is diabetic or not using different machine learning algorithms. A statistical Free open-source dataset from National Institute of Diabetes and Digestive and Kidney Diseases as part of the Pima Indians Diabetes Database has been used to study about the presence of diabetes. It has got 768 instances with 9 different features like Pregnancies, Glucose, Blood Pressure, Insulin, BMI, Diabetes Pedigree Function, Age, and outcome with 0.1% missing values. Different preprocessing techniques like missing values, outliers have been used before training the dataset with different Machine learning algorithms like logistic regression, K Means algorithm and hierarchical clustering algorithms. The results obtained through these algorithms has been compared. Various visual representations has been used to portray the results obtained through this algorithms.

Keywords: Diabetes, Logistic Regression, K Means, Hierarchical, clustering, classification.

Paper 006

MACHINE LEARNING ALGORITHM FOR HOUSE PRICE PREDICTION

Ayah Jad Allah Rajeh Jad Allah and C. Jayakumari

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ABSTRACT

Machine learning is one of the cutting-edge technologies that can be applied to analyse huge volume of data. Machine learning algorithms guarantees to produce better accurate solutions which would help decision making process. Machine Learning techniques have been applied in variety of domains. This paper concentrate on the application of Linear regression algorithm for the prediction of housing price. An open dataset has been used to implement the algorithm. The dataset has 414 instances with 8 features like age, distance to the nearest places. Different pre-processing techniques like missing values, outliers have been used before training the dataset. The RMSE error and MSE has been used to evaluate the house price production and it is found that the algorithm produces very good results. Various visual representations have been used to portray the results obtained through this algorithm.

Keywords: Linear regression, house price, prediction.

Paper 007

ENHANCING SOFTWARE MAINTAINABILITY AND SOFTWARE QUALITY BY DETECTING AND COMBATING CODE SMELLS IN OBJECT-ORIENTED PROGRAMMING

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ABSTRACT

Background/Purpose: Code Smells are usually the situations that arise because of bad programming practices or poorly written program code. They are not considered errors but are technically incorrect implementations. These can arise due to various strategies and concepts that are adopted to code or sometimes due to the logic that is being used. A Java code is in no way an exception to the presence of Code Smells. In fact, it is more susceptible and vulnerable to Code Smells than many other languages. In this paper, we try to present various Code Smells that we come across in Object-Oriented Programming with special reference to the Java programming language and also discuss a few tools and techniques to resolve them.

Objective: To enhance Software maintainability and Software quality by detecting and combating Code Smells in Java.

Design/Methodology/Approach: Analysis and presentation of information collected from various scholarly articles and web articles. Also, source code examples and their implications on the concept.

Findings/Result: Based on our study and analysis, we did find that software maintenance becomes difficult and software quality also deteriorates because of the presence of Code Smells in Software. Also, Code Smells are likely to affect the speed of execution and the appearance of the code.

Research limitations/implications: The examples, analysis and solutions mentioned in this paper are limited to Java Programming. However, it can be seen in other programming languages too.

Originality/Value: This paper focuses on various Code Smells that are normally seen in Java. There are also some tools and techniques that are discussed to overcome the same.

Paper Type: Exploratory research.

Keywords: Code Smells, Java, Software quality, Software maintainability, Types of Code Smell, Refactoring.

Paper 008

THE ROLE OF BIG DATA IN EDUCATION

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ABSTRACT

The use of big data has radically changed most area and education is one of the most prominent areas affected by this change. In recent years, educational institutions - from primary and secondary schools to universities and online educational service providers are able to collect, use and share data more easily and quickly than ever before. This research paper aims to explore the role of big data in education. The exponential growth of this data will lead to the study and provision of techniques needed to deal with the importance and knowledge of this data. Recent years changes in Big Data Architecture, Big Data Analytics and Big Data Technologies helped extensive usage of big data for decision making. Therefore the development of the problem-based approach and open research problems gives researchers a new horizon.

Keywords: Big Data in Education, Big Data Architecture, Big Data Analytics, Big Data Technologies.

Paper 009

IOT-INTERNET OF THINGS IN HEALTHCARE

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ABSTRACT

In in the fields of electronics and computer science combined result, technological advances are formed with the realization of IOT(internet of things), connected healthcare, and smart concerns. The impact related to IOT in healthcare still has significant stages of development in the early days. The networked sensors are used in it that is embedded in living environments for the possible gathering of rich information with mental and physical health. This research work tries to comprehend and review the applications related to IOT with custom-made healthcare for excellent achievement at a reasonable cost. The explanation is given out in brief with IOT over which functions are used in the combination of sensing and wireless techniques with the implementation of healthcare applications. Here, the brief clarification is also given out with the challenges and opportunities for IOT. The research also highlights the opportunities and challenges for IOT in realizing the vision of the future of health care. Telemedicine is defined clearly in the research with different terms and conditions.

Keywords: IoT, Smart Healthcare, Sensors, Physical health, Tele-medicine, Patient monitoring system.

Paper 010

CRITICAL EVALUATION OF IT AND ITS IMPACT ON WAREHOUSE OPERATIONS AT A LOGISTICS COMPANY IN OMAN

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ABSTRACT

The research focuses on the critical evaluation of IT and its impact on warehouse operations at a logistics company in Oman. Information technology plays a fundamental role mainly in the business success of companies in general as well as the success of warehouse operations. On the other hand, failure to implement these modern technologies in warehouses and total reliance on manual methods leads to the existence of multiple problems and has a negative impact on the operations in the warehouses. This research aims to critically evaluate the impact of information technology on the warehouse operations at a logistics company in the Sultanate of Oman. This research targets the employees working in the warehouse department as well as the IT department in a logistic company in Oman. In this research, two types of research methods were used, the qualitative method and the quantitative method. Qualitative method done through an interview with the supervisor of the warehouse department in the company. Survey questionnaire was being distributed to the employees working in the warehouse and information technology department. Findings from the previous studies were compared with the results of the current study. The final results obtained are analysed and recommended to overcome problems in the warehouses. The study recommends the use of modern information technology for warehouses, COBOTs, automated guided vehicles as well as an automatic retrieval and storage system along with automatic control reports. The study also recommends that the company should be in constant contact with all organizations that specialize in research and development. The company must be fully aware of all the modern technologies that are used in the logistics business and that helps to increase the efficiency of the company's operations.

Keywords: Warehouse Management System, Warehouse operations, Information Technology, Information technology infrastructure, Logistics management

Paper 011

THE IMPACT OF DIGITAL TRANSFORMATION TO ENHANCE BUSINESS IN THE LOGISTICS SECTOR OF OMAN AIR

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ABSTRACT

Digital transformation represents a modern addition to the traditional work in order to create a strong competitiveness of the institution. Digital transformation is a re-engineering of services that contribute to facilitating and simplifying to the customer in terms of reducing effort, time and cost. Digital transformation helps to maintain the success of enterprises during sudden changes, such as Covid 19 crisis, which led to making all work done electronically and technically. The Sultanate of Oman encourages keeping pace with digital transformation, which in turn will make a major quantum leap in the logistics sector, which is the backbone of economic development in Oman, in line with the national strategic plan for logistics 2040. Oman Air has recently been interested in keeping pace with the digital transformation in its business in order to enhance business and achieve high competitiveness in the logistics sector. Through this, Oman Air has made available an application called "SATS" that provides several useful features that increase the speed and efficiency of transactions made by both the customer, the employee, and others. This research aims to study and evaluate the extent of the impact of digital transformation in enhancing the business related to the logistics sector in Oman Air and analyzing the results contributed by the application of Oman Air "SATS" in terminating transactions. This research targets two categories such as the customers, through whom the impact that is produced during their use of technology in finalizing their transactions will be known through their answers to a questionnaire that will be conducted to them. As for the other category, which is employees in Oman Air, in order to discuss the impacts of digital transformation in the logistics sector, that will be known through a procedure of an interview with one of the staff members. In addition, data collection will be gathered by comparing previous literature reviews, that are related to this topic.

Keywords: Digital Transformation, Information Technology, Application, Logistics Sector, Digital Improvement.

Paper 012

EVALUATION OF SOFTWARE TOOLS FOR PRODUCT DESIGN PROJECT MANAGEMENT

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ABSTRACT

Product design process consists of various numbers of sequential steps and these steps are linked as per the requirements of product development processes. Execution of product design as a project facilitates identifying and sequencing of product design steps, scheduling of these steps, connecting resources and managing costs. Usage of project management software tools for project planning, project scheduling and managing product design project helps to overcome various key challenges, especially related to scheduling, resource allocation and costing. This research paper identify various steps involved in product design processes from project management perspectives and evaluation of project management software tools for integrating product design processes. The research further explores project management software capabilities on linking of various key steps in product development for identifying and managing project slacks as a part of project monitoring and controlling activities to achieve optimized scheduling.

Keywords: Project planning, Project scheduling, Project management software tools, Project monitoring and control, Project slacks.

Paper 013

EVALUATING THE IMPLEMENTATION OF SMART CARDS CHECK-IN SYSTEM FOR IMPROVING THE EFFICIENCY OF MWASALAT BUS STATIONS

Ebtihal Saif Al Nofli

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ABSTRACT

The transport sector is considered one of the most competitive sectors in companies around the world, and therefore interest in this sector will increase levels of customer service and also reduce costs and thus increase economic growth in the country. At the present time, the world is running only with technology, as technology has occupied a large space in daily business due to its facilitation of business. This research aims to evaluate the impact of implementing a smart card screening system to improve the efficiency of transportation bus stations. This research targets the employees in the transportation administration department as well as the information technology department in the Mowasalat company. In this research, two types of research methods were followed, a mixed approach involving quantitative and qualitative methods. An interview was conducted with the supervisor of the transportation department in the company, and a questionnaire was distributed to the employees of the IT department. The results of some previous studies were reviewed and compared with the current results. Based on the findings, it provides an advanced service that keeps pace with the era of modern technology in the bus stations. Finally, the recommendations are made to improve the efficiency of Mwasalat's services.

Keywords: Public Transport Service, Smart bus stops, Sustainable bus station, Transport Management System, Internet of Things

Paper 014

EVALUATE THE IMPACT OF INFORMATION TECHNOLOGY ON INVENTORY MANAGEMENT PRACTICES IN ALI SHAIHANI GROUP

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ABSTRACT

Information technology has become an essential part of companies' operations and has a profound impact on improving performance, so most companies have begun to focus greatly on developing and improving the information technology used in their operations. Among the processes that rely heavily on information technology are the processes of inventory management. The use and development of information technology in companies, whether industrial or commercial, has facilitated inventory management processes and overcome the challenges they face. However, so far, some companies are still ignoring the development and improvement of information technology used in inventory management. Therefore, it is necessary to clarify and educate companies on the importance of using information technology in inventory management, which is to increase companies' efficiency and success, improve the quality and productivity of their products, increase their competitiveness, and reduce cost, effort, and time. This research aims to study and evaluate the impact of IT on inventory management in the Ali Shaihani Group, determine its effectiveness, identify the challenges facing inventory management and find appropriate solutions to develop and improve the information technology used in inventory management in the Ali Shaihani Group. In this research, information was collected using primary and secondary sources. The Ali Shaihani Group website, articles, and electronic magazines related to the title of the research and other websites were also used. Then the data was analysed using quantitative and qualitative analysis. The most important results indicate that the impact of information technology on inventory management is very large, and it is imperative for all companies to continuously develop and improve the information technology used in inventory management. The results also found that the use of ERP (Enterprise Resource Planning) and SAP in inventory management leads to increasing companies' efficiency and success, improving the quality and productivity of their products, and increasing their competitiveness. This study will contribute to improving inventory management in Ali Al Shaihani Group and educating other companies on the importance of using information technology in inventory management.

Paper 015

A STUDY ON IMPROVING CARE IN DIABETES THROUGH EHEALTH TECHNOLOGY BY EVALUATING PATIENT EMPOWERMENT

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ABSTRACT

Diabetes mellitus is a chronic illness affecting majority of the population worldwide. The effective management of Diabetes Mellitus is essential to prevent long term complications. The advent of newer technologies has provided greater possibilities in diabetes self-management, smart-phone applications are one of these technical advancement. Also encouraging individuals with diabetes for diabetes self-management is effective by empowering them through health education. The objective of the study to identify the reach of smart-phones in a diabetic population compared to non-diabetic population and to characterise smart-phone users among individuals with diabetes and to examine the effectiveness of a freely available smart-phone application in diabetic self-care and also to study patient empowerment through health education in improving diabetic care. This study is divide into three parts, the first part is a cross sectional study, Part 2 was a pilot study and Part 3 is a cross sectional study. This included a convenient sampling and the study was carried out for a period of six months. The analysis of the study was done using a SPSS software. Correlation was applied to part 1of the study, which revealed that the smart-phone prevalence was more in the younger age people whose income is above Rs. 1,00,000 and whose educational level is above degree. Part 2 study was analysed with the paired t test which depicted that there was a significant relationship between the HbA1c level for intervention and control group. And lastly the part 3 study was analysed using the paired t test which revealed a significant relationship between the pre-test and post test scores for a DKQ (Diabetic knowledge questionnaire) also the correlation test shows that the education level and duration of diabetes has a significant relationship. Part 1 of the study shows that the reach of smart phones was more in younger individuals with salary above 1,00,000 and education level above degree. Part 2 of the study, shows that the intervention using smart-phone applications in diabetes self-care is effective. And part 3 of the study reveals that the patient empowerment in the form of health education will bring about positive behavioural changes in the individual which will aid in diabetes management. The study concludes that the e health applications and patient empowerment is effective in diabetes management. The present diabetic population lack sufficient knowledge on the usage of smart-phones but the future generation will be well versed with this and hence the implementation of m-health

strategies are promising for the future. Patient empowerment is very important aspect in health care this has to be considered as the patients can take part in the decision making process pertaining to their health with the health care team.

Keywords: Smart phone application, eHealth, Diabetes mellitus, Diabetes self –care management, Patient empowerment, Non-diabetic

Paper 016

RECENT DEVELOPMENT AND TECHNIQUES IN ANDROID APPLICATION SECURITY

Rushali Pawade[1], Deepa Hosur[2], Menaka[3], Soumya Biradar[4], Ashalatha Ramegowda[5], Shivanand S Rumma[6]

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ABSTRACT

Android is an open-source and Linux-based operating system for mobile devices such as smartphones and tablet computers. The android operating system is built basically for mobile phones, and the software is based on the Linux Kernel and other open-source software and developed by Google company. Android is very popular nowadays among students for choosing Android for the sake of their projects. Therefore, a beginner must build baby Android apps to learn Android software. Android is a sort of mobile operating system used in gadgets like smartphones, tablets, and even television. Android is open source to developers who has an interest in developing mobile apps. It also provides an adaptive framework that allows the developer to create apps more simply. Furthermore, Android is an open-source tool where developers can develop and expand new features to make their applications better. This paper aims to concentrate on the security scanning process and the features of android application development for mobile phones.

Keywords: open-source, tablet computers, Linux Kernel, gadgets.

Paper 017

BLOCKCHAIN AND CRYPTOCURRENCY - A CASE STUDY

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ABSTRACT

Money and finance world is changing right in front of our eyes. The technological weapon of choice driving the success of Bitcoin and other cryptocurrencies, a decentralized transaction and data management in short known as Blockchain. Blockchain has a ledger that contains a transaction spreadsheet. When someone trades or mines cryptocurrency, the transaction is recorded in a spreadsheet, which is referred to as a ledger in the virtual world. Blockchain technology gives up new possibilities for making data use more efficient and equitable. The amount of money invested in virtual currency over the last several years appears to have levelled off recently. This does not, however, suggest that blockchain technology, which underpins virtual currencies, has lost its utility. The increasing valuation of digital currencies provides a variety of problems and difficulties for the financial and political system. Almost majority of recent Blockchain-Based studies are focused on its application for cryptocurrencies such as Bitcoin, with just a limited number of studies exploring the use of Blockchain Technology in other fields. On the contrary, a new generation of blockchains, as well as associated applications, is currently being developed and deployed. Despite the fact that there are over 1000 cryptocurrencies on the market, Bitcoin is the most well-known and commonly bought cryptocurrency on the planet. Bitcoin has a market capitalization of little over 725 billion dollars. Bitcoin, the first decentralized cryptocurrency, became live in January 2009 and was created by Satoshi Nakamoto whose identity is unknown. He has given the world something innovative, and it is up to the users to decide what they will do with it. The future of blockchain technology is very exciting; new technologies are continuously hitting the market, offering greater and bolder applications. The purpose of this paper is to provide a brief introduction to these topics.

Keywords: Blockchain, Cryptocurrency, Bitcoin, Security.

Paper 018

ARDUINO-BASED AUTOMATED AEROPONICS FARMING IN THE DOMAIN OF PUBLIC HEALTH INTERESTS

Omprakash V. Bhat

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ABSTRACT

This idea presents an efficient and effective indoor cultivation system based on the modern agricultural concept of aeroponics, in a controlled atmosphere, utilising Arduino and several parameter measuring sensors.

Aeroponics is a method of growing plants without the use of soil or water in a conditioned air environment. This approach involves spraying nutrient-rich solution onto the plant's dangling roots and lower stems in a closed or semi-closed environment. Under these conditions, a controlled environment has a tremendous potential to improve the stages of development, health, and growth of plants.

Long-standing farming techniques are mostly reliant on soil conditions and the surrounding environment. However, the cultivation process in aeroponics technology is more resourceful, with a superior control system and data monitoring, as well as being more convenient for indoor farming. The current proposal is also simply accessible and contains user-friendly components, allowing individuals to replicate and alter it without requiring extensive technological knowledge or resources.

Keywords: Aeroponics, Arduino, sensors, actuators, module relays, Interrupt system.

Paper 019

IMPACT OF BYJU'S LEARNING APP ON STUDENTS ONLINE EDUCATION DURING THE COVID-19 PANDEMIC - A CASE STUDY

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ABSTRACT

Byju's e-learning App is one of the most used online learning mobile application in India. It began its operations in 2011.Founded by two business entrepreneur Byju Raveendran and Divya Gokulnath. The Company's head office is in Bengaluru, India. Slogan for the app is "Fall in love with learning". This app has brought new and emerging trends in the field of education, especially in e-learning. Byju's e-learning App initially comprises classes of students of all categories, all boards in India, especially from classes 1st to 12th. Besides this, the app also provides special products for graduates, who try to crack competitive exams, such as CAT, IAS, GRE, and GMAT. The main segment of the application is to provide a platform for e-learning with exited examples in order to increase the concentration level of students. It is the fastest E- learning app in India, only focused on learning the concept through visualization and explained through various teaching tools, in a simple and better manner, where the learning outcome is best in possible especially for mathematics and science subjects. In this paper we analyze the impact of Byju's learning app in students during COVID 19 pandemic. This paper also analyzes how e-learning apps can focus on improving the students experience and how it helped to be more customer-centric and increased its usage. Based on the SWOT analysis we have provided some suggestion that can be incorporated by Byju's Learning App as business strategy.

Keywords: Online Learning Platforms, Byju', Personalized Learning, M-Learning, Technology, Learning Apps.

Paper 020

ROLE OF SOCIAL MEDIA ON SOCIETY

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ABSTRACT

Social media refers to interaction among people in which they create, share and exchange information and ideas in virtual communities and networks. In today's life, there is no one who does not talk about social media. Social media has so much influence. Today's generation are growing up by mobile devices. Facebook, Twitter, Instagram are the some examples of interactive social media. Whatever the area, the impact of social media is not insignificant. This paper discusses the effect, areas, and future of social media. It also deals with who is more addicted to social media in the society.

Keywords: Social Media, Society, Mobile Devices

Paper 021

APPLICATION OF ARTIFICIAL INTELLIGENCE IN SELF-DRIVING VEHICLES-CASE STUDY

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ABSTRACT

As modernization progresses, so does the demand for oil-based energy, resulting in the rapid fluctuation of crude oil product market prices due to the fundamental economic principle of the Law of Demand. The adoption of green technologies could be one of the solutions to the volatility and uncertainty in crude oil demand and price. Green approaches emerge to be the upcoming business and market trend. In recent years, technological advancements in the automotive industry have focused on the development of electric vehicles to combat rising pollution levels. Autonomous vehicles have recently made headlines and are dominating tech discussions. They can't be an imagination in the age of artificial intelligence (AI), which is being used to supplement self-driving cars. Given the widely available, practical and on-demand network access to a common pool of customizable computing resources, it seems inevitable that the Internet of Things (IoT) and artificial intelligence will be integrated into different areas of our day-to-day life. This paper focuses on the use of artificial intelligence in self-driving cars. Also covered are the technologies and infrastructure used by AI, as well as private companies in the race to develop self-driving cars.

Keywords: Artificial Intelligence, Autonomous Vehicles, AI, Internet of Things, IoT, Self-Driving Cars.

Paper 022

A COMPARATIVE ANALYSIS TO MEASURE ACADEMIC SUCCESS OF STUDENTS USING DATA MINING METHODS

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ABSTRACT

Prognosticating students' output remains a critical commotion for the sustainability of the global education segment. But, due to the vast volumes of data within educational databases, the challenge continues to be difficult. Conversely, certain institutions do not have programmers in place to analyze and track students' progress. Aforementioned issue may be exacerbated by a short of appreciating of the value of forecasting students' results. Furthermore, current research on concert forecast methods is still insufficient in identifying and persuading educators to use the most appropriate tool for forecasting students' concert. The present study examines the most widely used data mining techniques for forecasting student concert in previous studies in order to determine the most appropriate technology for forecasting student performance. This study's findings revealed that the clustering algorithm is the best technique for forecasting student success because it provides reliable and precise results. Forecasting student success aids in the tracking of students' progress, both pass and fail, and thus offers a window for early intercession and supervisory on the part of educators. The present incentive significantly aids in the promotion of the education segment by improving educational principles.

Keywords: Educational Data mining, Student Performance, Data mining techniques.

Paper 023

INTELLIGENT ANALYSIS IN CARDIOVASCULAR DISEASE USING DECISION TREE IN R LANGUAGE

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ABSTRACT

As the most significant single cause of death on the planet, cardiovascular disease (CVD) in all its forms is an essential and life or death problem. CVD is not a particular disease but a cluster of diseases and injuries that affect the cardiovascular system (the heart and blood vessels). Heart disease is most common and the blood vessels of the heart and brain. Overall, they affect people in later life (with the incidence rising sharply after the 30- 44 age range). However, giving a cardiologist to a foremost 35-year-old, who will get a form of CVD already has the disease's beginnings. CVD is a group of diseases heartrending the cardiovascular system. These include coronary heart disease, angina; stroke; rheumatic heart disease; congenital heart disease; peripheral arterial disease, aortic aneurysm and dissection, deep vein thrombosis, and other, less common, cardiovascular diseases. Research and epidemiological studies have concluded that 23.3 million people died from CVD in 2018. Of the total deaths due to CVD, 80% of the deaths are from low-middle income countries. It has been predictable that by the year 2030, >23.3 million people will die annually from CVDs. Low and middle-income countries are more vulnerable to deaths due to CVD since they are more exposed to risk factors such as tobacco, less access to health care facilities and lack of awareness. This paper predicts the patients level in cardiovascular disease with decision tree algorithm analysis of the NSP- fetal state class code(N=Normal; S=susupect; P=pathologic) in the R language with illustration form.

Keywords: Cardiovascular disease, Decision Tree algorithm, R Language

Paper 024

USING ARTS TO ENHANCE UNDERSTANDING OF PATIENTS EXPERIENCES OF ILLNESS USING TECHNOLOGY ENHANCED LEARNING

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ABSTRACT

Introduction: The 'art of medicine' involves communication and understanding of the social, emotional and spiritual factors that impact upon the human experience, the health care system and our understandings of illness, suffering and medicine[1]. Art in Medicine improves the quality of history obtained from the patient, improves physician's diagnostic ability and decreases rate of miscommunication[2]. The objective of this study is to measure and examine student's ability to collaborative and reflect on patients experience of illness through technology enhanced learning.

Methodology: The first phase medical students were given a 30-minute introductory talk using Google meet on how arts were used around the world for making medical students understand the patient's perspective of illness. Then the students were distributed into group of 15 students. Then a painting and a Jam board were shared on Google classroom and the students were asked to comment with one word on Jam board. Then the students were given 15 minutes to discuss on Google classroom/ Google meet on 'what do they see' and 'What do they feel' about the painting. They were needed to reflect as a group on Google classroom in their respective groups. Finally, closure was done by discussing about their reflections. Feedback was taken about the students experience in understanding patients experience of illness through Art through technologically enhanced learning.

Results: A common reason for integrating art in undergraduate medical education is that art may act as a balance to the dominance of natural science. Among 149 students 102 students responded for the questionnaires. The data were collected, statistically evaluated by using Microsoft excel. Out of the respondents, 59% of them reported that understanding the patients experience of illness can also be effectively learnt through online modality also.

Conclusion: The findings of the study suggest that medical students felt that a session on, "Art and Observation" opens the students to experience the perspective of the artist, and each student can perceive the same piece of Art with a different meaning. Hence the feelings of the patient with regards to his illness is multidimensional. Over a period of time we have seen that the physicians are not able to understand and experience the pain and illness of patients. Various stressful aspects such as long work-hours and sleep deprivation, dependence on technology for diagnoses, shorter patient hospitalizations and limited bedside interactions contribute to decrease in imbibing these skills. Trying to listen to and feel the patients illness will go a long way in having an effective therapeutic relationship with the patient. During covid times, when we force to use technology, we saw that even technology can also be used to experience the same.

Discussion: The key to an effective doctor-patient relationship and a successful diagnosis, treatment, and prevention of diseases is the patient's trust in the physician. This can effectively be done by using the teaching learning method of "Art and Observation". The same can also be facilitated using technological support so that there is no extra burden on already over stretched syllabus of a medical student.

Keywords: Illness, Art & Online

Paper 025

SEIZURE OF IOT HOUSEHOLD APPLIANCES FOR CYBER FORENSIC ANALYSIS

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ABSTRACT

Crime scene investigators face new challenge in the approach of seizure of IoT household appliances that is connected to access point or router. With the advent of IoT devices that facilitates ease of access and connectivity to household appliances within a premise increased the complexity of seizure of such equipment's for investigators for further analysis as required by the framework set forth as part of code of practise. As the connected devices hold several data that can be used for further analysis after an incident occur, the procedure require to seize such electronic equipment's that's connected to a network. Household appliances such as Refrigerator, Washing Machine, Television, Microwave Oven, Air Condition, Ceiling Fan, etc., are embedded with network device to be able to connect to an access point or a router. Cyber Forensic Analyst requires to acquire the log files such as The timestamp of access details, record that shows change is control settings or temperature, Remote connection logs etc., from the connected devices. In order to do achieve this task, the seizure of electronic devices pose a great challenge due to the complexity of transportation and storage due to the size. Live forensic acquisition techniques therefore should be brought into practise for IoT household appliances. Tools and software's that is required to do live forensic acquisition should be standardised for IoT devices that cannot be transported or stored. Thus, the objective of this paper is to study the aspects of code of practise and standardisation of tools and software's for conducting live forensic analysis of IoT devices during Crime scene investigation. With the use of a standard procedure of acquiring relevant data from connected devices on-site will save cost and time and increase efficiency in evidence analysis.

Keywords: IoT, Household appliances, Live Forensics, Crime scene.

Paper 026

MINIMIZATION OF ENERGY CONSUMPTION IN WIRELESS SENSOR NETWORKS USING SINK NODE SELECTION

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ABSTRACT

The Wireless Sensor Networks has limited battery power, and the selection of the sink node for the optimized routes with minimal energy usage. The distance of the sender and the receiver may be very far away from the sink node, usage of sink node for the transmission can lead to minimize the energy usage. A sink node has more computational capabilities than other nodes. In the communication, the topology information is shared with the master node and selection of the master node is also a critical task. In this paper we have developed a suitable path selection algorithm to choose the sink node.

Keywords: Sensor, sink node, topology, algorithm.

Paper 027

AUTOMATIC BREAKING NEWS APPLICATION

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ABSTRACT

Current generation completely relays upon the electronic Media. The main. Objective of this news application is to provide the updated and breaking news to the users of the system. AJWT token is used for user authentication process. The user can read the article of his interest by selecting the category. The application will simplify the job of the admin by automating some of the process using cron jobs.

This news application is built to meet the requirements of current generation people and to update them about the daily news, breaking news and latest headlines in different fields around the world

Keywords: News Application, Json Web Token, Cron.

Paper 028

ANTICIPATED DEVELOPMENTS IN STUDENT-CENTRED, FACULTY-FOCUSED HIGHER EDUCATION SYSTEM BASED ON INDIAN NATIONAL EDUCATION POLICY 2020

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ABSTRACT

The higher education system in India is anticipated to have a major transformation after implementing National Education Policy 2020. With many options to pursue higher education at undergraduate and postgraduate levels, higher education is going to be an innovative Student-Centred model where students are center of the sphere and get the freedom to choose subjects, professors, colleges/universities, and degrees. Further, they have the freedom to change the professors, college, and university every year. They can also take dual degrees simultaneously and change the pace of completion of courses according to their comfortability. Professors can offer subjects from colleges, universities, or any online learning platforms independently as freelancers and depending on their popularity, offer many courses throughout the country ubiquitously. Colleges and universities are going to have different responsibilities of evaluating the student's certificates to award degrees. This leads competency-based evaluation system. Though the objective of NEP -2020 is to realize an ideal education system that is student-centric, faculty-focussed, and ubiquitous, through offering Academic Bank of Credit (ABC) depository to individual students to earn their favourite degrees at their convenience with least cost, the first phase of transformation may contain 3 models as Campus model, Blended model, and Online model leading to Campus-based degree, Blended degree, and Online degree at UG and PG level. In this paper, we anticipate and analyse the usefulness, effectiveness, and consequences of these three models in HES in near future. The paper also discusses, the smooth transfer of these processes of transformation of current faculty and university-centred system into the student-centred system with emphasis on employability and innovability through skill and research focus.

Keywords: HES, NEP-2020, Student-centred education system, Faculty-focussed education system, Academic Bank of Credit (ABC),

Paper 029

CONVERSION OF ELECTRICAL FOUR WHEELERS INTO THE HYBRID VEHICLES-CHALLENGES AND OPPORTUNITIES

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ABSTRACT

Due to the hike in the commercial fuels as well as the various regulations related to the environmental pollution, it has become very much difficult to maintain the current vehicle and the running cost also is high compared to the earlier years. To avoid the above major issues of the running cost as well as the pollution problem the customers are slowly inclined to buy the electrical four wheelers. These vehicles have very much low running cost as well as they do not contribute the pollution to the environment. But these electrical four wheelers suffer from the limitation of the distance to be travelled as well as the time taken to recharge fully. The energy given to the electrical vehicles will be stored in the Lithium ion battery. The capacity of the energy stored inside the battery makes the vehicles to cover a maximum distance of 250 KM to 300 KM. Once the battery is completely discharged then it takes minimum 4 hours to completely charge. So the above two constraints limit the performance of the electrical vehicles. The impact of the above limitations force the electric four wheelers to run within the city limits. The cost of these vehicles are at par with the other four wheelers which depend on the commercial fuel. These vehicles do not have limitations in the distance to be travelled as well as the fuel can be refilled within few minutes. Considering all the above limitations this paper is written to highlight the importance of the hybrid four wheelers. The paper also explains the different types of hybrid vehicles which are either in the R&D department or in the market. The paper also explains the limitations of the hybrid engines and proposes the modifications in the hybrid engine for the better performance.

Keywords: electrical, hybrid, four wheeler, charging, lithium-ion

Paper 030

SOCIAL MEDIA AND CSR - AN OVERVIEW A REVIEW PAPER AND RESEARCH AGENDA

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ABSTRACT

Corporate Social Responsibility(CSR) activities remain important factors for the corporates to gain favourable stakeholder attitude and it is an attempt to maximize business benefits. Today, corporates are expanding their use of social media in communicating CSR activities to the stakeholders. While studies on CSR is wide, research into the social media and CSR in India is less. Communicating CSR activities of corporates to the general public or stakeholders still rely on the traditional methods. International studies show that significance of social media or digital platform in delivering the companies brand value or recognition to the stakeholders in a effective manner. Study analyses how the corporates are using social media in educating different avenues of CSR practices. Social media is providing a great opportunities to the corporates to maintain a permanent relationships with different stakeholders. It is crucial to analyse how the companies use effectively engage in informing, educating and influence between corporates and general public. A systematic, interdisciplinary study of CSR through digital platforms is fundamental to establish a good rapport and to be up to date of the work. The modern technology and digital platforms has a diversified features to advance corporates involvement with stakeholders through accountability, transparency, moral integrity, fairness and participation. Finally, this study emphasizes the use and effectiveness of Social Media in communicating CSR with public in the two way communication process. Following a systematic literature review proposals for future research directions were also formulated.

Keywords: Corporate Social Responsibility, Social Media, Communication, Stakeholders, Digital Platform

Paper 031

A DYNAMIC TASK ALLOCATION ALGORITHM FOR PARALLEL LEXICAL ANALYZER ON MULTI-CORE MACHINES

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ABSTRACT

Massive multi-core architecture is rapidly becoming the standard in digital technology due to its high and parallel computational capability and performance benefits. To fully utilize the technological capabilities of multi-core systems, system software such as compilers should be re-engineered for parallel processing. Several important contributions have been made in the past to enhance the efficiency of the lexical analysis process by leveraging the innate parallel processing capability of multi-core computers. This trend of implementation shows that a parallel lexical analyzer tends to perform lexing tasks better than a conventional sequential lexical analyzer.

This article discusses the way of making the tasks in parallel during the scanning of source program in the phase of lexical analysis. The objective of this study is to explore how to perform lexical analysis in parallel. On multi-core processors, multiple processes of the lexical analyzer program can run concurrently to scan multiple lines in the input stream in parallel for token detection. This is done by allocating tasks line-by-line to the core which is not engaged yet. According to the theoretical and experimental results, the proposed methodology significantly outperforms the sequential approach in terms of tokenization. It considerably reduces the time required for lexical analysis during the compilation process.

Keywords: Multi-core architecture, Lexical analyzer.

Paper 032

HYBRID MODEL FOR CONCURRENT EXECUTION OF LEXICAL ANALYZER ON MULTI-CORE SYSTEMS USING DYNAMIC TASK ALLOCATION ALGORITHM AND AUTO KEYWORD DETECTION USING HASH TRIE

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ABSTRACT

The processing power of machines will continue to accelerate massively. Modern eras of computing are driven by elevated parallel processing by the revolution of multi-core processors. This continuing trend toward parallel architectural paradigms facilitates parallel processing on a single machine and necessitates parallel programming in order to utilize the machine's enormous processing power. As a consequence, scanner generator applications will eventually need to be parallelized in order to fully leverage the throughput benefits of multi-core processors.

This article discusses the way of processing the tasks in parallel during the scanning stage of lexical analysis. This is done by recognizing tokens in different lines of the source program in parallel along with auto detection of keyword in a character stream. Tasks are allocated line-by-line to the multiple instance of the lexical analyzer program. Then, each of the instances is run in parallel to detect tokens on different cores that are not yet engaged. Theoretical and experimental results indicate that the proposed methodology consistently outperforms the sequential approach in terms of tokenization. It significantly decreases the amount of time spent on lexical analysis during the compilation process.

Keywords: Multi-core architecture, Lexical analyzer, keyword detection

Paper 033

A NOVEL MECHANISM TO DEFEND DDOS ATTACKS AT THE NETWORK LAYER AND APPLICATION LAYER

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ABSTRACT

Computer networks are under attack in unprecedented amounts and types, the vast majority of which are distributed denial of service attacks. The type and tactics used in DDoS attacks are constantly changing, making detection and administration extremely difficult. Approaches that can effectively identify and mitigate developing assaults are necessary to handle the changing nature of threats. DDoS assaults overwhelm a target server's vital resources to deny services to legitimate customers, and they focus on the availability of the Confidentiality, Integrity, and Availability (CIA) trinity in Internet-based applications. DDoS detection, DDoS mitigation, and IP traceback are three important components of DDoS defensive techniques examined in this study. First, we must identify any DDoS assaults using any intrusion detection technology to establish the attack's specific packet characteristics. Based on packet characteristics, we categories the assault flow. The categorization may enable an attack to be mitigated. Rate limitations and filtering of harmful packets are used in the mitigation strategy. IP traceback may track IP packets back to their origins without relying on the source address information in the IP header. IP traceback methods are used to determine the real source address and reject spoofing IP addresses. Finally, we suggested a unique approach to protect against DDoS assaults at the network and application layers in this study.

Keywords: Cybersecurity, DDoS, IP traceback, IP spoofing, Intrusion detection

Paper 034

A CASE STUDY ON DIFFERENT SDLC PHASES, MODELS IN SDLC AND THEIR APPLICATIONS

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ABSTRACT

Each field requires its software to work more efficiently, hence software is recognized as one of the most crucial parts of our modern society. The software development life cycle, also known as the software development process, is made up of multiple stages or phases that work in a top-to-bottom order, with the result of one phase serving as an input to the next. The phases include Requirement analysis, Design, Coding Testing, and maintenance. There are various software development models that are used to develop software. Software development models also known as software development Life Cycle (SDLC) are essentially sequences of activities that will be carried out while developing a software project. The waterfall model, prototype model, spiral model are examples of such models. As a result, in this paper, we represent different software development models and applications of each model to assist developers in selecting the most appropriate model for a given situation based on customer demand.

Keyword: SDLC, Software Models, Application, SDLC Phases, Waterfall Model, Prototype Model, Spiral Model

Paper 035

BLOCK CHAIN AND CRYPTOCURRENCIES

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ABSTRACT

The new field of cryptographic currencies and consensus ledgers, commonly referred to as blockchains, is receiving increasing interest from various different communities- technical enthusiasts, activist groups, start-ups, large enterprises, public authorities etc. The scientific community adapted relatively slowly to this emerging and fast-moving field of cryptographic currencies and consensus ledgers. The archetype for modern cryptographic currencies and consensus ledgers is Bitcoin and its underlying Nakamoto consensus. This paper examines different types of cryptocurrencies , their properties and answers various questions around their history or value in market. Also explains what is block chain ,how it works and cryptocurrencies. Discusses the properties of cryptocurrencies and thereby helps to determine whether to use the cryptocurrency or invest in it for future. We currently have hundreds of cryptocurrencies in market, which makes it really hard for one to choose a currency.

Keywords: Blockchain, cryptocurrencies, Nakamoto consensus, consensus ledger.

Paper 036

SERVING DIGITAL VISITORS THROUGH BUSINESS CHATBOTS USING INTELLIGENT MACHINES AND NATURAL LANGUAGE PROCESSING

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ABSTRACT

Chatbots are intelligent machines serving digital visitors.Intelligent machines are capable of simulating knowledge.This paper examines some of the latest AI patterns and activities then provides alternative theory of change in some of the popular and widely accepted postulates of today.Based on AI (Artificial Intelligence) structuring and NLP(Natural language Processing)based software, chatbots are made.The paper highlights that AI is ever improving and sheds light on the potential of intelligent machines and NLP tasks.The rise of business chatbots is the latest disruptive force that led to a change in customer interaction.In the context of digital markets and digital services ,the emergence of AI driven chatbots has changed the phase of interaction among digital customers.The business sector plays an important role in development into any country.It also explores the usability of chatbots to assess whether it can fulfill digital visitors ever-changing needs.

Keywords: Chatbot , AI ,NLP, digital markets, digital services.

Paper 037

FAST PHRASE SEARCH FOR ENCRYPTED CLOUD STORAGE

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ABSTRACT

Cloud computing has generated much interest in the research community in recent years for its many advantages, but has also raise security and privacy concerns. The storage and access of confidential documents have been identified as one of the central problems in the area.

In particular, many researchers investigated solutions to search over encrypted documents stored on remote cloud servers. While many schemes have been proposed to perform conjunctive keyword search, less attention has been noted on more specialized searching techniques.

In this, I included a phrase search technique based on Bloom filters that is significantly faster than existing solutions, with similar or better storage and communication cost.

This technique uses a series of n-gram filters to support the functionality. The scheme exhibits a trade-off between storage and false positive rate, and is adaptable to defend against inclusion-relation attacks. A design approach based on an application's target false positive rate is also described.

Keywords: Cloud computing, Bloom filters, n-gram filters, inclusion-relation attacks.

Paper 038

A STUDY OF CURRENT TECHNOLOGIES AND FUTURE ASPIRATIONS IN PROSTHETICS

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ABSTRACT

Bionic prosthetic hands are developing exponentially. Only a small number of people employed in highly specialized units are currently required to have in-depth knowledge of this field of medicine. With the advancement of technology, however, the market for and application of bionic hands are likely to continue to grow and a broader understanding is required. They study the literature to outline the major developments that have culminated in improving the currently available bionic hand prostheses in medicine, computers and engineering. Since the hook prostheses developed centuries ago, today's bionic hand has advanced considerably. They address how major human hand functions are digitally reproduced in futuristic bionic hands. The bionic prosthesis is still a smaller alternative for their human counterparts, given the remarkable advantages. Finally, we address some of the main areas of research that could contribute to vast improvements in the design of bionic limbs, which may one day be able to fully imitate the biological hand or perhaps even exceed its inherent capability. It is critical for the healthcare world to recognize the production of bionic hands and the technology that underpins them as this field of medicine grows.

Keywords: Prothetics, Bionics, Bionic Hands, Human Counterparts

Paper 039

COST MANAGEMENT DILEMMAS OF SMALL SCALE INDUSTRIES- A CASE STUDY OF SELECTED AGARBATTI INDUSTRIES IN WEST BENGAL.

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ABSTRACT

The purpose of this study is to explore the causes of the failure of a selected set of small-scale industries in West Bengal. Primary data were collected for the analysis. The data is quantitively and qualitatively analyzed in the form of charts and tables. The analysis of data confirmed that most of the small-scale industries run by proprietary mode of business have little understanding of cost. It is also found that all expenses are treated as cost; hence they are unable to overcome the cost leadership posed by large scale manufacturers of the same product. The industry is still being headed by the monopoly of Agarbatti manufacturers at the large scale and small scale homemade units are devoid of research and development with regard to the quality of investment and focus on cost effectiveness is lacking. They have storage and environmental concerns too. Most of the raw materials are purchased in bundles and criteria of allocation and absorption of overheads and other costs are not properly implied. However, the concerned authority lacks parenting with respect to educate the small scale owners regarding operations of units effectively. This industry plays a crucial role in the livelihood of semi-skilled and unskilled workers. With the emergence of pandemics, this industry needs to revamp again, if it has to find its place in the market. This non-polluting industry has a large potential to generate employment, with minimum investment and maximum return.

Keywords: Agarbatti, Cost, Allocation and Absorption, Investment.

Paper 040

EFFECTIVENESS OF MULTI-MEDIA APPROACH INSTRUCTIONAL PACKAGE ON THE DEVELOPMENT OF SELECTED COMPETENCIES IN MATHEMATICS AMONG SLUM STUDENTS -AN EXPERIMENTAL STUDY

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ABSTRACT

UEE has been one of the most important goals of educational development in India since independence. Article 45 of the Constitution has directed the state to provide free and compulsory education to all children up to the age of 14 years within a period of ten years of the commencement of the constitution. To promote literacy among its citizens, Government of India has launched several schemes but it is a sad situation that the dropout rate in India is very high. Several reasons can be given for this state of affairs. A major portion of the dropouts consists of socially disadvantaged children. Most of the children have to work very hard to earn their livelihood, and live in slums.

Modern approaches in the education technology like multimedia applications using computer technology prove to cater to the diverse needs of students in the educational setup. Multimedia is a unique medium with features of quality, audio-visual recording, and sound effects. It can be conveniently used to convey well designed information with varying special effects. Students learn effectively through Multimedia Approach, which is perceptual learning (Andrew Laghos, 2010;Siew Pei Hwa, 2009; Eun Joon Um, 2008; Norhayati, A. M., and Siew, P. H., 2004 and others).

The present study was carried out with the objective to study the effectiveness of the multi-media approach Instructional Package in relation to traditional approach in fostering

selected Mathematics Competencies among Slum Students. The sample of the study was 40 slum students of standard six. The pre-posttest experimental design was followed for the present research study. The treatment for the Experimental group was given by the investigator for 40 sessions specifically to foster Mathematics Competencies using a specially designed instructional material. The obtained data were analyzed by using mean, S.D., t-test and ANCOVA. Analysis of the results revealed, that Multi-Media Approach Instructional Package was significantly more effective than of the traditional method in fostering selected Mathematics Competencies among Slum students. Multimedia approach can be followed to help students to foster their achievement level. Educational implications of the study were i) Teachers need to be trained to use multimedia approach rather than simple lecture demonstration method, ii) The teachers need to be trained to prepare instructional material based on multimedia approach, iii) The text books should give enough guidelines to help teachers to use multimedia approach for different topics of the syllabus.

Keywords: multi-media approach, slum students, mathematics competencies

Paper 041

A FRAMEWORK OF COST EFFECTIVE HUMAN TRACKING SMART WRIST

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ABSTRACT

Many times, it is heard in news that elderly or specially enabled people are lost due to no track of their movements in public places in the Sultanate of Oman. This is a word of concern and demands a product that could bring confidence among them and their guardians. A study was made to find the best components that could be used in order to achieve a cost effective product to fulfill the aim to save elderly or specially enabled people from losing. [Litt. Review] A survey to see the reactions of the common people on a product was conducted by the student researchers and they realized that they were on the right track with a huge positive response. [Appendix A]

This project will be a framework of a Smart Wrist Watch that works with the Bluetooth system connected to a micro- controller that will be fixed on the elderly person or specially enabled people. It will contain a GPS system to track them. A lot of GPS trackers are available in the market, few of which are discussed further. An attempt is going to be made to develop a cost effective wrist watch which could be afford- able for the common man. [1] The Raspberry Pi P4 micro- controller which is the latest and has the built in GPS module will be used. It will be connected to Bluetooth for Raspberry Pi P4. All these will take the form of a wrist watch which will be fixed on the victim who has the tendency to lose. An app will be installed in the guardian's mobile which will receive the alert message when the

victim moves away. After the alert the GPS tracker will get enabled and show the direction and location of the victim. Our aim is to achieve a good product with maximum facilities and minimum expenses.

Keywords: Raspberry Pi, micro-controller, GPS, location tracker.

Paper 042

BREAST CANCER PREDICTION USING MACHINE LEARNING AND TENSORFLOW

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ABSTRACT

Breast Cancer is one of the most significant reasons for death among ladies. Many researches have been done on the diagnosis and detection of breast cancer using various im- age processing and classification techniques. Nevertheless, the disease remains as one of the deadliest diseases found in one out of six women in her lifetime. Since the cause of breast cancer stays obscure, prevention becomes impossible. Thus, early detection of tumour in breast is the only way to cure breast cancer. Using CAD (Computer Aided Diagnosis) on mammographic image is the most efficient and easiest way to diagnose breast cancer. Accurate discovery can effectively reduce the mortality rate brought about by using mamma cancer. Masses and microcalcifications clusters are an im- portant early symptoms of possible breast cancers. They can help predict breast cancer at its infant state. The image from the DDSM Database (Digital Database for Screening Mam- mography) which contains approximately 3000 cases and is being used worldwide for cancer research. This project quantitatively depicts the analysis methods used for texture features for detection of cancer. These texture features are extracted from the ROI of the mammogram to characterize the

microcalcifications into harmless, ordinary or threaten- ing. These features are further compared and passed through Machine learning algorithm for better understanding of the cancer pattern in the mammography image. The applica- tion is intended to use for predicting the presence of breast cancer based on the image uploaded. Initially the app is trained with the sample images for both tumorous and non- tumorous using TensorFlow through which the model learns on the pattern. The trained model is deployed using Flask in python which acts as an API and connects the frontend HTML with the backend script. In this application image is taken as input to the model for processing and the result is predicted. Two labels are taken into consideration such as benign and malignant.

Keywords: Machine Learning, TensorFlow, Prediction Analysis, Feature Extraction.

Paper 043

A STUDY ON APPLICATION OF MPHASIS COGNITIVE GURU – A CHATBOT INTELLIGENCE

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ABSTRACT

Over the years machines have been changing our lives by helping us to easily solve problems. These machines have algorithms and greater computing power by using technologies. The most popular technologies used nowadays are Machine Learning, Cognitive Intelligence, and Artificial Intelligence which may change the way businesses operate and how they make decisions. Most intelligence machines are able to reason and process natural language on the basis of statistical, logical, and operational methods. However, the abilities of the intelligence machines will depend on the features of their algorithm. The cognitive abilities of these intelligent machines help with the autonomous processing of large amounts of data and also assists to make better business decisions and considerably reduce the chances of human error. By offering better and efficient solutions to several business tasks, these intelligent machines allow businesses to boost productivity and offer a better experience to customers. Mphasis provides information technology services and integrated solutions that include business process outsourcing, infrastructure technology, and application services. At Mphasis, CG currently handles more than 50+ service desk use cases, catering to 28,000+ employees. It benefits HR leaders, HR business partners, and functions including employee engagement, compensation & benefits and learning & development. The markets served by the company

are financial services and insurance, healthcare, manufacturing, government, transportation, communications, and consumer and retail industries.

Keywords: Machine Learning, Cognitive Intelligence, Artificial Intelligence, infrastructure technology.

CLASSIFICATION OF COVID-19 FROM CT SCAN IMAGES USING DEEP LEARNING TECHNIQUES

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ABSTRACT

This paper presents an approach of automatically classifying COVID-19 from CT scan images using Deep Learning techniques. To deal with the irregularity of available data, it is preprocessed carefully to make it standardized. Due to the scarcity of data, data augmentation is adopted to increase the amount of data. A number of Deep Learning techniques using transfer learning methodology are used for the purpose of classification COVID-19 and their performances are compared. COVID-19, being a highly contagious, sensitivity of the model is considered as primary performance characteristics along with the accuracy. Based on that, a transfer learning model built on ResNext architecture is selected which provide a promising sensitivity, accuracy and also fares good in other performance metrics.

Keywords: COVID-19; Deep Learning Convolutional Neural Networks (CNN); ResNet; DenseNet; ResNext

Paper 045

A STUDY ON QUALITY OF WORK-LIFE DURING THE PANDEMIC IN BANGALORE

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ABSTRACT

During Pandemic, particularly the covid-19 surge in India, it continues us to push our limits to the unknown depths – as a working professional and as an individual's we seek to do our best and serve the organization and also ensure our families, friends and communities are also taken care. It is proved that many organizations have prioritized their employee wellbeing by giving required support during the Covid-19 pandemic. At the same time, working from home has erased the limits on the time that is dedicated to working and the time dedicated to oneself.

During this challenging environment, Quality of work-life plays an important role for both working professionals and also for Organizations. This research paper aims to study the Quality of work-life of the people in Bangalore during the pandemic situation. The sample consists of people working in different workstreams in Bangalore city. The data is collected through an online mode by sending the Google form having standard survey questionnaire by Marshall Sashman & Langermann. This instrument consists of two parts 1. Quality of work-life condition having 25 questions/items 2. Quality of work-life feeling having 10 questions/Items. This research study has been conducted using the second instrument called Quality of work-life feeling, as most of the employees are working remotely during this Covid-19 pandemic.

Quality of work-life – Feeling, is descriptive in nature and the researcher has used a non- parametric test which is Mann Whitney U Test as an inferential study.

The statistical work for this study is carried out using MS Excel and Python environment

Paper 046

A CONCEPTUAL EXPLORATION INTO THE INDIAN CONCEPT OF MIND AND ITS ROLE DURING PANDEMIC

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ABSTRACT

Happiness has been a major aim for every human being. All activities carried out by humans are pointed towards gaining maximum happiness in life. But, we always assume that happiness is achieved by objects and hence humans search happiness outward and the mind is externalized. As long as the mind wanders of objects, uncontrolled, exited, agitated, this true happiness cannot be realized.

Food plays a major role in balancing our body and mind. If food is withdrawn for couple of days, it cannot think properly. There is no functioning of mind during deep sleep. The body with its sense organs is also a substance of mind. The physical body is the outward reality of the mind. Every change in thought makes a vibration in your mental body and the same is transmitted to physical body, causes activity in the brain. Hence when mind is hard, body also becomes hard.

Mind has a power of imagination which creates fear and during any pandemic situation the fear intensifies and makes ourselves a worst enemy.

This paper,

- - Explores the meaning of mind and how to control the mind

- - How fear turns the mind from positive to negative, unhappy and unsuccessful
- - Represents the Conceptual model of the mind

The daily habits and few practices purify the mind and also help to overcome fear and create a healthy life balance.

Keywords: Mind, body, food, fear, pandemic

Paper 047

CAN E-LEARNING REPLACE CLASSROOM LEARNING

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ABSTRACT

Learning is acquiring knowledge or skills through study, experience, or being taught. Various innovations in Information and Technology have changed the way of learning as well. E-leaning is the learning conducted through electronic media. The emergence of COVID-19 as a global pandemic has lead to the growth of e-learning as a global platform for learning. The pandemic has compelled the use of e-learning in education. In this regard, an attempt has been made to identify the pros and cons of e-learning, to identify problems faced by students in e- learning and to suggest certain measures to make e-learning as an effective tool. For the purpose of study, google form is used to collect the information. The data is collected from 104 respondents studying in different colleges.

Keywords: E-learning, Classroom learning, ICT

Paper 048

INFLUENCE AND IMPACT OF MOODLE IN VIRTUAL TEACHING AND LEARNING PLATFORM

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ABSTRACT

In the recent years, World Wide Web has become an essential platform in our daily routine. Most of our day-to-day transactions can be completed using an online portal. The most common includes Booking flight tickets, making an online money transfer, messenger for communication, food ordering are a few to name. On the other hand, e-learning which replaces the traditional learning methodology has a greater impact in the last decade. Eventhough its impact is slow when compared to the social (Facebook) and content sharing (YouTube) networks, it had made a firm foundation in the teaching-learning process in many educational institutions. Many organizations have adopted e-learning as the primary teaching-learning platform. There are many e-learning tools which serves the teachers and the learners in a much greater way efficiently and effectively. In the present scenario Learning Management System (LMS) is globally accepted by various institutions. Learning Management System offers its services in learning process, content preparation, assignment submission, proctoring, examination and assessment. It also supports in sharing the study content between the teachers and the learners. This research paper gives an insight of the Client/Server architecture of the learning management solution and how it extends its services and features to enhance the academic progression.

Paper 049

A SURVEY ON DIFFERENT DATA ANALYTICAL TECHNIQUES FOR COMMODITY PRICE PREDICTION USING SMART AGRICULTURAL SYSTEM

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ABSTRACT

Food or agricultural products are one of the most basic needs of people. The population of India and the rest of the world is growing at an exponential rate, as is the demand for food commodities. As a result, there should be a proper and convenient way to increase food production, as well as the introduction of efficient technologies in all aspects of the agriculture sector. Commodity prices are an important factor in agriculture because they determine the former's economic status and wealth. The farmer's income and profit are determined by the current and future price of the commodity. Farmers are losing a lot of money because they don't know what the price of their product will be in the future. As a result, there should be a proper approach that provides future information about agricultural products, allowing farmers to make decisions ahead of time before cultivating any product. From the last few years, a massive amount of commodity price data is available. As a result, we must analyse these data and discover knowledge in a series of steps. Price prediction is a methodology for forecasting future agricultural commodity prices based on current and

historical data from a database. This paper was primarily concerned with identifying the appropriate data analytical techniques for implementing price prediction systems, particularly for agricultural products. Also conducts a survey on various predictive analytics approaches related to agricultural datasets. Finally, we used our own suggested model to implement a price prediction system with the help of a smart agricultural system.

Keywords: Data Analytics, Smart Agricultural System, Price Prediction, Agricultural

Paper 050

OPEN SOURCE INTELLIGENCE AND ITS LEGAL ASPECTS – A THEMATIC REVIEW

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ABSTRACT

Open-source intelligence (OSINT) has grown in prominence as a result of the vast amount of data that has become available in the public domain in recent years. By intelligently gathering and correlating the processed data, the data available in the public domain can be used for profiling targets, determining potential security threats, evolving new knowledge, and so on. Open-source intelligence is widely used by government agencies, corporate companies, law enforcement agencies, Cybercriminals, security analysts, etc. Some of the key sources of information used for OSINT are, print and digital media, publications, social media, commercial reports, etc. Despite the fact that the source of such information is openly available in public internet space, there are some legal and ethical concerns associated with the entire open-source intelligence process. Certain countries are more concerned about its citizens' personal data, such as name, date of birth, race, and so on. Such data collection and profiling may result in legal consequences. Privacy law varies by jurisdiction, and in some countries, the wording used to describe citizens' privacy is not precise enough. We reviewed various privacy issues and legal implications of open source intelligence activity in this paper. The ABCD analysis was carried out to understand the Advantages, Benefits, Constraints, and Disadvantages of open-source intelligence activities. Based on the results of

the ABCD analysis, certain recommendations have been made to further improve the OSINT process.

Keywords: OSINT, profiling, legal, privacy law, ABCD analysis

Paper 051

REMOTE AUTHENTICATION OVER THE VOICE COMMAND-VOICE BIOMETRIC SYSTEM: A CASE STUDY

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ABSTRACT

We are in the era where all the activities are carried out over the internet, the person being in the remote place, whether it is the financial field, medical field, education field, national security, software field, and the list goes on. In such a condition identification and authentication of a person becomes a very important task. In order to authenticate a person we use the combination of login and alphanumeric passwords but these passwords are not safe as anyone can obtain these details and access the system. The next option is to authenticate by using biometric such as fingerprint or Iris scan, but this requires the person to physically present in front of the system. During a pandemic situation like covid-19, it becomes necessary to authenticate the person without physical contact. One solution for these authentications is a voice biometric system. It is type of system in which the voice of a user is used to identify and authenticate the right person. The dialogue of a person is used as a signature for a new enrolment. Every time the enrolled users have to repeat the same dialogue to access the system. Software will authenticate the user for later access. In future, Voice

biometric will slowing replace the existing authentication techniques. Voice biometric is very powerful and efficient technique. In this paper we are presenting a case study about the company which is already producing the voice biometric products. This study will help to understand the working of the company products, challenges faced and future enhancements in the field of voice biometrics field.

Keywords: Authentication, Voice command, Voice-Biometric, aculab, Security

Paper 052

HOW ADVENTS IN ICCT HAS CHANGED THE CONCEPTS OF SCHOLARLY RESEARCH AND PUBLICATION – A SYSTEMATIC ANALYSIS

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ABSTRACT

Scholarly research and publication is changing its framework and becoming important aspects of the higher education system after it has accepted research and creation of IPR as an integral part of higher education including undergraduate and postgraduate education. After the advent of the Internet and other technologies under the broad area of Information Communication and Computation Technology (ICCT) including research data analysis software, the research process and publication became easier in terms of cost and time. The opening up of information to everyone through these ubiquitous technologies attracted many young and nascent researchers to show interest in research and publications. The technology enabled research and publication processes eliminated many complex and costly processes which were not only deaccelerated the research processes but created many mediators who were looted both money and time of researchers through their monopoly strategies. Various research databases and indexing agencies along with international publishers who retain the copyright of research for global publication are of this category of mediators. These mediators are now eliminated due to the advents of technology irrespective of several black ocean strategies they play to maintain their monopoly. ICCT adoption in research and

publication uncovered new trends in scholarly research where the review of literature while identifying a suitable research topic and analysis of data using suitable software are simplified and eliminated time, energy, and cost of referring journals at selected and scares libraries. This paper discusses the effect of the Internet and other ICCT innovations that affected the scholarly research and publications and converted it into researcher centric instead of Aggregators and Publishers centric.

Keywords: Scholarly research, Scholarly publications, Effect of Internet and ICCT, Research information aggregators, Journal indexing agencies, Subscription based journal publishers,

Paper 053

INTELLIGENT POLICE PATROLLING SYSTEM TO FASTEN RESPONSES IN EMERGENCIES AND DISASTERS

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ABSTRACT

Internet of things (IoT) is influencing every aspect of hu- man life in the present days. With the help of internet every machine can be controlled, which makes human life easier, secure and comfortable. With the help of IOT we can con- trol and access the machines and things which are connected to the internet even if the distance is large. Even without the human-human and computer-human interaction, we can send and receive information. Police patrol is one of the most important tasks employed on a daily basis by the police to prevent and reduce crime and respond to emergencies and disasters. The visible presence of police officers in a com- munity became one of the key components of routine police patrol since the establishment of the "New Police" in 1829 in England. Wise and Cheng describe how police officers create guardianship by reminding individuals of the rule of law and by raising

the awareness among potential offenders of the risks associated with committing offences. So, the physical presence or absence of police in time and space influences individual offenders in their decision to commit any crime. One of the primary goals of proactive patrol is crime preven- tion. Despite this goal, routine police patrol is, according to some patrol experiment, a rather ineffective mode of polic- ing to reduce crime and the public's fear of crime. As a re- sult, the effectiveness of focused proactive patrol in reducing crime at specific and small geographic areas, so-called hot spots policing. The authors made an extensive study. This resulted in a wide range of routing strategies solely based on hot spot policing. Nevertheless, routine police patrol, which is not geographically constrained to a small number of pre- identified high crime places, is nowadays still central to ev- eryday policing in many jurisdictions. This will be a flexible system that moves in a predefined path that react to crime voice and gather location information such as crime location and crime images and to send these data to the nearby po- lice station to take corrective action in order to provide safety and protection to the citizen of the area and also to trace any area without the physical presence of police authorities. This idea is to display the virtual reality interface which reads the binary file 3DS into the data array and exposes the models and texture maps which come from 3D modeling of patrol environment via OpenGL. The virtual display module is di- vided into 2 steps: reading binary files and rendering. The virtual display module uses the data array to render the vir- tual environment, which is based on the OpenGL graphical interface in C++ environment. The man-machine interac- tion interface will display the completed 3D model and the users can rotate the virtual model through the corresponding omni-directional browsing algorithm.

Keywords: Police pa- trol system, Hot Spot policing, Arduino Uno, GPS, OpenGL, location tracker.

Paper 054

CLOUD COMPUTING AND ARTIFICIAL INTELLIGENCE IN HEALTHCARE

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ABSTRACT

In the healthcare industry, health-related data analytics is increasing, and AI and cloud computing's ability to consume massive volumes of data and deliver precise insights that approach human level accuracy has grown exponentially. This has primarily been made possible by the availability of scalable, cost-effective, and quickly available cloud-based resources. The explosive growth of medical data have brought huge challenges to data access, security and privacy, as well as information processing. We mainly focus on the advantages brought by the cloud computing, and artificial intelligence technologies to healthcare. We also explore how to rationalize the use of medical resources and the security and privacy of medical data, so that high-quality medical services can be provided to patients and to help bridge the gap between large numbers of patients and a limited number of healthcare providers. We explore current issues and future enhancements in cloud computing and artificial intelligence.

Paper 055

AN EMPIRICAL STUDY OF DIGITAL PAYMENTS IN BANKS WITH SPECIAL REFERENCE TO MANGALORE CITY

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ABSTRACT

It has been said that every disruption creates opportunities and one such disruption was the announcement of demonetisation by Prime Minister Mr. Narendra Modi on 08 November 2016. Demonetisation creates huge growth opportunity for digital payment in India and the digital wallet companies grabbed the opportunities with both the hands to expand their market share. Demonetisation has presented a unique platform for adoption of digital payment, as an alternative to cash for Indian consumers. The pace of digital payments has significantly increased with the strong move towards cashless economy. The digital payment landscape in India is undergoing a massive transformation. Indian consumers have shown tremendous affinity to digital technologies, with growth rates for mobile phones and e-commerce adoption for outstripping rates in developing economies. The government of India 'Digital India' initiative at transforming India into digitally empowered society and

knowledge economy is expected to further accelerate awareness, availability, and adoption of digital technologies.

In this paper we shall be trying to analyse the Digital payment modes used in banks and try to find out things such as most preferred mode of payments, reasons for adoption of Digital payments etc. in Mangalore City.

Keywords: Digital Payments, Demonetisation, Digital wallets

Paper 056

PSYCHOLOGICAL EFFECT OF SOCIAL NETWORK DATA USING MACHINE LEARNING TECHNIQUES

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ABSTRACT

Purpose: Social networks have been developed as a great point for its users to communicate with their interested friends and share their opinions, photos, and videos reflecting their moods, feelings and sentiments. This creates an opportunity to analyze social network data for user's feelings and sentiments to investigate their moods and attitudes when they are communicating via these online tools.

Methods: Although diagnosis of depression using social networks data has picked an established position glob- ally, there are several dimensions that are yet to be detected. In this study, we aim to perform depression analysis on Face book data collected from an online public source. To investigate the effect of depression detection, we propose machine learning technique as an efficient and scalable method.

Results: We report an implementation of the proposed method. We have evaluated the efficiency of our proposed method using a set of various psycholinguistic features. We show that our proposed method can significantly improve the accuracy and classification error rate. In addition, the result shows that in different experiments Decision Tree (DT) gives the highest accuracy than other ML approaches to find the depression.

Conclusions: Machine learning techniques identify high quality solutions of mental health problems among Face- book users.

Keywords: Social network, Emotions, Depression, Sentiment analysis

Paper 057

A BI-OBJECTIVE HYPER HEURISTIC SVM FOR BIGDATA CYBER SECURITY

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ABSTRACT

Cyber security in the context of big data is known to be a critical problem and presents a great challenge to the research community. Machine learning algorithms have been suggested as candidates for handling big data security problems. Among these algorithms, support vector machines (SVMs) have achieved remarkable success on various classification problems. However, to establish an effective SVM, the user needs to dene the proper SVM configuration in advance, which is a challenging task that requires expert knowledge and a large amount of manual effort for trial and error. In this paper, we formulate the SVM configuration process as a bi-objective optimization problem in which accuracy and model complexity are considered as two conflicting objectives. We propose a novel hyper-heuristic framework for bi-objective optimization that is independent of the problem domain. This is the first time that a hyper-heuristic has been developed for this problem. The proposed hyper-heuristic framework consists of a high-level strategy and low-level heuristics. The high-level strategy uses the search performance to control the selection of which low-level heuristic should be used to generate a new SVM configuration. The low-level heuristics each use

different rules to effectively explore the SVM configuration search space. To address bi-objective optimization, the proposed framework adaptively integrates the strengths of decomposition- and Pareto-based approaches to approximate the Pareto set of SVM configurations. The effectiveness of the proposed framework has been evaluated on two cyber security problems: Microsoft malware big data classification and anomaly intrusion detection. The obtained results demonstrate that the proposed framework is very effective, if not superior, compared with its counterparts and other algorithms.

Keywords: support vector machine, hyper-heuristic approach.

Paper 058

STUDENT ENGAGEMENT WITH ONLINE EDUCATION TECHNOLOGIES DURING COVID-19 AND ITS EFFECT ON THEIR HEALTH: AN ANALYSIS

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ABSTRACT

COVID-19 has had a significant impact on our lives. Students, unfortunately, are among those who may be most affected by the virus. Whether it is mental health, physical health, or a mixture of the two, students have experienced their fair share of health issues during this pandemic. Students who take online lessons from home do not have to be as professional as their peers in the classroom. As a result, several areas of their physical health are worsening. One of the most prominent explanations for the current upsurge in back aches is poor ergonomics, such as attending online classes on beds and sofas. Obesity is on the rise in youngsters, either as a result of a lack of outdoor physical activity or as a result of binge eating and easy access to junk food at home. Youngsters are also losing muscular mass and gaining fat, which will hinder their growth. The fact is that the more physically active a youngster is during his or her growing years, the better their physical and mental health will be for the next three to four decades. Due to the current health crisis, this is completely absent. A lack of physical exercise, lack of sunlight exposure, and a poor diet are all factors that contribute to calcium and vitamin D deficiencies. Muscle cramps, spasms, and strains/tears are typical in children with severe impairments owing to minor traumas or bad posture. Moreover, students are finding it difficult to cope with remote education options which is indirectly increasing stress on them. Every youngster wishes to be outdoor, and his or her fitness has deteriorated as a result of the confinement. Students who were isolated at home struggled with depression. The researchers hope to shed light on the health difficulties that students are experiencing as a result of their engagement in technology-assisted online education in this study. An online survey was conducted for this purpose in order to collect student feedback, which was then analyzed, interpreted, and tested in order to identify problems and make recommendations.

Keywords: COVID-19, Online Education, Health Crisis, Chi-square, Survey.

Paper 059

INFORMATION SCIENCE & TECHNOLOGY: THE ASPECTS OF FOUNDATION & TRENDS

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ABSTRACT

The importance of Information and similar contents are significant and are needed in many industry sectorsand areas. The field of studies, teaching, and research in the areas of information is called Information Science. However, apart from Information Science, some other nomenclatures are also being started and available in the sector. Initially, only

Information Scienceis considered as important nomenclature for information solution and gradually it has been noted as a field for technological solutions and complete information solutions. The field of Information Science even considered as older than Computer Science, Information Technology as information management became practiced in early ages also and for that different mediums became used viz. stone, wood, leaves, etc. There were different establishments and enterprises considered valuable in Information Management viz. Libraries, Museums, Information Centers, etc. The rapid development of Computers and similar technologies led to the growth of Computer Science and thus it started a new edge in the existing Information Science field for its activities. The rapid growth of different technologies, methods, systems, etc. lead to the development of modern and technology aided Information Science and further, it becomes available with other nomenclature. This Paper talks about the background of Information Science including the advancement of the field empowered by IT and Computing. The paper also discusses the emerging technologies and systems in the field with changing roles.

Keywords

Information Science, *iSchools*, Information Science and Technology, Computing, Systems, Information Management, Digital Society

Paper 060

REVIEW OF THE ROLE OF PUBLIC HEALTH INFORMATICS IN THE HEALTHCARE OF HYPERTENSIVE PATIENTS IN BANGLADESH.

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ABSTRACT

Recognized as intensive information on hypertensive patients considering the socio-economic context of Bangladesh, timely, accurate information is required from various sources produced by Health Information Systems (HIS). Today's technology is information-based technology. Newly invented hypertensive information plays a milestone in the advancement of information science and technology to promote the health of the population. In a country like Bangladesh, there is a shortage of people skilled in technology. People with limited health education are more likely to have medication errors and have less health knowledge, worse health, more hospitalization and higher health costs than people with adequate signatures (Rathnakar et al., 2013). Drug adherence is a growing concern among physicians, healthcare systems, and other stakeholders because of the prevailing regulation and the adverse outcomes and associated higher costs of care (Ho et al., 2009). As a result of the

widespread problem of adherence, a sufficient number of patients do not receive the maximum benefit of treatment, resulting in poor health in Bangladesh. Due to the lack of health facilities of hypertensive patients and its indirect link to poverty, the role of public health information in hypertensive patients in Bangladesh has become a topic of interest in research. Although it is difficult for Bangladesh in a breakable environment, the authorities should take appropriate steps to improve the state of health technical education in rural areas and across the country. When the policy is cruel and realistic then the country will depend on the healthcare of hypertensive patients to achieve the continuity of natural resources. However, there is a real need for more in-depth study on this subject. Thus, the country was called upon to take necessary steps to reduce future mortality in order to achieve better living conditions in the future.

Keywords: Public Health, Public Health Informatics, Healthcare Management, ICT in Healthcare, Governance

Paper 061

INFORMATION SYSTEMS AND TRADITIONAL TYPES: WITH REFERENCE TO THE SUPPORTING SYSTEMS& TECHNOLOGIES—AN OVERVIEW

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ABSTRACT

Information is required in almost all the areas and fields and its other areas viz. Data, Content and Knowledge are also important. System deals with interrelated and connected parts, entities, objects. System also considers as the combination of the tools or facets i.e. some

subsystems. Information Systems is also an example of the systems; where different tools, connected entities dedicated to the information related viz. collection, selection, organization, processing, management and dissemination. Information Systems can also consider as the electronic systems responsible for information management for organizations, institutions. In the Computational context, it is the preservation and delivery of information. Information Systems is the apex controlling mechanism like Executive Information Systems, Decision Support Systems, etc., these are considered as the types of Information System. However, these can be considered as traditional types of information system. There are other emerging types in the recent past can be considered based on different criteria. This paper is a theoretical one and discusses about the information systems with the foundation, basic types, emerging types, etc.

Keywords: Information, Information Systems, Digitalization, Types of Information Systems, Executive Information Systems, MIS

Paper 062

E-WASTE MANAGEMENT- AN OVERVIEW

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ABSTRACT

E-waste or Waste Electrical and Electronic Equipment (WEEE) are loosely discarded, surplus, obsolete, broken, electrical or electronic devices which are hazardous to the environment and affects human health. Therefore E- waste management is very essential in present day life. These waste electrical equipments can be reused and recycled. Various organizations, bodies, and governments of many countries have adopted and developed strategies for E-waste management to handle the threat of E-waste to the environment and human health. E-waste includes non- ferrous and precious metals, alloys, glass, ceramics, organic polymers with toxic content, other substances like stabilizers, fillers and pigments. This paper focuses on E-waste composition, Indian E-waste scenarios, hazardous materials found in the E-waste, Best Available Practices, recycling, and recovery processes followed in order to protect the environment. E-waste is a major threat faced by many countries so the government focuses on reducing and eliminating the E-waste by adopting various techniques and best practices to safeguard the human health and environment.

Keywords: E-waste, Recycle, Hazardous materials, Electrical equipments, Environment

Paper 063

A COMPARATIVE STUDY OF AURA IMAGE PROCESSING

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ABSTRACT

The human aura which surrounds every human being is an embodiment of electromagnetic fields. It also encompasses thermal as well as photonic energies. If we can capture the aura image and do the processing on it, we can infer vital information such as the current state of mind as well as the status on the physical health of an individual. Aura can also significantly contribute as a biometric factor for identification of an individual. There are various methodologies available for the processing of Aura images which are rooted on the scientific basis of fluorescence (Kirlian Photography), interference (Polycontrast Interference Photography), and resonance (Resonance Field Imaging). In addition, the spectral properties of biophotons are also taken into account for the image processing. In one of the methodologies the processing of Kirlian images through the various stages is elaborated. In yet another methodology the aura colourspace algorithm is used for the detection and processing of human biofield. The spectral properties of the biophotons paves way for the

spectral analysis of the biofield. This paper is a comparative study of these techniques used for the aura image detection and processing.

Keywords: Aura, Biofield, Image Processing, Kirlian Image, Aura Colourspace Algorithm, Spectral Analysis

Paper 064

DEEP LEARNING FOR THE DETECTION OF COVID-19 USING TRANSFER LEARNING AND MODEL INTEGRATION

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ABSTRACT

The onset of corona virus disease (i.e., COVID-19) was recorded first in China in December 2019 has become pandemic all around world today. This serious illness may result in death as consequence of alveolar damage and respiratory failure. Although laboratory testing done today, (i.e., RT-PCR), is the golden standard of clinical diagnosis, the tests may produce false negatives. Moreover, the shortage of testing resources (RT-PCR) is delaying the following clinical treatment. Under these circumstances, we can use chest CT imaging and classifying using deep learning for both diagnosis and prognosis of COVID-19 patients which can minimize the requirements of manual labelling of CT images. Based on our results obtained

the qualitative and quantitative, we can use a wide range of deployment for our developed techniques in a large scale with a clinical study.

Keywords: Deep learning; covid-19 detection; covid-net; transfer learning; model integration

Paper 065

LARAVEL BASED WEB APPLICATION TO HANDLE LOCATION BASED TASKS BY EXECUTIVES FOR DATA RETRIEVAL

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ABSTRACT

The web-based application in which the front-end design will be Android and API server connection through PHP Laravel framework. Android provides a variety of pre-built UI components such as structured layout objects and UI con- trols that allow us to build the graphical user interface for the app. Through Laravel Application Development, we can develop web application in a more user-friendly design, se- cure, scalable and feature-rich that can fulfill our require- ment. The front end will developed in Android which will be the part that clients collaborate with. Laravel is a web ap- plication framework with expressive, elegant syntax. Laravel takes the pain out of development by easing common tasks used in

many web projects, such as: Simple, fast routing engine. Powerful dependency injection container. Multiple back-ends for session and cache storage. This official Loca- tion checks application and handles the undertaking. Here the back end System Company allocates undertaking to of- ficial for checking the location and gather the information of specific area. In this system there are 3 types of users: • Admin- Update complete System. • Manger – Manages the system, assigns and maintains the tasks. • Executive – ver- ifies the location and submits all the data. This application provides ease to use in GUI environment and a convenient way for the executive to verify the location and handle the task. Executive will get the task through App. He/ she should take the task. Must be assign visit to task location and ver- ify location, update the data and take snap of the location through App. He/ she can't update the location manually. The operation is to carry out a preliminary calculation step that can be done manually or automatically. Based on statis- tical analysis the performance of the employee can be mea- sured. It is the successful integration of the data model and to the application. To perform analysis data is extracted from both data storage objects, later combined and processed.

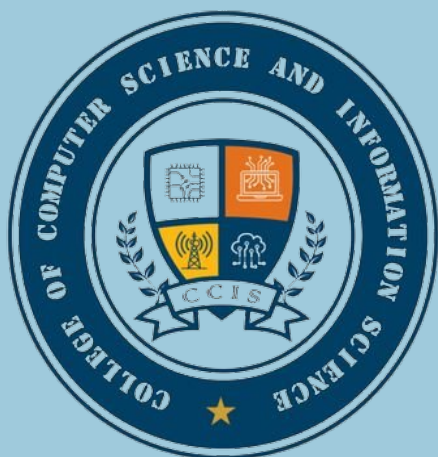**Keywords:** Laravel, Android App development, Loca- tion verifier.

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