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Spectrum is an e-magazine with the comprehensive collection of all the papers that have been published in our journal over the last two months — Volume 7, Issue 5 (September-October, 2021). This edition brings together 136 papers by 350 authors from 133 institutions. Each entry links to the abstract and the full paper.

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ABSTRACTS

1 Application of lean principles to reduce break down cases in processes in automotive product development- A case study of Toyota company limited

Paper ID V7I5-1137 · Pages 1-9 · Engineering

Levi Ptang Uny Cheworei, Student, Andhra University, Visakhapatnam, Andhra Pradesh

The production process in the manufacturing industries has proven wasteful of the resources in the production process over time. integrating lean principles in manufacturing activities has brought notable success in a complex and slow production process in an industry. This study aims at integrating lean principles into a product development process to eliminate breakdown cases as it makes the process easy as well as speeding up the product development in the automotive industry. Three major phases are applied in product development namely; the early concept phase, middle core design, and the launch phase. An exceptional definition of products development of lean principles is applied to come up with an analysis framework. Through interviews, observations, documentation, and experience barriers that cause a large number of wastes can be established. Lean principles will then be applied to eliminate such causes in the product development and then derive the conclusion that shows the industry the process of lean in product development in the entire process

Keywords: Lean, Quality Tools, Productivity, Lean Principles, Continuous Improvements, Lean Manufacturing, Lean Transformation

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2 Encryption and real-time decryption for protecting machine learning models in Android applications

Paper ID V7I5-1140 · Pages 10-15 · Computer Science Engineering

Aryan Verma, Student, National Institute of Technology, Hamirpur, Himachal Pradesh

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With the Increasing use of Machine Learning in Android applications, more research and efforts are being put into developing better-performing machine learning algorithms with a vast amount of data. Along with machine learning for mobile phones, the threat of extraction of trained machine learning models from application packages (APK) through reverse engineering exists. Currently, there are ways to protect models in mobile applications such as name obfuscation, cloud deployment, last layer isolation. Still, they offer less security, and their implementation requires more effort. This paper gives an algorithm to protect trained machine learning models inside android applications with high security and low efforts to implement it. The algorithm ensures security by encrypting the model and real-time decrypting it with 256-bit Advanced Encryption Standard (AES) inside the running application. It works efficiently with big model files without interrupting the User interface(UI) Thread. As compared to other methods, it is fast, more secure, and involves fewer efforts. This algorithm provides the developers and researchers a way to secure their actions and making the results available to all without any concern.

Keywords: Android, Mobile Applications, Security, Data Encryption, Model Deployment

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3 Analysis of Bitcoin and Blockchain using Game Theory and Behavioural Economics

Paper ID V7I5-1153 · Pages 16-18 · Economics

Aishi Basu, Student, Independent Researcher

This paper presents a brief overview of the role that game theory plays in Blockchain Technology and the Bitcoin market, with a focus on how human behavior influences the market for digital currencies. Through this analysis, the viability of digital currencies as a replacement for conventional money is explored.

Keywords: Game Theory, Behavioral Economics, Blockchain, Bitcoin

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4 Building an Intelligent Agent to play Flappy Bird using NEAT

Paper ID V7I5-1155 · Pages 19-21 · Computer Engineering

Pratik Manoj Desai, Student, College of Engineering, Pune, Maharashtra
Rhugaved Rajendra Narmade, Student, College of Engineering, Pune, Maharashtra

Games are an efficient way to measure the progress of AI. Artificial intelligence has been making rapid advances in recent years, and one way to see how it is progressing is by playing games. Go, Atari2600 and Chess are some AI agents which even defeated human players. These AI agents require or have a training stage involved. In this paper, we propose a training strategy to develop an Artificial Intelligence agent using the NeuroEvolution of Augmenting Topologies (NEAT) algorithm to play the Flappy Bird Game. NEAT basically implements a genetic algorithm that generates ANNs. Our agent learns to safely dodge all the barriers and flap its way through them, optimally playing the famous “Flappy Bird” game.

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Keywords: Flappy Bird IA, NEAT, Flappy Bird with NEAT, Flappy Bird AI, Artificial Intelligence, Neural Network, Genetic Algorithm, Flappy Bird, Neuro Evolution

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5 Effectiveness of Doula care on anxiety and labor outcome among parturients

Paper ID V7I5-1163 · Pages 22-24 · Nursing

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Dr. Arzta Sophia R., Professor, Christian College of Nursing, Neiyyur, Tamil Nadu
Dr. Santhi Appavu, Principal, Christian College of Nursing, Neiyyur, Tamil Nadu

Pregnancy is a natural event, speculated to be of celebration and joy. But anxiety and fear about childbirth often inhibit most women from enjoying this childbirth experience. Supportive measures involve continuous support during labor by doula and doula care is effective in these situations to reduce anxiety. This study was conducted to assess the effectiveness of doula care on anxiety and labor outcome among parturients in Kanyakumari, India. Methods: This was a quasi-experimental study, conducted among 30 primi parturients who were selected using consecutive sampling techniques, in 2021 in Kanyakumari, India. The tools used for data collection was interview schedule composed of demographic and obstetrical variables, anxiety scale, and labor outcome checklist. Collected data is entered in Excel and analyzed in SPSS 20 using appropriate descriptive (f,%) and inferential statistics (Independent ‘t’ test). Results: Regarding anxiety pretest anxiety scores did not differ significantly between the experimental and control group (p=1.000). After doula care, in the post-test, there was a significantly low anxiety level in the experimental group as compared to the control group (P & lt; 0.001). Conclusion: Doula care is effective in the reduction of anxiety and promotes labor outcomes during childbirth.

Keywords: Doula, Doula Care, Parturients, Anxiety, Labour Outcome

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6 Rake- A cross-platform digital product

Paper ID V7I5-1164 · Pages 25-27 · Web Development And Machine Learning

Ganavi J., Software Engineer, Altiostar, Bangalore, Karnataka
Amith S. Bharadwaj, Data Scientist, Sakha Global, Bangalore, Karnataka

Rake is a cross-platform release-ready digital product that is a production-level app, making use of all the latest Firebase technologies. This app uses Firebase MLKit, Firebase Firestore & Firebase Authentication for its core functionality. It also uses libraries like Retrofit, Glide, GSON, and more third-party libraries for other functionalities. Firebase MLKit is used to recognize handwriting and text in images, objects in images, and also scan barcodes. This contributes to the main purpose of our app, which labels images and provides the user with context-aware actions of what the user can do next. Firebase Authentication is used to authenticate and help users log in & signup into the app. This uses OAuth 2.0 under the hood, so it is a very secure mechanism for login. Firebase Firestore is used as a database to store the user’s scanned data so that he can refer to it for later use. We’re also using our own custom TensorFlow Lite model, named ‘mobilenet’, to detect images. The

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app can be accessed via the web portal as well. Firebase Authentication lets the user login on to the web portal, which can be found at the rake.now.sh, and give the user access to his data on Firebase Firestore. This extended functionality where the user can access his data enhances the ease of use and makes sure that the user doesn't always need a mobile device to see his previously scanned data.

Keywords: Image Classification, Text Recognition, Barcode Scanning, Reverse Image Search, REST API, Android, Web Mining, Cross-Platform, Firebase

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7 Supercharge the dopamine naturally for a good feel

Paper ID V7I5-1136 · Pages 28-33 · Community Health Nursing

Dr. Esther John, Dean, Ganga Institute of Health Sciences, Coimbatore, Tamil Nadu
Priscilla Prabu, Assistant Professor, Ganga Institute of Health Sciences, Coimbatore, Tamil Nadu

"Happiness depends on ourselves." More than anybody else. Yes when an exogenic force shakes our mental equilibrium to drop down, we must be aware to reboot with our God's pharmacy app that is inbuilt in our body. Dopamine also plays a big role in our ability to think, plan, focus, and engage in activities; it drives motivation. If dopamine levels are low, we may struggle with motivation or feel a little down. Thankfully, there are some incredible ways to increase dopamine levels naturally. So, let us dive into the natural mood-boosting hacks that will drive us to positivity and success. This article scribes down to unveil the ways to boost our hanging android that is sad and sorrows, weary and worn out by just activating the hormone app that is inbuilt as God's Pharmacy.

Keywords: Dopamine, Boosting, Supercharge

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8 Automated real-time detection and reporting accidents using IoT based helmet

Paper ID V7I5-1151 · Pages 34-39 · Internet Of Things

Karthik B., Student, Panimalar Engineering College, Chennai, Tamil Nadu

In recent days, road accidents are occurred as regular habits by mainly using motorbikes. The goal of this project is proposed to prevent, detect and report the accidents to the respective authorities. This may reduce severe accidents and as well as may save the lives of people. We propose the solution, where the helmet itself initiates communication to report the accident using a person's phone. Our design consists of Arduino Microcontroller, transmitter and receivers, and sensors. By using RF transmitter and indicator, indicates that the person is wearing a helmet, if it doesn't indicate which means the person doesn't wear a helmet. Only then does the bike get started. So, this will be the initial prevention in this design. If a severe accident occurs, the pressure sensor in the helmet detects the pressure limit, then python code executes and triggers the alert message using cloud authentication. Mobile application catches the trigger and obtain the device's location and sends the alert message to nearby hospitals, relations. There will also be a buzzer sound to alert the nearby people to draw attention, even if it is unable to send an alert message. If there is a mild accident and no injury,

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there will be a reset button to cancel the sending of the alert messages using a secret PIN.

Keywords: Accident Reporting, Accident Prevention, Emergy Alerts

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9 Adsorption Behavior of Cu, Al, Mn, Sr, Pb, Cd, Zn, and Ca Metal Ions on Cation Exchange Resign Dowex 50 WX8 (NH₄⁺ form) from Aqueous Acetone – Ammonium Propionate Media

Paper ID V7I5-1169 · Pages 40-43 · Chemistry

Rajan Kamble, Associate Professor, Bhogawati Mahavidyalaya, Kurukali, Maharashtra

In the field of inorganic separation, the incentive to explore the use of non-aqueous or mixed solvent has been enhanced selectivity's, discovered quite early in such media for Zeolites [1] and ion exchange resins [2]. The partial substitution of an aqueous solution by organic solvent produces a number of changes in an exchange system. The electrolyte plays a significant role in the ion exchange equilibrium with aqueous solutions. This effect is expected to be even more important in the adsorption equilibriums of metal ions from mixed aqueous organic solvents. Adsorption equilibrium depends on the properties of the organic solvent and the reaction with resin and electrolytes which determine the equilibrium. The metal ion exchange on cation exchangers and their uses has been done.

Keywords: Dowex 50 WX8 (NH4+ form), Ammonium Propionate, Distribution Coefficients, Binary Mixtures, Eluting Agent

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10 The Effect of Nylon Fibers in Self-Consolidating Concrete (SCC)

Paper ID V7I5-1171 · Pages 44-51 · Civil Engineering

Qasim Alsherify, Student, Andhra University, Visakhapatnam, Andhra Pradesh

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Self-compacted concrete (SCC) is a unique type of concrete that settles into the formwork and fills all of its corners without the use of compaction or vibration. Because SCC has a higher flowability, it becomes brittle and performs poorly under stress and bending. One of the most effective ways to increase the tensile and flexural performance of SCC is to include randomly distributed short and discontinuous fibers. In this regard, this experimental study is undertaken to investigate the effect of nylon fibers (NF) on the fresh and hardened properties of SCC. Two different lengths, 20 mm and 12 mm, were used, as well as five different volumetric percentages of NF, 0.1, 0.2, 0.3, 0.4, and 0.5 percent. The results demonstrated that adding NF to SCC had a minor effect on its fresh characteristics. However, the magnitude of the influence is not large enough to be considered a significant factor. According to EFNARC criteria, the fresh characteristics of whole mixtures are within the required range. With the addition of NF, the strength qualities improve. the extent of increment is greater for the longer length of NF. The optimum volumetric fraction of NF for producing high strength SCC was found as 0.5%. The fresh properties of complete combinations are within the required range, according to EFNARC guidelines. The strength properties enhance with the addition of NF. The length of NF has a significant impact on the amount of increment. The volumetric proportion of NF required to produce high-strength SCCwas discovered to be 0.5 percent.

Keywords: Self-Compacting Concrete, SCC, Nylon Fibers, NF

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11 Sentiment analysis of COVID-19 Vaccination Tweets on Twitter using Machine Learning Algorithm

Paper ID V7I5-1175 · Pages 52-57 · Information Technology

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After Declaring pandemic in March 2020 public health prevention measures have proven to be somewhat effective in limiting the spread of COVID-19. Protective immunity through vaccination will be great importance of in ending the pandemic. This work aims to identify the sentiments of the masses towards vaccination by analyzing the text tweets. 68,654 tweets are retrieved from Twitter posted within the timeline from December 2020 to January 2021. Sentiment, polarity score, and subjectivity score were computed and analyzed on the basis of text and date columns. According to the polarity and subjectivity scores, tweets were classified as positive, negative, and neutral using the TextBlob library of natural language processing. Also, the user's view on the vaccination was analyzed using machine learning algorithms such as Naïve Bayes (NB) and Logistic Regression (LR). The highest accuracy achieved was 90% by Logistic Regression (LR). It was observed from the results that the sentiments towards the vaccine were positive on the initial day but a shift to negative sentiments was observed. Later, the sentiment towards vaccines is again positive.

Keywords: COVID-19, Machine Learning, Naïve Bayes, Sentiment Analysis, Time Series Analysis, Vaccine

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12 The Biofuel Price Stabilization Mechanism

Paper ID V7I5-1166 · Pages 58-59 · Chemical Engineering

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This article studies the capacity of biofuels to reduce motor fuel price fluctuations. We hypothesize the dependence between crude oil and biodiesel blend prices in Spain and the EU. Copula models are a method of study. Results suggest that the practice of blending biodiesel with diesel can protect consumers against extreme crude oil price increases. This can also help reduce the carbon emissions and the Green House Gases (GHG's) emitted upon burning fossil fuels

Keywords: Biodiesel, Copula, Green House Gases (GHG's)

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13 Hydraulic Analysis of Lekhnath small town Water Supply Distribution Network, Pokhara Metropolitan City, Nepal

Paper ID V7I5-1141 · Pages 60-66 · Civil Engineering - Water Supply Engineering And Management

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Drinking Water is the most important factor to be considered for a sustainable and healthy life for humans. United Nation’s Sustainable Goal No. 6 also considers ensuring the availability of clean and safe drinking water to all. Water Distribution Network designed earlier is having challenges in fulfilling the growing need for water supply. Forecasting and monitoring the flow, pressure, demand, and quality of water in the water distribution networks are key requirements for sustainable and reliable water supply. Lekhnath, due to the recent merger with the biggest metropolitan city of Nepal, Pokhara, has created the rapid growth of population resulting in haphazard pipeline extension in this area. For hydraulic analysis of Lekhnath Small Town Water Supply Distribution Network, one of the networks i.e, Shishuwakhudi distribution network was taken as problem analysis. This hydraulic analysis research case is a part of ongoing doctoral research and Youth-led Initiative ‘drink Pani’ on ‘Water Supply and Quality Monitoring using Emerging Technologies’ where the capacity building of Youth and Women through data-driven engagements (Water-informatics) is one of the core targets in the overall project-work package. The preliminary analysis of water quality is also derived from Young Water Volunteers (YWVs) under the research work on Youth-led Participatory Sensing (YPS) Model to enhance drinking water security of the study area. The Shishuwakhudi Water Distribution Network (WDN) supplies water to 1138 households at present and consisting of 41 junction nodes and an 11.2km distribution pipeline distributing water from a reservoir. With field survey, household at each node of the network was determined. Demand-driven analysis using EPANET was done to determine the pressure deficit at the various nodes. Demand pattern based on design guidelines was adopted for analysis. In the present scenario, four nodes at end of the network showed negative pressure at peak hours (5 am- 7 am). At other times, the pressure was above 10m head. Demand was forecasted for 10 years from now by projecting the household population based on the growth rate of census 2011. When projected to the future scenario, the existing pipeline showed only 17% reliability

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with a minimum pressure requirement of 10 m head as per norms of urban water supply projects in Nepal.

Keywords: Water Distribution Network (WDN), Water Supply and Quality Monitoring, EPANET, Hydraulic Analysis, Reliability, Youth-led Initiative, Capacity Building

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14 Accident detection and rescue system

Paper ID V7I5-1180 · Pages 67-70 · Iot

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The Rapid growth of technology and infrastructure has made our lives easier. The advent of technology has also increased the traffic hazards and the road accidents take place frequently which causes huge loss of life and property because of the poor emergency facilities. The incidence of accidental deaths increased by 44.2% in 2011 from 2001. Our project will provide an optimum solution to this drawback. Nowadays we are able to track vehicles using many applications which helps in securing personal vehicles, public vehicles, feet units and others. Furthermore, there is a rapid increase in the occurrence of Road accidents. This paper is about a system that is developed to automatically detect an accident and alert the nearest hospitals and medical services about it. This system can also locate the place of the accident so that the medical services can be directed immediately towards it. The goal of this paper is to build up an Accident Alert System Using Arduino. The system comprises Sensors, GPS & GSM Module support in sending messages. The Sensors is used to detect vibrations and impact are used to detect an accident. Short Message will contain GPS [Latitude, Longitude] which helps in locating the vehicles

Keywords: GSM, GPS, Arduino

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15 Morphometric Analysis of middle Kaligandaki Sub Basin and Flood Mapping using HEC-RAS

Paper ID V7I5-1172 · Pages 71-77 · Civil Engineering

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Watershed analysis based on morphometric parameters gives an idea about the basin characteristics regarding slope, topography, soil condition, runoff characteristics, surface water potential, etc. These characteristics are very important for watershed planning and management. The potential disaster of flash flood and soil erosion is anticipated by studying morphometric parameters of the Kaligandaki basin. In the middle Kaligandaki sub-basin, the Kaligandaki river from Tatopani to Modibeni has human settlements concentrated along its sides like the Beni bazaar. They are always at risk of erosion and flood inundation. In monsoon, due to heavy rainfall, the Kaligandaki river erodes and inundates the lands near its bank. From the analysis of morphometric parameters,

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the erosion and inundation of land near river banks are justified. The study of flood inundation map obtained by processing discharge of river in HEC-RAS indicates the settlement and structures near the river are very prone to flood disaster. This study can be referenced for flood planning and disaster reduction measures in the Beni bazaar.

Keywords: Morphometric Parameters, Flood Inundation, Erosion

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16 Breast Cancer Classification using Python

Paper ID V7I5-1182 · Pages 78-80 · Computer Science

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This article aims to evaluate the prediction models of machine learning classification in terms of accuracy, objectivity, and reproducible of the diagnosis of malignant neoplasm with fine needle aspiration. Also, we seek to add one more class for testing in this database as recommended in earlier studies. We present six various classification methods: Multilayer Perceptron, Decision Tree, Support Vector Machine, Random Forest, and Deep Neural Network for evaluation. In the field of assisted cancer diagnosis, it's expected that the involvement of machine learning in diseases will give doctors a second opinion and help them to form a faster / better determination. There is an enormous number of studies in this area using traditional machine learning methods and in other cases, using deep learning for this purpose.

Keywords: Machine Learning, Support Vector Machine, Deep Neural Network, Decision Tree, Random Forest

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17 Assessing the knowledge of caregivers of patients undergoing peritoneal dialysis in the Mahaweli c region, Sri Lanka

Paper ID V7I5-1183 · Pages 81-85 · Health

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Continuous Ambulatory Peritoneal Dialysis (CAPD) was identified as the best alternative treatment for developing countries like Sri Lanka having an increasing number of CKD and CKDu patients. Caregivers of CAPD patients play an important role in this treatment regime. However, the assessment of knowledge of caregivers of CAPD patients was not conducted systematically. This study aims to evaluate the knowledge of caregivers and improves the knowledge. The study was conducted in three stages, i.e. pre-interventional, interventional and post-interventional. The results obtained by the pre-intervention were analyzed and gaps were identified

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under each key area. Strategies were identified to achieve better patient safety practices. Further, the training/ workshop plan was conducted to improve the knowledge of caregivers at Divisional Hospital Girandurukotte. To check the effectiveness of the intervention statistically, a paired t-test was used. Correct answer count was obtained for each caregiver before and after data sets separately and marks were assigned for knowledge of each caregiver. Then averages were calculated for both datasets. Finally, using the paired t-test, before and after average marks were compared. The percentage of caregivers who gave correct answers increased after the intervention. Paired T-test results illustrate that there is a significant difference between before and after intervention Since the p-value is less than the 5% significance level, it can be concluded that after the intervention average marks of caregivers increased. Therefore, this intervention positively impacts the caregiver's awareness. Therefore, continuous educational programs for all patients and caregivers who receiving CAPD treatment are recommended to improve knowledge about treatment.

Keywords: CAPD, Mahaweli C Region, Caregivers

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18 Restoring data from one cloud to another cloud in case of disaster

Paper ID V7I5-1191 · Pages 86-88 · Cloud Computing & Backup

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Nowadays, a tremendous amount of information is produced, and it needs a data recovery management system so that the data can be recovered in case of a disaster. Different cloud service providers offer security to the users and clients despite the risk that their systems may go down due to disaster. So, there is a need to recover data services in the developing stage, which requires evolution and organized powerful data rescue methods if data is lost in a disaster. Recovery methods aim to support user's sensitive data that should be protected in a disaster. There are many reasons for it. Various procedures have been submitted in an environment like security breach (ransomware attack), water flood, sudden fire, earthquake, device mistake, or non-expected reason for deletion of information which might not be available permanently. Recovery aims to eliminate massive data recovery from one cloud platform to another cloud platform, which can be considered a part of cloud computing.

Keywords: Aws, Azure, Cloud

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19 Factors influencing Immunization Coverage among children 12-23 months of age in Bastar division from 2013 to 2020 – A review.

Paper ID V7I5-1178 · Pages 89-94 · Health And Science

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Bastar is a backward division in the state of Chhattisgarh with a large tribal population (32%). It is affected by left-wing extremism [2] It has 7 districts, and all are included in the Aspirational district program of NITI Aayog.

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In India, proper vaccination could prevent about 3 million deaths per year [2,15]. This vaccination drive is affected by several factors, which may vary from place to place depending on social, cultural, and developmental status Although there are many studies on factors influencing immunization in other parts of the country, there was a dearth of literature in Bastar division. This study reviews the literature for the factors affecting immunization coverage in the Bastar division, a culturally unique entity. After removing duplicates from the 23 articles, a total of 12 factors were discovered. The main issues were a lack of human resources, inaccessibility, low female literacy, and a lack of infrastructure. Haat bazaars, a lack of awareness, a sick infant, an inconvenient time, AEFI, the place of delivery, lockdown, and birth order were among the others.

Keywords: Factors, Immunization Coverage, Bastar

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20 Problems in India’s rural area and rural development programmes

Paper ID V7I5-1188 · Pages 95-98 · Economics

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India is a predominantly rural country with a rural population of over 65%. To develop India effectively, it is important to develop villages first. That is why Mahatma Gandhi's future lies in the villages of India. Seventy years after our country's independence, there is no sustainable development in rural areas. In the direction of alleviating these problems, the government needs to undertake different rural development programs. As the countryside embodies its own design, character, and elegance, it is necessary to engage the rural population in the effort to alleviate these problems and hire an economist or sociologist with special knowledge of rural meaning and society. The Indian economy is characterized by agrarian dominance. More than 60 percent of India's population is engaged in agricultural activities for livelihood and survival. The Indian economy wants to make $ 5 trillion by 2025. The rural economy plays an important role in this sector. The rural economy has the potential to create decent and productive jobs and contribute to sustainable development and economic growth. Promoting decent work in the rural economy is key to eradicating poverty and meeting the nutritional needs of the growing country's population.

Keywords: Development Rural Area, Agricultural Activities

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21 Smart Intravenous Monitoring System

Paper ID V7I5-1177 · Pages 99-104 · Computer Science

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In the Medical field, the Need for good patient care in hospitals, assessment, and management of fluid and electrolytes is the most fundamental thing required. Almost in all hospitals, an assistant/nurse is responsible for monitoring the electrolyte’s bottle level. But unfortunately most of the time, the observer may forget to change

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the bottle at the correct time due to their busy schedule. To overcome this critical situation, an IoT-based automatic alerting and indicating device is proposed where the sensor is used as a level sensor or weight sensor. The Automated glucose stream control and observing framework are tied in with checking the progression of glucose consequently. At whatever point if patients get a lot of tiredness that time medical caretaker will put the glucose for the recuperation of patients. While putting the glucose bottle she just needs to control the progression of glucose amount. In the event that the glucose bottle got unfilled, a medical caretaker ought to be there to supplant or evacuate the container. In case the nurse isn't there, that time the patient's body blood will flow into the container in an inverted bearing. For taking the weight of the bottle we use a Weighing scale. As indicated by the weighing scale the flow will control the progression of glucose. Many devices introduce a drastic change for monitoring the body measures like blood pressure, heartbeat rate, diagnosis of heart attack symptoms, and much more automatically with interdisciplinary nature. The health care system is becoming more valuable these days. In this proposed system the IV fluid monitoring system automatically sends a message to the nurse through SMS technology. This technology reduces the work of the nurse instead of keeping on watching an IV Fluid system. One of the greatest advantages of our project is the ease of interface with users which functionally can be managed by means of the mobile application.

Keywords: Polyvinyl Chloride (PVC), Single-Chip Microprocessor (SCM), Intravenous (IV), Integrated Development Environment (IDE)

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22 Identifying Malicious Facebook Apps

Paper ID V7I5-1192 · Pages 105-119 · Computer Engineering

Dr. Ali Ahmed Razzaq, Research Scholar, Andhra University, Visakhapatnam, Andhra Pradesh

Third-party apps are a big reason for Facebook's success and addictiveness, with 20 million installs every day [1]. Regrettably, hackers have discovered the potential of leveraging applications to propagate malware and spam. The issue is already serious, as we discovered that at least 13% of the apps in our database are malicious. Until far, researchers have concentrated their efforts on spotting malicious messages and campaigns. In this research, we examine whether we can tell if a Facebook application is malicious just by looking at it. The development of FRAppE—Rigorous Facebook's Application Evaluator—arguably the first tool focused on detecting fraudulent apps on Facebook— was a major contribution. We used data acquired by observing the posting behavior of 111K Facebook applications across 2.2 million Facebook users to create FRAppE. First, we identify a collection of characteristics that assist us in distinguishing between malicious and benign programs. As an example, we find that malicious apps often share names with other apps, and they typically request fewer permissions than benign apps. Second, leveraging this FRAppE can detect malicious apps with 99.5 percent accuracy, no false positives, and a low false-negative rate, according to our findings (4.1 percent). , We investigate the ecology of malicious Facebook apps and the ways by which they spread. Surprisingly, we discover that many apps collaborate and promote one another; in our dataset, 1,584 apps enable the viral spread of 3,723 additional apps through their posts. In the long run, we see FRAppE as a step toward establishing an independent watchdog for app evaluation and ranking, with the goal of alerting Facebook users before they install apps.

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Keywords: Online Social Networks, Facebook Apps, Malicious Apps, Profiling Apps

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23 Perspectives regarding the quality of supervision among dental postgraduate students in Bengaluru city, Karnataka

Paper ID V7I5-1194 · Pages 120-125 · Dental

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Supervision is an important pillar in supporting the learning environment throughout post-graduate education. It is also one of the most important contributors to the successful completion of a higher education degree and to a student's positive academic experience. Objectives:- The aim of the present study was to assess the perspectives regarding the quality of supervision among dental postgraduate students in Bengaluru city, Karnataka. Methods:- From a total of 18 dental colleges,9 colleges were randomly selected using a lottery method. All the postgraduate students from these selected dental colleges were included in the study. A total of 297 students participated in the study. The results were analyzed using SPSS, version 19(SPSS Inc. Chicago, IL, USA) in frequencies and percentages described as basic information. Results:- Overall, the majority of the post-graduate students were satisfied with the supervision they received and had similar perspectives about all the domains. Conclusions:- The study concluded that post-graduate students were satisfied with the overall supervision they received. The main elements contributing to a positive supervision experience were support, guidance, availability, and good communication between supervisees and supervisors.

Keywords: Post Graduate Students, Supervision, Dental Students, Quality of Supervision

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24 Green Internet of Things in smart cities

Paper ID V7I5-1195 · Pages 126-130 · Computer

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'Change is the only constant thing in the world." The invention of the computer resulted in wanting more better computers and greater and advanced features. The same goes on for IoT. The Internet of Things also known as IoT is the ultimate building block for smart objects. A search for better and environmentally sound function resulted in Green IoT. A Smart city comprises all the basic necessities but in a smarter version. From the bed light before sleeping to the automated alarm to wake one up. Everyone is surrounded by Smart objects. These objects have definitely made our life easier. However, a change in life may have both good and bad consequences. Despite the benefits of IoT, energy consumption is still on the rise. This problem brought the solution motivated by achieving a sustainable smart city incorporated with Green IoT. This not only saves the extra energy which it was utilized priorly by IoT but also works efficiently. The Green IoT is a new advancement in technology and this paper discusses the merits, demerits, and various recommendations.

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Keywords: Internet of Things, IoT, Green IoT, Sustainable, Smart Cities

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25 Facial expression recognition

Paper ID V7I5-1196 · Pages 131-134 · Machine Learning

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Rohan Raut, Student, Boise State University, Boise, Idaho

Facial expression is a very difficult task (FER) due to the variation of facial expression across the human population and to the context-dependent variation even for the same individual. We can see that FER has many applications in the fields like human behavior interpretation and human-computer interface. The study of Mehrabian shows that 55% of the message is comprised of facial expression while 7% of the communication is conveyed by linguistic language whereas 38% by paralanguage during human communication. This shows that facial expression has a significant role in communication. The proposed system uses a webcam to capture our face and determine whether you were smiling or not. The system uses an OpenCV computer vision library to preprocess the webcam image, and in this system, we have used a logistic regression algorithm to train on a provided dataset and evaluate the new image.

Keywords: Facial Expression Recognition, Facial Expression, Feature Extraction, Classification

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26 A study of Machine Learning algorithms to predict liver cirrhosis and its stage

Paper ID V7I5-1200 · Pages 135-139 · Artificial Intelligence

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In the early stages, cirrhosis usually doesn’t cause symptoms. Only through routine blood tests or liver biopsy does a doctor diagnose damage to the liver. Using Machine learning we develop a model that can assist doctors in diagnosing the early stages of liver cirrhosis before it gets fatal. In this study, we use various machine learning algorithms to determine the liver cirrhosis stage. Data is collected from the Mayo Clinic trial, USA, in primary biliary cirrhosis (PBC) of the liver conducted between 1974 and 1984. The performance of the algorithms was evaluated using the ROC-AUC curve which is a very practical method of model evaluation for classification problems. Results showed that by applying Logistic Regression to predict the cirrhosis stage we get a ROC-AUC score of 0.74 which is considerable in view of the instance we have.

Keywords: Supervised Machine Learning, Disease Prediction, Python

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27 Recreating Solar Panels: An Integrated Approach

Paper ID V7I5-1181 · Pages 140-143 · Engineering

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As solar power becomes increasingly popular as a clean and renewable energy source, there is a need to better understand the technology used to convert sunlight into electricity. Bell Labs first used the photovoltaic effect to harness the striking of photons on a solar panel to create an electrical charge. In my paper, I propose two novel methods to increase the efficiency of solar panels. The first method utilizes solar tracking and computer science to tilt solar panels to face directly toward the sun throughout the day to maximize photon strikes. The second method concentrates photons through a magnifying glass to maximize the surface area of light being focused onto the panel. Developing better approaches such as those suggested in my paper have the potential to make solar panels more efficient and affordable, thereby increasing the scope of the solar power market.

Keywords: Solar Energy, Solar Schemes, History of Solar Panels, Working, Method to Calculate Tilt Angle, Solar Tracking, Concave Lens, Survey, Future Utilisation

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28 In-vitro Antimicrobial activity of Moringa Oleifera and Ocimum Sanctum leaves against subclinical mastitis-causing pathogens

Paper ID V7I5-1152 · Pages 144-149 · Veterinary Medicine

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Dr. Ambica Gadige, Assistant Professor, College of Veterinary Science, Hyderabad, Telangana
Dr. Lakshmi Kosapati, Assistant Professor, College of Veterinary Science, Hyderabad, Telangana
Dr. Swathi Bommu, Professor, College of Veterinary Science, Hyderabad, Telangana
Dr. Padmaja Katta, Professor, Veterinary Polytechnic College, Mahbubnagar, Telangana
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Among the 164 culturally positive samples, In vitro drug sensitivity test was conducted on 20 samples, and among these 19, 17, 15, 13, 9, and 7 samples showed a sensitivity of 95.00, 85.00, 75.00, 65.00, 45.00, and 35.00 percent to Enrofloxacin, Ceftriaxone, Amoxicillin + Clavulanic acid, Tetracycline, Gentamicin, and Streptomycin, respectively. These samples also showed maximum sensitivity to leaf extract of Moringa oleifera and Ocimum sanctum at 30 mg and 50 mg concentrations with the highest zone of inhibition as 16mm and 20mm, respectively.

Keywords: Invitro, Antibiotic Activity, Moringa Oleifera, and Ocimum Sanctum

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29 Spatial Distribution of Cholera cases in Damaturu Town, Yobe State, Nigeria

Paper ID V7I5-1204 · Pages 150-161 · Medical Geography

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Falmata Usman Charangi, Lecturer, Yobe State University, Damaturu, Nigeria

Cholera disease appears to be a serious infections disease that bedeviled many locales, particularly in

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developing countries. A single case of cholera is a threat to neighboring areas and a global concern. The distribution of the disease is largely determined by series of environmental factors such as climate, local geography as well as living standards. Similarly, poor sanitation and hygiene are part of the drivers for the disease progression in most affected communities. Based on 10 years of data from the epidemiological unit, this study undertook the spatial analysis of cholera disease incidences in the Damaturu Local government area so as to determine the hotspots of the disease in the area and awareness of the disease among people. Also, six wards were purposively selected and questionnaires were administered to 381 household respondents. Descriptive statistics and GIS tools were used to analyze the data. Results were presented in maps and frequency tables. The findings reveal that there are three high vulnerable areas, five moderate areas, and three low-risk areas. The epidemic was concentrated in Nayinawa, Kukareta, and Maisandari wards. Nearest to the water body and high population density are factors that determine the spread of cholera disease in the study area. Further research is needed especially in the environmental factors influencing the occurrence of cholera in other to prevent and control future outbreaks and disasters.

Keywords: Cholera Outbreak, Hotspot Maps, Epidemics, Endemic, Damaturu, Yobe State

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30 Spatial planning in museums for display gallery and its importance

Paper ID V7I5-1201 · Pages 162-165 · Architecture

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The major issue in the designing of any exhibit space involves one question as to how the layout of the space interacts with the layout of the objects In museums display gallery is a very important area as it is the heart of museum .so while designing the gallery spatial planning is a very important role to play .spatial planning of display gallery not only gives clear vision for curator but also for the visitor who is going to visit the museum. Area for smooth movement of visitors is also one of the aspects for consideration of spatial planning .museums are known for their artifacts and arranging the artifacts in display gallery is directly proportionate to the number of visitors. if the museum has a nice display arrangement along with interesting spaces for visitor's it will create great revenue for its future .museum will sustain for long life for future generations also .museums in Maharashtra are having great heritage value despite those values it is found that rethinking about display gallery is needed to add some heritage value for its future exitance .few museums are well care taken about its planning and few are still neglected. In few museums are having very high value for their intangible heritage and definitely rethinking should be needed for designing display areas.

Keywords: Display Gallery, Spatial Planning, Curator, Intangible, Heritage, Heritage Value, Exhibition Space, Etc.

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31 Application of operational research in the oil and natural gas industry

Paper ID V7I5-1199 · Pages 166-170 · Operations Research

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Operations research is a science/process in which one applies mathematics to real-life business problems to come up with the most highly effective and efficient solutions/ decisions. Algorithms, simulations, and optimization are the key to finding any solution with the help of OR. The oil and natural gas industry were one of the early adopters of this scientific process and the use of OR helped this industry to grow and overcome several hurdles throughout. The report further provides insights into the different problems faced in the operations of the business in this industry and how different models and theories of Operations Research help in making the best decisions regarding it. We have also discussed in detail how several oil corporations have used OR in their functioning.

Keywords: Operations Research, Oil, Natural Gas, Chevron, Texaco, Trolls West, China's National Petroleum Corporation

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32 Design and analysis of fairings for bicycles

Paper ID V7I5-1205 · Pages 171-175 · Mechanical Engineering

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Aerodynamics is the study of moving air's properties and the interactions between moving air and solids. Rider gets slammed into air particles while riding that get compressed once rider hit them and then become spaced out once they flow over the rider. The distinction in atmospheric pressure from your front to your back creates a retardant force. The force that's perpendicular to the oncoming flow direction is the lift force. It contrasts with the drag force. Aerodynamic shapes reduce this pressure drag and lift by minimizing that difference in pressure and allowing the air to flow more smoothly over your front, reducing the low-pressure wake behind the cyclist and reducing this drag, and increasing speed in this paper; fairings designed. NACA airfoil as a base, fairings are designed using CATIA.CFD analysis is carried out on the bicycle with a fairing to calculate drag and lift force. As the position of cyclists isn't modified and due to fairing, the air resistance reduces, which may increase the comfort level of cyclists. From this analysis, the economical fairing can be determined, facilitating additional drag and producing less lift.

Keywords: Human-Powered Vehicle, Fairings, Drag, Lift, Coefficient of Drag, Coefficient of Lift, CFD Analysis

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33 Highlighting symbolism in Maya Angelou’s I Know Why the Caged Bird Sings

Paper ID V7I5-1203 · Pages 176-177 · English

Shruthi J., Independent Researcher

The purpose of this paper is to explain the strong presence of symbols in I Know Why the Caged Bird Sings by Maya Angelou. In literary works, a symbol is employed to bring out ideas, conceptions, beliefs, and opinions in a more efficient method. Symbolism allows for a multi-dimensional approach to literary writings, allowing readers to grasp the substance of the texts with more clarity. Symbolism is a highly illustrative form of communication that reveals the ultimate truth. The desired meanings are indirectly conveyed through signs and symbols. The goal of symbolism is to achieve a far more profound and significant understanding. Rather than speaking it out loud, an author can employ symbols to convey her views.

Keywords: Symbolism, Caged Bird, Momma's Store, Arkansas, Self-Acceptance, African-American

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34 Application of wind energy in the DC motor control using MATLAB/SIMULINK.

Paper ID V7I5-1207 · Pages 178-186 · Electrical And Electronics Engineering

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Commercial wind energy is one of the most economical sources of new electricity available today. In this power point presentation, the main objective is to explain how wind energy is used in the control of DC motor. Wind Energy Conversion System (WECS) is done by using a doubly fed induction generator driven turbine in MATLAB/SIMULINK. Speed control of a machine is the most vital and important part in any industrial organization. Now, this DC motor control is done with the help of a H-Bridge circuit. The AC output obtained from the wind energy is converted into DC and is fed to the DC motor. Results obtained by the implementation of WECS and DC motor control model in SIMULINK are presented. Additionally, the switching states required for the four-quadrant operation of a DC motor are presented.

Keywords: H-Bridge, DC Motor Control, Wind Energy Conversion, DC Motor Control Using Matlab/Simulink.

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35 A robust TLBO algorithm for solving the ELD problem

Paper ID V7I5-1211 · Pages 187-192 · Power System

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This work focuses on a teaching learning-based optimization (TLBO) algorithm for solving economic load

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dispatch (ELD) problems. The TLBO technique is a recently developed optimization algorithm based on the influence of the teaching-learning process. The best possible dispatches scheduled of the thermal generator are finding using the TLBO algorithm that minimization of fuel cost of a given system. To test the effectiveness of the TLBO algorithm, the proposed algorithm has been applied to three and six generating unit systems for fuel cost minimization. The simulation results achieved by the proposed method are better-optimized solutions for fuel cost minimization.

Keywords: Economic Load Dispatch, Evolutionary Computing, Fuel Cost Minimization, TLBO

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36 A comparative study to analyze the efficacy of walking and balance training on fall prevention among the elderly population

Paper ID V7I5-1221 · Pages 193-197 · Physiotherapy

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A comparative study to analyze the efficacy of walking and balance training on fall prevention among the elderly population. OBJECTIVE To find out the comparative effects of walking and balance training on fall prevention in the elderly population. DESIGN: The study is a pretest and post-test experimental design comparative in nature. PARTICIPATION: Twenty subjects aged between 75-85years old with prone to fall were selected from old age home Podanore and treated with walking and balance training. OUTCOME MEASURE: The outcome was measured by using ‘The -4 Stage Balance test’ RESULTS: Statistical analysis done by using paired ‘t’ test and unpaired ‘t’ test showed that there was a significant improvement in subjects who underwent the treatment with walking and balance training. CONCLUSION: It concluded that the patients who underwent the walking had a better effect when compared to the patient who underwent balance training.

Keywords: Elders. Fall Prevention, Balance, Walking

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37 A holistic view on the National Wind Resource Assessment Program (NWP) of India

Paper ID V7I5-1223 · Pages 198-209 · Wind Resource Assessment Studies

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India is blessed with immense renewable energy resources in general and wind energy resources in particular. Evaluating the potential of wind energy resources in changing the energy scenario in the country is vital for the development of wind turbine installations in near future. About 38600 MW capacity wind power plants are installed so far as up to December 2020. In the wind energy conversion/utilization, India stands in the fourth

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position in the world and it is one of the countries with the largest ground measurement databases exclusively for wind power projects. This paper presents a complete overview of the National Wind Resource Assessment Programme (NWP) being implemented by the Government of India through the National Institute of Wind Energy (NIWE) and its role in facilitating the Indian Wind Industry in achieving its key position in the global wind energy scenario.

Keywords: National Wind Resource Assessment Program (NWP), Wind Energy, Wind Resource, India, Wind Power, Offshore

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38 Visual relationship detection and Scene Graph Generation using the Bi-Directional Gated Recurrent Unit

Paper ID V7I5-1219 · Pages 210-214 · Computer Science

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Visual relationship detection is an intermediate image understanding task that detects two objects and classifies a predicate that explains the relationship between two objects in an image. Relations among entities play a central role in image understanding. Due to the complexity of modeling (subject, predicate, object) relation triplets, it is crucial to develop a model that cannot only recognize seen relations but also generalize to unseen cases. Inspired by a previously proposed visual translation embedding model, the context-augmented translation embedding model can capture both common and rare relations. The previous Visual translation embedding model maps entities and predicates into a low-dimensional embedding vector space and learns the embeddings guided by the constraint predicate, union(subject, object). In addition to the framework is combined with a language model that learns which relationships are more suitable between pairs of object classes. The model solves the scene graph inference problem using the standard Bi-GRU model and learns to iteratively improve its predictions. Our joint model can take advantage of contextual cues to make better predictions on objects and their relationships from an image. This work explicitly models the objects and their relationships using scene graphs, a visually grounded graphical structure of an image. Where in the graph, the nodes are represented as the objects, and the directed vertex is represented as relationships. The experiments show that our model significantly outperforms previous methods on generating scene graphs using the Visual Genome dataset.

Keywords: Bi-Directional GAN, Scene Graph, Faster CNN, Visual Relationship Prediction, Computer Vision, Deep Learning, Visual Genome Dataset

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39 Vehicle area impact on fuel efficiency in platoon management

Paper ID V7I5-1222 · Pages 215-219 · Safe Vehicle Systems

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Due to the continuous increase in highway transport, the expectation on the automotive manufacturer is increasing for more fuel-efficient solutions. Vehicle platooning attracts considerable attention from the

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manufacturers and customer business model because of reduced fuel consumption which gives more profits during transportation. Vehicle Platooning is a technique where highway traffic is organized into a group of close-following vehicles called platoon or convoy. In-vehicle platoon management, the lead vehicle is led by one or more following vehicles in the longitudinal direction. This research work focuses on the impact of the vehicle area on fuel efficiency and also demonstrates the importance of vehicle area to achieve better fuel efficiency during platoon management. This paper has been divided into four sections, it starts with an introduction to the vehicle platoon and state of art. The second part of the work describes basic mathematical modeling to analyze vehicle area impact in platoon management. The third part describes the analysis of vehicle area impact in the platoon management and finally concluding the research work.

Keywords: Vehicle Platoon, Vehicle Area, Platoon Management, Fuel Efficiency

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40 IoT based home automation using FPGA

Paper ID V7I5-1243 · Pages 220-222 · Wireless Communication

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A comfortable lifestyle is improving with the advance in technology day by day. Internet helps us provide any required information which any individual wants. IoT abbreviation for Internet of things helps us not only to get a comfortable lifestyle but also helps us to establish smooth and errorless transfer in communication. In-Home automation any appliance can be connected through IoT and can be used by our smart phones through application. Home automation is the future of smart homes. Wireless Communication using Wi-Fi is always placed into consideration compared to wired communication, as it is not only reliable but also easy to use. Wireless Communication like Bluetooth, Zigbee has a very short range. IoT uses WiFi to transfer data and it also helps to transfer data over a long-range using Static IP addresses and the Internet. FPGA helps to establish smooth connection between FPGA and home appliances. FPGA board provides high security and flexibility to the circuit. Home appliances are controlled using an FPGA board and it receives commands in serial communication from IoT Module through the application in the smartphone. It can also give us alerts through our application and also through the web IP address which can be protected by a password. It can also help us in long-distance communication with home appliances. There are many more advantages that can help us lead a comfortable lifestyle with IoT and FPGA board.

Keywords: IoT (Internet of Things), FPGA, VHDL, Hardware Description Language, Android Application

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41 Intelligent Accident Detection and Alert System

Paper ID V7I5-1228 · Pages 223-226 · Computer Science

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Road accidents rates are very high nowadays due to various factors. Timely medical aid can help in saving lives. Traffic congestion, lack of ambulance services, no network connectivity are the major elements that delay the provision of medical help. An automated response system is required to resolve these factors. For building such automated systems smartphones with their in-built sensors are excellent platforms. In this paper, we introduce the ADAS (Advanced driver-assistance systems) which will reduce the time gap and ensure medical assistance immediately. The server and the ADAS software are the two main components of this system. In this ADAS client system, the location can be identified with the support of in-built sensors in the Smartphone and it will alert the nearest medical assistance provider, which will enable the team to arrive at the accident site on time. The action time and the death tolls can be decreased with the help of this ADAS system.

Keywords: Accident Detection, Vehicle Accident Alert System, Location Tracking, Smartphone, Medical Assistance, Sensors Software

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42 Impact of work from home on Communications in COVID-19 Pandemic

Paper ID V7I5-1197 · Pages 227-255 · Public Relations

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COVID-19 had adversely affected the global economy, causing mass disruption and unemployment. It had tremendously affected all the sectors, causing predicaments in daily chores. Several measures were laid out to re-establish regular routines, Work From Home was one of them. We conducted this study to check the impact of the COVID-19 on communication during Work From Home and the work environment during the corona pandemic. This article describes the working trends during Work From Home in the COVID-19 era of the Indian population. Difficulties developed during working from home and their potential solutions have been highlighted. This paper had discussed the virtual working regimes during Work From Home based on an online survey conducted; we have considered several socio-economic and geographical factors. We focused on

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working professionals working from home during the first phase of the coronavirus pandemic in India dated between April 2020 to August 2020, where 220 working professionals participated. This article also weighs the importance of electronic meeting platforms, categorized into personal & social network platforms, professional meeting platforms, and remote access and control platforms. The data analysis and interpretation showed that the Work From Home had proven to be more productive for the information technology sector than the manufacturing industry because of the nature of the work involved.

Keywords: Work From Home, Telecommuting, Communication, COVID-19, Coronavirus Pandemic

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43 Application of Information Technology in Stock Market

Paper ID V7I5-1230 · Pages 256-265 · Information Technology

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India was introduced to the Internet in the early '90s and the users started to increase rapidly. India stands 5th in the list of countries by the number of internet users. The Stock markets introduced Internet trading (online trading) in February 2002 which has brought a tremendous change in trading. The National Stock Exchange started the first form of online trading wherein users/investors can buy/sell stocks in a day without much paperwork. Earlier it used to take around 60 days to buy/sell stocks in stock markets and the investor also had to go through loads of paperwork. But thanks to Internet the wait has been curbed and in the last ten years, Indian capital markets have recorded 1488% of growth in exchange turnover. The online trading system of NSE is used by companies to make IPOs through book building. It is a fully automated screen-based bidding system that allows trading members to enter bids on behalf of their clients. All bids received by the system are numbered, time-stamped, and stored in the book till the last day of the book-building process, and the offer price is determined after the bid closing date. While ensuring efficient price discovery, this system reduces the time taken for the completion of the issue process.

Keywords: Information Technology (IT), Stock market, Capital Market, Stock Exchange, IPO (Initial Public Offer), Automated Trading, Technological advancement, Algorithm Trading, Transaction chain, Stock trading sector, Tradelect, Web-based trading, Markets in Financial Instruments Directive (MiFID).

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44 Plant Disease Recognition using Artificial Intelligence

Paper ID V7I5-1246 · Pages 266-269 · A.i And Image Processing Using Cnn Algorithm

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The project Plant Disease recognition using AI is made for the farmers to take care of their farms and fields and to help them by recommending and suggesting to them a proper guideline for control measures to be taken. In this Project `Plant Disease Recognition using AI` we have focused on Detecting some plant diseases using Artificial Intelligence by using Various Algorithms like CNN Algorithm. We have used Hardware components like

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Sensors, Raspberry pi, and ADC convertors and created a sort of handheld device for taking readings from plants and by using face recognition algorithms like CNN and KNN algorithm we detect the disease by comparing the images from the standard images. In This project, we have used Thinkspeak which represents the data from IoT in a pure database format so that the data can be easily analyzed by using various DBMS Techniques. After getting the data from Thinkspeak that data will be undergoing through the various algorithm that we have mentioned in the project which is performed at the backend. In the frontend for the results to be displayed for the user, we will be creating a dashboard that will inform the user about the various diseases that the plant/crop is undergoing. For that we will be using app developing methods like react.js, node.js, ML5.js, etc. . We have used Tensor Flow which is one of the Machine Learning libraries for performing Machine Learning. IoT using Thinkspeak is used as this way we have combined all the software and the hardware aspects of our project to result in a hardcore product which would be very beneficial for the farmers of our country to take proper care of the crops and to take preventive measures so that there won't be any loss to farmers. This project is aiming to make the farmer’s life easy and better. The Sensor Programming is done in python and uploaded to the firebase.

Keywords: Plant Disease Recognition, Artificial Intelligence, CNN Algorithm, Sensor Programming

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45 Application of Operations Research in Financial Decision Making

Paper ID V7I5-1240 · Pages 270-274 · Operations Research

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“O.R. is the application of scientific methods, techniques and tools to problems involving the operations of a system so as to provide those in control of the system with optimum solution to the problem. -Churchman, Ackoff and Aronoff.” This report includes the application of OR (Operations research) in financial industry. How OR's instruments would avail in solving quandaries such as portfolio management, asset allocation, investment strategies and imperil evaluation etc. Finance management is a very delicate process and needs a very profound understanding in order to realise its functioning. Most of the times avail of experts is required to understand it’s working. OR gives a very efficient method to solve things and get the optimal solution thereby minimizing extra costs and jeopardizations. The topics discussed in the report are 1) Monte Carlo Simulation 2) Index Tracking Fund (Includes Quadratic Programming) 3) Data Envelopment Analysis (DEA). It is difficult to utilize operations research when you wish to make decisions but the conditions are not matched, and when differing objectives conflict with each other. The problems which are being solved through this report are 1) Financial Risk Management 2) Passive Portfolio Optimization 3) Banking Operations and Decision Making.

Keywords: Operation Research, Risk Management, Portfolio Optimization, Money, Financial Problems, Decision Making

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46 A model to predict COVID-19 epidemics with application to India, Canada, and France

Paper ID V7I5-1209 · Pages 275-279 · Mathematical

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In this work, our gathering develops a differential conditions model of Coronavirus pandemics. We will most likely expect forward in time the future number of cases from early definite case data in regions all through the world. Our model unites the going with huge parts of Coronavirus pandemics: (1) the amount of asymptomatic compelling individuals (with uncommonly delicate or no signs), (2) the amount of intriguing declared overpowering individuals (with outrageous incidental effects) also, (3) the amount of demonstrative unreported overwhelming individuals (with less genuine indications). We apply our model to Covid plagues in India, Canada, and France.

Keywords: COVID-19 Epidemic, Reported and Unreported Cases, Isolation, Quarantine, Public Closings

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47 Operational Intelligence for Retail Industry

Paper ID V7I5-1159 · Pages 280-282 · Operational Intelligence

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Operational intelligence in a new domain which is being explored by every business industry to know their customers in a better way possible and satisfy their need. Whenever customers want to purchase any product from a retail website they put a lot of time in searching for the right product at right price from right place. Its becomes difficult to get all this things at one place customer has to check all the sites on which the product is available and then compare and then decide even after deciding he is not sure whether he is getting the product at right price and getting all this information at real time is tedious task. The main objective involves, getting the required information of product price from different websites at real time whenever the customer wants to make a comparison. Giving appropriate discounts on the product so that the business is not in lossand the customers are retained, sending proper messages to respective customer at proper time regarding thebest offers. Tracking the customer activities and making its use to the fullest for the benefits of the business industry. The websites which are present till date to not help customer find the right product at right price no real-time comparison of product prices are shown at one place. The customer select product after doing his research and then purchase the product depending on the reviews of the product and the feedback from other customers. There is no mechanism to check whether the reviews provided by other customers are genuine or not. Getting all the information about price at a single place will save time and won't keep a customer in a blind spot while purchasing the product from right place at right price. They will get instant messages regarding the rise or fall of prices or the discounts which will be provided along with that they do not need to worry about the feedback of the product as the products which are being provided is from same brand or company which other websites provide. The website is just a platform for B2C e-commerce

Keywords: Operational Intelligence, Retail Industry, Data Mining, Web Crawler, Python Django, B2C Commerce

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48 Career discrepancy and subjective well-being among undergraduate students in close liaison to career decision self- efficacy

Paper ID V7I5-1231 · Pages 283-290 · Psychology

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The current study aims to establish a possible relation between three variables: career discrepancy. career decision self-efficacy, and subjective well-being. Respondents were 86 subjects currently enrolled as undergraduate students within the territorial boundaries of India. Subjects were to answer items present in the three forms while filling in certain demographic details. The current study had four hypotheses; a negative correlation between career discrepancy and self-efficacy; a positive correlation between self-efficacy and subjective well-being; a negative correlation between career discrepancy and subjective well-being; and career discrepancy and self-efficacy significantly predicting relationship with subjective well-being. Results concluded

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a significant agreement with the hypothesis, but all correlations were weak. Multiple linear regression revealed a moderate level of prediction, with both career discrepancy and career decision self-efficacy significantly predicting the subjective well-being

Keywords: Career Discrepancy, Career Decision Self-Efficacy, Satisfaction with Life Satisfaction, Subjective Well-Being

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49 Study of medicinal plant species diversity: A scenario of Bhor Taluka, Pune district

Paper ID V7I5-1235 · Pages 291-295 · Medicinal Botany

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The present study focuses on the current state of detailed information about some medicinally important plant species that have been used traditionally. It goes over the general information regarding their traditional uses. Also trying to enhance their sustainable development and conservation. This research will undoubtedly help to guide others who are interested in this field.

Keywords: Medicinal Plant Species, Traditional Use, Sustainable Development, Conservation, Etc.

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50 Application of Operations Research in Human Resource Management

Paper ID V7I5-1245 · Pages 296-300 · Operations Research

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We wanted to see how operational research may be used in the subject of Human ResourceManagement in this study work. It has long been a known fact that when work is done without the use of any scientific equipment, humans are prone to make mistakes. After conducting extensive research in the field of human resource management, we discovered that training, selection, recruiting, and other activities in many businesses are based on bias and partial perspectives. We also discovered that the average capital invested in training and development programs is significantly more than it should be. This prompted us to link the concept of organizational research to Human Resource Management, namely, maximizing happiness at the lowest possible cost. With this goal in mind, we set out to study previous articles to learn more about how firms are already employing OperationsResearch techniques. Operations research (OR) is a problem-solving and decision makinganalytical method that is effective in the management of businesses. Problems are broken down into simple components in operations research, and then the mathematical analysis is used to answer them in

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predetermined steps. The future of decision-making is OperationsResearch. In this context, operational research serves a critical role in enhancing management productivity and ensuring that scarce resources are managed more effectively. The existing state of the art in India is compared to its potential in terms of economic incentives and disincentives, social, cultural, and political considerations, computer availability and usage, OR staff availability, and current management approaches.

Keywords: Operations Research Project, HR, HRM, NMIMS Project in OR

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51 Optimal holiday destination selection

Paper ID V7I5-1254 · Pages 301-302 · Optijization

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It is important for people to select the proper leisure destinations to spend their vacations. Each vacation location would have its own expenses, own entertainment, and own risks. Thus, wisely selecting the proper destination to spend a vacation is of paramount importance for any person for phycological reasons. In this paper, we formulate the holiday destination selection as a mixed-integer programming model (MILP). We also show how to solve this problem using a simple meta-heuristics, a max-min ant system (MMAS). The MMAS shows that it is an effective way that people can use to select holiday destinations. The suggested algorithm can be used as a base for a mobile application that people all over the world can use for their holiday planning.

Keywords: Max-Min Ant System, Holiday, Selection Problem

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52 Application of Operational Research in Optimization of Agricultural Sector

Paper ID V7I5-1252 · Pages 303-305 · Operations Research

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The goal of this study is to see if operation research approaches are suitable and applicable to decision-making in farming. The methods and principles of operational research can be applied to agriculture and development in a variety of ways. The process and problems are investigated as to how operational research can be put into use in the manner to optimize value. The technique of integrating advanced logical theories and models to aid in better decision making and resource utilisation is termed as operations research. This research is focused on the use of operations research methodologies in the realm of agriculture. They are used in a variety ofelements of agriculture, including day-to-day decisions made by farmers such as selecting the best grain, farmplanning, cost reduction and profit maximisation on a single farm, and crop production and transportation. Thisresearch study uses scenarios and issues to demonstrate several Operations Research theories and modelsapplied to agriculture.

Keywords: Operations Research, Agriculture, Linear Programming, Queuing Theory, Game Theory, Inefficiency

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53 The Potential Role of mRNA Vaccine: In treating SARS-CoV-2

Paper ID V7I5-1248 · Pages 306-308 · Biotechnology

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An effective vaccine is needed to halt the proliferation of SARS-CoV-2 that is: Severe Acute Respiratory Syndrome Coronavirus-2. An RNA vaccine is a type of vaccine that uses a copy of a natural chemical called messenger RNA (mRNA) to produce an immune response. COVID-19 BNT162b1 mRNA vaccine has been proved omnipotent enough for eliciting robust CD4+ and CD8+ T Cell responses and powerful antibody responses. COVID-19 mRNA vaccine can make fake versions of the viral protein especially, S antigenic protein but, potent enough to elicit a primary immune response against the COVID-19 virus. T Cells and commendatory cytokine retaliation induced by the BNT162b1 mRNA vaccine propose that it has a future to protect against SARS-CoV-2 Keywords: SARS-CoV-2; COVID-19 BNT162b1 mRNA Vaccine; Spike Antigenic Protein; Protection Against SARS-CoV-2.

Keywords: SARS-CoV-2; COVID-19 BNT162b1 mRNA Vaccine; Spike Antigenic Protein; Protection Against SARS-CoV-2.

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54 Use of Operations Research in Aviation-Scheduling of Aircraft and Crew

Paper ID V7I5-1247 · Pages 309-312 · Operations Research

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In these testing times of the pandemic, the aviation industry has suffered huge losses and the key is to optimize the cost by mathematical and technological advancements. Operations research helps optimizing fleet

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and crew to maximize efficiency, reduce costs and reduce delays. This paper deals with how integer linear programming and simulations help to solve the problem.

Keywords: Operations Research, Aviation, Fleet Scheduling, Crew Rostering, Linear Programming

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55 Using The Transfer Matrix Method Analyzing Muffler Performance

Paper ID V7I5-1261 · Pages 313-316 · Mechanical Engineering

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Internal combustion engine is considered as a major source of noise pollution. And these engines are used for various purposes such as, in power plants, automobiles, locomotives, and in various manufacturing machineries. Engine created noise pollution becomes a vital concern when used in residential areas or areas where noise creates hazard. Generally, noise level of more than 80 dB is injurious for human being. Exhaust noise and the noise produced due to friction of various parts of the engine are the main sources of noise in an engine. The exhaust noise is the most dominant one and to reduce this noise, various kinds of mufflers are generally used. The construction and the working procedure of mufflers usually affects the level of exhausts noise reduction. Engine makers have been making mufflers for more than 100 years. As the name suggests, muffler serves the primary purpose as to reduce or muffle the noise emitted by the internal combustion engine. Technology for muffler has not changed very much over the past 100 years. The exhaust is passed through a series of chambers in reactive type mufflers or straight through a perforated pipe wrapped with sound damping material in an absorptive type muffler. Both types are having strengths and weaknesses. The reactive type muffler is generally restrictive and prevents even the good engine sounds from coming through, but it does a good job of reducing noise. On the other hand, most absorptive type mufflers are less restrictive, but allow too much engine noise to come through. Despite of the packing material, absorptive type mufflers tend to get noisier with time.

Keywords: Analysis, Investigation, Validation, Research, Comparison

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56 Smart Luggage System

Paper ID V7I5-1258 · Pages 317-318 · Information Technology

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The main idea of the Smart Luggage System IoT Project is to develop luggage that could be user-friendly.

Keywords: GPS, Bluetooth Connectivity

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57 A study of operations research in relation to the logistics sector and rising fuel prices

Paper ID V7I5-1260 · Pages 319-321 · Operations Research

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Problem resolution based on assumptions of a simple cause-and-effect relationship is insufficient in a complex activity like logistics. One of the highest costs contributing to “reducing transportation costs” concerns is the price of fuel. To avoid a substantial rise in operational expenses, it is important to adapt and develop a plan while simultaneously pursuing reduced costs. This necessitates the use of operational research technique that is based on mathematical processes. The cost of fuel consumption is determined by the distance travelled and the road conditions (in the case of poor road conditions, the width of the road can impact the vehicle's speed as well as the amount of fuel consumed). This article focusses on strategically evaluating on how to reduce these costs in the logistics sector by using relevant Operations Research Techniques in order to achieve profitability without affecting the operation and customer service.

Keywords: Operations Research, Logistics, Fuel Consumption, Transportation Costs, Location Routing Problem (LRP)

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58 Significance of Operations Research in Human Resource Management

Paper ID V7I5-1263 · Pages 322-325 · Operations Research

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A deeper look into the usage of operations research techniques and their effects on human resource management in a method proving to be beneficial through various trials and streamlining the allotment of limited resources in human resource management.

Keywords: Operations Research, Human Resources Management, Optimized, Queuing, Linear Programming

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59 Analyzing the variance in environmental changes, its impact, and solution process in objectual understanding of moments of earth and relevant systems

Paper ID V7I5-1272 · Pages 326-328 · Sociology

Yalla Venkata Chalapathi Rao, Indipendent Researcher

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Analyzing the applicability of the variance in environmental changes, as per geographical atmosphere, its impact, and solution process in objectual understanding of moments of earth and relevant systems. Major factors to be taken into consideration relating to global warming, biological environmental, social, and health issues. Analyzing consists of Wheel based analyses, Environmental based analyses, and Associative thinking analyses Concluding factors can be considered for solutions.

Keywords: Environmental Changes, Geographical Atmosphere, Global Impact and Solutions, Social, Health Issues

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60 Medication chatbot using conversational AI

Paper ID V7I5-1285 · Pages 329-330 · Computer Science

Chandana T. J., Independent Researcher

Conversational Artificial Intelligence systems are computers that can be interacted with by just conversing with them. With the assistance of conversational AI, we can settle one of the significant challenges in this day and age i.e., Medicine non-compliance. It is tough for patients to keep track of their medications according to the prescribed dosage, time, frequency, and direction. This paper proposes a virtual assistant that uses conversational AI to remind people to take their pills/medications on time and in the correct dosage. As virtual assistants provide a steady stream of channels through which to enhance the healthcare infrastructure. The main goal is to help people improve their adherence to recommended health and wellness treatment. This will be extremely beneficial to persons who suffer from chronic illnesses.

Keywords: Conversational AI, Medication Compliance, Chatbot, Digital Healthcare

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61 Structural and Optical properties of Magnetism Oxide and Nickel doped Magnesium Oxide nanoparticles

Paper ID V7I5-1187 · Pages 331-335 · Nano

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In this study, un-doped and Ni-doped MgO nanoparticles have been synthesized, through a simple precipitation method. To investigate the effect of Ni-doping on the structure of MgO, the obtained nanoparticles were characterized using scanning electron microscopy (SEM). Plate/slice-like morphology was clearly observed in the SEM micrographs. FTIR studies also frequency number 841.06 cm-1 appeared in the stretching vibration of metal oxides Mg-O. The irregular nano-sheets that are assembled together by weak interactions provide the plate-like morphology with an increase in unsaturated Ni atoms, oxygen vacancies, and defect sites which render the plate-like MgO more active for catalytic reactions.

Keywords: Ni-doped MgO Nanoparticles, SEM Analysis, XRD

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62 A study on women entrepreneurship, problems, and prospects in the state of Karnataka

Paper ID V7I5-1281 · Pages 336-339 · Commerce And Management

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Women entrepreneurs are becoming a frightening force to be reckoned with in the corporate world, and they are not only in it for the money, but also to satisfy their creative urges and demonstrate their abilities. Educated women are playing an increasingly important role in societal transformation, and more women will be entering into previously male-dominated fields in the future. Many women today have built their own economies, or entrepreneurial empires, and are now dominating their world as they desire. With increasing sensitivity to women's position and economic standing in society, the hidden entrepreneurial potentials of women have been gradually altering.

Keywords: Women Entrepreneurs, Empowerment, MSME, Sectors.

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63 A study on the organic food industry: Consumer perception

Paper ID V7I5-1256 · Pages 340-352 · Business Management

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This research paper drills deep into the Organic food market. Highlighting the aspect that awareness about the benefits of organic food consumption is already high and after looking at the current incidences of harm to human life because of consumption of unhealthy food products, it is only expected to increase. The research problem is to study the consumer perception towards organic food products in Western Mumbai. The study was undertaken to study the motivations, barriers, awareness levels, and demographic characteristics of our study population w.r.t. organic food products.

Keywords: Organic Food, Western Mumbai, Conscious Consumers, Organic Market, and Organic Products.

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64 Pharmacogenomics in Cancer

Paper ID V7I5-1262 · Pages 353-361 · Cancer

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The science of one’s genetic background and its impact on disease susceptibility and drug response has well established its place in clinics. As many drugs that are currently available in the market are “one size fits all,” but they don’t respond the same way for everyone. These inter-individual differences of drug response can be

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due to different age, drug-drug interaction, gender, inherited variations in drug disposition or through gene and drug target gene. The impact of Genetic study is mostly observed in the current arena of clinical oncology compared to any other chronic diseases due to several reasons: Toxicity, Critical time & narrow therapeutic index. “Pharmacogenomics” is the whole genome application of Pharmacogenetics, where genomic information is used to study the single gene interactions with drugs by studying the patient’s genetic profile. Their biomarkers hold great promise for the individualization in cancer therapy by selecting the most appropriate medication thereby, applying the optimal dose for each individual patient according to precise markers assisted in screening tests by reducing the toxicity of chemotherapy. Two major aspects considered by researchers while studying the response of a drug in an individual are: how much of a drug is needed to reach its target in the body, and how well the target cells or genes respond to the drug. Overall, the current review summarizes the role of Pharmacogenomics in cancers mainly focusing on Colorectal, Osteosarcoma & Breast Cancer and the advances made in their treatment.

Keywords: Cancer, Pharmacogenomics, Drug response, Toxicity, Biomarkers.

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65 Optimal EEG Channels for emotion detection in humans

Paper ID V7I5-1265 · Pages 362-367 · Brain Computer Interface

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A brain-computer interface (BCI) is a system that allows communication between a subject's brain and a computer, without requiring any physical movement. The high-level process for any BCI system is signal acquisition, signal processing and providing output through a physical device. Signal acquisition is done by sensors with multiple channels using invasive or non-invasive methods. The collected data usually contains more than 256 unique channels across the standard 32 sensors. In addition to this, the data is often sampled at a rate of 256Hz for long periods of time, resulting in massive datasets. The critical next step is to preprocess these signals to understand the patterns and changes in the various types of brain waves. However, the intrinsic neurophysiological changes in the brain pose a challenge to the processing of these signals. Identifying the key sensor channels becomes vital not only for the above reason but also due to the large size of the data points captured. This paper is a study on identification of optimal channels for the detection of an emotion such as Fear, one of the primary emotions frequently observed during multiple studies. By detecting channels with highly prevalent features, this study aims to reduce the size of data. The data so optimized can be output to speed up complex classification/prediction algorithms.

Keywords: BCI, Signal Processing, EEG Channels, Emotion Detection, MNE-Python

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66 A study to assess the effectiveness of a structured teaching program on knowledge regarding breast crawl among staff nurses working in the labor room in the selected hospital.

Paper ID V7I5-1276 · Pages 368-370 · Nursing

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Mother Nature equips newborns with a wonderful innate sense of cues. Breast Crawl, demonstrates process of initiating breastfeeding exclusively by baby's own ability. WHO and UNICEF recommend early initiation of breastfeeding for lower neonatal mortality. Evidences show that early initiation of breastfeeding can prevent 22% of all deaths among babies below one month in developing countries. About 16% of neonatal deaths could be prevented is all infants were breastfed from day 1 & 22% if breastfed within 1st hour after birth. Nurses as health professionals if work in coordination as team to bring forth & promote Breast crawl initiative into maternity hospital; it will be beneficial for Mother and Baby. Methodology: The research methodology adopted for the study was Pre experimental research approach. Consisting of one group pretest-posttest design. A structured teaching programme on Breast Crawl was administered to staff nurses & their level of knowledge was assessed. Semi-structured questionnaire were prepared for assessing the Pre & Post knowledge. Validity was established by the experts. Pilot study was conducted to check the feasibility of the study. The reliability of tool was done by test retest method and Pearson correlation formula. The reliability score was 0.86 which shows that the tool is reliable. Data collection was done on 100 samples by Non- Probability Convenient method. Pretest was taken; structured teaching programme was administered & on the 7th day Posttest was conducted. The collected data was tabulated in the master sheet and analyzed using descriptive and inferential statistics. Paired t-test to compare pretest and posttest knowledge scores of staff nurses regarding breast crawl was used. T-value was 31.8. Since p-value is very small (less than 0.05), the null hypothesis is rejected. Average knowledge score in pretest was 6.4, post test was 17.3. The association between knowledge and demographic variables was assessed using Chi square test. Since all the p- values are larger, (> 0.05), there was no evidence against null hypothesis. None of the demographic variables were found to have significant association with knowledge score. Indicating that structured teaching programme on assessing knowledge regarding breast crawl is effective.

Keywords: Structured teaching program, Breast Crawl, Staff nurses.

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67 Organizational Management that fosters innovation – Apple and Tesla

Paper ID V7I5-1283 · Pages 371-374 · Business Management

Sindhuja Muppaneni, Student, Independent Researcher

In today's world where change has become a constant, it has become extremely crucial for businesses to stay up to date and relevant in society through innovation. The kinds of rules, procedures, and teamwork introduced to the employees can not only channel their thinking process but the entire operations in a certain company. As this would all lead to and foster innovation, this research will compare the organizational management of Apple and Tesla, two companies that have set themselves apart in terms of innovation.

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Keywords: Apple, Tesla, Innovation, Organisation, Management

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68 Analysis of paperboat’s marketing strategy

Paper ID V7I5-1284 · Pages 375-381 · Business Management

Sindhuja Muppaneni, Student, Independent Researcher

Paper Boat is a brand of traditional Indian beverages and foods produced and marketed by Hector Beverages. They wanted to be able to go back in time and bring back flavors of the summer holidays. From that idea, they introduced seasonal drinks and kept the older generations alive. These drinks were favored through the ages and told a story of their own. By filling the main gap and bringing back traditional drinks, the product was layered with memories and emotional insights. While many believe the product is the hero, and PaperBoat’s product range definitely fulfills that, the company is entirely focused on the customers. The customer-centricity and the motto to touch the lives of people was what led it to be successful.

Keywords: Paperboat, Marketing, Strategy, Analysis

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69 A study on investment behavior of software engineers in Hyderabad

Paper ID V7I5-1267 · Pages 382-389 · Commerce

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Financial literacy is demarcated as the capability to ensure acquaintance and knowledge about financial markets and financial products. The financial literacy term sounds alien to many people and many find it beyond their comprehension. Lack of financial literacy puts pressure on the country in terms of the rising cost of financial security and lesser development of the nation. It also makes the life of an individual very difficult and complex. The present study explores software engineers' investment attitude towards financial literacy.

Keywords: Financial Literacy, Individual Investor Behavior, Investment Tools

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70 Impact of anthropogenic disturbances on the plant diversity in a sub-tropical forest of Manipur, Northeast India

Paper ID V7I5-1289 · Pages 390-403 · Ecology

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We examined the impact of anthropogenic disturbances on plant diversity in a sub-tropical forest of Langol hills, Manipur, Northeast India. Three sites representing various levels of anthropogenic disturbances along an elevational gradient (780-900 m) were earmarked in the forest on the basis of cut stumps analysis. The site I was located at the hill base and was a protected area, site II was located at the mid-hill and was mildly

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disturbed and site III was located at the top of the hill and was moderately disturbed. The forest vegetation was dominated by Lithocarpus fenestrata Roxb., Schima wallichii (DC) Korthals and Quercus serrata Thunb. A total of 282 species of plants were recorded from across the study sites, representing 210 genera and 82 families. The quantitative characteristics such as density and Importance value index of species varied between the study sites. Species richness in the tree layer was highest in the mildly disturbed forest site II (26 tree species) followed by the protected forest site I (25 tree species) and moderately disturbed forest Site III (18 tree species). In the shrub layer, species richness was highest in Site III (14) followed by Site I (13) and Site II (10) while in the herb layer, the maximum richness was recorded in Site III (21) followed by Site II (18) and Site I (16). The three sites exhibited high community co-efficient values for tree, shrub, and herb layers. The Shannon and Wiener diversity index on the basal cover basis for the tree, shrub, and herb layers varied between 2.37-3.77, 2.68-3.15, and 2.51-2.85 respectively. The distribution pattern of the species in each site followed in the order of contagious > random > regular. The concentration of dominance was low where species diversity was high in all the study sites. Beta diversity was found to decrease with the increase in altitude. Our study indicated that the present forest exhibited high species richness and also suggested that the mildly disturbed forest site favored tree species diversity in the present forest compared to that of protected and moderately disturbed forest sites.

Keywords: Anthropogenic Disturbances, Beta Diversity, Northeast India, Plant Diversity, Shannon-Wiener Diversity Index, Species Richness

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71 Electronically tunable third-order Feed-Forward CM Band Pass Filter for F_0 = 10KHz

Paper ID V7I5-1287 · Pages 404-408 · Electronics

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The circuits using current-mode (CM) building blocks have received considerable attention in many filtering and signal processing applications. Compared to their voltage-mode (VM) counterparts, the current-mode building blocks are attractive because of their wider bandwidth, higher slew rate, and lower power consumption. In IC technology, it is desirable to operate circuits at low voltages which can be achieved by using CM building blocks. As a large number of op-amp based circuits with elegant realization procedures are already available, it is worthwhile to convert them into the circuits based on current-mode building blocks. In this paper, a realization of a current mode third order band pass filter is described. The proposed circuit employs an operational amplifier as the basic building unit. The filter circuit realizes quadratic work function. It provides electronically tuning capability of the filter characteristics. The circuit gives better band pass response for 10 kHz≤ f0≤ 70 kHz with better pass band gain, no shift in centre frequency, better symmetry of curves and optimum bandwidth while it has low gain roll-off. The filter circuit is better for wider bandwidth.The circuit is suitable for monolithic integration and high frequency operation. The filter developed have passive sensitivities less than unity in magnitude and active sensitivities one third in magnitude, which is a noteworthy achievement.

Keywords: Current Mode Filter, Electronically Tunable, Band Pass, Circuit Merit Factor, Center Frequency

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72 Prabandha Nartanam culture in Andhra Natyam

Paper ID V7I5-1290 · Pages 409-411 · Classical Dance

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In Andhranatyam there are many traditions followed which are determined as the margins of this dance Parijatams are also known as proband has. They are the stories of Lord Krishna and Satyabhama. And so it is called Sri Krishna Parijatam and Bhamakalapam which is as famous as prabandha in Telugu. It was usually performed by the dance artists on the festivals days in Andhra Pradesh. It was performed in front of the lord of the temple and it is meant for the common people to know about our religion, culture, cults, spiritualism, social aspects. It was education through entertainment for the people. Generally, prabandham means a literary poetical composition. Here parijatham is a sringara drisya, Sravana audio-video prabandham as it contains the sentiment it can be enjoyed by hearing and witnessing it. There are many probands has that are being followed in the Andhranatyam to give varieties of god and goddess life history.

Keywords: Prabandam, Andhranatyam, Parijatams, Andhra Pradesh

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73 Analyzing the variance in environmental changes, its impact, and solution process in Objectual understanding of moments of earth and relevant systems

Paper ID V7I5-1288 · Pages 412-415 · Sociology

Yalla Venkata Chalapathi Rao, Independent Researcher, Indipendent Researcher

Analyzing the applicability of the variance in environmental changes, as per geographical atmosphere, its impact, and solution process in objectual understanding of moments of earth and relevant systems. Major factors to be taken into consideration relating to global warming, biological environmental, social, and health issues. Analyzing consists of Wheel based analyses, Environmental based analyses, and Associative thinking analyses Concluding factors can be considered for solutions.

Keywords: Environmental Changes, Geographical Atmosphere, Global Impact and Solutions, Social, Health Issues

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74 Enhancing aesthetics of the patient using internal characterization and detachable magnet retained cheek plumper: A case report

Paper ID V7I5-1293 · Pages 416-419 · Dental

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Aesthetics has become one of the increasing demands in dental patients so in complete denture wearers. A conventional complete denture can be modified according to the patient's complexion like by denture characterization and in cases of sunken cheeks by incorporating cheek plumpers.

Keywords: Aesthetics, Denture Characterization, Cheek Plumpers

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75 Measures to achieve greater integration of indigenous populations within the global economy

Paper ID V7I5-1234 · Pages 420-429 · Economics

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Historically, merchants, traders, and governments have colonized and homogenized Indigenous peoples in order to weaken or eradicate their traditions, customs, and identities. Colonialism deprived Indigenous peoples of access to and collective control of their original lands' natural resources while also undermining their distinctive cultures, languages, and religions. Post-colonial governments exacerbated these consequences by promoting and supporting non-Indigenous interests above those of their indigenous peoples. Exclusion from all economic activity, in particular, has made surviving in a globalizing world hard for such aboriginal groups. Even the most remote and isolated Indigenous communities are endangered by the enormous rise in global demand and competition for oil, gas, minerals, forests, water, and arable lands as globalization's reach are enhanced by new and developing technology.

Keywords: Indigenous, Native, Economy, Traditional, Modern, Balance, UN, Politics

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76 Schiff’s Base Hydrazone: Molecular Interactions and Polarizibility constants in Water-Dioxane Mixture at 303 K temperature

Paper ID V7I5-1299 · Pages 430-433 · Physical Chemistry

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The ultrasonic velocity, density has been measured for the mixture of 2,4-hydroxy acetophenone-2,4,-dichlorobenzoyl hydrazone (H2L1), and 2,4-dihydroxy-5-nitroacetphenone-2,4,-dichlorobenzoyl hydrazone (H2L2) at different concentrations in dioxane at 303 K temperature. From the experimental data different acoustical properties like apparent molar volume, apparent molar compressibility, adiabatic compressibility, intermolecular free length (Lf), relative association (RA), acoustic impedance z, etc. have been calculated. These parameters obtained have been interpreted in terms of solute-solvent and solute-solute interactions. Molar refraction and polarizability constant for (H2L1) and (H2L2) at different percentages of dioxane have been calculated.

Keywords: Schiff base Hydrazones, Molecular Interactions, Polarizability Constants

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77 Structural Analysis of Angle Plate in ANSYS

Paper ID V7I5-1313 · Pages 434-437 · Finite Element Method

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Angle plates are used for supporting long shafts in order to reduce the bending stresses produced in the shafts due to their own weight. Structural analysis of Angle plate by FEA software ANSYS is presented in this report. Loads on the angle plate are due to the weight of the portion of the shaft. The maximum stresses are observed at the bolt holes and the bend. Free and have the maximum deformation because it is free to move. The maximum stresses are below the yield strength and so the design is in the safe region. Dynamic loading should be avoided by keeping the shaft balanced.

Keywords: Angle Plate, Shaft, Bolt, Stress, Deformation

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78 ICICI Mutual Fund

Paper ID V7I5-1301 · Pages 438-443 · Finance

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ICICI Securities Limited functions in providing various investment banking products with addition it is also responsible for providing services to investors, financial authorities, corporates, and retail investors in India and globally. It plays a vital role in providing corporate finance services to corporations, financial institutions, financial sponsors, and government, which comprises equity capital market products, such as initial public offerings (IPO), further public offerings. rights offerings, convertible offerings, qualified institutional placements, non-convertible debentures, buyback, delisting, and open offers and international offerings for both unlisted and listed entities. The company also offers mergers and acquisitions advisory services, and private equity advisory.

Keywords: ICICI Securities, IPO

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79 Frictionless electricity generation using propeller shaft

Paper ID V7I5-1304 · Pages 444-449 · Mechanical

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The shaft can generate electricity if it gets magnetized which can be used to power other components. A vehicle such as this can generate electricity for operating a hybrid engine or recharging batteries by use of an electricity-generating driveshaft. The electricity-generating drive shaft consists of a magnetized driveshaft which acts as a rotor, and a series of copper wire coils surrounding the magnetized driveshaft which acts as a stator in an electrical generator. In this project, we will use the propeller shaft which rotates at high speed, on which we will mount the disc magnet and the wooden or aluminum plates to hold the coils near the magnets

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mounted on the propeller shaft. This rotational movement creates a magnetic field and generates EMF into the coil as defined by Faraday's law of electromagnetic inductions.

Keywords: Electromagnetic Induction, Magnetized Driveshaft, Catia Software, Software Analysis

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80 Fraud examination of Kingfisher Airlines

Paper ID V7I5-1305 · Pages 450-460 · Finance

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This paper primarily dwells on the fraud examination of the legendary airline company, Kingfisher Airlines, led by the flamboyant Chairman of the United Breweries Group and hitherto Kingfisher Airlines, Mr. Vijay Mallya. For the purpose of examination of fraud, two financial models in relation to the topic were employed and tested, viz. Beneish Model and Benford's Law, while analyzing, in brief, the quality of financial auditing done using the annual reports of Kingfisher Airlines Ltd. for the period of 5 years from the financial year 2008-2009 to 2012-2013. The three variable and the five variable models of the Beneish Model were employed to obtain a score

Keywords: Kingfisher Airlines, Beneish Model, Benford's Law, Fraud Examination, Auditing Efficiency

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81 Pneumonia detection using Deep Learning

Paper ID V7I5-1311 · Pages 461-464 · Deep Learning

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Effective and accurate health care has always been the need of the hour. Early detection of various diseases such as pneumonia, tumor, and cancer is very much essential. Pneumonia, an acute respiratory infection ranked eighth in the list of the top 10 causes of death in the United States [1]. According to WHO, it accounts for about 1.6 million deaths a year in this age group - 18% of all deaths among children under five [2]. The paper aims to automatically detect pneumonia using chest x-ray images. We prepared five different models and analyzed their performance and choose the best-suited model for developing Pneumonia Detection System. Five different pre-trained deep Convolutional Neural Network (CNN): VGG16, ResNet50, InceptionV3, InceptionResNetV2, and Xception network were used for transfer learning. VGG16 network performed well with better accuracy of 92% which is better than other CNNs.

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Keywords: Deep Learning, Machine Learning, Transfer Learning, Pneumonia, Chest X-Ray

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82 Recipient based malicious discovery for overloaded Wireless Networks based on recipients

Paper ID V7I5-1309 · Pages 469-471 · Networks

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We remember utility maximization in networks the place the sources do not employ go with the flow manage and may just accordingly overload the group. Inside the absence of go-with-flow manipulation on the sources, some packets will inevitably have got to be dropped when the neighborhood is in overload. To that end, we first advance a disbursed, threshold situated packet-shedding protection that maximizes the weighted sum throughput. Subsequently, we don't forget utility maximization and strengthen a receiver-headquartered waft manipulate scheme that, when combined with threshold-situated packet shedding, achieves the best utility. The glide manipulation scheme creates digital queues on the receivers as a push-back mechanism to optimize the number of talents dropped at the destinations by means of again-strain routing. A wi-fi sensor neighborhood can get separated into a few associated add-ons due to the failure of some of its nodes, which is known as a cut-down. In this article, we recollect the mission of detecting cuts with the aid of the remaining nodes of a wi-fi sensor community. We suggest an algorithm that allows for (i) each and every node to realize when the connectivity to a specially detailed node has been misplaced, and (ii) a number of nodes (that are connected to the targeted node after the scale down) to understand the incidence of the cut. The algorithm is allotted and asynchronous: each node desires to hold up a correspondence with excellent those nodes which will also be inside its verbal trade range. The algorithm is established on the iterative computation of a fictitious electrical knowledge of the nodes.

Keywords: Wireless Networks, Sensor Networks, Network Separation, Detection, and Estimation, Iterative Computation

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83 Novel Approach of Energy efficient Massive MIMO Communication by optimized Clustering in 5G

Paper ID V7I5-1310 · Pages 469- · Electronics And Communication Engineering

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In general, network plays a vital role in tranferring the information from one node to other. Various techniques are developing to convey the data efficiently. Additionally, in today’s era; less energy utilization, high throughput and serving numerous users at a time are the essential requirements of wireless communication system. So, these requirements can be fulfilled with the help of Massive Multiple-Input Multiple-Output (MIMO) technology to some extent where in the same time-frequency resources; many users can be served with a Base Station (BS) equipped with very large number of antennas. Hence, it is a favourable technology for next generations of wireless systems such as in 5th generation. To communicate inside the large network, it is

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divided into clusters in which cluster head to be chosen and energy is optimized to some extent using Bacterium forging optimization technique.

Keywords: 5th Generation (5G), Massive MIMO, Bacterial foraging optimization (BFO)

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84 Ant Colony Optimization Algorithms for the Knapsack and traveling salesman problems

Paper ID V7I5-1315 · Pages 472-474 · Optimization

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This paper is a simple tutorial for researchers interested in ant colony optimization (ACO) in general and max-min ant system (MMAS) in particular. The paper compares the differences in implementing these algorithms to solve sequencing and selection problems. For selection problems, we use the famous knapsack problem (KP) to demonstrate how MMAS can be used, whereas, for the sequencing problem, we use the famous traveling salesman problem (TSP). Results from the literature show how the MMAS algorithm can outperform other meta-heuristics in solving these two types of problems.

Keywords: Max-Min Ant System, Ant Colony Optimization, Knapsack problem, Travelling Salesman Problem, Algorithms

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85 Optimization of shelf space using OR techniques

Paper ID V7I5-1314 · Pages 475-478 · Operations Research

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This research paper focuses on shelf space optimization in supermarkets or retail stores. Mathematical techniques have been used in the context of operations research in order to arrive at a set of findings. Through this research paper, methods of product placement on rack and shelves used in stores has been explained. Optimization and linear programming methods have been used to find the optimal product placement. Binary integer programming has been used which uses only two decision variables to come to a conclusion whether to place a certain product in a certain rack/shelf or not. The literature review also highlights work done in the past by other researchers in this field. Consumer psychology has also been explored to a certain extent when it comes to purchasing a product. The logic behind product placement has also been highlighted. Through the findings of this paper, basic decision-making that goes behind product placement has been shown. Findings in the research paper are done on a small scale which is why several factors like shape, size, etc. of the product have been ignored.

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Keywords: Operations Research, Shelf Space, Optimisation, Linear Programming, Binary Integer Programming, Product Placement, Stores, Consumer Psychology, Simplex, Excel, Solver

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86 Design and analysis of fifth wheel car parking mechanism

Paper ID V7I5-1320 · Pages 479-481 · Manufacturing Engineering

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In earlier methods of parking, the time taken is 2 minutes, the driver needs to be more alert while parking in order to avoid hitting the car during the reverse motion. Therefore, to avoid these inconveniences, a concept of fifth wheel parking is made, where the total time will be 50 to 60 seconds. This parking can be done using an additional wheel fifth wheel. A screw is used to control the fifth wheel to land and lift. DC motor enables the forward and reverses motion for the screw. It also helps to know malfunctions during the landing or lifting of the wheel. This concept is mainly used for four-wheeler vehicles. This setup makes the vehicle turn parallel at a significant angle with reference to the front axle within a short period. The model enables the driver to park the vehicle between two vehicles, where the space is limited.

Keywords: Parking System, Screw, Control Unit, Additional Wheel, DC Motors

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87 Using the GARCH framework to aid in decision making for businesses with Forex Exposures

Paper ID V7I5-1323 · Pages 482-487 · Economics

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The increased volatility that has been witnessed over the past few years has posed a problem to SMEs. The authors of this paper would wish to prepare a framework that can help solve this problem by giving SMEs a guideline for making payments and to hedge their exposures. Earlier literature has already covered the prediction of spot prices of the forex rates. The authors wish to use this for decision-making. The model used for this is the eGARCH model used on the R software. Using monthly and daily predictions the authors have developed a framework that can be used for decision making and hedging. This model is limited to working in normal times and not stressed situations.

Keywords: Forex, Forecasting, eGARCH, Risk Management, Hedging, Small and Medium Enterprises

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88 Comparison of Vedic and Modern Maths in Forward Difference by Meru-Prastar

Paper ID V7I5-1308 · Pages 488-491 · Numerical Analysis

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In this paper, we will use the Binomial Theorem in the Forward Difference Operator of Modern Mathematics. On the other hand, Vedic Mathematics offers a new approach to mathematics. If we find the coefficients with the help of the Binomial Theorem, we experience difficulty, when we find the same coefficient with the help of the Vedic method Meruprastra, we get it easily. MeruPrastra method is also known as Pascal's Triangle. Vedic Mathematics reduced efforts by around 50%.

Keywords: Meru-Prastar, Vedic Mathematics, Binomial Theorem, Forward Difference Operator

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89 Applications of operations research in advertising media of fantasy sports

Paper ID V7I5-1317 · Pages 492-496 · Operations Research

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This paper aims to find out how techniques of operations research can be used by fantasy sports companies to market their products successfully to potential customers. The dawn of the customer-centric approach has left marketing processes like online and viral marketing with several gaps which can be filled using OR techniques. In this paper, the selection of media used for marketing their products to maximize profits under budgetary constraints is being ascertained using a simplex linear programming model.

Keywords: Operations Research, Fantasy Sports, Advertising, Linear Programming, Simplex Method, Dream 11

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90 Improving the efficiency of public transportation in India using operations research

Paper ID V7I5-1324 · Pages 497-502 · Operations Research

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The analysis shows that no single model or theory, such as Queuing Theory, Transportation Problem, Vehicle

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Routing problem, Hubs, and Spoke Model, etc., aim at increasing the efficiency of public transportation by addressing a particular segment of the problem are enough to solve the problem holistically. In this paper, we touch upon the shortcomings of the existing models and algorithms and suggest that a model should be developed which encompasses all these factors and provide an all in all solution to the problem.

Keywords: Queueing Theory, Transportation Problem, Vehicle Routing Problem, Probability, Hub and Spoke Model, Holistic Development, Human Intelligence

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91 Application of Operations Research in the supply chain management of wineries

Paper ID V7I5-1306 · Pages 503-507 · Supply Chain Management

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Supply chain management is a procedure of further developing the business' supply chain, making them stronger, spryer, and therefore, more competitive. This paper is an endeavor to study the contributions of operations research to the operational, tactical, and strategic planning of wineries and to maximize the efficiency of the supply chain in the winery field. The central points looked at in this research paper are distinguished through the knowledge gauged from informational websites and published papers. The overall goal is to recommend some subjective and quantitative methods from the field of OR for the different issues identified. The issues examined are the major inconvenience of spraying with capacity limitations in viticulture, finding how to optimally schedule the work in wine grape harvesting, and maximizing the processing and storage of wine in the minimal time possible. It is important to consider all the possible underlying implications to the suggested method and solution before finalizing it.

Keywords: Optimization, Supply Chain, Wineries, Operations Research, Grape Harvesting, Viticulture, Crushing

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92 Analyzing the hyperlocal delivery business model using operations research techniques

Paper ID V7I5-1326 · Pages 508-513 · Operations Research

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The hyper-local delivery industry is on the rise in India due to firms trying to capture the biggest share in the

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market by promising the fastest delivery in the industry. Through this research paper, we have tried to analyze the impact of the Assignment problem in a way to increase employee efficiency and optimize business operations via time minimization. With the use of these tools, companies can optimize their delivery time which they could have overlooked due to human error. After going through different research we came to the conclusion that they address the problem by taking only one constraint into account, so to counter this we came up with a solution using multiple constraints that are actually faced by companies. Our findings demonstrate that operations research methodologies can assist hyper-local delivery platforms in making decisions about how to assign their employees to pick up or drop the package in the least amount of time possible.

Keywords: Hyper-Local Delivery Industry, Operations Research Application, Assignment Problem

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93 Video Project Assignments as an Integrated Tool for Active Learning

Paper ID V7I5-1330 · Pages 514-517 · Education

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The English video projects are usually assigned in English classrooms to enhance their communication skills. Integration of technology in Communicative English classrooms is a compulsory aspect especially in the teaching-learning process of Professional English classrooms. This paper discusses how to frame video assignments and optimize creativity that could reflect effective communication skills in their workplace. The ability to present information and convey knowledge in a range of formats is a beneficial skill in many professions, which students will take from their video assignments in class to their respective workplaces (McCarthy & Hatcher, 2002). Students thus can better interact and communicate in multimedia platforms and handling key information in visual formats. The use of videos, animated clips, and presentations in language classrooms reflects the everyday use of multimedia technology. Teachers use technology-assisted simulations to bring content related to their learning objectives. Video assignments in academic contexts do arouse hesitations and challenges from both the learner's and teachers' perspectives and the situation essentially varies from subject to the teacher to the context and to the content delivered and relates to the proper evaluation process. This paper analyses the video project assignments and the advantages of their implications in enhancing communication skills. It addresses and highlights the positive outcomes in achieving communication skill sets essential for a professional context.

Keywords: Information and Communication Technologies (ICTs), Video

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94 Time Allocation in Academia

Paper ID V7I5-1331 · Pages 518-520 · Optimization

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University professors all over the world are facing increasing challenges to publish more and more high-quality papers, get funds, and improve their citation indices. In many scientific disciplines, like engineering and

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computer science, research topics keep changing and professors' research agendas need to change as well. In this paper, we develop a mixed-integer linear program (MILP) to model a university professor's problem of selecting research topics. The problem aims to increase the professor's number of citations subject to time constraints and publication probability constraints. We also solve the suggested MILP using a max-min ant system. A case study for a professor in an industrial engineering department is also presented.

Keywords: Ant Colony Optimization, Research Topic, Academia, Budgeting, Knapsack

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95 Project planning and cost optimization in Construction Industry

Paper ID V7I5-1332 · Pages 521-525 · Operations Research

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Operations Research is an analytical tool to support complex problem-solving and decision-making. The success of OR methods is that it is a systematic approach that provides a framework for constructing conceptual and mathematical models, analyzing alternatives with respect to specified measurable parameters, and finding out the best solutions among all alternatives under a constraint environment. OR contributes to improve project management by applying different techniques such as Critical Path Methods (CPM) and Project Evaluation Review Technique (PERT), reduce logistics cost and quality delivery through network optimization, traffic simulations, decision theory, game bottleneck elimination (game theory), linear programming, transportation problems, etc. In this research paper, we are mainly focused on the practical application of Operations Research in the construction industry to optimize cost for quality and timely delivery with minimum wastages. (Suthar Nisarg Arvindbhai1, 2020).

Keywords: CPM (Critical Path Method), PERT, Commercial Business Cycle, Operational Research, Linear Programming, Simplex Method, Transportation Problem, Monte-Carlo Simulation, Decision Theory, FDI, Construction methods, Construction management, Inventories, Mathematics, Probability, Matrix (Mathematics), Linear functions

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96 Integer programming for selecting the best playing XI of an IPL team

Paper ID V7I5-1334 · Pages 526-532 · Operations Research

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Since the inauguration of Twenty20 cricket in 2007 with the first Twenty20 world cup, there has been a huge amount of excitement among the supports about this shorter format of the game. It has also increased

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television viewership to a large extent. The Indian Premier League (IPL) which started in the year 2008, brought about a larger number of fans following and helped the board, franchise owners and the players generate profitable returns. This paper helps us analyze and formulate the optimal starting XI for a cricket team. The team that we have selected is Kolkata Knight Riders which is a franchise playing in the IPL. To formulate the problem, the integer programming model is being used in the paper which helps us in obtaining the best possible playing XI. Performance measures such as batting and bowling ability help us in formulating the problem. An illustration of the method is provided, and the data is taken based on the statistics of the players of Kolkata Knight Riders from the previous season, i.e., the 2020 IPL season.

Keywords: Cricket, Integer Programming Model, Optimal Starting XI, Indian Premier League, Batting Ability, Bowling Ability

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97 Operations Research in Sports Analytics

Paper ID V7I5-1335 · Pages 533-537 · Operations Research In Sports

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The primary objective of this paper is to analyze the application of operations research in the field of sports with the help of quantitative and decision-making techniques. The paper arrives at its conclusions after reviewing different research papers in sports such as Cricket and Formula 1. It discovers that there are some typical applications and elements in the field of sports but there are some significantly different applications in various sports like cricket and F1 racing. The main similarity is that both of these sports have used Operations Research to optimize a critical success attribute. So be it the process of switching out tires in a Formula One race or a strategy to minimize travel time while scheduling inter-city matches, Operation research techniques have been beneficial. This secondary study indicates that Operations Research can undoubtedly enhance a player's performance during a sport and help uncover the perfect output matrix in a professional organization. However, it also elaborates that the full scope of betterment is greatly dependent on the identification of the accurate matrix in the first place, as well as the application of efficient tools and appropriate techniques.

Keywords: Simulation, Pit Stop Timings, Tire Changing Technique, Scheduling, Optimization, DLM Method, WASP Technique, Player's Valuation.

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98 Recommendations for an effective vaccination supply in India using Operations Research tools.

Paper ID V7I5-1338 · Pages 538-542 · Operations Research

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In many ways, COVID-19 affected people from all economic categories. Many endured a company loss and a huge money crunch lost employment and lost loved ones. Amid this chaos, science gave a ray of hope with an aim to ease the impact of the pandemic if not completely eradicate it, in the form of vaccines. The vaccines were publicly made accessible and were also approved by the World Health Organization. However, there was still a problem that people faced, accessibility of the vaccines. Which was also attempted to be solved by the Government by allowing the conduct of local vaccination drives in communities. The paper aims at proposing a transportation problem as an effective Operations Research tool that can be incorporated to optimally allocate the available resources. A locality has been taken into consideration wherein an illustration has been formulated showing different buildings demanding vaccines from different hospitals and the transportation problem enables effective selection of hospitals for buildings. Through our paper, we intend to provide a solution to the vaccination problem prevalent in India. The aim is to use transportation problems to ensure that the supply chain is not disrupted and people are provided vaccines through the most optimal route to ensure that resources are not wasted.

Keywords: COVID-19, Vaccination, Vaccination Supply, Operations Research, Transportation Problem.

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99 Optimization of Capital Structure using Operations Research Techniques

Paper ID V7I5-1339 · Pages 543-548 · Finance

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This research paper aims to optimize the capital structure of a company using operations research techniques. All companies require financing for day-to-day operations and expansion. The two major sources of financing are equity finance and debt finance. Raising capital by selling shares of a company is known as equity finance

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whereas bank loans, bonds, securities, and overdrafts are some sources of debt finance. Now the question that arises is what is the appropriate capital structure that the company must follow to achieve maximum profit at the lowest cost. To solve this problem, our paper proposes a simple mathematical model that can be applied to various companies. Using the Simplex method of solving LPP (Big M method) we have developed a model to optimize the capital structure of a company that helps to minimize the overall cost of capital while taking into account various other factors that influence it like the risk of insolvency, tax shield, and expenses incurred to acquire the funds.

Keywords: Capital Structure, Cost of Capital, Equity, Debt, Profitability, Simplex Method, Linear Programming

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100 The Nyankpe and Justice in Pre-colonial Banyang country

Paper ID V7I5-1322 · Pages 549-555 · History And African Civilizations

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This work examines the role of the Nyankpe institution in dispensing justice in pre-colonial Banyang country in the Republic of Cameroon. It argues that Nyankpe played a significant role in establishing truth and dispensing justice among the Banyang. The recruitment of those who administered justice was carefully done taking certain things into consideration. The efficiency and satisfaction in the delivery of justice promoted unity, peace, tranquility, and sustainable development in the Banyang country. In carrying out this research, a historical method was applied and a qualitative instrument of analysis was made use of. We consulted and made use of primary and secondary sources including archival materials, interviews, a questionnaire, articles, and books. These were helpful in providing us with the material needed to defend our claim that Nyankpe effectively administered justice in Banyang country in pre-colonial times.

Keywords: Nyankpe, Obassinjom, Nfam, Banyang, Truth, Justice

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101 The impact of project management throughout ERP implementation life cycle

Paper ID V7I5-1342 · Pages 556-559 · Computer Management

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This paper aims to analyze the various aspects of project management in an ERP implementation life cycle. It also reviews the role of the project manager, team leader, and other project employees in the implementation of ERP. Project management helps you build a link between your vendor and your employees in order to control and monitor all the activities that are related to the implementation of ERP software. One of the main reasons why an ERP implementation fails is due to lack of project management. It is very important that an organization

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has the proper planning and involvement in the development of its enterprise resource planning software (ERP) project. This is why it is often necessary to hire an experienced and professional project manager.

Keywords: Project Management, Enterprise Resource Planning, Implementation Phase, Organizational Culture, Risk Management

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102 Application of OR techniques on government planning during the COVID-19 pandemic

Paper ID V7I5-1344 · Pages 560-566 · Operations Research

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In this paper we try to suggest models to optimize actions and policies which attempt to benefit the Government as well as people during the Covid-19 pandemic. We make use of game theory and a modified SEIR model. These models are important because of the adverse effects the Covid-19 pandemic has brought on, such as strict stay-at-home orders and economic shutdowns. Our game theory model studies the decision-making behavior of people and Government during the current pandemic. We also suggest a modified SEIR model represent the movement of people between states of a country.

Keywords: Game Theory, Operations Research, Government, SEIR Model, COVID-19

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103 DES and AES hybridization by the genetic process of image transfer by comparison

Paper ID V7I5-1346 · Pages 567-575 · Computer Science And Engineering

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Hybrid paper in which there is the use of cryptography to protect images. Hybrid techniques are basically a combination of cryptography and steganography integrated with a genetic algorithm. The effectiveness of the two methods is the same but different from each other. It can join encryption techniques by installing cryptography and hide encrypted text by sending Steganography. The idea of this analysis is to communicate in a secure manner and to go beyond the confines of confidential communications that can handle high security and enable image handling and anonymity.

Keywords: Steganography, Cryptography, AES, Genetic Techniques

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A study to assess the effectiveness of structured teaching programme on knowledge regarding breast crawl among staff nurses working labour room in selected hospital

Paper ID V7I5-1275 · Pages 576-578 · Nursing

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Introduction: Mother Nature equips newborns with a wonderful innate sense of cues. Breast Crawl demonstrates the process of initiating breastfeeding exclusively by baby's own ability. WHO and UNICEF recommend early initiation of breastfeeding for lower neonatal mortality. Evidence shows that early initiation of breastfeeding can prevent 22% of all deaths among babies below one month in developing countries. About 16% of neonatal deaths could be prevented if all infants were breastfed from day 1 & 22% if breastfed within 1st hour after birth. Nurses as health professionals if work in coordination as a team to bring forth & promote Breast crawl initiative into maternity hospitals; it will be beneficial for Mother and Baby. Methodology: The research methodology adopted for the study was Pre experimental research approach. Consisting of one group pretest-posttest design. A structured teaching programme on Breast Crawl was administered to staff nurses & their level of knowledge was assessed. Semi-structured questionnaires were prepared for assessing the Pre & Post knowledge. Validity was established by the experts. A pilot study was conducted to check the feasibility of the study. The reliability of the tool was done by the test retest method and Pearson correlation formula. The reliability score was 0.86 which shows that the tool is reliable. Data collection was done on 100 samples by Non-Probability Convenient method. Pretest was taken; structured teaching programme was administered & on the 7th day Posttest was conducted. The collected data were tabulated in the master sheet and analyzed using descriptive and inferential statistics. Paired t-test to compare pretest and posttest knowledge scores of staff nurses regarding breast crawl was used. T-value was 31.8. Since p-value is very small (less than 0.05), the null hypothesis is rejected. The average knowledge score in the pretest was 6.4, post test was 17.3. The association between knowledge and demographic variables was assessed using Chi square test. Since all the p- values are larger, (> 0.05), there was no evidence against the null hypothesis. None of the demographic variables was found to have a significant association with knowledge score. Indicating that a structured teaching programme on assessing knowledge regarding breast crawl is effective.

Keywords: Structured Teaching Programme, Breast Crawl, Staff Nurses.

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105 Effective utilization of textile effluent in the concrete of Solapur textile industrial water

Paper ID V7I5-1266 · Pages 579-585 · Solapur Textile Industrial Water

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In a future world, the population is going to be under high water scarcity according to WorldWater Development (UN) report. Countries of Africa and Asia like Cambodia, Bangladesh, China, and India are still developing are likely to face water scarcity more. It was expected that by 2055, 70 to 75 % of the population will leave in the city of India. With the shrinking of water, low rainfall, etc it is difficult to provide water to such a high population. Water is one of the most highly consumed materials in the world. Scarcity of fresh drinking standard water is becoming evident due to increasing population, improvement of lifestyle, climate change, and lack of appropriate water resource management. Therefore, the conservation of freshwater is becoming an important issue. The study reported 825 billion liters of freshwater were required to satisfy the world's concrete requirement in 2010. This research aimed to use treated industrial wastewater as a substitute for fresh water in the mixing and curing of concrete. Water samples were obtained from the central wastewater treatment plant of Chittagong Export Processing Zone (CEPZ), Chittagong, Bangladesh which generally is disposed to the Bay of Bengal after treatment. Firstly, treated wastewater quality is examined and compared with the relevant standard of pure drinking water. Cement setting time and mortar flow were evaluated using both freshwater and treated wastewater. Both types of water were used to produce and cure concrete. Workability, compressive strength, and Ultrasonic Pulse Velocity(UPV) tests were conducted on the concrete samples. It is concluded that treated wastewater could be a replacement for freshwater in the production and curing of concrete and can help to save a large amount of valuable freshwater and thereby achieving sustainability in the concrete industry. This study tries to provide problems arising due to waters car cities in India.

Keywords: Chittagong Export Processing Zone (CEPZ), Ultrasonic Pulse Velocity (UPV)

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106 Experimental studies, analysis and comparison of EPR spectroscopy for DPPH, Myoglobin and Manganese Chloride

Paper ID V7I5-1347 · Pages 586-591 · Biophysics

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Electron Paramagnetic Resonance (EPR) spectroscopy is a spectroscopic technique that can be used to study complexes containing unpaired electrons, due to a phenomenon known as the Zeeman effect. This paper will aim at performing an experiment to retrieve and analyze Electron Paramagnetic Resonance (EPR) Spectra.

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Samples of 2,2-diphenyl-1-picrylhydrazyl (DPPH), Myoglobin, and Manganese Chloride were analyzed through room temperature and low-temperature EPR runs, using liquid nitrogen as the cooling agent. The spectra obtained were then used to calculate quantitative values and the values were analyzed and interpreted to provide the nature of the unpaired electrons in the complex. Lastly, the results were compared with literature values and future opportunities for research about EPR in biochemistry and geology were also discussed.

Keywords: EPR Spectroscopy, ESR Spectroscopy, DPPH, Myoglobin, Manganese Chloride

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107 Application of operations research in supply chain management of Micro, Small, and Medium Enterprises

Paper ID V7I5-1349 · Pages 592-597 · Operations Research

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Keeping in mind the complexity of the functioning of the Supply Chain Management of Small and Medium Enterprises, the authors of the paper have aimed at focusing on various methods that can be used to arrive at the best results with optimum utility of resources. The paper also depicts the functioning and procedures of the various methods and which one should be used under different circumstances that can obtain the best outcome for the enterprises. The aim is to show a way of improvement in supply chain management of micro, small and medium enterprises. Sustainability of small and medium-sized enterprises (SMEs) is significant as SMEs con-tribute to GDP substantially in every economy. This research develops an innovative and sustainable supply chain performance measurement model for SMEs.

Keywords: Supply Chain Management, SCOR, Bayesian SEM, MCDM, SWARA, MSMEs, SMEs

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108 Simulation and application in slot Machine Analytics

Paper ID V7I5-1350 · Pages 598-605 · Operations Research

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This research paper deals with busting 3 major myths associated with slot machines. Here, we have used the simulation to replicate a real-life casino slot machine and use it to bust the 3 myths. The simulation was made keeping into consideration several factors such as Return-To-Player Ratio, weighted symbols, and many more to make the simulation as accurate as possible. Findings from this were then used to debunk the myths.

Keywords: Simulation, Slot Machine, Operations Research, Debunking Slot Machine Myths

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109 Preference and adoption towards electronic vehicles among youngsters

Paper ID V7I5-1366 · Pages 606-609 · Commerce

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Road transportation is the preferred mode of transportation in India. Using conventional fuel vehicles has led to pollution and global warming. The production of electric vehicles and their related components are anticipated to increase the share of manufacturing in GDP to over 24% by 2022-23. The study is evidence that preference for electric vehicles is increasing especially among youngsters. They are aware that EV has better performance and low operating costs. Their concern is regarding the lack of charging stations and the high initial cost of the vehicle. Companies only have a few EV models, and customers have very limited choices.

Keywords: EV, Hybrid, Green Tax, FAME

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110 Finding some Addresses of Ornamental Fish Hub in West Bengal

Paper ID V7I5-1361 · Pages 610-613 · Social Science Education: Ornamental Fishery

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At present, Ornamental Fish or Aquarium Fish has been made for farming, hobbies and business. Although it has not improved much, as the field is largely unorganized. Even on top of that there is very little education. Many unemployed young women are involved in this business, while many are planning to participate in this business. It has been noticed that many people have lost their way in this matter. The main reason for this is not to know the search of different places related to this business. So here we have tried to find various Ornamental fish farmers and local and international fish traders, following which can benefit many.

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Keywords: Ornamental Fish Hub, Aquarium Fish, West Bengal Fish Farmers, Socio Economical Values, Unemployment, Education, Fish Farming

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111 Evolution of Cyber Criminology

Paper ID V7I5-1327 · Pages 614-618 · Information Technology-cyber Security

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A dramatic change has taken place in the world of commercial and industrial activities due to a revolutionary communication method that evolved and which is known as Information Technology. It is a boon to society and more so for the manufacturing and trading sections. Information technology has economically reduced the cost of management as well as the cost of repetitive production systems wherever mass production is in vogue. Apart from that with the advent and spread of new technology, new terms and phrases have been added in the dictionary of the commercial and financial world such as internet, cybercrime, dot-com, e-mail, paperless business, electronic documents, digital signatures, ransomware, computer network, encryption, asymmetric cryptosystem, backup, data, database, e-commerce, hard copy, media, web site, password, public key infrastructure/PKI, server, bugs, virus, web browser, advertising on the web, domain names and its registration, hackers, crackers, etc., A new discipline of study connecting the information technology and criminology has been evolved, called as 'Cyber Criminology'. This new field talks about the threat of corruption and destruction of digital information with the help of various types of programs such as viruses, Trojans, Worms, and logic bombs. This new field of study introduces new concepts to be adopted for the purpose of protecting the legal rights of parties, introducing laws of privacy, and various compliance standards and benchmarks on digital transactions referred by the impact of International Laws. The purpose of this article is to analyze the evolution of the new discipline of study, 'cyber criminology'.

Keywords: Cyber Criminology, Schools Of Criminology, Conventional Crimes, White-Collar Crime, Cybercrimes, Cyber Security,

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112 Hobby, Business and Education of Aquarium Fish with Little Capital

Paper ID V7I5-1363 · Pages 619-622 · Social Science Education: Ornamental Fishery

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Although the fishing and food fishing business is quite old, the hobby, business and education of aquarium fish is almost new. Cultivation of this aquarium fish has been a well business flow in India for almost 200 years. It is said that although it is new, this subject is increasing and becoming more accessible than before. Although there is no specific idea about this yet, many people cannot imagine having a hobby or doing business on this subject. Some brave young men and women plan on this subject but it is seen that in between they have to face various obstacles. Most people think that these are just a matter of the rich. Again, the initial investment in this business is probably a lot. But in real life it has been seen that even if there is no money, this aquarium fish

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can be hobbies, studies, education and farming or business can be done. It is possible to inspire others by standing on your own two feet, even starting from small.

Keywords: Hobby of Fish Keeping, Ornamental Fishery Education, Business of Aquarium Trade, Scope of Employment, Little Capital

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113 Deep Learning-Based Computer Vision in Image Contrast Enhancement for Brightness Preservation

Paper ID V7I5-1353 · Pages 623-629 · Computer Science

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Image Contrast Enhancement for Brightness Preservation main objective is to overcome the problems faced by the existing methods of image contrast enhancement. Image Contrast enhancement is a process that makes the image features stand out more clearly by making optimal use of the colors available on the display or output device using deep learning computer vision concepts. There are several existing methods for image contrast enhancement like Histogram Equalization, Bi-linear interpolation, Contrast Limited Adaptive Histogram Equalization and Dynamic Stretching. We have considered a base paper which proposed dynamic stretching after comparing with the other methods. There are some issues identified with the existing dynamic stretching method: light and brightness levels not being changed and there are no positive results for dusty and low light images. Moreover, it is an iterative process operating on a single intensity channel and using a golden section search algorithm to calculate pixel positions using mean brightness. Our approach tries to address the issues by proposing a new methodology. Our proposed method makes use of dynamic stretching approach but the operation is being done on all [R, G, B] channels and using RGB to HSI conversion and later using HSI to RGB conversion just before producing the enhanced image thus making the proposed method efficient. Histogram Equalization has also been used as a part in our proposed method for preserving brightness and contrast enhancement. Experiments conducted on different images from different domains like medical images, low light images, dusty images and black and white satellite images without haze showed efficient results with brightness preservation while performing image contrast enhancement. Hence our proposed method has overcome the issues faced with the existing image contrast enhancement methods.

Keywords: Image Contrast Enhancement, Brightness Preservation, Histogram Equalization, Dynamic Stretching, Bi-linear interpolation

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114 Application of Operations Research for Lap Time Optimization in Formula 1 Racing

Paper ID V7I5-1360 · Pages 630-637 · Formula 1 Racing

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Our research paper is based on the lap time optimization of an F1 car in a race. We have achieved this with the use of various Operations Research techniques. In order to explain how the overall lap time is forecasted and optimized, the Monte Carlo Simulation method has been used. The Hungarian Assignment Problem helped us determine the most efficient allocation of a pit crew in a pit stop in a race to get the lowest possible pit stop time. Game Theory is used in order to understand the mindset of a driver driving wheel-to-wheel on every chicane. We have also dealt with the Decision Theory to gain insights on the choice of tyres made by teams on a race weekend. Many smaller variables, such as lap time variations, affect the outcome of a race. As a result, if a potentially winning strategy is to be devised, these occurrences and influences should be modelled within the race simulation. Using these OR techniques we have formulated a way in which we can optimise the race time from different race situations

Keywords: Formula-1, Lap-time Optimization, Monte Carlo Simulation, Hungarian Assignment Method, Game Theory, Decision Theory

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115 Strategy of Aquarium Fish Business

Paper ID V7I5-1364 · Pages 638-642 · Social Science Education: Ornamental Fishery

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There is an underlying reason for this. The work has been chosen for various purposes. There are a lot of people who are deprived of employment opportunities i.e. becoming a self-reliant is the case with this ornamental fish farming. It has been observed that this ornamental fish farming involves understanding and applying a variety of content. So if you understand and know these issues better, you can make it more self-sufficient. In a word, apart from the traditional education, there is a need for institutional education as well as systematic practical education. The whole subject can be considered as part of the backyard of education. On top of this, if the quality and application of education increases in the last level, the concept of ornamental fish farming will change a lot and it will be possible to make a lot of improvements in business and leisure. So there is a great scope or opportunity for self-reliance or entrepreneurship development through the teaching of ornamental fish. This job has been chosen with these issues in mind. I am also involved in special work on it with my long 35 years of experience and learning from different places. I have tied the knot of my life by further improving these ornamental fish farming, hobbies, education and business, with which I have now been able to come from that small range into a normal environment or range. So even if others start small, it is

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possible to improve them at some point. Not just me, but countless other kids like me have made great strides in this field. Others are also hopeful that they will be able to establish themselves quickly. So others have a special kind of scope to enter this case. Here is a special way to solve the unemployment problem. It will inevitably take the form of a larger field if it is followed in a simpler and clearer way of understanding and illuminated in the field of learning. As a result, he will become helpful to others in the society along with his own welfare.

Keywords: Aquarium, Ornamental Fishery, Business, Hobby, Employment.

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116 Implications of blockchain technology on corporate governance in India

Paper ID V7I5-1341 · Pages 643-645 · Law And Technology

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With the advent of technology, humans have made it possible to arrive at a place where they can carry out huge transactions all by themselves without the help of any intermediaries. This technology is very famously called blockchain technology (BCT). The primary focus of this article is to see what implications BCT would have on corporate governance being specific to India. Corporate governance includes the government, big companies, and financial institutions that work through a framework for the smooth functioning of the companies. Although BCT is at a very primitive stage in India, if implemented it can fix the lop-sidedness of corporate governance in India for it provides greater transparency, efficiency, and security. The author through this article has explained the working of blockchain technology. Finally, the author has emphasized the need of adopting BCT for better corporate governance in India.

Keywords: Blockchain Technology, Corporate Governance, India, Cryptocurrency, RBI

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117 Real Electrical Signals to Text

Paper ID V7I5-1158 · Pages 646-648 · Nanotechnology

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In this paper, for the first time, we successfully achieved two major accomplishments (1.) predicting any real clean analog signal to the English language (2.) converting real clean electrical signal of a nanomanufacturing fluidic electronics multi-100,000 nodes nanoscale pores chip [1] to Unicode language.

Keywords: Nanofluidics, Fluidic Electronics, Nanomanufacturing, Electrical signals, Natural Language Processing, AI, AI Design

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118 Age of Deglobalization: Scenario, Winners, and Opportunities

Paper ID V7I5-1168 · Pages 649-654 · Economics

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Since the great recession of 2008, an era of deglobalization in terms of the flow of immigrants, money, and trade across borders has started. Trade has risen steadily for about more than 50% until the shock of the 2008 downturn turned many countries inward since the 1970s. As they start erecting new tariffs and NTB's by the hundreds, global trade has fallen back, and the general consensus is that the whole world is worse off as a result. But as trade flows fell, they also began to shift. China's share of global manufacturing exports peaked at more than 17% in 2014 and began to fall, particularly in cheap, labor-intensive sectors like apparel. China's loss has benefitted those nations with the most advantageous labor and regulatory conditions, unfortunately, does not benefit much to India. But, a conducive policy environment could materialize this deglobalization era for India's job-led manufacturing sector. This paper aims at analyzing the shifts of supply chains of global to other Asian nations and the opportunities for India amid burgeoning trade differences between two economic giants i.e. U.S. and China.

Keywords: Deglobalization, Exports, Tech-Clash, Competitive, Tariffs, Imports

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119 An analysis of Vivādi Rāga-S handled by Muttusvāmi Dīkṣita

Paper ID V7I5-1372 · Pages 655-661 · Karnatic Music

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Dr. S. Subbu Lakshmi, Professor, Vels Institute of Science, Technology and Advanced Studies, Chennai, Tamil Nadu

Rāga, tāla, and pada are the three foundational elements of Indian Classical Music. A rāga comprises a group of svara-s which have a specific and well-defined relation with each other, and clear-cut patterns of movement. The intra-relationship between these svara-s in a phrase gives each rāga its unique flavor. A svara in a rāga which is prominent and is used frequently is known as vādi. There are said to be three ways in which svara-s are related to each other with reference to the vādi - samvādi, anuvādi and vivādi. Svara-s that have a discordant relation to the vādi are called vivādi. The presence of vivādi relationship between svara-s in a rāga is considered to be a 'defect' and 'dōṣa'. This 'vivāditva' is seen in forty out of the seventy-two mēla-s and in this mēla-s, forty-four compositions of Muttusvāmi Dīkṣita are found in Saṅgīta Sampradāya Pradarśini, the earliest authentic source of his compositions. While rendering these mēla-s, Subbarāma Dīkṣita, the author of Saṅgīta Sampradāya Pradarśini says that it is tradition to observe 'vādi vivādi lakṣaṇa-s' in order to offset the 'dōṣa' of vivāditva. An analysis of the handling of vivādi rāga-s by Muttusvāmi Dīkṣita is taken up in this paper.

Keywords: Muttusvami Dikshita, Vivadi ragas, Subbarama Diksita, Sangita Sampradaya Pradarshini, Vadi, Samvadi, Suddha Rishabha, Suddha Gandhara, Suddha Dhaivata, Suddha Nishada, Satsruti Rishabha, Satsruthi Dhaivata, Varja, Vakra, Dirgha

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120 Personal Financial Planning and its effect on the Indian Economy

Paper ID V7I5-1374 · Pages 662-671 · Economics And Business Management

Aman Mehta, Student, Jai Hind College, Mumbai, Maharashtra

“FAILING TO PLAN IS PLANNING TO FAIL” Financial planning is planning which deals with money. Personal financial planning refers to the proper planning and implementation of well-coordinated plans to achieve financial objectives. The savings and investments made today should match the future goals. Every human being is interested in leading a ‘Happy Life’ as long as he lives. Happy life would mean having some goals to be achieved and possessing sufficient money to attain those goals. Personal Financial Planning helps one to lead a happy life by planning one’s goals, the process required to achieve the goals, the timing of the investments, and the class of assets to be invested in. In India, the knowledge of personal finance is very poor at all ages. People are not aware of such a concept and whatever they learn is from observing what their parents or friends do. Financial education and awareness from an early stage would definitely help in increased fiscal responsibility being taken by the young citizens of India and also result in wise spending and improved savings and investment for the economy.

Keywords: Personal Financial Planning, Goals, Outflow of Funds, Inflow of Funds, Stages of the Financial Life Cycle, Retirement, Investment, Strategies, Class of assets, Indian Economy, KVP (Kisan Vikas Patra), NSC (National Savings Certificate), Insurance, Professional Financial Planner, Budget, Deposit Scheme for Retired Employees (DSRE), Health and Retirement Study (HRS).

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121 A Study to assess the effect of balloon blowing exercise on airway patency among preschool children with acute respiratory illness in selected schools at Kanyakumari district

Paper ID V7I5-1345 · Pages 672-676 · Government Primary School Mundavilai

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Children are the blessings from the Lord. They are like clay in the potter’s hand. Health plays a major role in the future of the children to withstand and meet personal, psychological, and social needs and fulfill the challenges

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in life. In India, about 35% of the total population are children below 15 years of age. The World Health Organization(WHO) estimates that respiratory infections account for 6% of the total global burden of disease. The study was a quasi-experimental study with a quantitative research approach. The study was conducted in two government primary schools (Marankonam and Mundavilai). The data collection period was one month. The samples were preschool children between the age group of 4-6 years with acute respiratory illness. A purposive sampling technique was used to select the samples, the sample size was 40. The tool used for data collection Was Respiratory Parameter's Observation Checklist. The findings revealed that the pre-test means score level of respiratory parameters among preschool children was 24. The post-test mean score level of respiratory parameters among preschool children was 16.5. the 't' value 19.034* which is significant at p

Keywords: The effect, Balloon Blowing Exercise, Airway Patency, Preschool Children, Acute Respiratory Illness

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122 Single Page Application Implemented in Train Ticket Booking

Paper ID V7I5-1354 · Pages 677-681 · Computer Science

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The railway reservation system facilitates the passengers to enquiry about the trains available on the basis of source and destination, booking and cancellation of tickets, enquiry about the status of the booked ticket, etc. The aim of the application is to design and develop a web page to maintain record of train status, passenger details by rendering it has a component in our application. The application is designed in such a way that, it should provided security to user credentials by using SHA-256 Hashing algorithm When it works out manually numbers of employees were needed. But through this system, we could overcome the above-mentioned problems. Some of the main features of our project, Single Page Component Rendering, security updates like hashing SHA-256 algorithm is used to secure password of the user. If any person enters to book the tickets they could view the details of all the persons who have booked tickets until and also about what are all the places already booked. Presently available seats also shown. According to the passengers wish they could reserve the tickets. All the booking details and cost of tickets for reservation will be displayed. This is less time consuming and also reduces the overhead of railway employees.

Keywords: The main objectives of the application is provide, a good user-friendly environment for the user to book the seats and payment in easy going way. Another aspect of our application, is to provide credential security to the user.

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123 The role of student's in the Telangana movement – A historical study

Paper ID V7I5-1371 · Pages 682-685 · History

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The student movement in Separate Telangana movement launched by the student organizations in the state is

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by far one of the most powerful movements ever considered to have been launched in the state. Demand for Telangana State was relegated back seat till 1995 and again initiated discussions, workshops, seminars and public meetings by intellectuals in Kakatiya University, Osmania University Students are actually the backbones of the Telangana movement. Besides TRSV several other student wings like ABVP, NSUI, PDSU, AISF, and Dalith Student Organization, etc. also supported the cause of the Telangana movement. Most of the student organizations assembled in the Kakatiya University on the. 17th of November 2009 and formed a student JAC and 23rd invited this JAC by the supreme of TRS, KCR, and supported him if he were gone for a hunger strike. Actually, he was already declared his hunger strike. Students are actively involved in the movement because they are aware of the cause since their childhood days.

Keywords: Telangana Movement, Students, JAC, All Parties, TRS, Congress, BJP, Students unions

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124 3D Printing and Mechanical Characterization of Polylactic Acid in 0.02mm layer height with different nozzle diameters

Paper ID V7I5-1373 · Pages 686-688 · Electrical Engineering

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Rapid prototyping (RP) technologies have emerged as fabrication methods to obtain engineering components within a short span of time. Desktop 3D printing, also referred to as Additive Manufacturing (AM) technology is a powerful method of rapid prototyping technique that can fabricate three-dimensional engineering components. Poly Lactic acid (PLA) is a green alternative to petrochemical commodity plastics, used in packaging, agricultural products, disposable materials, textiles, and automotive composites, 3-D printing technology enables fabrication of PLA and bronze filled PLA, which has less tensile and flexural modulus. In order for 3D printed parts to be useful for engineering applications, the mechanical properties of the material will play an important role in the functioning of the components. In the present study, commercial-grade PLA & bronze-filled PLA has been considered as material for the preparation of samples using a desktop 3D printer. The samples were tested for their mechanical characteristics like Tensile and flexural strength properties. The test samples were fabricated using 3D printing with 0.02mm layer height and with different nozzle diameters. Comparison between 0.02mm layer height & different nozzle diameter of PLA based on the experimental results are discussed and found PLA has superior tensile and flexural properties.

Keywords: 3D printing, PLA, Bronze filled PLA

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125 Image classifying AI Chatbot

Paper ID V7I5-1378 · Pages 689-693 · Computer Science And Artificial Intelligence.

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We have built the bot by using HTML and CSS for a simple front-end display and JavaScript for the application

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tier. The neural network is constructed using Brain.js, a GPU accelerated library for handling neural networks in JavaScript. Brain.js consists of multiple neural network implementations mainly to foster the ability of different neural nets to perform different tasks well. The object detection feature is built using ML5.js. Training of the bot by exposure to both specific and generic questions would be crucial. Also, whenever a user isn't satisfied with the answer given by the bot, he can raise an issue, and the answer for that question would be answered correctly in future updates. The bot also learns with each question the user asks, thereby making it better and better with each iteration. The bot also has an image classifier feature for detecting objects.

Keywords: Chatbot, Image Recognizer, Object Detection, Web Development, Artificial Intelligence, Machine Learning, Computer Vision, Human-Computer interaction

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126 Web Application for E-Vehicle marketplace using Django

Paper ID V7I5-1388 · Pages 694-696 · Computer Science

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The worldwide electric vehicle market size is projected to develop from 4,093 thousand units in 2021 to 34,756 thousand units by 2030, at a CAGR of 26.8%. India has effectively demonstrated its strong fascination to be a significant piece of this car outlook change. Adding to that, India has as of now set forward the craving to turn into the greatest center point for electric vehicles later. Industry pioneers consider electric vehicles to be a promising choice.

Keywords: Electric Vehicles, Web application, Marketing, SQLite, Django, Python, PyCharm

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127 Facial emotion recognition using Convolutional Neural Networks for Autism and Dementia-related diseases

Paper ID V7I5-1370 · Pages 697-704 · Computer Vision

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Transfer research findings are important for mouth-based emotional recognition since there are limited data sets and most contain virtual actor emotional gestures rather than real-world categorization. Throughway of transfer learning, we can use less training data than training an entire network from scratch, thereby improving the network efficiency with emotional data and improving the overall output accuracy of the neuronal network within the desired area. The suggested solution seeks to dynamically enhance the understanding of feelings, taking into consideration not just new situations, but changed contexts, because even though the face in whole is apparent in an unfavorable perspective, the picture of the mouth can be accessible. Typical applications include automatic monitoring of vital bedridden patients in a hospital management system and wearable applications assisting people with conditions with facial expressions challenging to see or understand. This

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achievement takes advantage of previous work on mouth-based deep-learning emotional recognition and has also been validated and compared to a variety of other networks utilizing an extensive dataset for facial emotional recognition, well-known in publication. The exact recognition of the mouth was also contrasted to that of total emotional knowledge; we find that the lack of precision is mostly offset by continuous success in the area of visual awareness of emotions. Therefore we may conclude that in the dynamic phase of emotional recognition our system shows the value of mouth detection.

Keywords: Visual, Emotion, Facial, Convolutional, Neural, Network, Autism, Dementia, Disease, Recognition, Detection, Perception

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128 Nanotechnology-A promising approach in the prevention and treatment of coronavirus infection

Paper ID V7I5-1387 · Pages 705-709 · Biotechnology

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COVID-19 has emerged as one of the most challenging pandemics that has increased at an alarming rate over the past decade. The critical need for the designing of vaccines with high-efficiency rates has been emphasized to prevent viral infection. Therefore, it is necessary to rely on high sensitivity and selectivity diagnostics kits, and effective antiviral and protective therapeutics to eliminate and combat the viral load and also to counter the side effects derived from tissue damages. In this regard, the use of nanotechnology has shown new opportunities for developing novel strategies for the prevention, diagnosis, and treatment of COVID-19 and other viral infections. Thus non-toxic antiviral nanoparticles (NPs) have been promising in providing nano vaccines against infections from viruses. In this review, the potential use of nanotechnology for COVID-19 virus management by the development of nanoparticles as a drug and the advanced strategies to detect viruses using nanoparticles are widely discussed.

Keywords: COVID-19, Nanotechnology, Nanoparticles, Vaccine, Drug repurposing

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129 What are the main differences between the economic and military dimensions of the United States and China’s cybersecurity policies?

Paper ID V7I5-1238 · Pages 710-716 · International Relations

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The world's two most powerful economies, China and the United States rely on the global digital domain for economic productivity, societal well-being, and national security. At the same time, governments and companies alike are becoming increasingly concerned about the security and reliability of their information systems, even as there remains significant ambiguity about the true nature of the threats and the most effective ways of addressing them. In recent years, the security of global information networks has been a contentious issue in US-China relations. Against this backdrop, this paper seeks to appraise and analyze the variations in strategies and methods used by the United States and China to pursue their military and economic

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interests in the cyber domain. This paper concludes by outlining the threat landscape that characterizes US-China relations in cyberspace, as well as maps the way forward for bridging gaps in trust and strengthening international cooperation frameworks.

Keywords: Politics, USA, China, Cybersecurity, Cyberspace, Economy, Military, International Relations

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130 Car logo detection and classification approaches: A review

Paper ID V7I5-1391 · Pages 717-724 · Computer Science

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Vehicle identification systems rely on logo recognition to identify vehicles (VLRS). Convolutional Neural Networks are used to automatically learn characteristics for car logo recognition (CNNs). However, CNN struggles with rotated or noisy pictures. CNN's Random Forest classification technique is used to create an image recognition system. Random forest decision tree ensemble and train. AI has overcome object recognition problems. Convolutional Neural Networks (CNNs) is a popular type utilized to address object recognition issues due to their complicated structure and hidden layers. Logo recognition is often solved using CNN-derived techniques. The creators of used pre-trained CNNs to recognize logos. These technologies are also computationally expensive. This limits the use of computationally expensive alternatives. A logo's recognition accuracy with little computing burden remains a mystery.

Keywords: Logo Classification, Logo Recognition, Deep Learning

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131 Adsorption behavior of Cu, Co, Mn, Pb, Mg, Ca, Ba, Zn, Cd, Al, and Th metal Ions on cation exchange resign Dowex 50WX8 (NH4+ Form) From Aqueous Acetone – Ammonium Butyrate media

Paper ID V7I5-1375 · Pages 725-729 · Chemistry

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In the field of inorganic separation, the incentive to explore the use of non-aqueous or mixed solvent has been enhanced selectivity’s, discovered quite early in such media for Zeolites [1] and ion exchange resins [2]. The partial substitution of an aqueous solution by organic solvent produces a number of changes in an exchange system. Such as a change in the solution structure due to the interaction between water and the organic solvent, change in the hydration and salvation of the electrolyte, change in the solvent composition in the resin phase, change in the activity coefficients of the electrolyte in the solution phase as well as in the resin phase, change in the complexation of the metal ion and change in the extent of invasion by an electrolyte. All these changes are mutually dependent and affect the distribution of the metal ion. The solution composition in the resin phase often differs very much from that in the outer solution and the difference becomes greater with less polar organic solvents. Such behavior the selective swelling is mainly attributed to the hydration and salvation proportion of the functional resin group, namely the fixed ion and counterion. The difference in the

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composition of the resultant solution in the two phases enhances the invasion of electrolyte so that it is larger than in the pure aqueous solution. The electrolyte plays a significant role in the ion exchange equilibrium with aqueous solutions. This effect is expected to be even more important in the adsorption equilibriums of metal ions from mixed aqueous organic solvents. Adsorption equilibrium depends on the properties of the organic solvent reactions with resin and electrolytes which determine the equilibrium.

Keywords: Dowex 50 WX8 (NH4+ form), Aqueous Acetone Ammonium Butyrate, Distribution Coefficients, (KD), Total Adsorption (T. A.), No Adsorption (N. A.), Chromatographic Separation.

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132 Use and effectiveness of online learning with animated contents amid COVID-19

Paper ID V7I5-1380 · Pages 730-735 · Journalism & Science Communication

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COVID-19's impact may be seen across the world, and it affects all sectors equally. The education sector worldwide is also suffering, which is impeding the educational process. Total lockdown, which was imposed in 42 countries, harmed students' lives. The pause in the educational process has impacted around 1.277 billion pupils around the world. While change is unavoidable, COVID-19 has proved that growth is optional. This situation has compelled every educational institution to invest in ICT (Information and Communication Technology) to experiment with new ideas, such as animated teaching and multimedia in online classes. This article focuses on how online learning can be made effective during times of crisis by utilizing multimedia tools and animation. As a result, various online learning multimedia technologies and strategies that can assure learning continuity are emphasized.

Keywords: COVID-19, Online Education, Self-learning, Effectiveness, Animation, Multimedia Tools

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133 An overview on application areas of soft computing

Paper ID V7I5-1393 · Pages 736-740 · Electronics

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We know that Soft Computing refers to the science of reasoning, thinking, and deduction that recognizes and uses the real-world phenomena of grouping, memberships, and classification of various quantities under study. As such, it is an extension of natural heuristics and capable of dealing with complex systems because it does not require strict mathematical definitions and distinctions for the system components. It differs from hard computing in that, unlike hard computing, it is tolerant of imprecision, uncertainty, and partial truth. In effect, the role model for soft computing is the human mind. The guiding principle of soft computing is: Exploit the tolerance for imprecision, uncertainty, and partial truth to achieve tractability, robustness, and low solution cost. The applications of soft computing have proved two main advantages. First, it made solving nonlinear

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problems, in which mathematical models are not available, possible. Second, it introduced human knowledge such as cognition, recognition, understanding, learning, and others into the fields of computing. This resulted in the possibility of constructing intelligent systems such as autonomous self-tuning systems, and automated designed systems. This paper highlights various Application areas of soft computing.

Keywords: Soft Computing, Principle of Soft Computing, Intelligent System

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134 Car logo detection and classification by Deep Learning base Transfer Learning

Paper ID V7I5-1392 · Pages 741-747 · Computer Science

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Vehicle identification systems rely on logo recognition to identify vehicles (VLRS). Convolutional Neural Networks are used to automatically learn characteristics for car logo recognition (CNNs). However, CNN struggles with rotated or noisy pictures. CNN's Random Forest classification technique is used to create an image recognition system. Random forest decision tree ensemble and train. This work's primary contribution is a multiclass logo using convolution mapping in nonlinear space and random forest ensemble learning. In the experiment, 400 pictures with 10 classes were analyzed to increase accuracy by about 20%.

Keywords: Logo Classification, Logo Recognition, Deep Learning, Convolutional Neural Networks

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135 Video Shot Segmentation: Hybrid Approach using YOLOv4 and Deep Sort Algorithm

Paper ID V7I5-1381 · Pages 748-751 · Computer Science

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A shot is a sequence frame in an edited video taken by a single camera. Shot Segmentation is the process of splitting video and finding the boundaries of video data. In this paper, we study the method in content-based video retrieval which uses object detection and tracking for video segmentation. Data collected via segmenting can be categorized in a hierarchy manner as scene layer, camera shot layer, and the frame in their accordance. The data collected is used for segmentation. YOLOv4 is used to enhance the accuracy and the process of tracking and detection much faster.

Keywords: Video Shot Segmentation, Video Object Detection, Boundary Detection, Object Tracking, Yolov4, Deepsort, Etc.

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136 **The relationship between generational differences and work motivation of executive employees in the glass industry in Sri Lanka**

Paper ID V7I5-1383 · Pages 752-763 · Human Resource Management

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Employee motivation at work is one of the important factors which significantly impact job satisfaction, commitment, quality of work, and job performance. Organizations need to determine the best way to motivate their employees who are part of different generational groups (Baby boomers, Generation X, and Generation Y). Hens, this study was conducted to investigate the relationship between generational differences and work motivation of executive-level employees in the glass industry in Sri Lanka. Using Deci's intrinsic and extrinsic motivation theory as the foundation, we evaluate the relationship between generational differences and employee motivation in the glass industry in Sri Lanka. At present, only three generations, the Baby Boomers, Generation X, and generation Y, are available within the organizations' workforce. Therefore, only these three generations were used to conduct this study. The data were collected from a randomly selected sample of 70 executive-level employees who work in a leading company in the glass industry in Sri Lanka, by administering a structured questionnaire with 23 questions/statements on a five-point Likert scale. the method was used as the method of data collection. Data were analyzed using univariate analysis and bivariate analysis including correlation analysis with the SPSS 23.0 version and derived the results. According to the results of the study, there is a significant positive correlation between baby boomers and extrinsic motivation. The Pearson correlation between the main two variables of Generation "X" and intrinsic motivation, and also Generation "Y" and intrinsic motivation, was positive in executive employees in the glass industry in Sri Lanka. Positive relationships with extrinsic motivation and baby boomers were also discovered. Generation "X" and "Y" positively related to the intrinsic motivation at work in executive employees in the glass industry in Sri Lanka. In the near future, there will be a new generation in the workplace, i.e., Generation Z. As a result, management must now start understanding and developing new strategies to better prepare for Generation Z employees, as well as consider how to best integrate this next generation with their current employee workforce.

Keywords: Generational Differences, Baby Boomers, Generation X, Generation Y, Intrinsic Motivation, Extrinsic Motivation

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