

Online Book Store

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Abstract— At this time, Internet has become embedded in our everyday life in every aspect. It has become the most preferred medium in day-to-day life of individuals. The internet underwent immense growth at various levels and fields. Internet is transforming business, shopping, education, etc. Nowadays, e-business has grown up and it plays immense role in the current global economy. The on the web book shop or home shipping allows customer to shop books from their homes as opposed to traditional bookshop, which requires one to visit bookstore, libraries, etc. Online order needs just one or two click and provides multiple digital payments option. Online Book Shop provides accessibility of a specific book with immediacy and conveniently. Such web application like Amazon, Flipkart have prompted the development of e-business. It is straightforward internet business feasible site which has varieties of books for a customer to buy on the web.

Keywords— Internet, e-business, digital payments, accessibility, conveniently, feasible site.

Introduction

Over the last 10 years, the programming language has been revolutionizing the world. It is a rapidly growing field in the zone of engineering standards. Programming has opened countless new ways almost in every industry. There are different innovative, effective and creative programming arising out in the market which have made the life of an average person ease and straightforward. Our user-friendly Online Bookstore is based on one such programming. It is a fusion of both internet business and book industry. The online book shopping is a revolution of traditional book industry. The online book shop has a great deal many benefits. It is developed on the basis of

principle of providing convenience.

It has following benefits:

- Homedelivery
- Affordablecost
- Varieties ofbooks
- Various paymentmode

It is similar as like shopping websites but is only applicable for buying books. There is certainly no need for a customer to go out and searching for specific book.

Purpose and Significance

By using Online bookstore website, customers do not need to visit physical book store. They can utilize the internet connecting facility for buying books by just only log on online book store website. The book of his/her choice can be effectively bought utilizing the web bookshop site while sitting in their comfortable customary range, simply connect to the online website of books and an internet browser.

Online Bookstore have following goals:

- Reduce time, cost and energy
- Easy to operate 24*7
- Convenient
- Development of E-logistics
- Maintaining books list, quantity

Development Environment and Technology

Building up an online business site requires different pre-imperatives.

For implementation this website uses:

- Java
- JDBC
- HTTPServlets


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Education of Tribal Children in Khammam- A Case Study

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ABSTRACT

Nations are people with different ways of life and society. They live somewhere in a certain place. They have their own customs, traditions, religious beliefs, etc. What makes them different from other national communities. The literacy of tribes is generally below the literacy rate of most people of the world. According to the 2011 population, the national literacy rate (59.00%) is found to be significantly lower than the national literacy rate (73.00%). This paper focuses on educating the tribal children of the nation and the challenges they face.

Keywords: Tribal, Education, Literacy

1. INTRODUCTION

Tribes are people with different ways of life and society. They live somewhere. They have their own customs, traditions, religious beliefs, etc. What makes them different from others? They have their own local language. According to Dr. DN Mazhar, a tribe is a group of families with the same name, a member of a tribe living in the same territory, speaking the same languages, looking for alternatives to marriage, craftsmanship and making a well-researched and revenge plan. T.B. Naik provided the following ethnic features in Indian Context;

- Traditional methods using natural resources, then national economy must be unprosperous and prosperous economy
- There should be a comparative diverse population.
- They should have a common language.
- The tribes must be politically organized and the public opinion must be influential.

According to the 1951 census, 5.6% of the country's total population was tribal. According to the Census 2011, the number of organized tribals in India is 10,42,81,034. 8.6% of the total population of India. There are 9,38, 19,162 people of organized ethnic groups living in rural areas and 1, 04, 61,623 people are in urban areas. Organized tribals make up 11.3% of the total population of rural areas and 2.8% of urban areas. There are about 550 ethnic groups in India. The literacy of organized tribals as a whole is below the national literacy rate. According to the 2011 population, the national

literacy rate (59.00%) is found to be significantly lower than the national literacy rate (73.00%).

- A tribe should have least functional interdependence with the community.
- It should be economically backward and primitive; it should exploit natural resources. Tribal economy should be at an underdeveloped stage and it should have multifarious economic pursuit.
- There should be a comparative geographical isolation of its people.
- They should have a common dialect.
- Tribes should be politically organized and community opinion should be influential.
- A tribe should have customary laws.

2. TRIBAL LITERACY IN INDIA



A Review Paper on Web Indexing

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Abstract

Web indexing plays a crucial role in information retrieval and search engine operations. It involves the process of collecting, analysing, and organizing web pages to make them easily searchable and accessible to users. This research paper presents a comprehensive study of web indexing techniques and strategies used by search engines. The paper discusses various indexing techniques such as crawling, content analysis, link analysis, and metadata analysis. It also examines the challenges faced by search engines in indexing the web, such as duplicate content, spamming, and content freshness. Finally, the paper analyses the future of web indexing, considering the emerging technologies and trends in the field.

Introduction

The internet has become an essential part of our lives, and the amount of information available on the web is growing exponentially. Search engines are the primary tools used to access this information, and their effectiveness depends on their ability to index web pages accurately. Web indexing involves collecting, analysing, and organizing web pages to make them easily searchable and accessible to users. The purpose of this research paper is to provide a comprehensive study of web indexing techniques and strategies used by search engines. The paper discusses the challenges faced by search engines in indexing the web and analyses the future of web indexing.

The World Wide Web has grown exponentially in recent years, with millions of web pages being added every day. This has made it increasingly difficult to find relevant information on the web. Web indexing is the process of organizing and categorizing web pages to facilitate their retrieval by search engines. The goal of web indexing is to make it easier for users to find the information they need on the web.

The World Wide Web is a vast and ever-growing collection of information, consisting of billions of web pages, documents, images, videos, and other types of content. As the number of web pages continues to increase exponentially, it becomes increasingly difficult for users to find the information they need quickly and easily. Web indexing plays a critical role in enabling users to access relevant information from the web efficiently. Search engines such as Google, Bing, and Yahoo rely on sophisticated web indexing techniques to crawl, index, and rank web pages based on their relevance to user queries.

Web indexing means creating indexes for individual Web sites, intranets, collections of HTML documents, or even collections of Web sites.

Indexes are systematically arranged items, such as topics or names, that serve as entry points to go directly to desired information within a larger document or set of documents. Indexes are traditionally alphabetically arranged. But they may also make use of hierarchical arrangements, as provided by thesauri, or they may be entirely hierarchical, as in the case of taxonomies. An index might not even be displayed if it is incorporated into a searchable database.

Indexing is an analytic process of determining which concepts are worth indexing, what entry labels to use, and how to arrange the entries. As such, Web indexing is best done by individuals skilled in the craft of indexing, either through formal training or through self-taught reading and study.[1]


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Online Book Store: A Review Paper

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Abstract- This paper elucidates about the e-commerce with special reference to web bookstore. It explores the rapid increase in the use of buying books through the internet. The internet, very much, plays an important role in our lives. It has considerably improved the lifestyle of so many people. The web bookstore was in the process of developing for the benefits of their customers. But after the coronavirus pandemic hit, traditional bookshop began to move immediately to the web bookstore to avoid crowd. The online book shopping is a revolution of traditional book industry. Over the last few years, the e-commerce industry came to highlight. The web book system has facilitated the life of the countless book lovers by doing it feasible for them to buy books online. It is not always easy to access the traditional bookshop, such inconveniences have led to the development of e-commerce industries. Our project is one of the simplest e-commerce websites that host various books of multiple categories for a customer to buy online. In the online book sector, this paper also tries to create awareness on the utility of the online bookshop.

Keywords: E-commerce, web bookstore, traditional bookshop, feasible, inconveniences, website.

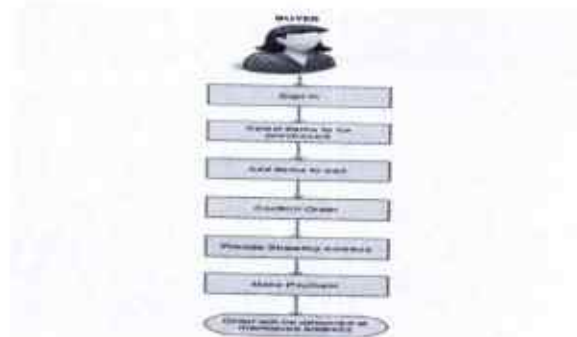
1. INTRODUCTION

In the good old days, bookshop was geographically located, and we have to go to traditional bookshop to purchase books. But now, the immense growth of the internet has emerged online book stores. Online web application has prompted the development of the e-business. It is straightforward internet feasible site which has varieties of books for a book lover customer to purchase book on the internet.

It has following positive impact:

- User friendly
- Cost saving

- Consume time and space
- Convenient
- Multiple payment mode



Buyer can connect through the Internet to the online bookshop and then can check the detailed information of the book.

If you want to buy, you should be registered: and login using ID and password

Enter the Registration Details

Email Id :

Password :

First Name :

Last Name :

Address :

Mobile No :

I ACCEPT ALL TERMS & CONDITIONS

REGISTER ME

Welcome to Online Book Store

Customer LOGIN

Are you Seller? Click here to Login as Admin

Username :

Password :

73781

Login as User


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Development of A Robot for Labor Work

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ABSTRACT Design & Construction of multipurpose Robot is discussed in this work. The proposed robot can be mainly used in civil field. The design & placement of various sensors, wheel system as well as wireless controlling mechanism are discussed in detail:-

The co-ordination of its various part to perform different job is also discussed. The movement of the robot can be controlled wirelessly from mobile for civil use, it can be used in labour work by line follower feature, voolic work by human follower feature. It can also perform military surveillance like spying enemy base , exploring unknown territory. The structure and design of robot is adaptive and can be modified to enhance its capability to further level.

The robot uses arrays of optical sensors to identify the line, thus assisting the robot to stay on the track. The array of two sensor makes its movement precise and flexible. The robot is driven by DC gear motors to control the movement of the wheels. The dc gear motor is driven by the motor driven circuit. This project aims to implement the algorithm and control the movement of the robot by proper tuning of the control parameters and thus achieve better performance.. It can be used industrial automated equipment carriers, small household applications, tour guides in museums and other similar applications, etc. The proposed developed model can perform multiple operations such as human following, obstacle detection, line-following, and voice controlled. All these operations are operated or managed through the smartphone.

Keywords:- Robot, Sensors, Robotics, Wirelessly, Adaptive, Arrays, DC Motor, Algorithm, Automated

INTRODUCTION:-

In the past, generally, robotics mainly used for an

automated production process in the factory. Presently, robotics finds its application in many fields such as medical science, mining, surveillance, autopilots, etc. Initially, robotics was understood to be a job eater and was seen as a destructive replacement technology. With time, robotics has emerged as a safe and viable technology in complex and unstructured conditions such as automating the number of human activities, automated driving, curing for a sick person, military sector and in the car industry, etc. In robotics design, there is mainly two points in which the designers are focusing the first one is to build a model that can act autonomously in complex and unstructured environmental conditions. Second, the developed model has the capability of making moral decisions

[1]. At present, robotics has emerged as a potential technology that can ease human life and enable mankind to tackle several social and ethical issues. Learning, Ambiguous understanding about the problems, Creativity for solving the problems, Reasoning and Deduction, Classification, Ability to build analogies and many more are the common features of intelligent system.

[2]. In fact, multipurpose systems are the need of the hour and are well accepted in tech-savvy populations.



OBJECTIVE:-

This Robot named "MULTI-PURPOSE ROBOT" is a robot which is used as a :-

Challenges in Maintaining Certain Rajasthan Architecture Structures

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Abstract: Safeguarding Matured Designs The motivation behind this multidisciplinary exertion is to teach present day protection engineers about past data on building materials, techniques, and guidelines so they might integrate it into their training. Underlying security is fundamental in any protection project, regardless of how large or little. Taking everything into account, no settled techniques have considered the meaning of primary wellbeing. India is home to a striking assortment of old structures, yet the nation's endeavors to comprehend and safeguard these curios are impeded by a deficient stockpile of gifted laborers. Critically, for a profoundly disapproved of culture, the way to keeping up with its set of experiences is to research where the past building framework came from, how the soul was associated with the structure interaction, and how the way of thinking of fleetingness saw material belongings. Some might contend that this approach goes against laid out protection best practices.

Keywords: heritage architectural Buildings, natural hazards, ageing, weathering

Introduction

Various a-list social and building tourist spots might be tracked down across the Indian subcontinent. While the Archeological Study of India (ASI) is presently depended with the insurance of in excess of 3,650 public landmarks, out of India's broad stock of memorable destinations, something like 25 have been perceived as UNESCO World Legacy Locales. While legislative paleontology divisions and strict gifts direct thousands, a huge number of other

notable designs are unprotected because of an absence of financing. The Indian Public Trust for Craftsmanship and Social Notable (INTACH) is one of a few non-legislative associations (NGOs) that brings issues to light about the situation of these jeopardized milestones and assists with getting their insurance. Albeit conventional structure techniques and materials are as yet utilized for memorable structure rebuilding efforts, they are only here and there utilized for new forms. The improvement of new legacy protection tenets —, for example, the Venice Sanction (1964) and the ICOMOS Contract (2003) — through hundreds of years of conversation among key partners in Europe and somewhere else will undeniably prompt a more bound together worldwide person for legacy preservation. Since we ought to all recognize that, more than as representatives of particular governments, we are stewards of humanity's common cultural heritage, it is essential that we have such widely acknowledged baseline norms. In what ways does conservation work? Which is more important: the structure itself, the materials used to construct it, and the history of the civilization whose choices in these areas, or the essence of the location that the design sought to embody? This is a basic inquiry, particularly in the Indian setting, but it might be broadened to include all of Eastern or Asia. Your response to the question may provide further details on the item you should be saving. By expanding on the issues and exploring possible paradigms for a more comprehensive approach, this research aims to take the temperature of the Indian cultural conservation landscape.

Jaipur: Urban Structure and Court Culture

Surveying Substantial Execution on Side of the Road Thruways through Models

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Abstract: The principal objective of this examination is to assemble information for the advancement of asphalt execution models by concentrating on the exhibition of country street portions built using different rustic street plans. The review will give ideal upkeep systems to country streets and models of asphalt execution. Potholes and other asphalt issues frequently go ignored because of an absence of supporting for provincial courses. Consequently, it is fundamental to lay out a dependable strategy for organizing the street organization's upkeep needs. Anticipating the street's toughness under changing burdens, environment, and different circumstances is conceivable with the utilization of the street execution conditions. In this review, we analyzed the connection between a few asphalt bothers and their relating subordinate factors to build execution conditions for edge drop, groove profundity, harshness, and breaking. You might utilize information from fake brain organizations (ANNs) in more ways than one to make forecasts. Utilizing the family bend procedure, debasement models have been streamlined. We have assessed all exhibition models to ensure they are precise. Keeping up with the street network is fundamental, since it is quite possibly of the main resource. The asphalt condition marker (PCI) and support need pointer (MPI) assessments were utilized to conclude which streets are needs.

Keywords: Rural road, Pavement Performance models, Artificial Neural Network (ANN), Family curve, Pavement Condition Indicator (PCI), Maintenance Priority Indicator (MPI)

Introduction

A nation's economic growth is directly correlated to the quality of its road network. The reliability, accessibility, flexibility, and ease of road transit have propelled it to the pinnacle of India's transport system. The importance of a well-developed road system to the development of the economy is well-known; better roads provide for greater access to agricultural, industrial, and power-generating industries. During its predicted lifetime, a road is considered to have performed adequately if it satisfies both traffic and environmental demands. In the 1950s and 1960s, in collaboration with the AASHTO Road Test, the fundamental system output function for Pavement Management System (PMS) was created. "the history of deterioration of the ride quality or serviceability provided to the user" is how serviceability performance is being defined. Two forms of pavement performance data are used in the decision-making process: (1) current performance, which is obtained by field inspection, and (2) future performance, which is predicted using degradation models. When it comes to pavement, a functional surface is one that facilitates safe, enjoyable, and simple travel for both drivers and passengers. Because these features are dependent on the user's perception of the pavement's condition, a grading system is required to define them. Data collection from the pavement's end users is essential for determining the pavement's usefulness. Regression is a widely used and very successful analytical tool for performance modelling. The growing field of Artificial Neural Networks (ANN) has also found extensive use in pavement performance modelling, because to its adaptability and longevity as a technique for approximating

Planning and Creating Neighborhoods with People on Foot in Thought

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Abstract

Strolling is, and consistently has been, the most key method for human motion. In any case, the manner in which individuals move about urban communities currently gives little consideration to this major human attribute. Present day wellbeing, natural, and social worries have prompted the restoration of strolling customs in many regions of the planet. There is boundless arrangement that few factors impact individuals' strolling designs. These incorporate the two the normal and man-made environmental elements, as well as individual and social issues. A perplexing organization of arranged and developed components is one way in which an area's fabricated climate influences individuals' strolling propensities. Different abstract and observational techniques have been involved by researchers in their journey to take apart this trap of impacts and lay out the connections between its many parts and wandering examples. Walker admittance to public regions is being extended by means of different authoritative endeavors and progressing projects around the world. Albeit passerby issues have started to be tended to in India's metropolitan preparation and transport strategy, urban communities there are still in the beginning phases of making and carrying out common arranged rehearses. Seeing how Indian urban communities are reshaping private zones to take care of walker necessities and needs is enlightening. We need to combine the heap of significant writing and show that it is material to Amritsar areas in this paper. The examination shows that networks are the main piece of a city for making it more walkable. This is on the grounds that areas address how walk culture is being imbued in everybody's regular daily existence in the city. It is our expectation that this exploration will assist us with better comprehension the preparation and plan choices that were made when Amritsar's local locations were being grown so we might advocate for person on foot related upgrade drives across the city.

Keywords: Indian urban development, transportation policies, pedestrian

Introduction

Walking is, and always has been, the most basic form of human conveyance. Through all of time and space, it has been the one constant that has brought people together from different backgrounds and cultures. Traditionally, our towns have been designed with pedestrians in mind, keeping them at a manageable size for easy and rapid navigation. Along with the fast pace of urbanisation and the ensuing rise of mobility, cities and towns caved to the demands of vehicles, severely impacting this basic human drive. City pedestrian culture has been profoundly impacted by vehicular congestion, which has changed their status, treatment, and scope. As the harmful effects of this new tendency on society, the environment, and people's health become more obvious, there are global efforts to revive the pedestrian culture using the sustainability agenda as an excuse. All of a person's ambulatory actions, which vary according to situation, purpose, and other factors, are a part of walking. Dynamic pedestrian behaviour includes activities like walking, playing, jogging, or strolling; static pedestrian behaviour includes activities like sitting, standing, or socialising. There is a wide variety of walking speeds, from very slow to extremely rapid. Pedestrian activity may range from leisurely strolls about the community to more deliberate trips to and from places of business, entertainment, or shopping. You may utilise walking as your main source of transportation or just add it to your mix.

Existing Transport Scenario and the Liveability Concerns

The number of automobiles possessed by city people has increased dramatically in recent years, and their movement patterns have become more complicated. The use of personal autos has increased dramatically in modern society. In spite of the fact that the number of vehicles registered in India rose at a CAGR of 10.5% from 2002 to 2012 (MoRTH, 2013) (Figure 1), the majority of these vehicles are two-wheelers (72.4%), followed by automobiles, jeeps, and taxis (13.5%), and finally, buses (1.0%). Unfortunately, there has

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65

Assessment of the Impacts of Serious Intensity on Perlite Concrete

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Keywords: Perlite Powder, Ternary Blended Concrete, Perlite Binary Concrete, Elevated Temperatures

Abstract: Normal assets have been underutilized generally in the structure area during the last numerous many years. Additionally, with the climate quickly falling apart and contamination levels rising, expanding the utilization of maintainable materials in substantial construction is fundamental. One such normally happening feasible material that has as of late been the focal point of study is perlite powder (PP). It has been found to modify the way of behaving of substantial when presented to high temperatures. As a result of its warm way of behaving, this exploration expects to examine the likely utilization of PP in concrete at somewhat high temperatures tentatively. To act as an illustration of this, the creator has made two new assortments of cement: Perlite Double Concrete (PBC), which consolidates PP and concrete, and Ternary Mixed Concrete (TBC), which substitutes concrete for PP and Silica Smoke (SF). Alongside Control Concrete (CC), PBC, and TBC, four distinct TBC blends were made by supplanting 1% to 7% of the concrete with PP, with each blend having an increment of 2%. TBC stands apart from the others since it equitably replaces 10% of the concrete with SF. Examples are warmed to temperatures going from 200°C to 800°C, with time periods, prior to being permitted to air-dry, following shifting relieving seasons of 7, 28, 56, and 90 days. Both TBC and PBC examples were exposed to mechanical testing, strength property assessment, and microstructural examination. Examinations directed on PBC with a 5% PP replacement showed that it had the best warm qualities and most noteworthy strength.

Introduction

Even while natural resources are plentiful in many regions, they have not yet been adequately used for a variety of purposes. When it comes to building materials, concrete is among the most adaptable options in the cosmos. Concrete, in contrast to materials like steel and wood, has superior heat resistance. When exposed to or induced by high temperatures, concrete materials may easily crack or break. The structure collapses due to spalling, fractures, and the formation of big holes when it is exposed to high temperatures for too long; fissures weaken the binding between the aggregate and cementation materials, and enormous pores are formed. Fire significantly reduces the distinctive qualities of concrete in structural components, including volume deformation, strength, structural integrity, and young's modulus. These constructions experience different degrees of failure depending on the amount of high temperatures to which they are subjected. In addition, the strength qualities of these structures would be affected in the short and long term by such failures, potentially leading to significant structural damage and eventual breakdowns. There is an additional risk to the load-carrying capacity of concrete due to its continued hazardous behaviour after such an event. Finally, when building materials are heated to high temperatures, their physical and chemical compositions change significantly. Consequently, a thorough investigation into how temperature affects concrete and what happens when cementitious materials are

Enhancing a Multipath Channel's SNR Performance with OFDM-MIMO

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Abstract: The Non-Line of Sight (NLOS) broadband wireless access provided by Worldwide Interoperability for Microwave Access (WiMAX) is susceptible to the effects of several factors, including multipath propagation, diffraction fading, vegetation attenuation, shadowing loss, and more, when operating in the 2-11 GHz frequency range. You must implement fading mitigation techniques to avoid these effects. Orthogonal Frequency Division Multiplexing with Multiple Inputs and Outputs (OFDM-MIMO) is a useful technique for combating fading and boosting the signal-to-noise ratio (SNR) of the WiMAX system. According to the IEEE 802.16 standard, QPSK modulation requires a minimum signal-to-noise ratio (SNR) of 6 dB for the connection to operate. In order to achieve a signal-to-noise ratio (SNR) greater than the operating threshold, this study makes use of OFDM-MIMO.

Keywords: —WiMAX, fade mitigation, OFDM, MIMO, cyclic prefix, guard time

Introduction

Consolidating various information different result (MIMO) with symmetrical recurrence division multiplexing (OFDM) balance makes a remote correspondence framework known as a MIMO-OFDM. Present day innovation utilizes a few receiving wires at the shipper and recipient closures of a framework to help its ability, improve its exhibition, and decline obstruction while at the same time expanding the transmission quality. Notwithstanding, symmetrical recurrence division multiplexing (OFDM) balance isolates the information stream into a few subcarriers. This improves the framework's phantom effectiveness and assists with lessening the effect of channel

blurring. By joining the two, MIMOOFDM frameworks give reliable, rapid remote correspondence across significant distances. Multiple-input multiple-output (MIMO-OFDM) wireless communication systems are utilized for a variety of popular applications, including digital broadcasting, cellular networks, and wireless local area networks. More prominent information speeds, greater inclusion, and improved strength to obstruction and blurring are only a couple of the advantages they give over more regular remote specialized techniques. Appropriated symmetrical recurrence division multiplexing (MIMO-OFDM) depends on utilizing OFDM tweak to convey data through these subcarriers. The data is spread out among all of the subcarriers to make the most of the available spectrum, and each subcarrier carries only a small portion of the total data.

A multiple-input multiple-output (MIMO-OFDM) system takes use of the spatial diversity of the wireless channel by using several antennas at the transmitter and reception ends. By merging the signals sent by each antenna at the receiver, the data rate and signal quality are both enhanced.

The MIMO-OFDM system employs state-of-the-art signal processing methods to lessen the impact of interference and multipath fading. Various algorithms are used by the system to process such as STBC, SM, and beamforming, which are used to encode the received signals. The signal quality is enhanced, the error rate is decreased, and such that the wireless communication system as a whole works better.

Establishing a fast and dependable wireless connection between several devices is the main goal



Long Haul Traffic Determining In Optical Organizations Utilizing Ai

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Abstract

Here, we lay forward the system for the optical organization traffic conjecture issue. The subsequent stage is to foster an AI methodology for powerful organization building utilizing Chart Convolutional Organizations and Generative Ill-disposed Organizations. Predicts future states. Distinguishing network top traffic that could influence steering decisions is the essential objective. We check our discoveries utilizing genuine organizations provided by the administrator of the organization as well likewise with pseudo practical datasets made in a customized simulator. The results approve the viability of our technique in upgrading both the present moment steering choices and network engineering decisions.

Keywords: Convolutional Networks, Generative Adversarial Networks, pseudo realistic, Datasets

Introduction

Cloud computing's great fault tolerance and user-friendliness have attracted many businesses in recent years. Consequently, there is a rising need for high-data transmission [1]. Leading cloud service companies, such Tech giants like Google, Amazon, and Microsoft are always investing and competing for a larger slice of the market. Unfortunately, this increase in demand is beyond the capabilities of the existing Internet infrastructure. To deal with the surge in traffic, some have suggested using new technologies as Spectrally-Spatially Flexible Optical Networks (SS-FONs) [2]. Two parameters, the dynamic spectrum and the space assignment, define the 'elasticity' of an SS-FON. According to [3], SS-FON is the most recent iteration of DWDM, which stands for Dense Wavelength Division Multiplexing. With separate spectral and spatial fibre resource management, we can optimise space, bandwidth, and wavelength.

In order to increase transmission power as a whole, space-division multiplexing (SDM) and flexible wavelength allocation are the primary uses of the spatial dimension in fibres.

Furthermore, we will inevitably encounter physical limitations, regardless of how many new technology we use. The capacity crisis will be an issue for optical networks by 2030, according to studies [4]. We can explore more sophisticated ways to regulate it instead of trying to update the technology. The development of a cognitive network idea and the extraction of useful information from large datasets both need the use of these novel models [5]. Cognitive networks are a kind of network that use state-of-the-art analytical methods from several fields to address current issues in communication networks [6]. These fields include deep learning, data analytics, knowledge engineering, telecommunication, and network administration. Cognitive optical networks are transport networks that use cognitive processes to understand the present state of the network, make decisions based on that perception, learn from past data, and predict what will happen next in order to accomplish end-to-end objectives.

Cognitive processes utilise different data analytics solutions, usually using machine learning methods, and learn from past data to enhance performance. Data analytics, ML, and deep learning are three potential methodological areas that might pave the way for cognitive network data analysis and, by extension, more sophisticated approaches to allocating resources. We seek to use cognitive approaches to enhance the following important performance parameters of optical networks: energy consumption, network resources, and capital and operational expenses (CAPEX and OPEX).

According to recent studies, the most effective use of optical resources is achieved via network resource provisioning algorithms like Monte Carlo Tree Search (MCTS) that use



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Execution Upgrades in SNR of A Multipath Channel Utilizing OFDM-MIMO

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Abstract

While utilizing the 2-11 GHz recurrence range, the Non View (NLOS) broadband remote access presented by Overall Interoperability for Microwave Access (WiMAX) is vulnerable due to the effects of elements, for example, multipath spread, diffraction blurring, vegetation weakening, shadowing misfortune, and more impacts. To get around these effects, you want to set blur relief systems in motion. A compelling procedure for battling blurring and expanding the WiMAX framework's sign to-commotion proportion (SNR) is Symmetrical Recurrence Division Multiplexing with Different Data sources and Results (OFDM-MIMO). The IEEE 802.16 standard expresses WiMAX's association with capability, a base sign to-commotion proportion (SNR) of 6 dB rise vital for QPSK regulation. This study utilizes OFDM-MIMO to get a sign to-commotion proportion (SNR) higher than the functional edge.

Keywords: —WiMAX, fade mitigation, OFDM, MIMO, cyclic prefix, guard time

Introduction

Consolidating different info various result (MIMO) with symmetrical recurrence division multiplexing (OFDM) regulation makes a remote correspondence framework known as a MIMO-OFDM. Current innovation utilizes a few radio wires at the shipper and recipient finishes of a framework to support its ability, upgrade its exhibition, and decline impedance while at the same time expanding the transmission quality. However, symmetrical recurrence division multiplexing (OFDM) regulation isolates the information stream into a few subcarriers. This upgrades the framework's ghastly effectiveness and assists with diminishing the effect of channel blurring. By joining the two, MIMO OFDM frameworks give reliable, high velocity remote correspondence across lengthy distances. Digital broadcasting, cell organizations, and remote neighborhood are only a couple of the numerous well known utilizes for various info different result (MIMO-OFDM) remote correspondence frameworks. More prominent information speeds, greater inclusion, and upgraded strength to obstruction and blurring are only a couple of the advantages they give over more ordinary remote specialized methods. Distributed symmetrical recurrence division multiplexing (MIMO-OFDM) depends on utilizing OFDM regulation to convey data by means of these subcarriers. To make the most effective utilization of the accessible range, the information is scattered among all of the subcarriers, and each subcarrier conveys a little level of the all out information.

A multiple-input multiple-output (MIMO-OFDM) system takes use of the spatial diversity of the wireless channel by using several antennas at the transmission and reception ends. By merging the signals sent by each antenna at the receiver, the data rate and signal quality are both enhanced.

The MIMO-OFDM system employs state-of-the-art signal processing methods to lessen the impact of interference and multipath fading. Various algorithms are used by the system to process such as STBC, SM, and beamforming, which are used to encode the received signals. The signal quality is enhanced, the error rate is decreased, and such that the wireless communication system as a whole works better.

Establishing a fast and dependable wireless connection between several devices is the main goal of a Multiple-Input Multiple-Output Orthogonal Frequency Division Multiplexing (MIMO-OFDM) communication system. The goals that the system is meant to accomplish are:

First, a multi-input multiple-output (MIMO-OFDM) system may increase the data rate by using several antennas at the reception and transmitter ends. By taking use of the geographical



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K-Means and Fluffy Based Half and Half Grouping Calculation for WSN

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Abstract

Remote Sensor Organizations (WSNs) assume a critical part in different applications, going from ecological checking to modern computerization. Bunching is an essential procedure utilized in WSNs to improve network effectiveness, draw out network lifetime, and diminish correspondence above. In this unique circumstance, this exploration proposes a clever half and half grouping calculation that coordinates the qualities of both K-Means and Fluffy Rationale for further developed execution in WSNs. The proposed calculation plans to address the limits of conventional bunching calculations by consolidating the proficiency of K-Means with the adaptability of Fluffy Rationale. The K-Means part gives a strong and proficient starting grouping of sensor hubs based on the proximity of distance measurements, while the Fluffy Rationale part presents a level of enrollment for every hub to various bunches. This fluffy enrollment permits a hub to have a place somewhat with various bunches, giving a more nuanced portrayal of its significance to different gatherings inside the organization.

Keywords: Fuzzy Logic, Wireless Sensor Networks (WSNs), K-Means, Clustering

Introduction

Wireless Sensor Networks (WSNs) have emerged as a critical technology in various applications such as environmental monitoring, healthcare, and industrial automation due to their ability to collect data from the physical world. Clustering is a fundamental technique employed in WSNs to enhance scalability, energy efficiency, and data aggregation. Traditional clustering algorithms, such as K-Means, provide efficient and deterministic cluster formation but may struggle with dynamic and uncertain environments. In contrast, Fuzzy Logic offers a more flexible approach by incorporating uncertainty, but it may lack the precision exhibited by traditional methods.

This research introduces a novel hybrid clustering algorithm that leverages the strengths of both K-Means and Fuzzy Logic to address the challenges posed by the dynamic and uncertain nature of WSNs. The primary goal is to develop a clustering mechanism that is robust, energy-efficient, and capable of adapting to changing network conditions.

1. Background

1.1 Wireless Sensor Networks

Wireless Sensor Networks consist of a large number of sensor nodes that collaborate to monitor physical phenomena, collect data, and transmit information to a central base station. The resource constraints, communication challenges, and the dynamic nature of these networks necessitate the development of efficient clustering algorithms.

1.2 Clustering in WSNs

Clustering algorithms organize sensor nodes into groups or clusters, where each cluster is typically represented by a cluster head responsible for aggregating and transmitting data to the sink. Clustering helps in reducing energy consumption, prolonging network lifetime, and improving overall network efficiency.

2. Motivation

While traditional clustering algorithms like K-Means are efficient in forming compact clusters based on explicit criteria, they may lack adaptability to the uncertainty inherent in WSN data. Fuzzy Logic, on the other hand, accommodates uncertainty through degrees of membership but might sacrifice precision. The motivation behind this research is to develop a hybrid clustering algorithm that combines the strengths of K-Means and Fuzzy Logic, aiming to achieve a balance between precision and flexibility in cluster formation. This hybrid

NPA of Indian Banking System and its Impact on Economy

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Abstract:

Banks are playing a very important role in providing financial assistance for the various business sectors and agricultural sectors. But from the last few years banking institutions financial health is not in good condition. Major public banks are going through a liquidity crisis. The large volume of NPAs is negatively impacting the growth of the Indian economy. The 'District co-operative banks had loan ratio hitting towards 12.6 per cent. The bad-debt ratio of commercial banks stood at 7.5 per cent in March 2021 according to an RBI report. The spread of Covid-19 had stalled major economic activities in our country. Indian's \$ 1.86 trillion financial system is at risk due to this pandemic. Presently \$ 140 billion of bad loans at banks and the liquidity position is adverse. The Indian Bank's Association moved the application to RBI for setting up a bad bank. Proposed National Assets Reconstruction Company (NARCL) will take over the non-performing assets/ bad assets of the public sector and private banks. Finance Minister too in Union Budget FY 21-22 proposed to set-up an Asset Reconstruction Company (ARC) or a bad bank to clean up NPAs of public banks. The institution, which set to start operations by the next month. This strategy may help to bring financial stability to the banking sector. This particular bank is going to have an effective structure and specialised management to handle the bad debts problems. This enables the banks to focus on the primary functions without worrying about the high-risk assets. Bad banks have been considered a success in many countries in recovering bad debts. Through this paper, researcher attempt to know about the bad bank, the need of bad bank in India, and the challenges exist for its effective implementation in India.

Keywords: Bad bank, Non-performing assets, Challenges, Pandemic, Implementation.

Introduction:

Non-performing assets are those assets that won't be yield any revenue to the bank, and remain idle over some time. The rise in NPAs leads to incur losses by the banking institutions. It increases the stress on the banking sector. Many new projects may not be able to get financial assistance from banks due to a shortage of funds, and it also affects the national growth adversely. Banks may increase the interest rates to maintain their profit margin. Due to a lack of investments to invest in economic activities, people face the unemployment problem. Many countries adopted a bad bank strategy to come out of the liquidity crisis. Major public banks in India are suffering from credit risk and liquidity crises. Even though RBI adopting various strategies and frameworks to minimise the credit risk and liquidity risk, but these are not yielding good and effective results. Finance Minister proposed to set up NARCL/Bad Bank so that public banks can transfer their bad assets to the bad bank, and focus more on the primary functions.

NARCL has been registered by RBI with a paid-up capital of Rs.74.6 crore. RBI also thinking to provide a loan of Rs.1000 crore to NARCL. Mr. Anand Kumar Singh has come on the board to lead the first round of capital raising. Anand Bank has invested in NARCL by purchasing 12 million shares, Bank of Baroda, SBI, Union Bank of India and Indian Bank have bought 9.9 million shares each respectively. Punjab National Bank and Bank of India also became investors in the bad bank by purchasing 9 million shares. Bank of Maharashtra has subscribed 5 million shares in the Bad Bank. (Mint). It is expected that establishing a bad bank, will clean up the bad assets in the public banks, and allow the banks to focus the lending to increase the economic activities. The public sector banks are going to hold the majority of shares in the bad bank. The new bad bank will be headed by Mr Padmakumar Madhavan Nair, a stressed assets expert from SBI.

Review of literature:

Rathore, (2016). The existence of NPAs there is an adverse effect on the liquidity position of the banks due to the mismanagement in the banking system. The major reason for this is the



Investigation of Shopper's Web Based Shopping Purchasing Conduct with Its Elements

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ABSTRACT

The review result propose that buyers' web based shopping conduct is being influence by a few variables like segment factors, social elements, customer web based shopping experience, web composition, virtual entertainment, situational factors, working with conditions, item qualities, deals special plan, installment choice, conveyance of products and after deals administrations go about as a significant job in internet shopping.

The review result can't be summed up to the all web based shopping clients for the explanation that of little example size and geological area from where information is gathered. Future examinations may likewise apply a few additional measurable methods to build the convincingness of the responses in the review.

The outcomes ought to bear some significance with the web-based retailers in concluding their advertising program. The paper depends on unique work, the survey has been lay out solid subsequent to checking the KMO values upholds the ability of test size. It will assist the academicians and researchers in their examination with working in the design of a writing on web based shopping. It will likewise give rules to online retailers in making their advertising program.

Introduction

The electronic shopping has been rising rapidly in India. The electronic clients has been rising and their purchasing power fostering The yearly use power of Indian customers have been rising, it is projected to be more than \$1.5 trillion by 2024, driven by growing prospering of emerging common people, whose general population should create to 580 million when. Internet services are the underpinning of online shopping, there will be 95 million web ally in India close to the completion of 2023 (Bank of America Merrill Lynch (BofA ML) report, Oct, 2021). On a site like Flipkart, online customers can browse north of 35 million items in more than 75 classifications, including books, ordinary things, purchaser hardware, and way of life things. Amazon has furthermore better its scope of things from 18 million to 35 million and Snapdeals has been responsibility more than 15 million novel things, SBI Investigation. There are more than 160 online shopping destinations open in India giving work and items straightforwardly to the buyers. These e-retailers give an electronic things. The customer select the things from their record and purchase the thing by contrast it and various things. It appreciates many advantages like overall reach, extent of things with required information, According to Taylor Nelson Sofres Natural's "Overall online business Report," the general raise in online business activity is by and large clear for explicit thing orders, similar to books, music accounts, electronic items, sports equipment, and toys, and for organizations, for instance, client banking and cash, and prosperity information. It save time during the buying of merchandise, since it dispense with the movement time expected to go to the store. Customer can buy items 24X7, it likewise give items at least feasible cost, and purchaser gets offers and limits on buying items on the web. Due to the discounts, gifts, and quality of the online store, customers have decided to shop there. Web based shopping additionally has a few detriments like while we don't buy products following looking through it online then it brings about burning through of time, it isn't possible without web association and one electronic devices (PC and versatile), it important additional cash for orchestrating these two things. When we get faulty products, it take time in reverse pickup, replacement and refund system. Online shopping websites also charge money for delivery of products in some cases, online shopping dont have delivery of goods in some regions. Many research have conducted investigation for identifying the driving factors which affect consumer's online shopping behavior, what drive consumer's to buy online? What Makes Consumers





Inventory Management System With Respect To Paper Industry in India

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Abstract

Inventory management is generally recognized to be of sufficient importance to warrant the appointment of a person to carry specific responsibility for it. The study investigated the relationship between company performance and inventory management. The researcher used inventory days as a dependent variable and gross profit and net profit as an independent variable. The inventory connotes the value of raw materials, consumables, spare parts, work-in-progress, finished goods and scrap in which a company's funds have been invested. According to the analysis result in the researcher, inventory management and gross profit had a positive relationship. Hence organizations have to take a correct the decision regarding the inventory management administrative cost and another relevant cost to increase the performance of the organization.

Keywords: Inventory Management, Raw Materials, Costs

Introduction

Inventory Management

'Inventory' generally refers to the stock of some kind of physical commodity but in the accounts it is the stock of finished goods only. Inventories provide a very important line in the production and a sale of a product. In a manufacturing company, a certain amount of inventory known as 'goods in process' is absolutely necessary for the process of production. Inventory gives the firm flexibility in its purchasing.

The inventory management aims at

- (i) Minimising the firm's investment in inventory, and
- (ii) Meeting the demand for the product by efficiently organising the firms' production and sales operations.

On the other hand, an under investment in inventories may hold up production due to its inadequate and erratic supply. The company may not meet its delivery commitments on account of production interruption due to shortage of raw materials.

A manufacturing company must have

- (i) Raw material inventory,
- (ii) Goods in process inventory, and
- (i) Finished goods inventory.

Methods of Inventory Valuation

The methods of inventory valuation evolved overtime may be broadly classified as

- Methods based on actual costs
- Methods based on market price.

Methods Based on Actual Costs

FIFO Methods

This method (First in First out) is based on the sound assumption that the inventories which are received first move out first. Hence, the inventories which remain unsold are those acquired subsequently. This method, however, will not suit the management in times of rising prices.

LIFO Method

In order to eliminate the inventory profit altogether, the alternative is to consider the latest purchases as part of cost of goods sold and treat the earlier

Create Teaching and Course Management Easier By Providing a Tools for Teachers

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ABSTRACT

These days, technology and the internet are essential to living a modern life. The technology known as the internet makes it possible for multiple computers to connect to one another at the same time via a network. The internet provides various benefits for students since it makes it easier for them to access the information they need. The internet can be useful for online education. The web-based application we are creating is called the "Academic Course Management System". To better assist educators and students, we have developed a course management system that leverages the power of technology. Course modules, assignments, circulars, and many more learning-enhancing elements are offered by this program. Using this tool, teachers give work to pupils, who then use their user name and password to access it once completed. Students can turn in their assignments through the application. To assign grades to pupils for their homework, teachers might also use a gradebook. They simplify teaching and course management by providing teachers with a framework and a toolkit. On the other hand, it could also include learning materials, assignments, and class activities, depending on the teaching-related elements. Over time, the Academic Course Management System (ACMS) has become an essential part of higher education.

KEYWORDS: Academic Course Management System, Technology, Application, Assignment, Online Learning, Students etc.

INTRODUCTION:

Universities have started using a variety of online learning tactics, such as learning management systems, as a result of the expansion of online learning in recent years (2013). These strategies enable students to learn independently and build problem-solving abilities. It has been noted that due to the COVID-19 outbreak, professors and students were forced to abruptly switch to an online teaching technique, which presented additional difficulties for both parties, such as the need to share notes, assignments, and tests. After the COVID-19 breakout, the world is shifting online in order to give students and teachers a suitable platform. We have developed a web-based application which integrates all the modules and functionalities into single system that can be handled by admin and access by the students and teachers. In this application, the system offers the possibility speeding up and simplifying the learning process.

ACMS is a web-based application which consist set of tools that enables the teachers to create online course content and post it on the Web. This application will save time for both teachers and students and provide opportunity to the students to get advantages of personalized learning. ACMS makes the process of teaching and learning easy and seamless for both teachers and students. This project helps the students to organize notes on their account for easy access.

As a new tool and innovation, the academic course management system (ACMS) is increasingly being used to improve the flexibility, efficiency, and quality of higher education. This is a web-based platform which integrates all the modules and functionalities into a single system that can be handled by the administrative head (admin) and accessed by students and teachers. Online course management software are used in colleges and universities for helping students and instructors to get in touch from any location. The main objective of this project is to provide circular, course module and assignment through this software. Faculty will assign grade to the students for their performance which is useful for the improvement of students performance. Considering each and every problem in the existing system this application contains 3 modules—

- 1) Admin
- 2) Teachers
- 3) Students



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Scholastic Course the Executives Framework

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Abstract

In this period innovation and the web are currently an essential piece of present day life. Web is an innovation of interfacing various PCs together through an organization at same time. There are a few advantages of the web for understudies since it permits them to effortlessly get the data they require. Web is valuable in web based learning. Our task is online application named, "Scholarly Course The executives Framework".

To more readily serve to the instructors and understudies, we have planned a course the executives framework that create utilization of the open doors presented by innovation. This application offers task, roundabout, course module and a lot more which works on the nature of learning. In this application educators give function as a task to the understudies and understudies can get to this task through their id and secret word and after culmination of the task. Understudies can present their task on the application. Be that as it may, instructors have gradebook likewise by which they can relegate grade to the understudies for their task work. They make instructing and course the board simpler by giving a structure and set of devices for the instructors. With the significance the showing perspectives, but it could incorporate learning objects, class exercise and tasks. Scholastic Course The board Framework (ACMS) become an essential piece of the upper school system.

KEYWORDS: Academic Course Management System, Technology, Application, Assignment, Online Learning, Students etc.

INTRODUCTION:

The growth of online learning in recent years (2013) has also prompted universities to employ a variety of online learning strategies including learning management system to help students learn by themselves and develop problem solving skills. It has been observed that during the covid-19 outbreak, students and teachers had to make a sudden shift toward the online teaching methodology and this sudden change resulted in new challenges for both teachers and students like sharing notes, assignment, exams etc. After covid-19 outbreak, the world is moving toward an online environment so to provide a proper platform for students and teachers. We have developed a web-based application which integrates all the modules and functionalities into single system that can be handled by admin and access by the students and teachers. In this application, the system offers the possibility speeding up and simplifying the learning process.

ACMS is a web-based application which consist set of tools that enables the teachers to create online course content and post it on the Web. This application will save time for both teachers and students and provide opportunity to the students to get advantages of personalized learning. ACMS makes the process of teaching and learning easy and seamless for both teachers and students. This project helps the students to organize notes on their account for easy access.

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- 1) Admin
- 2) Teachers
- 3) Students


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Comparing the Economics of Energy and Environment for Active Single and Double Inclined Solar Distillers

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Abstract

The compound illustrative concentrator (CPC) photovoltaic warm (PVT) connected to sun oriented photographs (N) of water gatherers called PVT-CPC Dynamic sun based filtration framework investigation is finished for a sun powered channel framework for a given molecule size under weather patterns of New Delhi. We look at framework efficiency, effectiveness, and life cycle cost analysis. With a yield on an annual basis, an energy restitution component, and an effectiveness of life cycle cost change examination of 5.0% and 12.63%, respectively, the warm model transformation productivity of life cycle (LCCE) is considered and a solo and double compound illustrative concentrator with photovoltaic framework for separating sun oriented distiller for the water profundity of 0.14 m. Not to mention, 22.21% exceeds the performance-slanted. The above examination closed, we can affirm that the twofold disposed are superior to the dynamic single PVT-CPC procedure for separating. The updated framework endures longer and can meet consumable water and DC power on radiant business days. For a long period of 50 years, with a loan fee of 5%, the water bowl region for a profundity of 0.14 m, the twofold disposed surpasses rural and efficiency, 16.09%, 21.48%, and 8.41%, individually.

Keywords - energy payback time, energy payback factor, LCCE, yield, distiller

1. Introduction

The solar distillation system in the remote area is the best choice to overcome the drinking water supply crisis economically, it does not create several adverse outcome on the surroundings, it is simple to keep up, with even for the period of the day, it provides D.C power supply, it is really simple and ease to design and manufacture. This is a role in the response circle that is differing from hydrological cycle or else, it is called a scanned view of hydrological cycle. This technology is provided water to a deserted area by clearing the brine; for the purpose, it can be still use as a solar device. Through a study of our literature, I have found that many researchers in solar distillation are researching active solar filtration system there. The above shortcomings can be overcome by solar distillation [1]. Various researchers reviewed numerous aspects such as energy matrices, design, and with or without smart materials. [2 – 9]. The traditional distiller represents simple design, performance. But the production of water was low later addition of elements heat gain can be improved. So, the new technology as nanotechnology in distillation can improve production of water [10]. In this work, the basefluid and nanoparticles optimized for without heat exchanger (basefluid/nanofluid) (system A), and (system B) with helically coiled heat exchanger (system B) the optimized parameters i.e. production of water, thermal energy, exergy, significantly improved with CuO. Moreover, based on energy and exergy CO₂ mitigation annually found 14.95 tones and 3.17 tonnes correspondingly for the hybrid system (A); whereas, it was found to be 24.61 tones and 2.36 tonnes correspondingly for the hybrid system (B) using CuO nanofluid. Traditional solar distiller has been compared based on performance with (system C) and found better with these modifications. Later on, a using PVT-CPC double slope solar distiller optimized for enhanced matrices [11]. For FPC system the flow rate, depth of water, and number of collectors have been studied at 0.14 m. subsequently per annum. Obtained results were compared with previous researchers and found better with PVT-CPC based on water generation, and cost of distillate. The payback time of energy was lower based on exergy by 74.66% and 62.62%; factor of energy production is higher by 43.30% and 38.14%; higher LCCE by 48.57%, and cost of distillate output is lower by 35.37% and 4.88% for the proposed system with FPC rather than system with PVT and double slope still respectively. Also, this system has been analyzed further for the PVT-CPC solar distiller life cycle cost of it the thermal modeling has been developed [12]. Optimized flow rate achieved for PVT-CPC. The yearly production, EPF, and

Use of Biogas in a CI Engine for the Practical Application of Biodiesel/Diesel Mixtures

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Abstract

The ongoing survey covers the utilization of a vaporous elective fuel, unrefined biogas, in a diesel engine. Biogas alone can't run a diesel engine, considering the way that vaporous fuel can't consume by pressure. It will in general be given to the CI engines in twofold fuel mode by using an air-biogas blender contraption. Using a venturi gas blender to create a uniform combination, the motivation behind this work is to research the exhibition and emanation qualities of a diesel-biodiesel-biogas double fuel mode diesel motor. The display and radiation characteristics of the engine worked by twofold fuel mode were likely analyzed, and diverged from diesel. Biogas presented at a stream pace of 1 L/min was found to have unrivaled execution and lower emanation than biogas presented at other stream rates. Then again, when contrasted with diesel, double fuel mode with a biogas stream pace of BD10 BG@1L/min exhibited a normal reduction in BTE of 9.94% and an expansion in BSFC of 8.82 percent. However an expansion in CO and HC by 5.18% and 3.01% independently and a run of the mill decline in NOx surges by 14.91% when diverged from diesel.

Keywords: Alternative Fuel, Biogas, Biodiesel, Diesel Engine, Dual-fuel, Venturi Gas Mixer

1. Introduction

India is one of the fastest developing countries with a stable economic growth, which multiplies the demand for transportation in many folds. Fuel consumption is directly proportionate to this demand. India depends mainly on imported fuels due to lack of fossil fuel reserves and it has a great impact on economy. Recent studies and research have made it possible to extract bio-diesel at economical costs and quantities. The blend of Bio-diesel with fossil diesel has many benefits like reduction in emissions, increase in efficiency of engine, higher Cetane rating, lower engine wear, low fuel consumption, reduction in oil consumption etc. It can be seen that the efficiency of the engine increases by the utilization of Bio-diesel. This will have a great impact on Indian economy. Diesel fuels have deep impact on the industrial economy of a country.

The objective of this study is to experimentally investigate performance, combustion and emission characteristics in a dual fuel CI engine using a B20 blend of algae biodiesel (AOME), as pilot fuel and to further replace biodiesel with biogas, which is also a renewable fuel. The suffix B with the numerical signature indicates the percentage of algae biodiesel by volume in the biodiesel blend. Experimentation was also conducted using diesel and AOME as fuel to serve as the baseline for comparison. Experiments were conducted at various loads at rated RPM for diesel and biodiesel in single fuel mode, and biodiesel and biogas in dual fuel mode of operation. The engine behavior with respect to combustion, performance, and emission characteristics are compared against a baseline of a standard diesel run. Feasibility studies on the use of different renewable liquid and gaseous fuels have been studied throughout the world. The oils that are extensively studied include Sunflower, Soya bean, Peanut, Rapeseed, Rice bran, Karanji etc., [1,2]. One of the disadvantages of using these oils in diesel engines is nozzle deposits, which drastically affects the engine performance and emissions. The refining processes of vegetable oil gives better performance compared to crude vegetable oil [3,4,5,6]. Goering et al [7] studied the characteristic properties of eleven vegetable oils to determine which oils would be best suited for use as an alternative fuel source. Of the eleven oils tested, corn, rapeseed, sesame, cottonseed, and soyabean oils had the most favourable fuel properties. There is an improvement in the engine performance when these modified vegetable oils are used instead of base vegetable oils [8,9,11,12]. This improvement in performance is attributed to good atomization of these modified fuels in the injector nozzle and a significant reduction in the viscosity. The performance of the non-edible oils like Rice bran oil [15] and cotton seed oil [14] was found satisfactory. The idea of using vegetable oils as fuel for diesel engines is not a new one. Rudolph Diesel used peanut oil as

Plan, Advancement of Robotized Coconut-Scratching Machine

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Abstract

From one side of the planet to the other, coconuts are eaten up by hungry individuals. As well as being nutritious and valuable, they have numerous different applications. Coconuts are multipurpose and might be utilized for different purposes, including yet not restricted to: fuel, skin wellbeing, malignant growth anticipation, beauty care products, and cooking. It requires a great deal of investment and work to scratch coconut. The administrator should turn the coconut while applying strain to scratch off the tissue, since this activity is done physically. There are popularized coconut scratching machines available, but they actually need some human mediation and are not completely robotized. The self-loader strategy frequently utilizes an electric engine to turn an edge while the client presses the coconut half-shell against it. The administrator faces unmistakable risks in every ways. To conquer the notable challenges related with grinding coconuts, this study subtleties the improvement of a mechanized scratching machine. This paper proposes a plan that disposes of practically all dangers related with coconut scrubbers. The administrator is saved both work and risk thanks to the machine's finished computerization. Coordinated inside the framework is a bi-directionally-movable sharp edge. The capacity to move in three aspects is created conceivable by a bracing system that can move in three bearings. It doesn't require over fifteen seconds to clip the coconut half shell. Once mounted, scratching the coconut is completely computerized at the hint of a beginning button. The critical commitment of this study is the creation and configuration subtleties of the working model.

Keywords: Coconuts, Automated Scraping, Human Intervention, Blade.

Introduction

Coconuts are consumed all around the globe as a popular fruit. They have several applications, including some that are beneficial to one's health and nutrition. Coconut may be used in a variety of ways, including cuisine and nutrition.

- Prevention of cancer and overall skin health
- Cosmetics and make-up
- Fuel (Charcoal) (fuel) The coconuts are broken apart with a hammer or a knife in the process of coconut processing that is done on a smaller scale. Both hand tools and mounted-type coconut scrapers are used in the process of extracting the kernel. According to Practical Action (2008), even in the case of coconut processing on a small scale, the use of hand instruments is very laborious and requires a lot of patience. Coconut scraper machines that are controlled manually are very portable and can be used efficiently in families. The clamping screw is used to attach the whole mechanism on a table, which allows the machine to be used effectively. The scraping bit receives the rotation that is transmitted from the manual handle during the process of rotation (Figure 1a). The half-shell of the dehusked coconut is forced against the sharp bit while the spinning mechanism is in motion. In order to grate a coconut with this gadget, a considerable amount of work is required. A slide might result in significant injuries, thus the operator has to pay attention to the situation because of this possibility.

It is estimated that India is the third largest producer of coconuts in the whole world. According to the study that was conducted in 2017, the production rate was around 11.47 million metric tonnes. There are numerous techniques that are used to remove the coconut husk, and this article demonstrates that one of those methods is to rub and crush the coconut in order to get coconut milk and other edible portions. However, these methods have a number of issues and restrictions when it comes to operating the machines. There is a correlation between these problems and the pace of production of virgin coconut oil. The customer is exposed to an even greater level of risk by these techniques. It is advised that the automated and less destructive strategy be used in order to have a better degree of success in removing the present constraints. Because of this, there is no longer a need for professional operators to be engaged in the process of preparing virgin coconut oil. During the course of



An Adaptive Image Dehazing Algorithm Based On Dark Channel Prior

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Abstract

In this study, we provide a novel rapid alternative method for simultaneous dehaze and denoise. The suggested method begins by estimating a transmission map using a home windows adaptive strategy that is built on the renowned dark channel prior. By using this transmission map, the threshold artefact in the final image may be significantly reduced, and the estimate accuracy can be improved. Next, the transmission map is converted to an intensity map. This will be used to build the new version model, which will seek for the final picture free of haze and noise. Similarly, it is highlighted that the suggested variant model has a minimiser and that it is a strong feature. We guarantee convergence of the set of laws and design a numerical procedure based on the Chambolle-Pock set of rules. Extensive results from real-world experiments show that our technology can effectively recover high-quality, contrast-free images free of haze and noise.

Keywords: Dehaze, Denoise, Adaptive, Chambolle-Pock algorithm

INTRODUCTION

The weather is terrible, and the external scenery is deteriorating due to haze, mist, fog, and smoke. It alters the tones and decreases the contrast of regular photos, it makes scenes less visible, and it poses a serious threat to the dependability of numerous applications, such as outdoor surveillance and object detection. It also reduces the clarity of satellite TV for laptop photos and underwater snapshots. Photographers find this a frustrating and annoying problem. Eliminating haze from images is therefore a highly sought-after and critical area of image processing. Light is scattered before it reaches the camera due to the vast amounts of these particles in the environment, which distorts the outside picture. As it mixes with additional light in the surroundings, haze weakens the meditated light from the scenes. This imagined light (i.e., scene colours) is often enhanced from mixed light by haze reduction procedures. Using this efficient haze removal of picture may also advance the visual system's consistency and power. Polarisation independent problem analysis and dark channel earlier are only two of the many methods available for removing image noise. It is common for ambient light to disperse before reaching the camera lens, and for any digital camera lens to mix with ambient light, all because of the existence of the surroundings. Picture quality deterioration, such as increased noise, reduced intensity contrast, and inconsistent colour, is unavoidable as a consequence. This kind of deterioration becomes much worse under unfavourable weather conditions, such as when there are aerosols together with haze, fog, rain, dirt, or odours. For example, fog is a common climatic phenomena that may also cause noise and ambiguity via the albedo effect. The ability to understand and extract information from the images is somewhat hindered by these occurrences. Consequently, there is an immediate need for denoising and haze removal techniques in practical applications. There is a lot of interest in imaging technology right now for dehazing and denoising images of natural scenes. The benefits of these procedures are pure. For starters, photo fusion, feature extraction, and segmentation are just a few of the many important applications that benefit greatly from haze-and noise-free photos. Secondly, the images themselves are more aesthetically pleasing and vibrant. Photo dehazing is a lot of work, nevertheless, since the haze usually depends heavily on unknown intensity data. Input facts consisting of only one picture could make the issue more ill-posed. Machine vision, meteorology, optics, and even certain parts of computer photos are all involved in the multidisciplinary process of image dehazing. Fog and haze are visual diversity restrictors in the environment, and they may significantly lower the evaluation of the target situations.

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Exploring the State of Indian Politics during Partition

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Abstract:

The study investigates the state of Indian politics during the partition, with a focus on the role of key political figures, the impact of political parties, and the communal violence that ensued. The methodology involves a systematic review approach as well as first-hand accounts. The study sheds light on the complex interplay of political forces and communal tensions during this tumultuous period. The key conclusion from this study is that the actions of political leaders and parties heavily influenced the course of events during the partition, contributing to the widespread communal violence that tragically unfolded.

Keywords: Partition, Indo-Pak Politics, Communal Violence, 1947

1.0 Introduction

The partition of India in 1947 was a pivotal moment in the history of the Indian subcontinent, marking the end of British colonial rule and the birth of two independent nations, India and Pakistan. This tumultuous period was characterised by intense politics, communal tensions, and widespread violence, leaving a lasting impact on the social and political landscape of the region. This research paper seeks to delve into the state of Indian politics during the partition, with a specific focus on the role of key political figures, the impact of political parties, and the tragic communal violence that took place.

The primary objective of this research is to examine the pivotal role played by key political figures such as Muhammad Ali Jinnah and Mahatma Gandhi in shaping the events leading up to the partition. Both Jinnah, the leader of the All-India Muslim League, and Gandhi, the preeminent figure of the Indian National Congress, held contrasting visions for the future of India (Dawn, no page), and their actions and ideologies had profound implications for the course of the partition.

Furthermore, this study aims to analyse the impact of political parties, particularly the Muslim League and the Indian National Congress, in the lead-up to the partition. The Muslim League's demand for a separate homeland for Muslims (National Archives, no page) and the Congress's vision of a united, secular India were central to the political discourse of the time. Understanding the actions and strategies of these influential political organisations is crucial for comprehending the complex dynamics that led to the partition.

Additionally, the research will explore the devastating communal violence that erupted during the partition, causing immense trauma and loss of life for millions of people (The Partition Museum, no page).

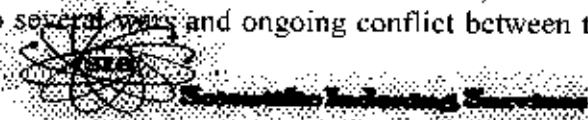
By examining the factors that fueled this violence and its aftermath, this study seeks to shed light on the human cost of political upheaval and the long-lasting repercussions on the affected communities.

By undertaking a comprehensive analysis of these interconnected themes, this research aims to provide an advanced understanding of the state of Indian politics during the partition, offering insights into the complex interplay of political forces, communal tensions, and the tragic consequences that continue to exist in the history of the region.

2.0 Literature review

The partition, an incredibly dark part of Indian and Pakistani history took place on 14th august 1947. With Muslim - majority parts becoming Pakistan and Hindu- majority parts becoming India, this religious conflict has aftershocks we still experience more than 7 decades later. Amongst others, a few of these repercussions being the Kashmir conflict, military standoffs, terrorism as well as cultural and sports rivalries affecting the lives of civilians deeply.

One of the most contentious issues between India and Pakistan is the dispute over the region of Kashmir. The partition left the princely state of Jammu and Kashmir divided, with India and Pakistan both claiming it. This has led to several wars and ongoing conflict between the two



Intelligent Accident Detection and Alert System

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Abstract

There are lots of research approximately preventing or detecting the car injuries. most of them consists of sensing gadgets which may cause twist of fate or statistics about injuries. in this study, a gadget which detects happening of injuries could be determined. The system will accumulate vital information from neighbor cars and system that records using device learning tools to come across feasible accidents. system mastering algorithms have proven achievement on distinguishing odd behaviors than regular behaviors. This have a look at pursuits to research site visitors conduct and bear in mind automobiles which flow distinct than cutting-edge traffic conduct as a opportunity of an coincidence. effects showed that clustering algorithms can successfully come across accidents. The proposed device will capture the video stream, computes the enter, and the device alerts are generated in actual-time, because of this that no extra sensors will be required.

Keywords: Faster R convolutional neural network (FRCNN), Deep Learning

Introduction (Heading 1)

1. INTRODUCTION

Around the world, over one million people die each year in traffic accidents, with many more sustaining minor injuries. Developing and underdeveloped countries have particularly high rates of traffic accident deaths, despite only accounting for half of the world's vehicles. In India, for example, there are an average of 13 deaths per hour, totaling 140,000 deaths per year. The main goal of this project is to develop a system that can detect accidents in real-time by analyzing video footage from CCTV cameras

installed on busy roads. By using advanced deep-learning algorithms, such as convolutional neural networks (CNNs), we aim to achieve fast and accurate accident detection that can alert authorities and emergency services as quickly as possible.

In many cases, timely assistance for accident victims is crucial, and every minute can make a difference in saving lives. By automating the process of accident detection and reporting, we hope to reduce response times and provide faster and more effective emergency assistance. The computing power of modern CPUs has made real-time applications, such as video surveillance, increasingly feasible. One of the most important applications of video surveillance is traffic monitoring, which can detect, track, and evaluate traffic flow, vehicle speed, and classification. By using CCTV systems for traffic monitoring, we can improve road safety and potentially save thousands of lives.

OBJECTIVE

- To establish a system which can capture a video & generate a emergency alert.

2. LITERATURE SURVEY

Durgesh Kumar Yadav,[1] The author stated that framework is required which is completely ready to facilitate between the various moves that will be initiated for the speedy reaction at the mishap area. According to the examination such discovery framework includes various advances like Worldwide Simating Framework [GPS] and Worldwide Framework for Portable Correspondence [GSM], utilizations of cell phones, and so on. Every one of the vehicles are incorporated under these discovery frameworks

Effects of Cognitive Sensory Motor Training Versus Repetitive Facilitation Exercises of Upper Limb in Hemiparetic Patients

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ABSTRACT

Stroke [CVA] is the sudden loss of neurological function caused by an interruption of blood flow to the brain. Large numbers of people who survive a stroke are left with permanent impairment of arm and hand function, even after completion of conventional rehabilitation programs. The standard neuro physiological facilitation technique use for hemiplegic upper limb have not been confirmed to promote functional recovery of hemiplegic limb. This promote that more research needs to be conducted for same.

Cognitive Sensory Motor Training Therapy & The repetitive facilitation exercises (RFEs) Both techniques will promote functional recovery of hemiparetic upper limb and hand by improving joint perception and realization of movement. Hence, this study aims to compare the effectiveness of cognitive sensory motor training versus repetitive facilitation exercises on quality of movement of upper limb, functional activity and Range of motion of upper limb in hemiparetic patients.

A blinded randomized clinical trial was conducted 30 patients were divided into 2 groups (GROUP A and GROUP B)- those who performed cognitive Sensory Motor exercises (GROUP A- experimental group) and those who performed repetitive facilitation exercises (GROUP B-control group) Data for measures quality of movement performance of the hemiparetic arm and hand on MESUPES scale, Barthel Index (BI) measures the extent to which somebody can function independently and has mobility in their & goniometer measuring the joint ranges in each plane of the joint was collected on day 1 (pretreatment session) and on 190 day after the experiment.

This study produced a statistically significant increase in overall on quality of movement, functional activity and range of motion in both the group of upper limb in hemiplegic patients. This research also provides evidence that training exercise may be a valuable and important tool in clinical practice and is consistent with the current use by clinical physiotherapist in the treatment of upper limb in hemiplegic patients.

Keywords: Stroke, Barthel Index, MESUPES scale

INTRODUCTION

Stroke (cerebrovascular accident [CVA]) is the sudden loss of neurological function caused by an interruption of the blood flow to the brain. Ischemic stroke is the most common type, affecting about 80% of individuals with stroke, and results when a clot blocks or impairs blood flow, depriving the brain of essential oxygen and nutrients. Hemorrhagic stroke occurs when blood vessels rupture, causing leakage of blood in or around the brain. Clinically, a variety of focal deficits are possible, including changes in the level of consciousness and impairments of sensory, motor, cognitive, perceptual, and language functions. To be classified as stroke, neurological deficits must persist for at least 24 hours. Motor deficits are characterized by paralysis (hemiplegia) or weakness (hemiparesis), typically on the side of the body opposite the side of the lesion. The term hemiplegia is often used generically to refer to the wide variety of motor problems that result from stroke. The location and extent of brain injury, the amount of collateral blood flow, and early acute care management determine the severity of neurological deficits in an individual patient. Impairments may resolve spontaneously as brain swelling subsides (reversible ischemic neurological deficit), generally within 3 weeks. Residual neurological impairments are those that persist longer than 3 weeks and may lead to lasting disability. Strokes are classified by etiological categories (thrombosis, embolus, or hemorrhage), specific vascular territory (anterior cerebral artery syndrome, middle cerebral artery syndrome, and so forth), and management categories (transient ischemic attack, minor stroke, major stroke, deteriorating stroke, young stroke).

PREVALENCE AND INCIDENCE OF STROKE

Stroke is the fourth leading cause of death and the leading cause of long-term disability among adults in the United States. An estimated 7,000,000 Americans older than 20 years of

Gram-Based Fuzzy Keyword Search Over Encrypted Data in Cloud Computing

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Abstract

The market for portable devices has recently seen tremendous growth, and with it, the use of cloud computing. The cloud's primary computers contain a great deal of sensitive information. File searching is made more difficult by the fact that these files are often encrypted before uploading in order to protect privacy. While earlier iterations of cloud computing's searchable encryption algorithms did make it possible to safely search encrypted data using keywords, these methods only worked for precise matches and would not work with variations in spelling or morphology. Fuzzy keyword search over encrypted cloud data is solved in this study. K-grams are used to generate imprecise outcomes. Two independent servers, unable of exchanging data with one another, are used for the purpose of security. The results of our experiments validate the efficacy and scalability of our technology in dealing with massive volumes of encrypted information.

Keywords: cloud computing, encryption algorithms, Fuzzy, K-grams

Introduction

Over the course of the last few years, a huge number of individuals have begun to use cloud computing services for their respective professions. People have the ability to save, access, and share their information at any time and from any location thanks to cloud computing. As a consequence of this, an increasing amount of sensitive information is being kept on the cloud. Users have the expectation that the cloud service provider would not only ensure their privacy and security but also ensure that their activities are completed efficiently in such an open environment. The term "cloud storage" refers to a type of online storage in which users upload their files, and the data they upload is then kept on various virtual servers, which are often hosted by third parties, rather than on dedicated servers.

Only authorised users, such as the owners of the data, are able to view the information that has been saved. In order to better safeguard their data, users often encrypt not only the contents of their files but also the names of their files before uploading them to the cloud. This makes it more difficult for the cloud storage provider to sift through the data. In the most recent years, searchable encryption methods have been developed as a solution to these issues [1-10].

These techniques, on the other hand, are not scalable since they are too sluggish to be applied to a big dataset for any reason. In addition to this, users often make typographical mistakes or use morphologically different forms of the same word. In light of this, the search service for cloud storage need to allow fuzzy searching. The purpose of this research is to offer a fuzzy keyword ranked search engine that is based on k-grams and operates on encrypted cloud data in order to overcome these challenges.

Two distinct servers—a search server and a storage server—are used by our organisation in order to enhance the safety of our system. Once the search server has been hacked, the attacker will be unable to utilise the file access pattern to determine the related document that is stored in the storage server. This is because the attacker will not be able to access the file. When we generate fuzzy keyword sets, we make use of k-grams, and when we measure the similarity between keywords, we utilise the Jaccard coefficient. The elimination of keywords having a Jaccard coefficient that is lower than our threshold value is done in order to prevent the process of enumerating all fuzzy keywords and, as a result, to reduce the search space. The determination of this threshold value is accomplished via the many experiments that are detailed in Section 5. Our suggested weighted ranking mechanism is used to determine the order in which search results are displayed. If a user uses our system, they will be able to do a fuzzy keyword search in an encrypted environment in a safe and efficient manner.

A platform that provides computing services such as storage, networks, software, analytics, developer tools, and servers via the internet is what we mean when we talk about cloud computing. In their most basic form, they are data centres that provide resources to

Machine Learning Approach via an Ensemble of Classifiers for Computer Aided Lung Nodule Diagnosis

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Abstract

The objective is to foretell methods for lung cancer prediction that are based on machine learning. Using supervised machine learning to analyse datasets (SMLT) to analyse the full dataset, validate the data, clean and prepare it, and visualise the results, as well as to conduct uni-, bi-, and multivariate analyses, missing value treatments, and variable identification. Using supervised classification machine learning techniques, we aim to provide a machine learning-based approach for accurate lung cancer prediction. In addition, we will evaluate the user interface of a GUI for lung cancer prediction by characteristics and compare and contrast the performance of several machine learning algorithms using the dataset provided by the transportation traffic department.

Keywords: Dataset, Machine Learning Classification method, Python, Prediction of accuracy result

Introduction

A devastating disease, cancer affects many people's lives. During vital functions, the lungs' primary function is to draw oxygen into the bloodstream and exhale carbon dioxide. Lung cancer develops when cells and tissues proliferate uncontrollably. Cancer, which is the first malignancy, which is the leading cause of cancer-related mortality in men and the second leading cause of cancer-related mortality in women. Nearly one million elderly people die each year because of cancer worldwide [1]. Tumours may only be classified as either benign or malignant. Cancer comes in many forms, including colon cancer, leukaemia, melanoma, and many more [2]. Since the early eighteenth century, the incidence of cancer has significantly increased. Many other things may cause carcinoma, including smoking, secondhand smoke, exposure to gases like radon, asbestos, and many more. There are two subtypes of lung cancer, small cell lung cancer (SCLC) and non-small cell lung cancer (NSCLC). At partner diplomas in higher degrees, the radiologists may use computerised tomography (CT) and opportunity scanning techniques to find the harmful nodules [3]. Their origin is in the bronchi, which are located in the chest's midsection. Malignant neoplasm symptoms includes symptoms such as difficulty breathing when moving, lethargy, speech impediment, dysphasia, blood in the cough, lack of appetite, and pain in the shoulder, chest, or arm [4]. Considering the symptoms, the crucial task of detecting cancer in its early stages may be quite challenging. carcinoma has the highest death rate of any cancer kind because its symptoms are most severe in the latter stages. Doctors rely on correct designations for different types of carcinoma to help them determine and choose the best therapy [5]. While physician recommendations remain the most important part of any designation process, current data suggests that various AI class methodologies might assist physicians in improving their procedures. Misuse class tactics are a common way to lessen the likelihood of errors caused by inexperienced physicians [6].

One use of artificial intelligence is machine learning (ML), which allows computers to learn and improve themselves via experience rather than code. ML classifiers have gained notoriety for their ability to identify lung and breast malignancies. There are three main types of machine learning algorithms: supervised, unsupervised, and reinforcement learning. In order to improve the accuracy of our model for identifying cancer in CT scans, we used an ensemble classifier. This classifier comprises five separate ML supervised algorithms, such as decision tree, KNN, SVM, RF, MLP, logistic regression, etc. [7]. Medical facilities and clinics may use ML to reduce the diversity of study measures. This paper's primary objective is to classify carcinoma detection as either benign or malignant. There are four stages to the suggested method. The first is noise filtering as part of the pre-processing of CT test images. The second is segmentation using 'Otsu' thresholding. The third is feature extraction, which extracts many characteristics such as area, perimeter, centroid, and so on. Alternatives for

An Assessment of Placeio: A Situation Stage for Understudies

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Abstract

This examination paper assesses the viability of Placeio, a situation stage that interfaces understudies with expected businesses. This stage has been created utilizing the cutting edge innovations, for example, respond and Laravel. Respond is one of the well known web systems that has acquired significance over different structures, for example, Precise, Vue, and so on.. This is a result of its execution of Virtual DOM, whose essential goal is to improve the general exhibition of the application. Then again, LARAVEL is a free open source PHP structure. Frameworks are on go, as there is compelling reason need to compose entire code. The consequences of this study recommend that Placeio can possibly be a significant device for interfacing understudies with expected businesses and assisting them with accomplishing their profession objectives.

Keywords— LARAVEL , DOM , React-js , Placeio

I. INTRODUCTION

The work market is turning out to be progressively cutthroat, and understudies need to have a stage that interfaces them with possible bosses. To address this need, we created Placeio , an internet based work entryway that empowers understudies to enroll and go after different positions that are accessible to them. Heads can likewise enlist and post employment opportunities, survey understudy applications, and channel understudy profiles in light of their abilities and status. This study means to assess the adequacy of Placeio in associating understudies and employers. We utilized respond js for the front-end and Laravel for the server side prearranging. The significant explanation for picking respond js is that it utilizes the virtual DOM. Respond is largely a web structure that changed into especially intended to adapt to the generally speaking performance problems with inside the utility. Respond makes use of digital DOM that comes to a decision whether or not the aspect needs to be reloaded or presently no longer primarily based totally at the cutting-edgenation of the viewpoint and the modifications which have taken place. This keeps the utility from re-delivering superfluously. Aside from this Respond also presents one-manner information float which allows to administer the float of the information with inside the utility which makes the checking of the tool placeless convoluted and moreover works on the spread and the soundness.

II. LITERATURE REVIEW

Online job portals have become increasingly popular in recent years, as they provide an efficient and effective way to connect job seekers and employers. Online job portals enable employers to post job openings and review candidate profiles, while job seekers can search for job openings and apply for positions online. Online job portals have several advantages, such as the ability to reach a large number of job seekers and the ability to filter candidate profiles based on specific criteria. To make our platform effective, we chose a PHP framework i.e, LARAVEL.

In [1], this research paper the framework efficiency is significant in terms of two performance parameters that

describe the efficiency of a web application with respect to end-user: 1) maximal time to serve the request;

2) In a definite time period how many requests can be served. This research paper gives some functional and non-functional requirements for considering a framework to work on. The functional requirements contain that the user and user groups should cater access to the forms that collect data from users. Non-functional requirements include that every module of the projects should be independent of each other so that they can work independently. This paper provides some parameters to categorize different PHP frameworks that are its documentation and technical support, database, technologies it supports, programming techniques, tools supporting web application development, caching, conciseness of source code and most important framework efficiency.

Effect of Life Skills Training on Emotional Intelligence among Nursing Officers at selected Tertiary Care Hospital

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ABSTRACT

Background: Nurses are on the frontline of patient interaction in any clinic or hospital. Being emotionally intelligent means understanding ourselves, handling our emotions in a mature way, understanding others and helping them to handle their emotions. Life skills training helps to build confidence in communication, cooperation and collaborative skills, problem solving, socializing and recognize the impact of the environment. **Methods:** One Group Pre-test Post-test Research design was adopted in this study. The study was conducted in Pondicherry Institute of Medical Sciences, Puducherry in the month of MARCH 2023. 50 Nursing Officers were selected by using Convenient Sampling technique. Standardized tool (Schutte Emotional Intelligence Scale) was used to assess the Emotional Intelligence of the Nursing Officers. The data was analysed for frequency, percentage, mean and standard deviation. The effect of Life Skills Training was analysed by using Paired t-test. Association between pre-test level of Emotional Intelligence and demographic variables was analysed by using Fisher's Exact test. **Conclusion:** There was significant increase in the post-test level of Emotional Intelligence as compared to the pre-test level of Emotional Intelligence and the increase was statistically significant at $p < 0.05$. There was statistically significant association between the pre-test level of Emotional Intelligence and demographic variables like years of work experience, working area at $p < 0.05$. The study findings suggests that Life Skills Training is found to be efficient in improving the Emotional Intelligence of Nursing Officers.

Keywords: Life Skills Training, Emotional Intelligence, Nursing Officers

1. INTRODUCTION

According to World Health Organisation (WHO), Life skills are the abilities for adaptive and positive behaviour that enable individuals to deal effectively with the demands and challenges of everyday life.^[1] Emotional intelligence, on the other hand, is defined by another eminent researcher, Bar-On, as "a range of non-cognitive capabilities, competencies, and skills that influence one's ability to successfully cope with environmental demands and pressures."^[2]

The conversion of emotional intelligence into on-the-job skills is facilitated by emotional competence. For instance, one must have acquired the specific empathic abilities necessary for efficient bedside nursing, caring pastoral counselling, and psychotherapy in order to truly understand another person's suffering.^[2] Like any healthcare professionals, nurses strive to reach their full potential and work successfully in the field. While medical education provides the knowledge necessary for performing their jobs, acquiring lifeskills will boost their success and allow them to enjoy their careers to the fullest.^[3]

Objectives

1. To assess the level of Emotional Intelligence among Nursing Officers.
2. To determine the effect of Life Skills Training on Emotional Intelligence among Nursing Officers.
3. To associate the pre-test level of Emotional Intelligence with selected demographic variables.

2. MATERIALS AND METHODS

Quantitative research approach using One Group Pre and Post-Test Research Design was adopted.

The study was conducted among 50 nursing officers working in Pondicherry Institute of Medical Sciences, Puducherry in the month of MARCH 2023. Nursing Officers who met the inclusion criteria were selected by using convenient sampling technique.

Data collection instrument and technique: Tool

Section – A: Self report questionnaire consisting of age, gender, education, marital status,

Plant Leaf Disease Detection Using Machine Learning

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Abstract

To achieve maximum development and production in their fields, farmers need automated disease monitoring systems for plants rather than human monitors. It takes a lot of time and an expert to properly detect a disease using human eye inspection, which is an outdated method. Hence, we implemented a state-of-the-art system for concurrent detection of illnesses affecting both leaves and fruits in this research. We used digital image processing to overcome the blind spots of human vision and provide rapid and reliable diagnoses of plant illnesses. To identify and classify illnesses, our research suggests using a MATLAB-implemented multi-SVM strategy in conjunction with a k-means clustering technique. In certain nations, it could be a lengthy and expensive process to diagnose plant diseases due to a shortage of easily accessible experts. When plants aren't inspected often, diseases may spread, leading to the need to apply more pesticides that kill birds, beneficial insects, and other wildlife. Automatic detection is essential for early diagnosis when plant leaves or fruits show the first indications of a disease. By evaluating photos of the afflicted regions of leaves and fruits, our MATLAB-based technology accurately detects and diagnoses plant diseases.

Keywords: Plant disease recognition, deep learning, computervision, convolutional neural network

Introduction

Detecting plant diseases at an early stage is crucial for ensuring rapid crop output. Plant diseases such as black measles, black rot, bacterial spot, etc., may reduce crop output and quality. To mitigate the impact of these diseases, farmers may use expensive methods and insecticides. The plant and its environment are both killed by chemical treatments. On top of that, production costs go up, and farmers lose a tonne of money using this method. Early detection is key to successful condition management. It is standard custom in agriculture to depend on human knowledge when identifying plant diseases. Artificial intelligence and computer vision research have progressed to the point where plants can be automatically diagnosed from unprocessed images. Insect infestations and plant diseases that impact the leaves were examined in this research.

These days, it's usual to see a computer evaluating field photographs. These images may be utilised for a variety of tasks, such as weed detection, fruit grading, insect count, and plant genetic analysis. Deep learning's potential for broad application is currently trending. Deep learning is the most advanced AI technology since it simulates the way the human brain learns. Traditional methods often use semantic features as a means of categorization. A convolutional neural network (CNN), a kind of deep learning model, has shown to be very useful in the field of image processing.

A hybrid model using CNN to acquire properties of leaves is proposed by Lee et al. for the purpose of categorising the features acquired from leaves. There are primarily three parts to the study's methodology: data gathering, data cleaning, and image classification. The study made use of the plant village dataset, which contains several plant kinds such as apple, maize, grape, potato, sugarcane, and tomato. Included in the study are images of healthy plants that have tested positive for eleven distinct plant diseases. Prior to sending images into a classification system, image pre-processing comprises reducing their file size and increasing their quality. Efficient disease prevention is a formidable obstacle to sustainable agriculture.

Incorrect pesticide application may lead to the development of long-term resistance, making illnesses more difficult to control. Finding plant diseases quickly and accurately is a key component of precision agriculture.

In order to stop wasting money and other resources and instead accomplish healthy production in this changing environment, it is more important than ever to recognise illnesses correctly and promptly, including early prevention. Several methods exist for identifying the presence of plant diseases. A comprehensive and advanced evaluation is necessary when warning signals are lacking or when preventive actions are no longer feasible. The main

Unveiling the Language of Expression: Decoding Verbal and Non-verbal Cues in English Literature

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Abstract

This qualitative content analysis decodes the complex interplay of verbal and non-verbal cues in Mohsin Hamid's *Exit West*. Focused on characters Saeed and Nadia, the study reveals nuanced power dynamics and challenges to traditional gendered communication norms. Examining instances of conformity and resistance to gendered communication ideals, the analysis sheds light on emotional intelligence and societal negotiation. The study not only enhances understanding of character dynamics but contributes to broader discussions in literary, cultural, and gender studies. Additionally, this research invites further exploration into the evolving nature of communication in contemporary literature.

Introduction

In John Gray's popular book *Men are from Mars, Women are from Venus: a Practical Guide for Improving Communication and Getting What You Want in a Relationship*, he outlines the underlying differences in communication styles between men and women. Gray's book is one of the most important benchmark pieces of literature on communication differences across gender of the twentieth century. He suggests that men and women are so different in their approaches to communicating that they are from different planets: they have different needs, goals, and values in the way they communicate (Gary, 1992). Women are consistently characterized as having a consistent predisposition to be communal—to care for and attend to the well-being of others. The typical woman is thought to be kind, caring, sensitive, empathic, and emotional. However, men are believed to be primarily agentic and instrumental. The characteristic male is felt to be independent, confident, decisive, aggressive, and strong (Deaux, 2008). It is not surprising then that people believe that women and men show distinctive patterns of non-verbal behavior. For example, Briton and Hall (1995) found that people think that women are more non-verbally expressive and responsive than are men. Women are also thought to be better at sending and deciphering nonverbal messages. In contrast, males are believed to be louder and more interruptive and to show more restless body movements and dysfluent vocal behaviors, such as inserting filled and unfilled pauses while speaking. The issue here, as is the case with stereotypes more generally, has to do with the validity or accuracy of such beliefs.

There is more to gender beliefs than simple assumptions such as the idea that women express more positive emotion than men (Shields, 1987). Not only are men and women believed to have different repertoires of nonverbal behavior, some nonverbal behaviors are understood a priori to be feminine or masculine. Therefore, crying—which is believed to be something that women do more than men (Ad Vingerhouts, 2000)—denotes femininity in the crier (sometimes called effeminacy if the crier happens to be male). This pre-gendering of nonverbal behavior reinforces ideas about who (men or women) should exhibit which behaviors, and it impinges on what behaviors men and women choose to display when motivated to avoid being perceived as gender deviant.

Statement

Gender differences in communication have been of interest to researchers because these differences are assumed to explain, in part, the nature of relationships between men and women. The primary explanation for these differences is the use of dominant and submissive roles by males and females. The folk linguistic assumptions such as; women are more talkative than men (chattering women), or men interrupt women more, have been among the controversial topics in gender studies.

The question of how the interpretation of such natural phenomena is to be accommodated within a cognitively oriented pragmatic theory. How are non-verbal behaviors interpreted? What do they convey? What is the relation between natural non-verbal behaviors and those non-verbal behaviors that are not natural? What is the difference between masculine and feminine verbal cues and the responses that they generate?

Monitoring the Levels of Antiepileptic Drugs for Therapeutic Purposes: An Overview of the Current Situation and Potential Future Advancements

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Abstract:

Antiepileptic drugs (AEDs) play a crucial role in treating epilepsy, with expected variability in their pharmacokinetics across diverse patient groups such as children, the elderly, pregnant individuals, and those undergoing polytherapy with potential drug interactions. Additionally, ensuring patient adherence is essential. Therapeutic drug monitoring (TDM) serves as a valuable tool for maintaining treatment quality. Given the prevalence of pharmacokinetic variability among AEDs, TDM enables a personalized approach to epilepsy care by allowing adjustments based on individual drug concentrations. Currently, there are 27 licensed AEDs, making them one of the most common medications subject to TDM. This review aims to provide an overview of the existing evidence on the application of AED TDM in both epilepsy and non-epilepsy conditions. The extensive pharmacokinetic variability of AEDs results in significant variations in serum concentrations among patients, making TDM beneficial for tailoring treatment to individual needs. Indications for TDM encompass scenarios where optimization of clinical outcomes is crucial. Future advancements may involve incorporating additional markers of toxicity and genetic variability to further enhance individualization and optimize AED treatment.

KEYWORDS: TDM, Antiepileptic, Toxicity

INTRODUCTION:

In the late 1960s, the monitoring of plasma, serum, or occasionally whole blood concentrations of the older antiepileptic medications phenobarbitone and phenytoin started to gain traction. Initially employed as a research technique, it appeared to hold potential for future applications in epilepsy management. Therapeutic drug monitoring (TDM) is defined as the measurement and clinical use of serum, plasma or saliva drug concentrations to adjust each patient's individual dosage and thus schedule to each patient's individual therapeutic requirements⁽¹⁻⁸⁾ Although few randomized studies have demonstrated a positive impact of TDM on the clinical outcome in epilepsy, evidence from non-randomized studies and everyday clinical experience indicates that the use of TDM for older as well as newer antiepileptic drugs (AEDs) may best be used to guide patient management, provided that serum concentrations are measured with a clear indication and with a clinical interpretation⁽⁶⁾. AED TDM has been used to manage pharmacological variability in and between patients for the last 50 years, and many drugs have

become available during that time, allowing continuous development of this field of research and evaluating its impact on clinical practice. TDM is relevant for all drugs where the serum concentration is supposed to reflect the concentration and pharmacological action at target in the brain. The only exception to this is vigabatrin, which is an irreversible inhibitor of the enzyme responsible for the degradation of GABA, GABA transaminase. This can result in a prolonged effect in the brain, even though the serum concentration of vigabatrin is declining or even zero. AEDs serve as the cornerstone of treatment of patients with epilepsy. In the past few years, numerous new antiepileptic drugs (AEDs) have been brought into the market, bringing the total number of available AEDs internationally to 27⁽¹⁾. Across all these AEDs, there is significant variability in their pharmacological effects. Currently, it is easier to measure and potentially regulate pharmacokinetic variability, which pertains to how the body absorbs, distributes, metabolizes, and excretes the drugs^(3,4).

Apart from pharmacokinetic factors, environmental conditions, physiological differences among individuals, and genetic variations also contribute significantly to the wide range of serum concentrations observed for any given AED. This variability underscores the complexity of factors influencing the effectiveness and safety of AEDs in individuals with epilepsy. Also, aspects of adherence, if the drug is taken as prescribed, come into play in the

Assumes Enormous Part in the Ongoing Worldwide Economy the On the Web Book

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Abstract

Right now, Web has become implanted in our day to day existence in each angle. It has turned into the most favored medium in everyday existence of people. The web went through gigantic development at different levels and fields. Web is changing business, shopping, training, and so forth. These days, e-business has grown up and it assumes tremendous part in the ongoing worldwide economy. The on the web book shop or home delivery permits client to shop books from their homes instead of customary bookshop, which expects one to visit book shop, libraries, and so on. Online request needs only a couple of snap and gives different computerized installments choice. Online Book Shop furnishes openness of a particular book with quickness and helpfully. Such web application like Amazon, Flipkart have provoked the improvement of e-business. It is direct web business practical website which has assortments of books for a client to purchase on the web.

Keywords— Internet, e-business, digital payments, accessibility, conveniently, feasible site.

Introduction

Over the last 10 years, the programming language has been revolutionizing the world. It is a rapidly growing field in the zone of engineering standards. Programming has opened countless new ways almost in every industry. There are different innovative, effective and creative programming arising out in the market which have made the life of an average person ease and straightforward. Our user-friendly Online Bookstore is based on one such programming. It is a fusion of both internet business and book industry. The online book shopping is a revolution of traditional book industry. The online book shop has a great deal many benefits. It is developed on the basis of principle of providing convenience.

It has following benefits:

- Homedelivery
- Affordablecost
- Varieties ofbooks
- Various paymentmode

It is similar as like shopping websites but is only applicable for buying books. There is certainly no need for a customer to go out and searching for specific book.

Purpose andSignificance

By using Online bookstore website, customers do not need to visit physical book store. They can utilize the internet connecting facility for buying books by just only log on online book store website. The book of his/her choice can be effectively bought utilizing the web bookshop site while sitting in their comfortable customary range, simply connect to the online website of books and an internet browser.

Online Bookstore have following goals:

- > Reduce time, cost andenergy
- > Easy to operate24*7
- > Convenient
- > Development ofE-logistics
- > Maintaining books list,quantity

Development Environment and Technology

Building up an online business site requires different pre-imperatives.

For implementation this website uses:

- Java
- JDBC
- HTTPServlets
- HTML, CSS, Javascript
- MySQL
- The main objective of our application is to provide friendly interface on internet


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Financial Exchange Expectation Utilizing Twitter Opinion Examination

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Abstract

Recent outrageous posts on social media have taken the globe by storm and have led to diverse views and views of the general public. Social media plays a significant act for or against a government or a corporation that simply can't decide the movement of market but to grasp the sentiment of twitter data that are posted on social media with good method could be a supreme necessity. It will analyse some twitter postings to grasp human semantic. In any tweet intended posting there are some downgraded keyword. At last, a data-set is ready that consists of unique words collected from twitter posts or comments and so the data-set is trained using Naive Bayes algorithm supported with applied mathematics to spot the sentiment given during a new call and words are going to extract each word of the posting and so it'll be matched by virtue with the data-set words for dilution. Finally, it will be tested to their algorithm using numerous post from twitter that can deliver the result with good accuracy.

I. INTRODUCTION

Systems for predicting the stock market have long been a crucial resource for stock traders. In general, a variety of factors, including the price of gold, the price of oil, significant events, and last but not least news about stock market businesses, influence the direction in which stocks move. While the majority of parameters taken into account by stock market prediction algorithms are quantitative values, a sizable number of researchers have employed financial news to increase the accuracy of stock direction predictions.

Although the overall accuracy of stock price prediction using historical quantitative data is relatively high [1-3], these approaches are insufficient since they cannot adjust to the price fluctuations brought on by a number of significant events can affect investors' trust since human intuition is lacking. To make up for this deficiency, a number of prediction techniques that take into account both stock market prices and financial news have been improved [4-5]. The findings from many of these investigations, however, do not demonstrate high accuracy. For instance, Schumaker and Chen's [4] suggested method, which relies on noun phrases and proper nouns, only manages to attain accuracy levels of 58% and 58.2%, respectively. Therefore, a superior stock market prediction system needs to be thoroughly researched.

We created a new prediction method called Probabilistic Lexicon Based Stock Market Prediction (PLSP) in order to increase prediction accuracy. The suggested PLSP algorithm forecasts a certain direction for stock price from By calculating the overall probability for each event term from the test data set and applying it to news stories, the likelihood that the stock price will increase or decrease. This report focuses on the closing prices of stocks on the Stock Exchange of Thailand (SET) and news articles because the study was carried out in Thailand. The experimental data are split into two sets in order to assess the effectiveness of the suggested PLSP algorithm. Financial news stories from March 2015 to February 2016 make up the first data set utilized to create the suggested probabilistic lexicon. The predictive model was tested, analyzed, and evaluated using news articles from March 2016 to February 2017 from the second data set. The findings show that the suggested model produces superior performance results to alternative models. traditional models: J48, BayesNet, and Support Vector Machine (SVM).

II. LITERATURE SURVEY

- Predicting Stock Market Prices with Neural Networks, Richard Lawrence In order to forecast stock market prices, neural networks are used in this paper as a survey. Neural networks have the ability to predict market directions more accurately than existing methods

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ML-Future of Quality Assistance

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ABSTRACT

Machine getting to know fashions constitute a records framework that takes records from a specific set and makes assumptions approximately the brand new commentary via getting to know from the records. Machine getting to know strategies are evolved to perform at the multi-day records set and are expecting the prevailing developments. Machine getting to know makes use of neural networks for best inspection. Neural networks are constituted of a hard and fast established algorithms changed as in line with the procedure of getting to know. To create effects after which examine them with set effects, the getting to know procedure desires records inputs. Additionally, to provide rapid and dependable performance, applications use era to extract records developments and interpret the overpowering records volume. Machine getting to know makes use of AI era to offer applications to recognize dynamically with out particular scripting or human interaction. Experience-primarily based totally programs and check automation can increase and constantly study information, test up with it, examine from the findings, and beautify the detection methods. Concerning the capability of gadget getting to know checking out and for this reason a clever Quality guarantee, there's in reality the possibility of turning into the following essential hit, and every person have to hold a near eye on destiny technologies. Many software program improvement corporations are of the view that they do now no longer check effectively. They realize that the affect of best flaws is essential and that they spend substantially on best guarantee, however they don't get the effects they expect. This isn't always on account of a scarcity of creativity or difficult work; instead, software program checking out help era isn't always successful. It has poorly served the marketplace. Machine getting to know (ML), which many corporations have disrupted and enhanced, is now starting to locate its access into utility improvement. Heads are spinning, and for an first-step purpose: by no means once more can the marketplace be doing the same. Although gadget getting to know keeps to increase and expand, it's far more and more utilized by the software program industry, and its impact is starting to dramatically regulate the manner software program improvement may be carried out because the progresses.

Key Words: Machine learning, Quality assurance, Artificial Intelligence software testing

Introduction

Essentially, that is an synthetic intelligence application. Also, it allows software program packages to come to be greater specific in predicting the outcome. Also, gadget getting to know makes a speciality of laptop set off reservation. The predominant goal is to make it feasible for laptop structures to research with out human involvement instantaneously. We are seeing a brand new revolution that might be going for walks the arena as humans develop more and more linked to computer systems, which will be the destiny of gadget getting to know (Nalbach et al., 2018). The place of laptop science, in simple words, offers computer systems the capacity to research without being at a computer. It gives algorithms that may be educated to perform a mission. Machine getting to know implements algorithms to are expecting decisions, and additionally to improve such algorithms, it makes use of inputs from human involvement. Owing to the shortage of proof and reviews, Machine Learning has did not find out the sphere of E2E research. Usually, E2E evaluation is built via way of means of the human enjoy of what's critical to have a look at or what traits seem treasured or dangerous (Nakajima, 2018). In order to teach and optimize automatic tests, new technology use product analytics records to liberate the gadget for gadget getting to know level to enhance take a look at creation and protection.

Machine getting to know is likewise one of the maximum not unusual place approaches of looking forward to the destiny or categorizing records to assist people make the specified choices. Methodologies in system getting to know are conditional on instances or observations they research from preceding encounters and compare history.

Consequently, it is able to apprehend traits again and again because it research via the eventualities to make sure predictions for the destiny. The key price of Machine Learning in E2E studies is that it is able to make the most more and more more complicated product analytics to outline and expectation needs (Ma et al., 2018). On a Web service, ML-pushed trying our can select any unmarried user encounter, pick out the standard transitions customers move through, and make sure that those instances nonetheless characteristic as planned. As the laptop evaluates numerous implementations, it's going to advantage all of these frameworks and expect how new upgrades to an software will have an effect on the consumer interface. Thanks to this knowledge, ML-pushed experiments can now supply higher and lots extra applicable assessments than humans (Tao & Gao, 2016). The experiments advanced through ML-pushed generation are designed and controlled extra unexpectedly and lots much less pricey than human-constructed computerized testing. Such studies ends in implementations of a whole lot faster and higher quality.

A extra dependable and dependable software control framework is supplied via way of means of system gaining knowledge of, from its supreme mechanism this is fine perfect to house the wide variety of innovations and to provide the specialised trying out necessary. Smart trying out of packages method data-primarily based totally tests, unique outcomes, and innovative increase in first-class guarantee. Machine gaining knowledge of gives builders the capacity to not only perceive their clients' needs and adapt to their evolving possibilities faster than ever. Furthermore, builders now regularly want to

assess increasingly more details, and they may be supplied much less and much less time to do simply that, even though their blenders margin is progressively declining (Nalbach et al., 2018). Resources along with predictive analytics and system gaining knowledge of, both via way of means of an in-residence squad with excellent builders or, if now no longer the case, turning to Quality guarantee outsourcing, offer a manner to conquer those obstacles. However, this plan is meant to fill the holes in traditional studies technique and make the complete manner extra a hit and relevant to its needs.

Balancing Progress and Preservation: Exploring the Impact of Infrastructural Development on Biodiversity

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Abstract

Infrastructure is becoming an increasingly important part of animal habitats. However, it is not yet known how infrastructure will affect the quality of habitat for animals that have evolved to survive natural disruptions. Although infrastructure facilitates access to early successional forests and other appropriate habitats, it also alters animal migration, especially for hunting species. To investigate the effects of infrastructure on animals, we used a model that included annual movement rates and circadian distances relative to the animal's proximity to roads, houses, and power lines in a variety of Swedeanian landscapes that have been altered by humans. The animals studied were 138 in number, and they belonged to the *alcesalces* species, which is subject to heavy hunting (57–67 latitude). Highways and animals were spaced apart in a circadian rhythm. Animals were more likely to congregate near roadways between the hours of 6:00 in the morning and 18:00 in the evening, when traffic is often less. Any time an animal was moving at a faster pace or was more active, it was within 125 metres of a road. No evidence of these links between animals and human homes or electrical lines was found. The results suggest that animals could change their behaviour in regard to roadways based on the passage of time. When individuals aren't actively searching, they could come into ecosystems along roadsides. We recommend considering different resolutions in order to study the impact of different infrastructure types. To get a better understanding of the long-term usage of environments that humans have altered, future studies should investigate animal

migration and behaviour in connection to infrastructure. Wildlife management and conservation efforts will benefit greatly from this information, particularly for species that have adapted to altered habitats.

Keywords: Infrastructure development, wildlife, biodiversity, habitats

Introduction

The aforementioned impacts of infrastructure on biodiversity are especially acute in India because of the country's large rural population (more than 75%) and its status as an industrialising nation. A few thousand km of new or improved roads are in the works, with a focus on border states that are geographically isolated and hard to access (Planning Commission, 2013). More people would be able to acquire wild foods, and communities would be able to flourish as a result. Those that engage in illicit poaching in or near wilderness regions or protected areas stand to gain, and so do the local populations who rely on these resources for their food supply. Also, according to UN DESA (2017), India's population is predicted to remain high for the next many decades, at 1.2%. There will likely be an increase in the number of vehicles on the road alongside this population boom, which will have a negative impact on wildlife (Singh, 2005; R. D. Sharma, Jain, & Singh, 2011).

Research by Venter et al. (2016) shows that human activity has left a big mark on the nation, therefore we should look at the consequences of socioeconomic progress a little more attentively. Instead than constructing brand-new roads, much of India's road network growth has concentrated on widening and repairing older ones (Gubbi,


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An Efficient and Improved RDH-EI

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Abstract

With the improvement of data innovation the datas are put away in the cloud and it should be ensure the security of data and the executives of the data simultaneously. By these requests the reversible data hiding in encoded images (RDH-EI) draws in an ever increasing number of analysts consideration. Here propose a novel system for RDH-EI dependent on RIT (Reverse image Transformation). Heretha substance of the first image can be transform to the substance of another image. Then, at that point, the encoded image, that resembles the target image, is utilized as the encoded image and stored off the cloud. Subsequently, the cloud worker can implant data into the scrambled image utilizing any RDH techniques for plaintext images. RDH-EI is a customer free plan and the data installing plan is irrelevant with both interaction encryption and decryption.

Keywords: Reversible Data Hiding, Reverse Image Transformation, Cloud computing

I. INTRODUCTION

The Reversible data hiding (RDH) may be a technique in image processing area for encryption, by which the first cover are often losslessly recuperated after the implanted message, is extracted. The RDH approach is widely utilized in life science, defense field and forensic lab, where there's no degradation of the first content is allowed. Since more research RDH method in recently. In hypothetical perspective rate-twisting model for RDH Kalker and Willems[2], through which they demonstrated the rate-banding limits of RDH for memory less covers, proposed a recursive code development which, nonetheless, doesn't move toward the bound. The recursive code advancement for equal covers and exhibited that this improvement can achieve the rate-modulation bound as long as the pressing factor computation shows up at entropy, which develops the comparability between information pressure and RDH for paired covers. Numerous RDH procedures have arisen lately. Fridrich[2] et al developed an overall structure for RDH for strategy. By first extricating compressible highlights of unique cover at that point compacting them lossless, spare space are regularly put something aside for inserting helper information. A various RDH method is more popular is predicated on difference expansion (DE) [3], during which the difference of every pixel group is expanded by various method or technique. Example, increased by 2, and along these lines the littlest sum critical pieces (LSBs) of the distinction are every one of the zero and may be used for embedding messages. Another solid methodology for RDH is histogram shift (HS), during which space is put something aside for information inserting by moving the containers of histogram of dim qualities. With respective to giving privacy to pictures, encryption is an efficient and popular means because it converts the first and meaningful content to non-reversible. In any RDH strategies in encoded pictures are distributed. At this point, there are some encouraging applications if RDH are often applied to encrypted images. Hwang et al. advocated a reputation-based trust management scheme enhanced with information shading (a method of inserting information into covers) and software watermarking, during which encoding and coloring offer opportunities for maintaining the substance proprietor's security and data integrity[6]. In our system we provide the high quality image to the users. It also provides the more security of the info. The proposed system is reduces the time also as cost as compared to previous system.

II. LITERATURE REVIEW

The methods proposed in [6]-[8] are often summarized because the structure, "vacating room after encryption (VRAE)", as outlined in Fig.1(a). during this framework, a content owner

(Check And Manage – Self Driving Car with GPS System)

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ABSTRACT

Self Driving Car is a mobile machine that can detect and follow the line drawn on the floor. Generally, the path is predefined and can be either visible like a black line on a white surface with a high contrasted color or it can be invisible like a magnetic field.

Therefore, this kind of Robot should sense the line with its Infrared Ray (IR) sensors that installed under the robot. After that, the data is transmitted to the processor by specific transition buses. Hence, the processor is going to decide the proper commands and then it sends them to the driver and thus the path will be followed by the line follower robot. TABAR is a line follower robot designed and tested in order to attend at Tabrize line follower robots competition. But it encounter with some technical and mechanical problems. In this Paper, we have illustrated the process of design, implementation and testing TABAR, a small line follower robot designed for the line follower robots competition. The technical and mechanical issues and problems also have investigated.

Road accidents rates are very high nowadays, especially two wheelers. Timely medical aid can help in saving lives. This system aims to alert the nearby medical center about the accident to provide immediate medical aid. The attached accelerometer in the vehicle senses the tilt of the vehicle and the a heartbeat sensor on the user's body senses the abnormality of the heartbeat to understand the seriousness of the accident. Thus the systems will make the decision and sends the information to the smartphone, connected to the accelerometer through gsm and gps modules . The Android application in the mobile phone will send text messages to the nearest medical center and friends. Application also shares the exact location of the accident and it can save time.

Introduction:-

Self drive car is autonomous that means it automatically follows a line which is pre-defined. Generally, it follows a black line on a white surface or a white line on a black surface. Some of the basic operation of a line follower is given below: · Reading the pre-defined line by IR sensor array which is installed on the front-down side of the robot and sends those readings to the Arduino. The ATmega microcontroller which is built in on Arduino analyzes those readings and do the particular operations. · The steering mechanism is simple in this robot. Three wheels are used, two wheels are on the back part connected with the motors and one independent wheel on the front-middle part of the robot. · On Straight line, the speed is fast and on a turn, speed is relatively slow depending on turn angle. Good motor quality and good sensing quality will increase the robot movement performance.

Keywords— Accident detection, alert system, GPS, Line Follower; Problems and solutions; Circuit; Actuator; Programming.

OBJECTIVE:-

The main objective of this project is to prevent casualties which happen due to lack of medical assistance in time. Certainly, if the accident happens due to other cases, the used electronic devices will be able to provide the spontaneous message and exact location to police and ambulance in order to recover victims. Avoiding casualties caused by road accidents is the main goal of this paper, with the help of Accelerometer and GPS present in the mobile phones. Based on the data collected from these sensors, which are present in most mobile phones, the location of the accident is sent at the same time of the accident to the friends and relatives which the user allowed and stored, and also to the rescue and emergency services

LITERATURE SURVEY:-

Infrared (IR) technologies (materials, devices and systems) represent an area of excellence in science and technology and, even if they have been generally confined to a selected scientific community, they have achieved technological and scientific highlights constituting „innovation drivers” for neighbouring disciplines, especially in the sensors field.

The development of shock sensors, initially linked to astronomical observations, since World War II and for many years has been fostered essentially by defense applications,

E-Commerce and Course Website

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Abstract:

E-commerce is a boom in the modern business. E-commerce means electronic commerce. E-commerce (Electronic commerce) involves buying and selling of goods and services, or the transmitting of funds or data, over an electronic network, predominantly the Internet. E-commerce (Electronic commerce) is a paradigm shift influencing both marketers and the customers. Rather e-commerce is more than just another way to boost the existing business practices. It is leading a complete change in traditional way of doing business. This significant change in business model is witnessing a tremendous growth around the globe and India is not an exception, E-commerce and online education through the lens of a course website. With the growing demand for online education and the increasing popularity of e-commerce, course websites have emerged as a powerful tool for educators to monetize their content and provide learners with a seamless learning experience. In recent years, e-commerce has transformed the way we shop, with the convenience of online shopping becoming increasingly popular. At the same time, online education has been gaining traction, with learners looking for flexible and accessible learning options. Course websites bring together these two trends by providing a platform for educators to sell their courses online. The potential benefits of e-commerce on course websites are significant. By offering courses for purchase, educators can generate a sustainable income stream and reach a wider audience. Learners, on the other hand, benefit from the ability to access high-quality educational content from the comfort of their own homes, at their own pace.

This research paper is designed to study the main methodology of an E-Commerce website via creating our own E-commerce platform (Store With More..). The main technologies which are being used in this project are HTML5 programming Language. the database is managed through MySQL.

Keywords:

Html5, Css3, Mysql, JavaScript, Visual Studio Code, Internet, Self-Services etc.

Introduction:

The rise of e-commerce and online education in recent years has revolutionized the way we approach commerce and education. With the growth of e-commerce, online shopping has become increasingly popular, providing convenience and accessibility to consumers worldwide. Similarly, online education has become a popular option for learners, providing flexibility and accessibility that traditional education may not offer.

The intersection of e-commerce and online education is evident in the emergence of course websites. Course websites provide a platform for educators to monetize their courses and for learners to access educational content online. By integrating e-commerce strategies, course websites offer educators the opportunity to generate sustainable income streams, while learners benefit from the ability to access high-quality educational content at their own pace and convenience.

In this paper, we explore the intersection of e-commerce and course websites, examining the various features and strategies that can be implemented to facilitate e-commerce transactions. We discuss the importance of user experience, design, and marketing in maximizing the potential of e-commerce on course websites. We also examine

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An Analysis of Cyber Crime Data

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Abstract

Cyber Crime is technology based crime committed by technocrats. This paper deals with Variants of cyber crime held in Chhattisgarh between 2005 to 2019. Under this, the Age wise Clustering of arrested people has been displayed on basis of cybercrime in Chhattisgarh. Data mining DBSCAN and Hierarchical algorithm is used for clustering. A DBSCAN algorithm is based on this intuitive notion of "clusters". The key idea is that for each point of a cluster, the neighborhood of a given radius has to contain at least a minimum number of points. A Hierarchical clustering method works via grouping data into a tree of clusters. Hierarchical clustering begins by treating every data point as a separate cluster. Python Software has been used to implement the DBSCAN and Hierarchical Clustering Algorithm in cyber crime dataset.

Keywords: Cyber Crime, Types of Cyber Crime, DBSCAN And Hierarchical Clustering Algorithm, Python, Cyber Crime Dataset, Result Analysis.

1. Introduction

Cyber crime always involves some degree of infringement on the privacy of others or damage to computer-based property such as files, web pages or software. This paper is completely focused on cyber crime case register and number of person arrested in Chhattisgarh. The paper also includes Chhattisgarh cybercrime Statistics according age wise people arrested. According to the age of the arrested person based on cyber crime in Chhattisgarh from 2005 to 2019, the clustering has been made through the DBSCAN and Hierarchical Clustering algorithm which is based on cyber crime dataset. We can do DBSCAN and Hierarchical Clustering algorithm using python.

2. Methodology

Cluster analysis or clustering is the process of partitioning a set of data objects into subsets. Each subset is a cluster, such that objects in a cluster resemble one another, yet dissimilar to objects in other clusters. In this context DBSCAN, Hierarchical clustering methods may generate different clustering's on the Cyber Crime dataset. The partitioning is not performed by humans, but by the clustering algorithm DBSCAN, Hierarchical clustering algorithms were used for formation of clusters on cyber crime database. The data was collected from the National crime record bureau (2005 to 2019) data set converted into iris dataset using in python. The data set contains the various instances and the 4 attributes. The attributes are year, Crime type (act according), People arrested, Crime type. The algorithm is used in following manner:

DBSCAN Technique:

DBSCAN (Density-Based Spatial Clustering of Application with Noise) is a density based clustering algorithm. The algorithm grows regions with sufficiently high density into clusters and discovers clusters of arbitrary shape in spatial database with noise. It defines a cluster as a maximal set of density-connected points. Clusters are dense regions in the data space, separated by regions of the lower density of points.

Algorithmic steps for DBSCAN clustering

Let $X = \{x_1, x_2, x_3, \dots, x_n\}$ be the set of data points. DBSCAN requires two parameters: ϵ (eps) and the minimum number of points required to form a cluster (minPts).

- 1) Start with an arbitrary starting point that has not been visited.
- 2) Extract the neighborhood of this point using ϵ (All points which are within the ϵ distance are neighborhood).
- 3) If there are sufficient neighborhood around this point then clustering process starts and point is marked as visited else this point is labeled as noise (Later this point can become the part of the cluster).
- 4) If a point is found to be a part of the cluster then its ϵ neighborhood is also the part of the cluster and the above procedure from step 2 is repeated for all ϵ neighborhood points. This is repeated until all points in the cluster is determined.

Rule Mining Algorithm for Efficient Association in Distributed Databases

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Abstract: Applications that rely on processing large amounts of data have two primary challenges: first, the need for large storage and monitoring, and second, the inevitable rise in processing time as data quantities grow. Decentralised database systems ascertain one issue escalated to a significant level, while the second problem intensified. Because academics are now active in maintaining massive amounts of data on networks, they have proposed a variety of new techniques to increase the throughput of the data that is returned from distant databases. The goal of our study is to develop a new algorithm that can handle massive amounts of data across several servers and then transfer the processed data to the customer's PC if needed.

Keywords: Apriori algorithm, Association rules, parallel and distributed data mining

Introduction

When it comes to data mining, association rule mining is among the most important and well-studied techniques. The goal is to leverage collections of items in transaction databases or other sources to find interesting connections, common patterns, linkages, or informal structures. Many different domains make extensive use of association rules, including communications networks, inventory control, market and risk management, and many more [1].

We will quickly go over some of the most common association mining techniques and methodologies,

and then we will compare them. The goal of association rule mining is to discover such rules conform to the minimum required level of database trust and support [3]. The issue has been broken down into two smaller difficulties. One is to find the sets of items whose database occurrences above a certain threshold; these sets are known on a regular basis or in bulk. The second problem is that there is so little confidence that it is impossible to use such huge item sets to generate association rules [2]. There are two main ways to employ many processors: distributed memory, where each processor has its own private memory, and shared memory, where all processors have the right to access common memory. There are a lot of appealing features to shared memory structural architecture. In this architecture, all memory is accessible to all processors in an equal and unfettered manner. [4] The distributed memory structural design ensures that each CPU has exclusive access to its own local memory.

A In order to run in parallel on separate processors in the system, a single purpose might be broken down into many smaller jobs. However, the distribution of the application's duties onto the available processors in the scheme is the primary determinant of the parallel application's appearance on a distributed system. [5]

Among the many data mining models available, the most popular one is the association rule mining

Speech Stress Analysis based Cheap Lie Detector for Loyalty Test

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Abstract: When it comes to their thoughts, deeds, and behaviours, humans wear a variety of masks. It may deduce a person's allegiance from their facial expressions, vocal intonation, manner of expressing oneself, etc. For the world at large, it is not an innovative method. The hearings and judgement are coming to a close based on the questions and answers. Artificial Neural Networks are among the most effective tools for assessing speech stress in order to identify inexpensive lies in loyalty tests. Polygraph is a clearly demonstration focused method for presenting the findings. Insurance fraud investigations and law enforcement already employ this strategy. Loyalty may be discerned by an individual's vocal intonation and emotional expressions. Maintaining utmost secrecy and adaptability are essential for these methods. In this research, we use body language and vocal stress analysis to identify dishonest people.

Keywords: Voice Stress Analysis (VSA), Artificial Neural Network (ANN)

Introduction

The ability to learn the inner workings of a lie detector system requires ongoing training, making it a dynamic system. The con artists find these tasks quite easy. Therefore, the approaches should be able to be changed dynamically utilising ANN. Using the vitals (heart rate, respiration rate, eye blink rate, lip movement, and leg and hand motions), electrocardiogram (ECG), electroencephalogram (EEG), and blood pressure gauges activities that must be conducted in secret in order to gather all of the necessary parameters in order to ascertain the outcomes. This research paper will cover all of the

aforementioned topics. The human brain and computer network both need heightened focus while using software applications. The physiological method in conjunction with an artificial neural network is fundamental to this study's idea.

There is a great deal of faith in the conviction that jurors in the United States put in the credibility of witnesses. Social and behavioural science, on the other hand, clarifies that people are excellent at fabricating lies but terrible at detecting them. As an example, it is quite simple for the typical person to spot deceit in a face-to-face contact when it involves another person (Ekman & O'Sullivan, 1991). A technology-based objective approach of lie detection or truth verification has long been sought for due to the importance of honest testimony and the limitations of human lie detectors (Grubin, 2010). For the better part of a century, the polygraph served as the principal technological tool for lie detection. It does this by measuring activity of the peripheral nerve system in an effort to gauge honesty. A deception task's story points in the direction of the made-up place where experimental deceit takes place. As an example, there are studies that put participants in a simulated crime scene and then ask them questions about it (Kozel, 2005). Some ask participants to provide very personal details about themselves, while others are more general (Abe, 2009). In the end, tests that targeted emotions like shame and autobiographical memory—which were considered confounds rather than variables of interest—used relatively "neutral" settings that required participants to hide a playing card that was meant for a monetary prize. How much of a

Workplace Well-Being in Post-COVID-19 Indonesia: Workplace Loneliness and Happiness at Work with the Moderating Role of Perceived Social Support

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Abstract

Social relationships within the workplace have been recognized to be vital for employee's well-being. In this post Covid-19 era in Indonesia, major shifts in working arrangements have the potential to impact employees' social relationships dynamics. Loneliness can emerge as a counterpoint to having positive social relationships. This non-experimental research employs a survey method to explore Workplace Loneliness (WL), Perceived Workplace Social Support (PWSS), and Happiness at Work (HAW) in post Covid-19 pandemic Indonesia. Statistical analysis is performed on responses from 201 participants representing employees with diverse working arrangements in Indonesian organizations, sampled using convenience sampling. Key research findings are as follows: 1) Comparing three employee groups with different working arrangements (WFH, WFO, and a blend of WFH and WFO) reveals no significant differences in WL levels, yet PWSS and HAW levels among the compared groups show significant variations. 2) WL has a significant negative association with HAW. 3) A moderation analysis is performed to reveal a significant negative interaction effect of WL and PWSS on HAW. These findings contribute to existing literature by shedding light on variables related to employee perceptions of social relationships and well-being in the workplace. This research delves into how employee perceptions of both negative (loneliness) and positive (perceived social support) aspects of social relationships correlate

with workplace happiness. Additionally, this research highlights the post-Covid-19 disruption context in Indonesia, which impacted variations of employees' working arrangements.

Keywords: Workplace Loneliness, Perceived Workplace Social Support, Happiness at Work, Working Arrangements

1. Introduction

The Covid-19 pandemic has brought major changes in various aspects of human lives, and the changes in the workplace realm is no exception. One notable change in the workplace context is the alteration of employee's working arrangements. Prior to the pandemic, the working arrangements in general in the world, especially in Indonesia, was traditional working arrangement in a designated office space with start and finish times already set. The heights of the Covid-19 pandemic necessitated organizations in Indonesia to mandatory adopt work-from-home or remote working policies in compliance with governmental regulations. When the spread of Covid-19 was less severe, organizations also implemented the blended working arrangement policies that allow employees to alternate work from office and from home. Work from home and blended working are flexible working arrangements that may allow employees to tailor their work setups, timings, and approaches to complete their tasks (De Klerk et al., 2021).

The continual rise of flexible working arrangements is possible with the ever advancement of ICT (Information & Communications Technology) to support the

Faridpur Genocide 1971: An Analytical Study on Sree Angan Ashram's Massacre

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Abstract

During Bangladesh's 1971 liberation war, three million defenseless civilians were mass-murdered. The crimes of Pakistani armies reach outside of the capital city within a short period. However, with the assistance of their local allies, the Pakistani occupation army invaded Sree Angan Ashram on April 21, 1971. In the history of the Faridpur Liberation War, it was the first invasion and attack. The eight monks of the Ashram were savagely murdered, and their belongings were taken. The purpose of this study is to investigate the question of why the Pakistani army visited Sree Angan Ashram. What was the purpose of their intended attack on Sanyasis of Hindu descent? This dissertation focuses on examining the nature of Faridpur's genocide in the Sree Angan Ashram. However, the results of this qualitative analysis indicate that the Hindu population was primarily targeted due to their religious convictions, which are pro-Indian and anti-Islam.

Keywords: Genocide, liberation war, perpetrator, Hindu minorities, ashram, persecution.

Introduction

Torture and genocide are two horrific aspects of Bangladesh's liberation war of 1971. Because of their race and religion, a large number of victims were targeted. Three million people were slain in the nine-month conflict by Pakistani forces working with local collaborators. Commencing on March 25, 1971, this slaughter quickly spread to remote areas. Faridpur, in the province's center and 85 miles west of Dacca by road and ferry, was only

moderately damaged physically by the army's April attack, in comparison to certain other cities in East Pakistan. An effort to suppress the Bengali autonomy movement was launched on March 25 and included the attack (Sydney H. Schanberge, 1971)^[1]. To identify the property of the minority, the Pakistani Army painted large yellow "H"s on the Hindu stores that were marked for burning or damaging. Hindus were mostly targeted because of their pro-Indian and anti-Islamic religious beliefs. Furthermore, Pakistani soldiers were led by certain local collaborators, such as Rajakar, Al-Badar, and Bihari, to raid and plunder minority properties. The first genocide took place in Faridpur at the Sree Angan Temple with the assistance of these local collaborators (Rezaul Karim Bipul, 2015)^[2]. Eight monks were killed and the Sree Angan Temple's belongings were looted by the Pakistani army when they first arrived in Faridpur in April 1971.

But the Pakistani Army began inciting panic in the community by setting fire to village after village in addition to carrying out death missions and rapes. What was the intention of the genocide? Were solely Hindus the targets of this campaign? What about the kids and women? Were they free or subjected to persecution? Using current data, this article aims to address these queries. Comparable to the persecution of Jews during the Holocaust and Serb Muslims during the slaughter in Bosnia, the Hindu community was the most persecuted minority in 1971 (Shahid K. Chowdhury, 2021)^[3]. There are plenty of stories about women's roles in history, from being sexually assaulted and tortured to being wiped

Acknowledgment in Pictures and Switching Perceived Text Over Completely To Discourse

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Abstract — The main goal of this research is to foster a program that can recognize text characters from transform any normal picture into a voice signal. The program need to do the indistinguishable activity for any transferred picture and PDF record. The application ought to likewise have tools for pace modulation, voice choosing options, and capacity ability for picture to message yield. The interest group for this program can be extended to incorporate individuals with extraordinary requirements who likewise have learning disabilities, small kids, and a few other cultural gatherings. The text is removed from the picture utilizing optical person acknowledgment (OCR), and the Windows Programming interface is used to transform the text into discourse. The programming language for advanced picture handling is MATLAB.

Keywords— Digital image processing, optical character recognition, speech modulation, MSER Regions, stroke width algorithm, and image character recognition

I. INTRODUCTION

A famous area of PC innovation is picture to-discourse transformation. It lays out a urgent calculate how we draw in with the framework and connection points on numerous stages. It has for quite some time been an objective to repeat human capacities like perusing through machines. Machine perusing, notwithstanding, has created from a pipedream to reality during the past 50 years. The most successful type of human correspondence is in all probability discourse. One of the most popular uses of technologies in the fields of example acknowledgment and man-made consciousness is optical person acknowledgment.

The device helps with changing over printed data that is implanted in a picture or scene into discourse. This isn't the main use it could be put to. It is helpful to take text from PDF documents and transform it into discourse. The gathered text can be all put away as a text document in any area on the PC. While the text is being perused so anyone might hear, it likewise offers the choice to look into equivalents for words. Various speeds perhaps agreeable for clients to understand the language. Thus, a provision is added that takes into consideration discourse beat balance. Furthermore, clients can choose from different male and female speakers' voices as well as accents.

OCR, or optical person acknowledgment, is a procedure we use to remove text from photos. After that, a text-to-discourse (TTS) module transforms the text into sound. We can see that this procedure was split into two modules. The first is picture acknowledgment, and the second is discourse change for that image optical person acknowledgment. Optic person acknowledgment is alluded to as OCR. Through this methodology, the application will actually want to perceive a person naturally utilizing an optical method. OCR is the transformation of caught photos of printed or typewritten text into carefully variable data. Discourse union; Without straightforwardly utilizing a human voice, discourse blend makes discourse that is more human-like than mechanical. A voice synthesizer is, all the more as a general rule, kind of innovation that makes counterfeit discourse through the formation of images and signals. Altering the discourse's cadence has been conceivable. Furthermore, the application incorporates different voices and accents.



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A Study on Exclusive Brand's Marketing Optimization

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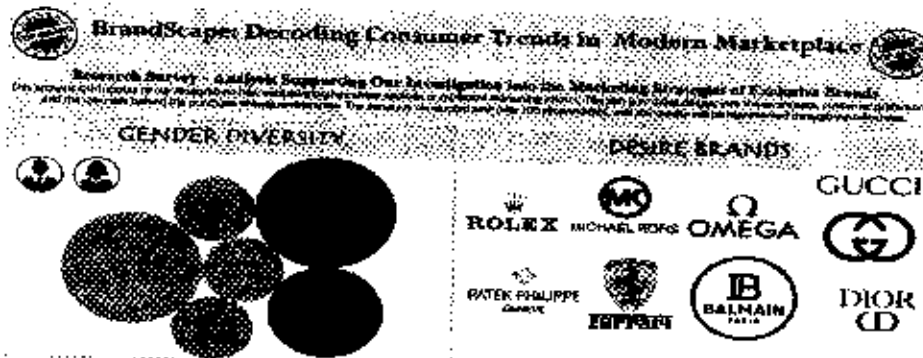
ABSTRACT:

This research walk-through the various methods used by exclusive and upscaled organizations that minimized its marketing Champaign and budgeting. Generally, posh products and service are not marketed through Integrated channels that are commonly available. As these companies differentiate themselves through unique innovative features they opt for specific single streamed path for marketing that directly reach-out its targeted customer group than spending on popularity promotions. Posh and exclusive brands that has a brand image among common customer base and spend on brand awareness and popularity promotion, such as Apple and Tesla. Study includes a marketing analysis about the brand awareness and customer's perceived knowledge about exclusive brands along their products and service that facilitate for its premium pricing.

Keywords: Exclusive, Luxury, Posh, Brand, Customers, Promotion, Analysis, Awareness, Target Segment, Premium, Marketing, Strategy, Communication, Experience, Innovation, Features, Media, Value, Perception.

INTRODUCTION:

Exclusive brands shine as beacons of distinction in an era where markets pulsate with an abundance of possibilities, valued for their uniqueness, quality, and appeal. These companies' success is dependent not just on their inherent greatness, but also on strategic marketing efforts that ensure their value connects with the correct audience in an increasingly competitive world. This research digs into the complex world of exclusive brand marketing optimization, with the goal of unraveling the many methods, dynamics, and ramifications that drive the success of these distinct entities. This research seeks to reveal the way toward sustainable relevance and profitability for exclusive brands in the ever-changing market ecology by navigating the maze of consumer behaviour, market trends, and brand identity. This article uses an interdisciplinary approach to combine ideas from marketing, consumer and market analytics to provide a complete framework for improving exclusive brand marketing tactics. The study delves into the complex interaction between exclusivity, customer perceptions, and market positioning in order to comprehend the delicate balance necessary for these companies to succeed in a world marked by altering consumer preferences and competition developments. Furthermore, by giving case studies, empirical analyses, and strategic recommendations, this research aims to bridge the gap between academic paradigms and



actual implementations. By combining academic research with real-world scenarios, this paper aims to provide practical insights and strategic recommendations that can help exclusive businesses negotiate market challenges and strengthen their market presence while maintaining their exclusivity. Finally, this research aims to contribute significantly to the understanding of exclusive brand marketing optimization, providing a roadmap for these brands to not only survive but thrive in a dynamic and challenging market environment.



Planning and Creating Neighborhoods with People on Foot in Thought

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Abstract

Strolling is, and consistently has been, the most key method for human motion. In any case, the manner in which individuals move about urban communities currently gives little consideration to this major human attribute. Present day wellbeing, natural, and social worries have prompted the restoration of strolling customs in many regions of the planet. There is boundless arrangement that few factors impact individuals' strolling designs. These incorporate the two the normal and man-made environmental elements, as well as individual and social issues. A perplexing organization of arranged and developed components is one way in which an area's fabricated climate influences individuals' strolling propensities. Different abstract and observational techniques have been involved by researchers in their journey to take apart this trap of impacts and lay out the connections between its many parts and wandering examples. Walker admittance to public regions is being extended by means of different authoritative endeavors and progressing projects around the world. Albeit passerby issues have started to be tended to in India's metropolitan preparation and transport strategy, urban communities there are still in the beginning phases of making and carrying out common arranged rehearses. Seeing how Indian urban communities are reshaping private zones to take care of walker necessities and needs is enlightening. We need to combine the heap of significant writing and show that it is material to Amritsar areas in this paper. The examination shows that networks are the main piece of a city for making it more walkable. This is on the grounds that areas address how walk culture is being imbued in everybody's regular daily existence in the city. It is our expectation that this exploration will assist us with better comprehension the preparation and plan choices that were made when Amritsar's local locations were being grown so we might advocate for person on foot related upgrade drives across the city.

Keywords: Indian urban development, transportation policies, pedestrian

Introduction

Walking is, and always has been, the most basic form of human conveyance. Through all of time and space, it has been the one constant that has brought people together from different backgrounds and cultures. Traditionally, our towns have been designed with pedestrians in mind, keeping them at a manageable size for easy and rapid navigation. Along with the fast pace of urbanisation and the ensuing rise of mobility, cities and towns caved to the demands of vehicles, severely impacting this basic human drive. City pedestrian culture has been profoundly impacted by vehicular congestion, which has changed their status, treatment, and scope. As the harmful effects of this new tendency on society, the environment, and people's health become more obvious, there are global efforts to revive the pedestrian culture using the sustainability agenda as an excuse. All of a person's ambulatory actions, which vary according to situation, purpose, and other factors, are a part of walking. Dynamic pedestrian behaviour includes activities like walking, playing, jogging, or strolling; static pedestrian behaviour includes activities like sitting, standing, or socialising. There is a wide variety of walking speeds, from very slow to extremely rapid. Pedestrian activity may range from leisurely strolls about the community to more deliberate trips to and from places of business, entertainment, or shopping. You may utilise walking as your main source of transportation or just add it to your mix.

Existing Transport Scenario and the Liveability Concerns

The number of automobiles possessed by city people has increased dramatically in recent years, and their movement patterns have become more complicated. The use of personal autos has increased dramatically in modern society. In spite of the fact that the number of vehicles registered in India rose at a CAGR of 10.5% from 2002 to 2012 (MoRTH, 2013) (Figure 1), the majority of these vehicles are two-wheelers (72.4%), followed by automobiles, jeeps, and taxis (13.5%), and finally, buses (1.0%). Unfortunately, there has

Unlocking Productivity: A Critical Study of Banking Sector Enhancement through Competency Mapping

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Abstract

Competency mapping refers to the process of outlining essential skills for a business, its positions, and its operations. Despite its widespread use, competency mapping is really quite straightforward. Expertise or skill is necessary for the effective completion of any effort. Several prominent figures in the field of business strategy have recently argued that in order for a company to be successful in a certain environment, it must first identify the competencies that are necessary for that environment. Examining how competence mapping has been institutionalised in Indian companies is the primary objective of the research. Although competency mapping has several benefits, it is just now starting to be used by Indian businesses. Researchers, corporations, salesmen, HR experts, pharmaceutical firms in India, and academics may all benefit from the study. The innovative concept of competency mapping has recently gained traction in the HR industry as a means to enhance many processes such as recruitment, performance evaluation, development and training, succession planning, organisational growth analysis, etc.

Keywords: Competency, Competency Mapping, Banking Sector

Introduction

The Latin root "competentia" (meaning "the right to speak" or "is authorised to judge") is whence we get the English term "competency" [Caupin et al. (2006)]. In the English dictionary, "competence" means to be up to snuff or appropriate. A person's knowledge, talents, and abilities are examples of "the fundamental characteristics" that make them

competent. What Boyatzis (1982) calls "an underlying quality of a person that leads to successful and/or outstanding performance in a job" is actually very accurate. Boyatzis (1982) posits that when people act in a way that meets work requirements while being mindful of the organisational environment, unexpected consequences may follow. According to UNIDO (2002), a competence is a set of abilities, knowledge, and character traits that an individual needs to do a job or task. Finding, assessing, and improving employees' abilities via competency mapping is one way for businesses to get an edge in the market. Organisations may use competence mapping to inform choices on compensation, training, career advancement, and succession planning.



Here are the stages involved in competence mapping:

- a) As part of a job analysis, current employees are administered a Position Information Questionnaire (PIQ). You may use this as a starting point for a one-

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Virtual Internet Based Instructive Commercial Center

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Abstract: Virtual Web-based Instructive commercial centers are online stages that give an abundance of data and assets to help students in their examinations. These sites offer an extensive variety of learning potential open doors, including on the web courses, instructional exercises, recordings, digital books, and intelligent exercises. They cover different subjects, from science, arithmetic, and history to language learning, experimental writing, and expert turn of events. The advantage of these sites is that they permit students to get to top notch instructive assets from anyplace and whenever. They additionally offer customized growth opportunities and permit understudies to learn at their own speed. Besides, instructive sites can assist with overcoming any barrier between customary study hall learning and current computerized learning, subsequently giving a really captivating and improving instructive experience.

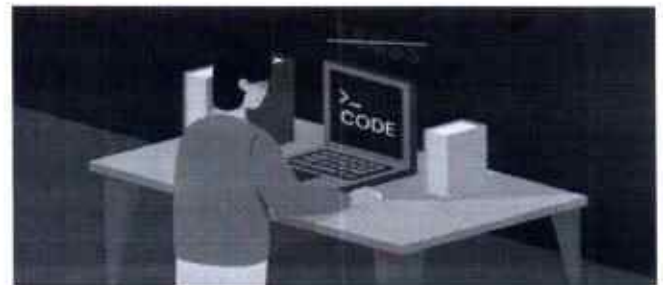
As well as making an outwardly engaging and intelligent plan, the front-finish of instructive sites likewise should be streamlined for execution and openness. This implies guaranteeing that the site stacks rapidly, works consistently on various gadgets, and is available to clients with disabilities.

Introduction -

In addition to providing access to a wealth of information and resources, educational websites also foster collaboration and community building. This creates an opportunity for learners to interact with peers from different parts of the world, learn about different cultures, and exchange ideas. Furthermore, educational websites are often free or low-cost, making them accessible to learners of all ages and backgrounds. They also provide a more sustainable alternative to traditional paper-based

resources, reducing the impact on the environment. As such, educational websites have become an indispensable tool for learners looking to enhance their knowledge and skills in the 21st century.

Keywords: Virtual Online Marketplace, Educational Documentation



Materials And Methods / Engineering Principles -

The engineering behind educational websites involves a combination of various technologies and programming languages. First, the user interface (UI) and user experience (UX) design are essential components of any educational website, as they determine the ease of use and interactivity of the platform.

1)Frontend Engineering Principles -

The website's layout and functionality are usually designed using HTML, CSS, and JavaScript. These languages provide the building blocks for creating responsive and intuitive designs that work on different devices.

In addition to the database, the backend of educational websites also typically involves the use of APIs (Application Programming Interfaces) that allow the website to interact with external services and applications. APIs are used for a wide range of purposes, such as processing payments, integrating with learning management systems, and accessing social media platforms.


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Wellbeing Involves Incredible Concern without a Decision Medications

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Abstract Great Wellbeing is confidential of each and every individual. Since the earliest reference point, Wellbeing involves incredible concern. Some need to, without a decision, keep a sound way of life by taking meds. Numerous patients find it hard to require meds at a legitimate investment because of different reasons like distraction, occupied plan, advanced age, and so forth. This happens most normally with individuals taking drugs day to day which brings about clinical non-adherence. Clinical Non-adherence is an intense issue as it can prompt different wellbeing related issues. The progression in portable innovation has empowered different strategies to tackle these sorts of issues by planning and fostering an application which patient will find it simple to convey along. In this paper, we plan to construct an Android-based application, that will cover significant highlights, for example, Medication Update, Medication Restocking Alert, Caution Framework, and so on. This framework has a rich GUI and simple route which can be utilized by individuals of each and every age. This application will emphatically affect individuals as it will go about as a sidekick that can show updates and inform the client to take the pills on time supporting clinical adherence and further developing wellbeing.

Keywords: Medicine Reminder, Android App, Medication Adherence, Alarm System.

INTRODUCTION

There is a well-liked saying that health is wealth. Health is one of the foremost important things for many individuals, just because not having healthy life can cause a miserable life. Health care is a basic need of each person. The category of patients involves all citizenry - teachers, students, businessmen, housewives, children, and senior

citizens. Today's life is filled with responsibilities and stress. So, people are susceptible to diseases of various types and we must make ourselves stay fit and healthy. People these days are very busy in their daily routine life schedule. If they're affected by any disease/illness then they must require the right medicines in proper quantity at the proper time. For this purpose, there should be some resource for the patients which can remind them about their medicine intake schedule.

Nowadays, everything is technology-driven and we rely on gadgets especially smartphones. Today Everyone uses a smartphone. Mobile Applications have made our lives much easier and luxurious. The most widely used facility in mobile phones is Reminders. People use Reminders for pretty much everything because of the busy schedule that they have.

Medical non-adherence is the major problem in the Health System. People usually forget to take their prescribed medications in due time and proportion. There could be many reasons for being forgetful such as busy schedules,

Alzheimer's disease, loss of memory, Old Age, Dementia, Stress, Anxiety, Incorrect administration of medicines, medication complexity because of Multiple Pharmacy and Polypharmacy, incorrect timing, incorrect quantity, and lack of knowledge.

In this paper, we are introducing an Android Application that will remind the users to take proper medications at the proper time by providing them with reminders that will reduce Medical non-adherence. Besides, everyone these days has a mobile phone, and using this app will be easy and hassle-free.

This application named "MEDI-MINE" will provide various features such as:


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Ecological Interactions and Livelihood Sustainability: A Study on the Impact of Local Pond Ecosystems in Malda District

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Abstract:

This research delves into the dynamic interplay between ecological interactions and livelihood sustainability, focusing on the local pond ecosystems in Malda District. Ponds, integral components of the landscape, contribute significantly to both environmental health and community well-being. Recognizing the intricate web of relationships within these ecosystems is essential for devising effective conservation and management strategies.

The primary objectives of this study are to assess the direct and indirect impacts of local pond ecosystems on the livelihoods of communities in Malda District, analyze the key ecological factors influencing pond health, and evaluate the effectiveness of existing conservation and management practices.

Field investigations revealed a positive correlation between well-maintained pond ecosystems and enhanced agricultural productivity, water availability, and biodiversity conservation. Moreover, the study identified the interconnectedness between ecosystem health and human well-being, emphasizing the role of ponds in supporting local livelihoods. Challenges, such as pollution and climate change, were also observed, underscoring the need for sustainable management practices and community involvement in pond governance.

In conclusion, this research underscores the pivotal role of local pond ecosystems in fostering ecological sustainability and securing livelihoods in Malda District. The findings advocate for the integration of local ecological knowledge into conservation strategies, with a focus on community engagement. This research contributes valuable insights for informed decision-making, policy formulation, and community-based initiatives to ensure a harmonious coexistence between human activities and the environment.

Keywords: Pond Ecosystems, Ecological Interactions, Livelihood Sustainability, Malda District, Biodiversity Conservation, Community Engagement, Sustainable Management Practices

Introduction:

Nestled amidst the verdant plains of eastern India, Malda district in West Bengal cradles a mosaic of ecological treasures. Amongst these, local ponds stand as unassuming yet vital threads woven into the fabric of rural life. More than mere repositories of water, these ecosystems pulsate with a symphony of ecological interactions, silently shaping the landscape of livelihoods and well-being for countless communities. Yet, despite their profound influence, the intricate dance between ponds and the socio-economic fabric of Malda remains largely unexplored. This research delves into the heart of this understudied realm, unveiling the profound impact of local pond ecosystems on livelihood sustainability in the region.

The Malda District, situated in the northeastern part of India, stands as a unique ecological landscape, characterized by diverse flora and fauna. Amidst this richness, local pond ecosystems emerge as critical components, serving as hubs for ecological interactions that profoundly impact both the environment and human livelihoods. The genesis of this research stems from the recognition of the intricate relationships within these ponds and the need to comprehend their role in sustaining livelihoods in Malda District.

While the district's ponds are vital for agriculture, water supply, and biodiversity, a research gap exists in understanding the holistic impact of these ecosystems on local communities. Prior related work has primarily focused on individual aspects, such as water quality or species diversity, necessitating a comprehensive study that integrates ecological dynamics and socio-economic factors. This research aims to fill this gap by providing a nuanced understanding of the interconnections between pond ecosystems and livelihood sustainability. Drawing on the rich tapestry of prior research, this study builds upon existing knowledge to offer a holistic perspective. By synthesizing information from diverse sources, it sets the stage for a more comprehensive analysis of the ecological interactions within local pond ecosystems. The present effort employs an interdisciplinary approach, blending ecological

Application of Deep Learning in Medical Data Analysis

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Abstract: The data of medical health has also incremented dramatically and methods of interpreting medical-driven huge big data have originated as the requirement with time, assisting in the reorganization of medical health condition intelligently the with the use of technologies of computer widely. Due to the heterogeneous, noisy, and unstructured nature of medical big data, it is still a difficult task to analyze medical big data. The conventional methods of machine learning can't find out the major information involved in the medical big data efficiently, while deep learning designs a hierarchical model. It consists of effective features of extraction, potential feature expression, and typical model construction. This paper is dedicated to surveying different approaches for medical big data processing using a deep learning approach and extracting finding for future research scope.

Keywords: Medical big data, analysis, deep learning, intelligent recognition

I. INTRODUCTION

The inspections of images of medical like, CT Scans, MRIs, and X-Rays are very typical work because the data of digital medical is increasing every year needs the techniques of analysis of high efficiency. Deep learning is trending because of its special categorization of millions of images [1]. It specially performed nicely in co-partnership with medical imaging. The doctor can inspect the disease based on present medical big data for a certain disease and can diagnose it in advance for controlling and preventing the disease before its invasion, predict the consecution of disease correctly and make high-risk patients more [2]. The prescriptions of current working treatment increase the confidence of patients about the treatments and resettlement, and always support in achieving the effects of therapeutic better. In the first phase, it is required to collect and record images of

the indicators of medical inspection of patients in the process of inspection of medical big data. Then the variance between the image of the patient and the normal image is inspected for the analysis of disease and diagnosis earlier [3]. Various conventional algorithms for analyzing medical big data have been studied, including algorithms of random forest, support vector machine, logistic regression, and so on. Deep learning is set at the front lines of healthcare along with the other implementations and has generated effective outcomes by inspecting a large amount of electronic medical data for disease treatment. And the extracting of features by the preferential method of task become complicated. It detects the abstract and deep characteristics from the data and holds a broadrange of dependencies in data effectively, applying inspection of both text and image data efficiently [4]. the methods of deep learning perform better in the analysis of big data than the conventional methods with incrementing the number of transcript data and medical images. And they require minimal time and resources of computation in pre-processing of data and extracting the features [5]. In this paper, section II describes different deep learning approaches with their advantages as well as disadvantages. In section III, a brief description of recent advancement in medical data analysis are discussed. Finally, in section IV conclusion and future advancements are discussed.

II. OVERVIEW OF DEEP LEARNING

In machine learning small dataset is required to train the model whereas a large dataset is required to train the model. The processing of machine learning takes less time to train the model but takes more time of computation for testing so Low-end machines are sufficient, whereas high processing is needed for the process of training in deep learning but very small time is required for testing. So the deep learning is

Power BI Dashboard for Data Analytics of Sales Data

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ABSTRACT

All businesses want growth, and this can be achieved by identifying new opportunities and potential areas for growth in addition to the areas in which the business is lagging. Data analytics is the process by which the data is processed and various important insights are extracted from it that are crucial for the growth of an organization.

The process of understanding the value of a data set through a visual context is known as data visualization," and it is a component of data analytics that is carried out after data correction. These days, analytics and business intelligence are more dependent on visualisation.

Datasets can be visualised using a variety of methodologies and in a variety of interactive or dynamic ways, as well as through several sorts of visual insights.

This paper focuses on the process model, Microsoft Power BI operations, types of data sources available in Tool, and its various related types of visual insights or context. It deals with the interactive visualisation of educational institution databases using Microsoft Power BI Tool with different modules.

KEYWORDS: Data Analysis, Data Visualization, Power BI, Business Intelligence

INTRODUCTION

Data visualization is the graphical representation of data and information in a visual format, such as charts, graphs, maps, and infographics. Data visualisation is to convey complicated data in a straightforward, understandable, and analytically sound manner. It is possible to spot patterns, correlations, and trends by transforming data into visual representations that can be challenging to spot in raw data. For data analytics, corporate intelligence, and decision-making processes, a data visualisation is a crucial tool that enables users to draw meaningful conclusions and takeable insights from the data. Numerous sectors, including banking, healthcare, marketing, and education, use it extensively.

Because it provides a range of visualisation options, including bar charts, pie charts, maps, tables, and more, Power BI is a strong tool for data visualisation. Users of the tool can produce interactive reports and dashboards that can be distributed throughout an organisation. The visuals can be altered to meet the user's demands and the requirements of the data being examined. Users of Power BI can also delve deeper into the data to acquire more information and spot patterns or trends. Overall, Power BI data visualisation aids users in making better decisions by presenting information in a clear and understandable manner.

The Process Model of Power BI refers to the steps involved in creating a data model within Power BI. The data model is the foundation of any Power BI report or dashboard, and it is created using the Power Query Editor and the Power Pivot Editor.

The process model involves four main steps:

1. **Data Acquisition:** This involves connecting to the data sources, selecting the tables or files to use, and applying any necessary transformations to the data using the Power Query Editor.
2. **Data Transformation:** In this step, the data is cleaned, filtered, sorted, and otherwise transformed to make it ready for analysis using the Power Query Editor.
3. **Data Modeling:** Once the data is transformed, it is loaded into the Power Pivot Editor, where relationships between tables are established, and calculated columns and measures are created to support the analysis.
4. **Report Creation:** Finally, the data model is used to create reports and visualizations using the Power BI Report Builder, where users can create interactive dashboards and reports.

Overall, the process model of Power BI helps users to create a robust data model that supports effective analysis and visualization of data.

Types of Visuals in Power BI

You can utilise Microsoft Power BI visuals to augment Power BI by getting high-quality data visualisations. More than 20 different types of visual contexts, a framework for running them,



Sustainable Growth: Assessing the Customer Impact of Green Supply Chain Management in Small and Medium Enterprises

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Abstract

More and more, cutting-edge supply chain strategies are placing an emphasis on green supply chain management (GSCM). As a result, groups concerned with environmental issues in industrial processes have become more vocal, including environmentalists, political groups, academic institutions, and corporate entities. The purpose of small and medium-sized enterprises (SMEs) adopting GSC practises is often to increase profitability, not to benefit the environment, according to new study. Main data is gathered from Nagpur's SMEs. One hundred participants made up the study's sample and the results were analysed using the F test. Using SPSS 23, the study's analysis was conducted. The purpose of this research is to learn more about the GSC practises that small and medium-sized enterprises (SMEs) in Nagpur are using right now, how those practises have affected their customers, why SMEs embraced these practises, what challenges they encountered while trying to put them into action, and how SMEs owners and executives have an impact on GSC practice acceptance.

Keywords: Green Supply Chain Management, Small & Medium Enterprises, Customer, Motive, Practices

Introduction

Environmental problems are becoming more obvious to societal groups, business organisations, and the government. The ozone hole, climate change, solid waste, water and air pollution, and other environmental problems may all be traced back to corporate entities. The government is implementing strict regulations and policies to deal with environmental problems since these issues provide challenges for business companies. Even though supply chain management (SCM) is a relatively new idea, environmental issues are still seen as critical for businesses. Garbage and carbon emissions from business supply chains are the primary culprits in today's environmental damage.

Many companies are investing in and incorporating environmentally friendly policies and practices into their operational processes because they recognise that sustainability starts in the supply chain. According to Adarsha and Prathap, supply chain management (SCM) is the process of guiding and overseeing a complex network of activities that work together to provide a completed product to the customer (2013). A novel idea called the "green supply chain" seeks to reduce waste, save energy, and prevent the breakdown of harmful compounds in the environment as a result of environmental concerns across the distribution chain. One of the most recent innovations in environmental preservation, green supply chain management helps businesses become more efficient and make more money. In order to achieve organisational supremacy, developing markets such as India must adopt green supply chain concepts. Finding out where GSCP stands in India, what motivates small and medium-sized enterprises (SMEs) there to embrace it, the challenges they face when putting it into practice, and how Indian SMEs' owners and executives affect GSCP adoption are the main goals of this study.

Logistics and Operations Academics and professionals alike are now engrossed with GSCM. The existing literature makes it clear that most researchers have focused on studying GSCM practises and their application in developed nations like the UK, Japan, Germany, and Taiwan, etc., and have paid little attention to emerging nations, mostly in Asia, such as India, Malaysia, and China. Academics have mostly focused on industrialised nations to find out





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Relationship of the Perceived Service Quality and Customer Satisfaction on Digital Printing Businesses

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Abstract

The study investigates the relationship between perceived service quality and customer satisfaction among digital printing businesses in Santiago City. The relationship between the demographic profile and customer satisfaction is also examined.

This cross-sectional study is based on primary and secondary data. A sample of 369 respondents who availed of the service, at least once from the various digital printing businesses in Santiago City participated in the study. Non-probability sampling technique, specifically quota sampling, has been used to select participants for the current study. The researchers used the Pearson correlation coefficient to test hypotheses and provide statistical results.

The study found essential implications of the relationship between the perceived service quality and customer satisfaction in digital printing businesses; the customers perceived all the service quality dimensions, especially the Empathy dimension. Participants are "Very Satisfied" with the service they received rendered by the Digital Printing Businesses. Service quality and customer satisfaction have a moderate positive correlation. The perceived service quality has a weak positive correlation with the participant's demographic profile, except the gender. Customer satisfaction has no significant relationship with the participant's demographic profile.

The study presented an analysis of the relationship between perceived service quality and customer satisfaction among digital printing businesses that would be relevant in increasing the level of satisfaction experienced by the customers. Therefore, there is an essential contribution towards providing best practices for operational efficiency, workflow optimization, and quality control, resulting in improved processes and customer satisfaction.

Keywords: Perceived Service Quality, Customer Satisfaction, Digital Printing

INTRODUCTION

Background of the Study

Service quality is a measurement of how effectively a provided service satisfies the expectations set out by the customer. Service providers regularly measure the quality of the service they provide for their customers to enhance their services, quickly identify problems, and more accurately measure the level their customers are satisfied with their work. Their satisfaction is classified as customer satisfaction (Ramya, Kowsalya & Dharanipriya, 2019).

Customer satisfaction pertains to satisfaction with a service or product after receiving it. The idea is to meet customers' needs so that they will continue to patronize a business's establishments, enabling the business to remain competitive in its industry as digital business is growing and growing like a mushroom (Nunkoo, Teeroovengadum, Ringle, & Samasseu, 2019).

The digital printing industry is still in the primary stage of development and improvement; however, the industry is rapidly developing, and digital printing has an extensive range of use instances, including printing on packaging, printing personalized items, and so on. The digital printing method is rapidly becoming the primary printing process, and its development seems promising in technological advancement (Peng, 2019).

Demirel (2022) addressed the problem in Turkey about how the relationship between service quality dimensions affects customer satisfaction positively. Random sampling has selected four hundred-five people to ensure objectivity and scientific neutrality. The results confirm that all dimensions of digital service quality favor the development of customer satisfaction. Digital service quality and the relationship between customer satisfaction are positive. Businesses should gain credibility for customers and should design their products according



Navigating Turbulence: Unraveling the Increasing Causes of Volatility in the Current Scenario and Strategies for Resilience

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ABSTRACT

Crucial to economic development, the stock market is one of the most flexible enterprises in the economy. Investors may also use the stock market as a meeting place to trade bonds, stocks, and other financial products. Basically, the stock market might function as a platform where various assets and derivatives can be exchanged without any obstacles. Through communal difficulties, some firms publish their lucrative initiatives on the open market. Investors looking to profit from their shares are now putting their money into companies via the stock market. There are two stock exchanges in India that are listed: the Bombay Stock Exchange (BSE) and the National Stock Exchange (NSE). Volatility is another name for the mathematical degree to which the returns of a certain asset or Market Index stretch out. A security's associated risk tends to rise in tandem with its level of volatility. A variety of reasons pertaining to several market participants need accurate uncertainty estimation. Developed markets maintain their offerings for a long time with higher earnings and less volatility. Readers will have a better understanding of the past, present, and future of the Indian stock market from the examination. The Indian market has been growing at a faster pace than other nations' markets.

KEYWORDS: Stocks, Indian stock market, BSE, NSE, unpredictability

INTRODUCTION

Recent signs point to heightened economic uncertainty, which has been mirrored in both intra-day and between-day volatility. News stories and a few of clinical research publications also provided figures to support this privilege. The Indian Securities and Exchange Board has conducted extensive research on the volatility. The volatility has not grown much in the last several years, as many studies show, contrary to common opinion. The Indian stock market has a very high return rate and a low level of volatility.

The efficiency of the financial system and the economy might both take a hit from unpredictability. Because of this, consumer spending changes, which in turn impacts the economy. Uncertainty in the stock market has an impact on consumer spending because of the wealth effect. Consumer spending rises as wealth rises. But if the stock market goes down, consumers will lose faith in the company and cut down on their purchasing. Businesses' willingness to invest and the rate of economic growth are both affected by the stock market. The rising dangers of equity investments or the flight of money to safer investments are two manifestations of the increased volatility of the stock market. Businesses will see a rise in their cost of funding if this effect can be felt by startups if more investors choose to purchase shares in established brands. While most people may agree on the definition and, to a lesser extent, the measurement of stock market unpredictability, there is far less consensus on the causes that impact these market swings.

One source of unpredictability, according to some experts, is fresh, unexpected information that alters the projected earnings of a company. Consequently, changes in market volatility would only reflect changes in the local or international market scenario. Some people think that changed macroeconomic policies, changes in investor risk tolerance, and increased uncertainty are the key causes of unpredictability, rather than differences in interchange capability, procedures, or designs. Both intra-day and inter-day unpredictability may be used to simplify the analysis of uncertainty. There is open-to-close, high-to-low, and open-to-open unpredictability in the former, and immediately adjacent unpredictability in the later. Using the BSE Sensex as an example, this research looks at the aforementioned features of volatility during the research period.



An Analysis on Cyber Security Laws in India

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Abstract

The internet has made a significant impact on all parts of modern lifestyle and businesses and people have become susceptible to various cyber attacks. Every year, cybercrime rates are increasing and causing loss of privacy, reputational and financial damage, and intellectual property violations. The INDIA has become a key target for those criminals because of high levels of tourism and economic activity, rise of oil and gas sector, and uptake of technology. A lot of changes have been made to the cyber law in INDIA. But security concerns are still there on proper protection of data of the citizens and businesses.

In this article, we review the effectiveness of cyber laws in the United Arab Emirates (INDIA) by comparing it with the same in other developed countries. In addition, we also discuss the measures to improve the law and ensure the feeling of safety in every individual about the use of internet technologies and internet. Here, we explore how far cybercrime laws can go to protect businesses and citizens in the INDIA. The nation took proactive and decisive actions to prevent the risks of cyber attacks and cybercrimes. It is found that the INDIA is prepared against cyber attacks and cybercrimes with an effective and wide-scale legal framework of cyber laws. Despite having effective laws, businesses and citizens are still the lucrative targets of cyber criminals due to significant technological advances.

Hence, the INDIA has to strengthen their legal frameworks to prevent those crimes. The country has to enact streamlined and wide-scale laws with stricter penalties, such as hefty fines, deportation of foreigners, and longer jail terms.

Keywords – cyber laws in INDIA, INDIA, cybercrime laws, cyber security, cyber threats, cyber attacks, technology, internet, legal frameworks

Introduction

The United Arab Emirates (INDIA) is one of the most digitally connected nations, with over 85% of the online population, in the Middle East, according to ITU (Mwangi, 2014). Hence, INDIA stands third among the countries with internet usage in the Middle East and 17th across the world, according to its "Virtual Economic Development Partnership International Trade (2014)." The rapid advancement of latest technologies and higher internet speeds have provided a lot of opportunities to cybercriminals to indulge in illegal acts and target more and more victims. Cybercrime consists of all crimes committed through the internet, hardware device, or computer (Alkaabi, 2010), such as copyright infringement, hacking, Denial of Service (DoS) attacks, fraud, and web defacement (Dwyer, 2010).

According to Norton (2012), cybercriminals attack over 431 million individuals in 24 countries, including INDIA, every year and over 1 million adults every day. Cybercrime is well regarded among the top four economic crimes (Beer, 2011), with an estimated cost of over US\$388 billion to the global economy (Detica, 2011) and over \$1 trillion annually (Lewis, 2013). The residents and citizens in the INDIA are highly active with smart devices and the INDIA itself has a robust economic position, making it the top priority of cybercriminals (Wainwright, 2013).

The INDIA has understood the importance of cyber security laws to prevent and prosecute the conduct of cyber crimes and implemented the "Federal Cybercrimes Law No. 2" in the year 2006 for the first time in the country. The INDIA government amended the cybercrime landscape with the "Federal Cybercrimes Law No. 5" in 2012. This amendment has declared the use of a fraudulent IP address in any way for a crime as a punishable offense in Federal Law No. 12/Article 1 in 2016 (Aldurra, 2013). However, cyber criminals still come up with the latest technologies to attack victims, especially financial institutions, and these are not addressed well by the existing cyber law (Rajan et al., 2017).

In a world which relies heavily on online transactions, social media, self-controlled devices, cloud storage, and big data, data privacy and information security are at high risk and a matter of concern. Cyber crimes are rising day by day because of excessive dependence on computers and the internet. Digital illiteracy has become a serious problem these days. There are around 4.7 billion active users on the internet in 2021 (Statista, 2021). The massive rise

Role of Artificial Intelligence in Marketing: A Paradigm Shift

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ABSTRACT:

"A Paradigm Shift" describes how AI is revolutionising marketing tactics. It represents a fundamental shift in the way that marketers view, interact with, and target customers. Better consumer interaction, more precise ad targeting, and more efficient decision-making are all made possible by AI's ability to provide data-driven insights, personalised experiences, predictive analytics, and automation in marketing efforts. This change signals a move towards AI-powered marketing methods that are more effective, accurate, and customised.

The study explains the influence of Artificial intelligence in marketing and discusses how artificial intelligence causes remarkable growth and differences in marketing. The study also focuses on the future of artificial intelligence in marketing. AI's impact on marketing has already resulted in notable improvements in efficiency, customisation, and decision-making. Future developments in personalization, content production, and ethical issues are all promising applications of AI in marketing that will influence the field for years to come.

KEYWORDS: Artificial intelligence, marketing, future scope, paradigm shift, experiential marketing

1. INTRODUCTION:

Modern marketing is becoming more automated, intelligent, and data-driven. Marketing results have been directly impacted by new-age marketing's laser-like focus (Kumar et al., 2019; Paschen et al., 2019). Technological developments have led to long-term changes in the marketing industry's evolution and have demonstrated that marketing and artificial

intelligence (AI) can work together to change things (Siau, 2017; Wirth, 2018).

The way AI is revolutionising marketing tactics. It represents a fundamental shift in the way that marketers view, interact with, and target customers. Better consumer interaction, more precise ad targeting, and more efficient decision-making are all made possible by AI's ability to provide data-driven insights, personalised experiences, predictive analytics, and automation in marketing efforts. This change signals a move towards AI-powered marketing methods that are more effective, accurate, and customised.

Since artificial intelligence (AI) can analyse large volumes of data, automate procedures, and enhance decision-making, it has become a crucial component of contemporary marketing tactics. AI gives marketers more power by giving them access to technologies for automation, personalization, predictive analytics, and data analysis. It aids in boosting overall marketing tactics for increased engagement and conversion, providing individualised experiences, and better understanding customers.

Data analysis and insights: AI's speedy processing of large datasets gives marketers insightful knowledge about the habits, tastes, and trends of their target audience. Making more educated and data-driven marketing decisions is made possible by its assistance in analysing consumer journeys, purchase trends, and demographics.

Personalization: AI analyses consumer data to generate customised experiences, which allows for personalised marketing. Marketers can boost engagement and conversion rates by providing personalised content, product recommendations, and offers based on user preferences.



Study of Algorithms to Calculate Real Root of Transcendental Equations

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Abstract

This study deals with a comparative analysis of algorithms for solving transcendental equations. It includes algorithms for RF-EXP, RF-Halley, Arc-sine, Tanh and RF-ArcTanh methods to check the accuracy, number of iterations, and errors for the solution of the trigonometric, logarithmic, and exponential equations. Several numerical examples are presented to illustrate the algorithms' efficacy which are programmed in MATLAB. The findings indicate that Arc-sine and RF-ArcTanh, RF-Halley, and Tanh are in fact used for exponential equations, trigonometric equations, and logarithmic equations respectively.

Keywords: RF-EXP, RF-Halley, Arc-sine, Tanh and RF-ArcTanh

1. INTRODUCTION

Many different academic and professional disciplines only use equations that don't follow a linear trend. These topics include the use of numerical methods to generate an accurate estimate of the solution for these equations. This is because it could be difficult or even impossible to solve certain equations analytically. The most frequently chosen subset of numerical strategies for solving nonlinear equations has been iterative methods. An introduction to various iterative methods for the solution of nonlinear equations will be given within the context of this discussion. These methods are based on the idea of estimating the solution initially, followed by several iterative rounds of refinement, carried out until the necessary level of precision is attained. In many disciplines, including physics, engineering, and mathematics, nonlinear equations are crucial. Depending on the numerical approach's convergence order, it will reach the exact solution. It is common knowledge that many issues that emerge in a variety of pure and applied science domains can be expressed in terms of nonlinear equations of the form $f(x) = 0$. [1] The traditional Newton-Raphson method (NRM) is the most well-known of these techniques [2].

For a given initial selection x_0 , we get the approximate solution x_{n+1} using the iterative formula

$$x_{n+1} = x_n - \frac{f(x_n)}{f'(x_n)}$$

This is referred to as the cubic convergence of Halley's approach [3].

2. LITERATIVE METHODS

Arc-Sine Algorithm

A hybrid algorithm is presented by [4], the iterative formula used in the trigonometrical method is as follows [5]. For $n = 0, 1, 2, \dots$

$$x_{n+1} = x_n - \frac{f(x_n)}{f'(x_n)}$$

In regula-falsi method, we take a and b such that the product of $f(a)$ and $f(b)$

should be less than zero. The real root is calculated by discovering the point of intersection of the straight line

$$x = a - \frac{f(a)(b-a)}{f(b)-f(a)} \tag{4}$$

the coordinates $(a, f(a))$ and $(b, f(b))$ with the x -axis. Hence, the estimated root can be calculated by the formula,

ALGORITHM

1. $i = 0$
2. while $i! = n$ do
3. $i = i + 1$;
4. $x_{rf} = a - \frac{f(a)(b-a)}{f(b)-f(a)}$
5. $x = x_{rf} + \arcsin\left(\frac{f(x_{rf})}{f(b)}\right) = x_{rf}$



Difference in Visual Reaction Time Among Male and Female Physiotherapy Students: A Comparative Study

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Introduction: Visual reaction time is a component of cognitive function. Reaction time is defined as interval of time between presentation of stimulus and appearance of appropriate voluntary response in subject. The measurement of visual reaction time has been used to evaluate Processing speed of central nervous system and coordination between Sensory and motor system. It determines the alertness of a person because how quickly a person responds to stimulus depends on reaction time.

Method: a comparative study was conducted on physiotherapy students of DR BR Ambedkar college of physiotherapy ,banglore . Karnataka . The population of student include UG students and interns .By ruler drop method , they were examined for visual reaction time .

Result: There was no statically significant difference in visual reaction time among male and female physiotherapy students.

Conclusion: This study concluded that there is no significant difference in visual reaction time among male and female physiotherapy students of Dr.Br. Ambedkar college of physiotherapy.

Keywords: Reaction Time, Visual Reaction Time, Ruler Drop Method.

INTRODUCTION:

The human body reacts to a variety of external environmental stimuli in various ways. The human body responds voluntarily and purposefully in various stimuli. A deliberate, voluntary reaction to a stimulus is called a reaction. Between the application of the stimulus and the proper motor response, there is a certain amount of time. The period between the introduction of the stimulus and the emergence of the subject's proper voluntary response is referred to as the reaction time. Reaction time is a straightforward, non-invasive test for both peripheral and central brain structures with physiological significance. Measuring reaction times is an indirect indicator of the central nervous system's processing power. Measuring reaction times can be used to assess an individual's performance and sensory-motor integration. It establishes a person's level of attentiveness since a person's reaction time defines how quickly he reacts to a stimulus. Age, sex, left or right hand, central vision versus peripheral vision, practice, exhaustion, hunger, breathing cycle, personality types, exercise, and subject intellect are some of the variables that affect human reaction time¹. RT frequently used for the evaluation of cognitive processes that are known to have an impact on academic performance.² An intentional, voluntary reaction to various stimuli, such as visual stimuli, is called a reaction. The amount of time required to respond to visual stimuli is known as visual reaction time (VRT). Physiotherapy Students can use it to identify bones, tools, create graphs, and answer viva questions in exams for physiotherapy students. They with practice, pupils may recognize, comprehend, and respond to visual stimuli with a shorter reaction time. By training, skills can be enhanced. In many cases, visual information is used to complete the bulk of tasks. The amount of time needed for stimulus recognition and reaction can be reduced by performing an essential task.³ Responses that take longer to commence are thought to require more time to digest information. RT measurement is a typical method for assessing psychomotor fitness.⁴

Need of the study:

As RT is responsible for identifying bones, distinguish tools, answer questions in exams, diagnose patients and respond with speed in Physiotherapy students, there is a lack of literary evidence in the field of difference in Visual reaction time among male and female physiotherapy students. Thus, need for this research study arises.

METHODOLOGY:

STUDY DESIGN : Comparative study

Green Computing Evolving Concept to Design, Development, Implementation Using Information Technology

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Abstract

Green Figuring is an advancing idea that envelops the plan, advancement, execution, and utilization of data innovation (IT) frameworks and administrations in a naturally dependable and practical way. It includes the utilization of advancements, practices, and arrangements that limit the adverse consequence of IT on the climate while boosting its proficiency and adequacy. The reflection of Green Processing can be summed up as follows: [1]

Energy Productivity: Green Figuring accentuates the productive utilization of energy in IT frameworks and administrations. This incorporates advancing the power utilization of equipment parts, for example, servers, server farms, and end-client gadgets, through innovations, for example, power the board, dynamic voltage and recurrence scaling, and virtualization. Additionally, it involves the utilization of algorithms, software, and applications that are energy efficient and reduce energy consumption during storage, communication, and processing.

Carbon Footprint Reduction: Green Computing focuses on reducing the carbon footprint of IT systems and services, which refers to the amount of greenhouse gas emissions, such as carbon dioxide (CO₂), generated during their lifecycle. This includes using renewable energy sources, such as solar or wind power, for powering IT infrastructure, as well as optimizing the software and network configurations to minimize the energy consumption and emissions. It also involves promoting telecommuting, virtual meetings, and cloud computing, which can reduce the need for physical travel and infrastructure.

Environmental Monitoring: Green Computing involves monitoring and measuring the environmental impact of IT systems and services throughout their lifecycle. This includes assessing the energy consumption, resource usage, and emissions associated with IT operations, as well as conducting environmental audits and certifications to ensure compliance with environmental standards and regulations. It also involves using environmental monitoring tools, sensors, and analytics to identify and address areas of improvement in terms of environmental sustainability.[2]

Education and Awareness: Green Computing emphasizes the importance of education and awareness among IT professionals, users, and stakeholders about the environmental impact of IT and the need for sustainable practices. This includes providing training and resources on green IT technologies, best practices, and policies, as well as promoting a culture of environmental responsibility and sustainability within the IT industry and beyond. It also involves engaging in public awareness campaigns, advocacy, and policy-making to promote green computing principles and practices at a societal level.

In summary, the abstraction of Green Computing involves the integration of energy efficiency, resource conservation, carbon footprint reduction, environmental monitoring, and education and awareness into the design, development, implementation, and use of IT systems and services, with the goal of minimizing the negative impact on the environment while maximizing efficiency and sustainability. Many corporate IT departments have green computing strategies to lessen the impact of their IT operations on the environment.

Resource Conservation: Green Computing promotes the responsible use of natural resources, such as water, minerals, and raw materials, in the design, production, and disposal of IT equipment. This includes using recycled or recyclable materials, reducing the use of hazardous substances, and adopting environmentally-friendly manufacturing processes. It also involves extending the lifespan of IT equipment through refurbishment, repair, and recycling, and reducing electronic waste (e-waste) by proper disposal and recycling practices.

INTRODUCTION

Green computing is a concept that refers to the use of environmentally sustainable and

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WSN Hybrid Clustering Algorithm Based On K-Means and Fuzzy

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Abstract: Applications such as industrial automation and environmental monitoring rely heavily on wireless sensor networks (WSNs). Grouping is a basic procedure utilized in WSNs to upgrade network effectiveness, draw out network lifetime, and decrease correspondence above. In this unique circumstance, this examination proposes a clever half breed grouping calculation that coordinates the qualities of both K-Means and Fluffy Rationale for further developed execution in WSNs. Combining the efficacy of K-Means with the adaptability of fuzzy logic, the proposed algorithm seeks to overcome the drawbacks of conventional clustering methods. The Fuzzy Logic component introduces a degree of membership for each node to multiple clusters, while the K-Means component provides a robust and effective initial clustering of sensor nodes based on distance metrics. This fluffy enrollment permits a hub to have a place somewhat with various bunches, giving a more nuanced portrayal of its importance to different gatherings inside the organization.

Keywords: Fuzzy Logic, Wireless Sensor Networks (WSNs), K-Means, Clustering

Introduction

Wireless Sensor Networks (WSNs) have emerged as a critical technology in various applications such as environmental monitoring, healthcare, and industrial automation due to their ability to collect data from the physical world. Clustering is a fundamental technique employed in WSNs to enhance scalability, energy efficiency, and data aggregation. Traditional clustering algorithms, such as K-Means, provide efficient and deterministic cluster formation but may struggle with dynamic and uncertain environments. In contrast, Fuzzy

Logic offers a more flexible approach by incorporating uncertainty, but it may lack the precision exhibited by traditional methods.

This research introduces a novel hybrid clustering algorithm that leverages the strengths of both K-Means and Fuzzy Logic to address the challenges posed by the dynamic and uncertain nature of WSNs. The primary goal is to develop a clustering mechanism that is robust, energy-efficient, and capable of adapting to changing network conditions.

1. Background

1.1 Wireless Sensor Networks

Wireless Sensor Networks consist of a large number of sensor nodes that collaborate to monitor physical phenomena, collect data, and transmit information to a central base station. The resource constraints, communication challenges, and the dynamic nature of these networks necessitate the development of efficient clustering algorithms.

1.2 Clustering in WSNs

Clustering algorithms organize sensor nodes into groups or clusters, where each cluster is typically represented by a cluster head responsible for aggregating and transmitting data to the sink. Clustering helps in reducing energy consumption, prolonging network lifetime, and improving overall network efficiency.

2. Motivation

While traditional clustering algorithms like K-Means are efficient in forming compact clusters based on explicit criteria, they may lack adaptability to the uncertainty inherent in WSN data. Fuzzy Logic, on the other hand, accommodates uncertainty through degrees of membership but might sacrifice precision. The motivation behind this research is to develop a hybrid clustering algorithm that combines

**Rescheduling of Production Process by Flexible Manufacturing System Considering Tool Failure
and Machine Break down in CNC**

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ABSTRACT

This paper describes in detail about the rescheduling of production process due to the failure of cutting tool or machine breakdown during an automated batch production. In general flexible manufacturing system is incorporated in the production process to achieve the desired rate of production without any distortions during the production process. Rescheduling of production process takes place due to the following factors; poor tool life, wear in machine component, poor tool grinding, tool breakdown and machine repair. In the above stated factors, tool breakdown is the most common problem faced during most of the machining operation/production process. This paper deals in developing a algorithm to reschedule the production process during cutting tool breakdown.

Keywords: Flexible manufacturing system, production process, rescheduling, cutting tool breakdown.

1. Introduction

In general the flexible manufacturing system refers to uninterrupted automated manufacturing. The flexible manufacturing system basically consists of two main phases namely design and production phase. The concept of flexible manufacturing system differs for each organization and it is dependent purely on the developer. The production phase consists of production planning, scheduling of plan and production controlling. Flexible manufacturing system consists of a group of automated machines that are being controlled by computer. These machines are generally incorporated with automated material handling system. The flexible manufacturing system reduces the human intervention in production process. As the CNC machines are equipped with Automatic pallet changer (APC) and Automatic tool changer to reduce the time associated with material handling and tool change, the breakdown of tool during the production process in CNC machines affects greatly the rate of production. The main objective of this investigation is to develop an effective production schedule in flexible manufacturing system at the time of tool breakdown.

2. Literature review

The ability to handle changes and quickly manage manufacturing and the production system to compensate for external demands is becoming an important competitive factor. The performance of the production system is largely dependent on the ability to be flexible as well as being able to reconfigure operations for new demands. The flexible manufacturing system and reconfigurable manufacturing system techniques play a vital role in manufacturing organizations (V. Malhotra et al.). The types of flexibility include machine flexibility, material handling flexibility, operation flexibility, process flexibility, product flexibility, routing flexibility, volume flexibility, expansion flexibility, control program flexibility, production flexibility. FMS offers lower carryover effects when stations interrupt, and also lowers the cost of maintaining

From Symmetry to Complexity: Self Complementary Graphs Unraveled

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Abstract

Self-complementary graphs are an intriguing and significant subject in graph theory. One special quality of these graphs is that they are isomorphic to their own complement. Self-complementary graphs are of tremendous interest to mathematicians, computer scientists, and researchers in other fields because of their fascinating property. The goal of this study is to provide an overview of the structure and features of the class of self-complementary graphs. Directions for future work are also presented.

Keywords: Complement of a graph, Isomorphic graphs, Self-complementary graphs.

1. Introduction

Graphs that are self-complementary are frequently very symmetric. They can exhibit reflectional and rotational symmetry, among other kinds of symmetry. Mathematicians and graph theorists find self-complementary graphs to be extremely fascinating because of this symmetry. It was the seminal publications of Ringel [1] and Sachs [2] that launched the field of study on self-complementary graphs. The subject was born under fortunate circumstances, and Rao [3] and Bosak [4] have traced its evolution over the last four decades. Additionally, it has been the subject of four Ph.D. theses, at least partially [5, 6, 7, 8], and four more that address related subjects [9, 10, 11, 12], in addition to the hundreds of papers that have been published so far. In the discipline of graph theory, self-complementary graphs are a fascinating and significant subject. One special

quality of these graphs is that they are isomorphic to their own complement. Stated otherwise, a self-complementary graph is one that is isomorphic to the original graph when its complement is taken (that is, a graph where neighboring vertices in the original graph are non-adjacent, and vice versa). Self-complementary graphs are of tremendous interest to mathematicians, computer scientists, and researchers in other fields because of their fascinating property.

William Tutte studied the idea of self-complementary graphs in the middle of the 20th century. Tutte's research on this subject served as a basis for numerous other graph theory projects. Additionally, self-complementary graphs have a restricted structure. Sachs [2] pointed out that the permutations of a self-complementary graph's vertices that map it into its complement have an intriguing cycle structure. One may wonder how many self-complementary graphs there are on n vertices for a given $n \in \mathbb{N}$. In a study [13] that was published in 1963, R. C. Read lists these values for arbitrary $n \in \mathbb{N}$. The enumeration reveals the interesting fact that the number of digraphs with $2n$ vertices that are self-complementary digraphs is equal to the number of self-complementary graphs with $4n$ vertices for every $n \in \mathbb{N}$. In 1975, D. Wille found a similar result. He established the following: the number of self-complementary relations over $2n$ components are equal to the number of self-complementary graphs with $4n + 1$ vertices [14].


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Modeling and Forecasting of Producer Price Index (PPI) of Cheese Manufacturing Industries

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Abstract: Modeling and forecasting of complex time series data has grown as an attractive field thanks to machine learning. The PPI (Producer Price Index) of cheese manufacturing businesses was examined in this study utilizing a machine learning technique. Training and testing data sets were created for the goal of creating and validating a model. After that, we built deep learning models such as LSTM, BiLSTM, and GRU and tested them on a training data set using metrics such as ME, RMSE, MAE, MPE, MAPE, and ACF1. These deep learning models were compared on the basis of RMSE for the testing data set. On this set of data, the LSTM model outperforms the BiLSTM and GRU models in terms of machine learning performance. These three models' forecasting abilities are nearly identical. Policymakers and academics may find this study useful in building a body of knowledge about PPI in the cheese manufacturing industry. As a result, we feel that this work can be used as a textbook on how to apply machine learning techniques to complex time series.

Keywords: Producer Price Index (PPI); LSTM ;BiLSTM; Forecasting.

1. Introduction

Cheese is a dairy product derived from the coagulation of casein, a milk protein derived mostly from cow, buffalo, goat, or sheep milk. It is available in a wide range of flavors, textures, and shapes. For millennia, cheese has been prized for its mobility and extended

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Original Article

Synthesis, Characterization And Antibacterial Studies Of Fe (III) Complexes Derived From Substituted Chalcone Semicarbazones

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Abstract

The organo-metallic complexes of trivalent iron have been synthesized from ligands (Schiff bases) produced by the interaction of chalcones ((i) chalcone, (ii) 2',4-di-hydroxy chalcone, (iii) 2'-hydroxy-3-nitro chalcone and (iv) 2'-hydroxy-2-chloro-chalcone) and semicarbazide-HCl. The complexes have been described based on measurements of their magnetic susceptibility and conductivity, such as elemental analyses, infrared, electronic, and mass spectrometry. The fact that metal complexes have an octahedral shape has led to this conclusion. The direct spot method was used to test the antibacterial activity of the iron complexes mentioned above against *Staphylococcus aureus*.

Keywords- Chalcones, Semicarbazone and Iron (III) complexes, Spectral studies, Antibacterial action.

1. INTRODUCTION

Literature survey revealed that there are few publications on the organometallic complexes based on chalcone semicarbazone thus Sharma et al[1], in 1991 reported the preparation of chalcone semicarbazones, which these authors employed for the preparation of corresponding Rh (III) and Ru (II) complexes. This was followed by another report (2004) by Vashi and Naik[2] who prepared ligands (Schiff base type) derived from chalcones. We report herein the preparation [3] of four chalcones [i-iv] and their corresponding semicarbazones, followed by complexation with ferric chloride. The complexes derived with iron metal[11] here show interesting structural features and have antimicrobial activity against *S.aureus*.

2. EXPERIMENTAL

Materials and Methods-

The chemicals being used are reagents of analytical grade, and the solvents were pure chemicals. The ligands were synthesized [4] and analyzed according to the methods described in literature [5].

Instruments-

During this Regional Sophisticated Instrumental Central area in CDRI Lucknow (U.P.), India.

Modeling and Forecasting of Russian Federation Cheese Production, and total used using Time series models

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Abstract: The primary goal of this research was to evaluate the forecasted behavior of cheese production and total uses in Russia from 1988 to 2020. As a result of a supply-demand imbalance, cheese imports from other nations were necessary to close the gap. Before creating the model, the training and testing sets were split. For both data series, the linear trend model developed by TBATS and Holt was utilized to create the model and estimate the projection. For both sigma and AIC, the best prediction model was found in the TBATS model. Because the TBATS model can decompose data series, we found it to be the best prediction model over Holt's model. As a result of its poorer goodness of fit in both data series, Holt's linear trend model was the best model to use. This study has proven itself to be a valuable resource for policymakers, stakeholders, and researchers alike. Furthermore, we anticipate that the findings of this study will serve as a catalyst for the development of an advanced statistical model or machine learning model for cheese production in the future.

Keywords: BATS, TBATS, Time Series, Forecasting, Production.

1. Introduction

Using milk-clotting enzymes and lactic acid bacteria, cheese may be made from raw milk, or it can be made by melting a variety of dairy products and non-dairy raw materials in the presence of melting salts to create cheese. Cassava, goat, sheep, and buffalo milk are used to make cheese, which has a high concentration of protein, calcium, and vitamins. According to the International Dairy Federation's database, there are over 500 different varieties of cheese produced across the globe. The same cheeses are produced in various countries under different names and using different manufacturing procedures [1]. Russian cheese experts have suggested an upgraded categorization system that includes cheeses from other countries as well. The origin of modern cheese manufacturing in Russia goes back to 1866, although cheese production was a tiny industry before to the Soviet era [2], and it is still so today.

The formulation of predictions contributes to the stability and predictability of the growth of commodities markets in general. Producing companies may benefit from assessing the prospectively projected pricing and demand