20(1)   6b

Research Article

Second Generation Of PID Controllers For Reference In Put Tracking

Sajay paliwal[1]

ABSTRACT

The paper presents the birth of the second generation of PID controllers for possible replacement of the first generation of PID controllers. It presents the dynamics of the control system incorporating one of the controllers: PID, I-PD, PD-PI and PI-PD and a highly oscillating second order-like process. The controllers are tuned and compared with a conventional tuned PID controller. The performance is judged through the maximum percentage overshoot, maximum percentage undershoot and these ttling time characteristics of the time response of the control system to a unit step reference input.

Keywords: Conventional PID controller, second generation of PID controllers, I-PD controller, PD-PI controller, PI-PD controller, 2DOF controller.

I. INTRODUCTION

The first generation of PID controllers were introduced in 1939 by Taylor Instruments Company and the Fox boro Instrument Company [1]. Since that time they found wide applications in industry and researchers efforts were paid to tune their parameters. However, the first generation of PID controllers suffered from a kick phenomena in the control system using PID controller sappeared in the step time response associated with its reference input[2].

Professor Galal Hassaan run an intensive research from 2014 onward to investigate the application of a large number of controllers belonging to what is he called 'the second generation of PID controllers' to control processes having difficult dynamics such as unstable processes and highly oscillating ones. Some of the outcome of his research for reference in put trackingis:

- I-PDcontrollerin2014[3].
- PD-PIcontrollerin2014[4].
- PI-PDcontrollerin2014[5].
- PPIcontrollerin2015[6].
- PI-P controllerin2015 [7].
- 2DOFcontrollerin2015 [8].
- PD-Icontrollerin2018 [9].

II. HIGHLYOSCILLATINGSECOND-ORDER-LIKEPROCESS

The applicability of the proposed controllers wastested using a second-order-like process having the characteristics:

Natural frequency, ω_n:	10	rad/s
Dampingratio,ζ:	0.05	
Maximum percentage over shoot, Os_{max}:	85.4	%
Settling time, T_s:	6	s

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Analysis of Physico-Chemical Parameters of Underground Drinking Water

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ABSTRACT

Water is one of the precious natural resources that exist on our planet Earth. Without water, survival is not possible. In rural areas, water is an integral part of human life specially in agricultural field. Potable safe water is totally essential for healthy living. Adequate supply of fresh and clean water may be a basic requirement for all person on the planet. Due to over exploitation and poor management, the matter of beverage pollution and water quality management has assumed an awfully advanced form. Attention on pollution and its management has become a requirement of hour due to way reaching impact of it on human health. Moradabad is an industrial town, globally identified for its brass business. due to completely different varieties of human activities and speedy industry, the underground water quality is additionally badly affected. Underground beverage samples at IM2 hand pumps at fourteen completely different sites at Moradabad were collected and analyzed quantitatively following commonplace strategies and procedure to estimate the extent of contamination. Water quality physico-chemical parameters were elite as per the rules of W.H.O. Underground beverage was found to be contaminated with references to most of the parameters studied, whereas it absolutely was moderately contaminated for alternative water quality parameters studied. The studies recommend that individuals hooked in to this water are liable to health hazards of contaminated beverage and a few effective measures are desperately required for water quality management.

Kew words: Water pollution, physico-chemical parameter, chemical contamination

Introduction

Water is completely essential for healthy living. It plays an essential role within the lifetime of each species that survive during this world and is needed by all living organisms for his or her existence. Improper management and reckless use of water system area unit inflicting serious threats to the supply and quality of water 1-3. This study is aimed to assess the groundwater quality of IM2 hand pumps of district Moradabad.

Experimental

Underground water samples of fourteen India Mark-II(IM2) hand pump were collected and analysed quantitatively following standard methodology of sampling and estimation[4-6]. Three samples of each site were collected, estimated and the arithmetic mean of three values is reported. A blank was also run for all volumetric titration. All the chemicals of anal R grade were used. The specification of used instruments are– Century CP 901 pH meter, RI Conductivity meter and Hach 2010 (version 6.4) spectrophotometer. The estimated water quality physico-chemical parameters are- pH, conductivity, turbidity, total solids, total dissolved solids alkalinity, dissolved oxygen, biological oxygen demand, chemical oxygen demand, hardness, calcium, magnesium, chloride, sulphate and zinc A brief description of sampling site is given in Table 1.

Results and Discussion

Site-wise estimated values of different physico-chemical parameters with their prescribed W.H.O. [7] standards are listed in Table 2. A critical analysis of the data revealed following facts regarding ground water quality at Moradabad.

Groundwater is found to be alkaline with higher values of pH and very high values of alkalinity. The observed range of conductivity is 0.44 -1.5 µS/cm and it is much higher than the desirable limit. The estimated range of hardness is140 - 408 mg/lit and the water of all the sites of study is very hard and unfit for usage. The concentration of calcium at all the sites is higher than that of magnesium, therefore, it may be suggested that hardness of water is mainly due to salts of calcium.

The amount of dissolved oxygen in groundwater is irrelevant for the assessment of water quality, however, water samples are found to be deficient of dissolved oxygen. The

Technique for Creating a Thermoelectric Cooler-Supported Water Condensation System

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Abstract

It is trying to acquire water assets for water system or different purposes in numerous countries, including India, because of the absence of precipitation, particularly in the dry areas like deserts and so on. Because of an absence of precipitation, the issue of water shortage is likewise seen all through the world. Notwithstanding, we can consolidate the airborne water fume in regions that are extremely muggy, like those close to the ocean. This study explains how to make a thermoelectric cooler-supported water condensation system. The framework comprises of air circulator, heat exchanger, and cooling gadgets. The air Water Generator is the innovation that can straightforwardly change air dampness into valuable and, surprisingly, drinkable water. This contraption transforms water fume atoms into water beads by utilizing the inactive intensity idea. In spite of the fact that it has been presented a little previously, India and a few different countries don't utilize it regularly. In our mechanical age, when we are depending on sustainable assets, it has a ton of utilizations. Additionally, the experiment's outcomes and the system's functionality are discussed in this essay.

Keywords: Thermoelectric cooler, Atmospheric moisture

INTRODUCTION

In numerous countries, including India, getting water assets for agribusiness or different purposes is testing, especially in parched areas. Finding different strategies for the age of unadulterated water turns out to be more helpful to motivate numerous scholastics to concentrate on related subjects in light of the absence of unadulterated water in numerous areas all through the world, especially in the nations of the Arabic Bay. Water is crucial for life in the entirety of its aspects. Water is an essential part of life, yet it is hard to decontaminate, costly to ship, and can't be subbed. Almost 45 crore individuals live in water-deficiency zones across 129 countries.

Almost 70% of new water is used for water system of agrarian fields, causing water clashes among metropolitan and rustic regions. In the event that this pattern proceeds, by 2032, almost 50% of the total populace will encounter a water deficiency. Water wars are likely to break out in the 21st century. It has been noticed that different regions of the planet are encountering water shortage because of an absence of precipitation. Notwithstanding, we can consolidate the airborne water fume in regions that are extremely muggy, like those close to the ocean. The strategy for making a water buildup framework in light of a thermoelectric cooler is introduced in this examination. There are cooling elements, a heat exchanger, and an air circulation unit in the system.

The Air is contains enormous measure of water as dampness, fume and so forth. Inside those sums practically 30% of water is squandered. If we are able to extract the water that is present in the air in the form of moisture, then this quantity of water can be utilized. This Environmental dampness convertsdirectly into usable and, surprisingly, drinkable water this is called Barometrical Water Generator.

This venture willhelps to expand the utilizations of suchdevices further from here on out. From past information, we got to realize that the temperature expect to consolidate

Security of Next-Generation Mobile Payment Systems:

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Abstract:

The main part of versatile trade is portable installment. We order the installment choices in light of various models, assess every one, and feature its benefits and impediments. As a type of mobile data service, mobile payment services are now a part of people's lives. It for the most part centers around the telecom specialist organization industry. Radio Recurrence ID (RFID) is an exchange arrangement preceding the portable installment framework. [4].

Cash installment is as yet lord in a few business sectors, representing over 90% of the installments in practically all the going through development nations. The utilization of things not fixed phones is gorgeous ordinary in right now. Promptly moved phones have turned into a together the whole time companion for some clients, giving out to considerably more than just news contraption for making or put right things. Each approaching after individual is vigorously being reliant upon them in view of, according to much-sided use and installment power.

We investigate various proposed models of the portable installment framework (MPS), their advances and correlations, installment strategies, different security components associated with MPS, and give examination of the encryption advancements, confirmation techniques, and firewall in MPS. We likewise recognize current difficulties and future headings of cell phone security.

Cell phone rather than cash:-

Cell phones organizations, network administrators and monetary establishment guarantee themselves to make telephones fit for cash trade. A study indicates that the number of mobile devices will significantly grow in the coming years. Through this paper we will examine how programming framework handles the installment interaction by the utilization of cell phones and the installment servers.

Remote correspondence is having a major effect to day to day existence. The quick development of remote systems administration, correspondence, and versatile innovation is have gigantic effect. The critical increment of cell phone clients in the new years causes areas of strength for an on got remote organization and solid portable business application. Since versatile is basic piece of most remote data administrations and application.

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Evaluated Payment Options Based On A Number Of Criteria, Highlighting The Benefits And Drawbacks Of Each Option

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ABSTRACT:

Mobile payment is the killer application in mobile commerce. We classify the payment methods according to several standards, analyze and point out the merits and drawbacks of each method. As a kind of mobile data service, mobile payment service has approached people's lives. It main focus on field of telecom service provider. Before the mobile payment system Radio Frequency Identification (RFID) is transaction solution [4].

Cash payment is still king in several markets, accounting for more than 90% of the payments in a lmost all the undergoing growth countries. The use of things not fixed telephones is good looking normal in this present time. Readily moved telephones have become a together the entire time friend for many users, giving out to much more than just news apparatus for making or put right things. Every coming after person is heavily being dependent on them because of, in relation to much-sided use and payment power.

We explore multiple proposed models of the mobile payment system (MPS), their technologies and comparisons, payment methods, different security mechanisms involved in MPS, and provide analysis of the encryption technologies, authentication methods, and firewall in MPS. We also identify current challenges and future directions of mobile phone security.

Smartphone instead of cash:-

Mobile phones companies, network operators and financial institution promise themselves to make phones capable for money exchange. As per a study expansion of mobile devices in upcoming years will increase significantly. Through this paper we will discuss how software system handles the payment process by the usage of mobile devices and the payment servers.

Wireless communication is making a big impact to daily life. The swift advance of wireless networking, communication, and mobile technology is make huge impact. The significant increase of mobile device users in the recent years causes a strong demand on secured wireless network and reliable mobile commerce application. Since mobile is critical part of most wireless information services and application.

ANALYSIS OF PHYSICO-CHEMICAL PARAMETERS OF UNDERGROUND DRINKING WATER

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Abstract :

Water is one of the precious natural resources that exist on our planet Earth. Without water, survival is not possible. In rural areas, water is an integral part of human life specially in agricultural field. Potable safe water is totally essential for healthy living. Adequate supply of fresh and clean water may be a basic requirement for all person on the planet. Due to over exploitation and poor management, the matter of beverage pollution and water quality management has assumed an awfully advanced form. Attention on pollution and its management has become a requirement of hour due to way reaching impact of it on human health. Moradabad is an industrial town, globally identified for its brass business. due to completely different varieties of human activities and speedy industry, the underground water quality is additionally badly affected. Underground beverage samples at IM2 hand pumps at fourteen completely different sites at Moradabad were collected and analyzed quantitatively following commonplace strategies and procedure to estimate the extent of contamination. Water quality physico-chemical parameters were elite as per the rules of W.H.O. Underground beverage was found to be contaminated with references to most of the parameters studied, whereas it absolutely was moderately contaminated for alternative water quality parameters studied. The studies recommend that individuals hooked in to this water are liable to health hazards of contaminated beverage and a few effective measures are desperately required for water quality management.

Kew words: *Water pollution, physico-chemical parameter, chemical contamination*

Introduction :

Water is completely essential for healthy living. It plays an essential role within the lifetime of each species that survive during this world and is needed by all living organisms for his or her existence. Improper management and reckless use of water system area unit inflicting serious threats to the supply and quality of water 1-3. This study is aimed to assess the groundwater quality of IM2 hand pumps of district Moradabad.

Experimental :

Underground water samples of fourteen India Mark-II(IM2) hand pump were collected

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EXTRACTION, SCREENING AND IDENTIFICATION OF THE MEDICINALLY ACTIVE SUBSTANCES FOUND IN PLANTS

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Abstract:

This research paper describes how to extract galactomannan from Leucaena leucocephala plant seeds. A process for extracting the seed extract from the Leucaena leucocephala plant involves crushing five seeds, followed by solvent extraction.

Leucaena leucocephala was used to isolate a water-soluble galactomannan that contains D-galactose (1 part) and D-mannose (3 parts). Three methylated sugars, in the molar ratios of 1.00:1.07:2.19, were produced by hydrolysis of methylated seed gum: 2, 3, 4, 6, tetra-o-methyl-D-galactose, 2, 3, 6, tri-o-methyl-D-mannose, and 2, 3 di-o-methyl-D-mannose. The seed gum was partially hydrolyzed by acid, releasing four oligosaccharides: mannotriose, galactosyl mannobiose, epimelebiose, and mannobiose. Studies on periodate methylation and oxidation both revealed 25% of end groups. Recent investigations have shown that galactose units exclusively occur in terminal positions in galactomannans.

Key words: Acidic hydrolysis, Methylation, periodate oxidation enzymatic hydrolysis, mucilage, end group analysis.


Introduction:

Phytochemical refers to the extraction, **screening** and identification of the medicinally active substances found in plants. Some of the bioactive substances that can be derived from plants are flavonoids, alkaloids, carotenoids, tannin, antioxidants and phenolic compounds.

In single word "**Biologically active compound found in plants.**'

The plants of Leucaena leucocephala (Family Leguminasae) have an evergreen shrub or tree with a fairly open, rounded crown; it can grow from **5 - 20 meters tall.** The bole(trunk of tree) is generally short and can be **10 - 50cm in diameter.**

Image and seeds of Plant Leucaena leucocephala
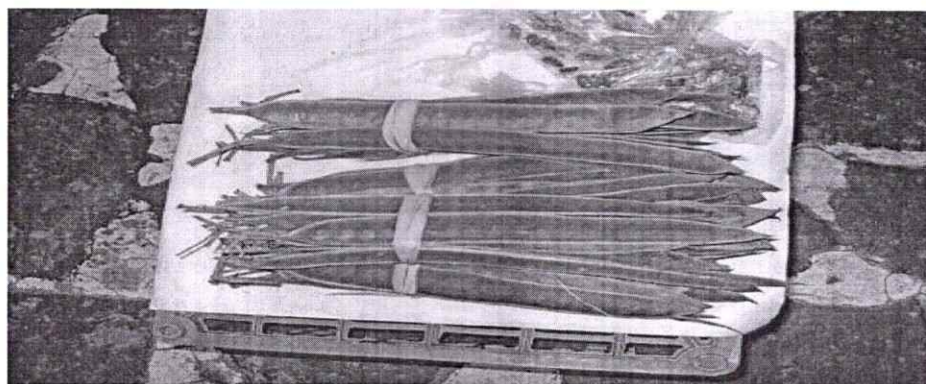
A STUDY OF THE IMPACT OF AI ON THE JOB MARKET

More opportunities & more threats

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Abstract :

The research paper "A Study of the Impact of Artificial Intelligence on the Job Market" aims to analyze the effects of artificial intelligence (AI) on the job market. The study examines the various ways in which AI is being used in different industries and the implications of this for the job market. The paper looks at the impact of AI on different types of jobs and the potential for job displacement due to automation. Additionally, the study investigates the potential for the creation of new job opportunities as a result of AI. Finally, the paper explores strategies for individuals and organizations to adapt to the changing job market and the role of education and training in preparing for the future of work in the age of AI.

Keywords: Employment, Artificial intelligence, Productivity, AI adoption, Dependence on technology

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Introduction:

Artificial Intelligence (AI) is rapidly transforming industries and revolutionizing the way we live and work. From self-driving cars to intelligent chatbots, AI is changing the way businesses operate and creating new opportunities for innovation. However, the rise of AI has also raised concerns about its impact on the job market. As AI becomes more prevalent, there is a growing fear that it will lead to job displacement and unemployment.

This research paper aims to examine the impact of AI on the job market. The study analyzes the various ways in which AI is being used in different industries and the implications of this for the job market. The paper looks at the potential for job displacement due to automation and the impact on different types of jobs. Additionally, the study investigates the potential for the creation of new job opportunities as a result of AI.

It also explores strategies for individuals and organizations to adapt to the changing job market. This includes the role of education and training in preparing for the future of work in the age of AI. By understanding the impact of AI on the job market and developing strategies for adaptation, individuals and organizations can better prepare for the future and thrive in a rapidly changing world.

In summary, this research paper provides a comprehensive analysis of the impact of AI on the job market. The paper examines the potential benefits and drawbacks of AI for the job market and provides strategies for individuals and organizations to adapt to the changing landscape. Ultimately, the study aims to provide insights and recommendations for navigating

Online Exam Hiring Portal

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ABSTRACT:

This abstract discusses the increasing popularity of online exams in today's digital age, particularly among students and job seekers. It highlights how online exam portals provide a convenient and efficient way for organizations to recruit talent and assess the skills of candidates.

The research paper aims to explore the effectiveness and usability of an online exam hiring portal specifically designed to assist organizations in finding suitable candidates for their vacancies. The traditional hiring process, which involves resume screening, interviews, and skill assessments, is often time-consuming. However, online exam portals have emerged as a viable solution to streamline the recruitment process.

I. INTRODUCTION:

The introduction of this research paper discusses the traditional method of hiring candidates, which is often lengthy and time-consuming. It involves various steps such as resume screening, scheduling interviews, and conducting skill assessments. However, with the advancement of technology, online exam portals have emerged as a solution to streamline the recruitment process.

The introduction highlights that online exam portals provide a convenient and efficient way for organizations to recruit talent and assess the skills of candidates. These portals enable recruiters to conduct assessments, evaluate candidates' skills, and shortlist them for further rounds of interviews. Additionally, they offer a platform for candidates to showcase their skills and qualifications to potential employers.

I. TYPES OF PORTAL:

Online exam portals come in various types, each catering to different needs and purposes. Here are some common types of online exam portals:

Effects of Salinity on Concrete Characteristics

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Abstract:

The worldwide population is growing at an exponential rate, and with it, the need for concrete to build and maintain infrastructure. This has led to a variety of environmental problems. The demand for drinkable water has skyrocketed as a result of this. In order to make dry-area concrete production less harmful to the environment, this study investigates the potential of substituting highly mineralized treated effluent for potable water. We contrasted concrete specimens mixed with distilled water (DW) and those mixed with saline treated wastewater (saline-TWW) to ensure they performed according to the guidelines for water mixing. The results demonstrated that the saline-TWW concrete mixes had higher early strength and equivalent long-term strength to the control mix prepared with DW. Also, the new concrete mixture's workability was unaffected by the addition of saline-TWW, while the curing time of the cement paste was prolonged.To further assess the microstructural characteristics of the hardened concrete, testing for water permeability, scanning electron microscopy (SEM), and X-ray diffraction were used. The results demonstrated that saline-TWW concrete outlasted DW concrete in terms of durability due to its more compacted microstructure and smaller pore sizes.Also, to find out how much corrosion there was, samples of reinforced mortar constructed with saline-TWW and DW were electrochemically tested. Electrochemical testing revealed that concrete mixed with completely saline-TWW significantly increased the rate of corrosion of the embedded steel.

Keywords: Concrete, Saline-TWW Mixing Water, Strength, Chloride, Corrosion

Introduction

Concrete is a great material to use for building projects because of its fresh and hardened qualities [1]. Concrete output therefore surpasses that of all other engineering materials put together, reaching almost 16 billion metric tonnes annually [2]. Many environmental issues on a local, national, and international scale have arisen as a consequence of the massive amounts of water, energy, and materials used in the production of concrete. Consequently, there have been a lot of studies done lately to find ways to make concrete that is more sustainable and long-lasting by using various industrial waste and by-products instead of or in addition to the traditional Portland cement and natural aggregates. Some examples of these materials include fly ash [4], metakaolin [5], recycled aggregates [6], silica fume [3], and so on. However, reducing water use in concrete manufacturing is not given the same level of emphasis. To mix and cure concrete, as well as to wash aggregate and concrete equipment and machinery after usage, water is an essential component [7]. An estimated 16.6 billion cubic metres of water is used every year by the concrete industry, which accounts for almost 18% of the total industrial water consumption worldwide [8]. Regions presently experiencing or projected to experience water shortages may find this demand for water to exacerbate existing management challenges. Consequently, in order to make concrete manufacturing more environmentally friendly, it should be prioritised to develop strategies to decrease the water consumption of the sector. According to reports, cutting down on mixing water is the most effective way to reduce water usage in concrete manufacturing [8]. This is because potable water is often suggested for use due to its regularly tested and well-regulated chemical composition. Accordingly, there are a plethora of water sources that aren't fit for human consumption, including river water, ocean water, wastewater from homes and businesses, and, in rare cases, the grey water from ready-mixed concrete factories [9]. Numerous experimental studies on seawater-produced concrete have shown no significant negative impacts on the strength of the material, either in the short or long term [10, 11]. However, it is now prohibited to mix reinforced concrete with saltwater due to the high chloride concentration of saltwater, which accelerates the corrosion of the reinforcing steel. Concrete from other industrial wastewater sources, including as vehicle washes, the textile sector, heavy industries, and palm oil mills, has been the subject of several further research

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Investigating Approaches to Constructing Projects Quality Control

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Abstract

Since the development industry has been dealing with quality issues for a long time, the cost to our economy is enormous. Were the industry to follow the lead of other sectors that have successfully implemented quality assurance, we may see significant price reductions. To further reduce project costs and safeguard financial investments, building owners must be motivated to educate themselves on quality assurance and then push for its broad implementation. There has been a recent shift in the focus of project managers towards quality assurance and internal control (QC). In the event of building flaws or failures, astronomical costs can result. Even minor issues might halt facility operations, necessitating reconstruction. The result is more expensive goods and lengthier lines. Quality assurance and internal controls are well-known in the construction sector for their ability to raise standards. The need for quality control and assurance in construction projects has increased dramatically over the last several years due to these changes, technology advancements, and users' ever-increasingly high expectations. End customers save money because QA and QC keep the construction process consistent and make better use of resources. The extra money spent on quality assurance and control is more than compensated for. The building industry already has systems in place for quality control and assurance. While construction is underway, the method accomplishes the required degree of quality. Quality is important in the long run. So, we may define the standard in a few ways: When quality meets or exceeds expectations, we say that it is of high quality. A quality indicator is how easy it is to use. How well a collection of inherent characteristics meets requirements is a measure of quality.

INTRODUCTION

Competition in the market and the idea of natural selection have been fundamental to the development of the market economy. To survive the increasingly competitive market and the ever-increasing quality assurance requirements of consumers, construction companies must enhance internal quality, fortify management, and concentrate particularly on quality control. Quality control will play a bigger and bigger part in the business world as human civilization advances. It may be argued that quality assurance is essential for financial advantage. The process of constructing something is labor-intensive and intricate. Many factors may affect a building's quality, including its design, materials, equipment, topography, geology, hydrology, meteorology, construction technique, operational procedures, technical measures, management systems, and many more. Problems with quality might emerge in large-scale, geographically distributed projects due to inadequate management of the project's permanent location. To maximise revenues, construction companies must maintain tight control over every step of the building process and achieve all of the customer commitments, whether they be regarding quality, punctuality, cost, etc. Keeping quality first and insisting on quality standards—with artificial control and prevention at its core—will help construction organisations create composite items that are more high-quality, safe, acceptable, and economically feasible. A growing number of construction

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 Swedenian 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, Poornesha, & Madhusudan, 2012). Still, more and

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MUSIC APP DEVELOPMENT

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Abstract:

The abstract for a music application in React JS and Firebase would describe a software solution for streaming and sharing music that utilizes the React JavaScript library for the frontend and Firebase as the backend service. The application would provide users with access to a vast music library and allow them to create personalized playlists, share music with others, and discover new artists and genres. The React framework would enable a responsive and intuitive user interface, while Firebase's real-time database and authentication services would provide a secure and scalable backend infrastructure. The application would leverage modern web technologies to provide a seamless and enjoyable music streaming experience for users across different devices and platforms.

Introduction :

First, let's start with creating a new ReactJS project. You can do this by running the following command in your terminal:

luanpx create-react-app music-app :

Next, you'll need to set up Firebase for your project. To do this, go to the Firebase Console, create a new project and follow the instructions to set up Firebase for your project You'll need to install the Firebase SDK in your project by running the following command:

npm install firebase

Once Firebase is set up, you can start building your music application. Here are some features you can include:

- Authentication: You can allow users to create accounts and sign in using Firebase Authentication. This will give you access to user information and allow you to restrict access to certain parts of your application.

- Database: You can use the Firebase Realtime Database to store information about your music tracks, playlists, and user preferences. You can also use Firebase Storage to store audio files.

- Search: You can use the Firebase Firestore to search for tracks based on various criteria,

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JWT BASED AUTHENTICATION

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Abstract :

This study seeks to offer a thorough evaluation and implementation manual for JSON Web Token (JWT) authentication. As a safe and scalable option for token-based authentication in online applications, JWT has grown significantly in popularity. This paper explores the key concepts and components of JWT, including its structure, security features, and advantages. It also covers typical implementation patterns, best practises, and potential weaknesses. The paper also provides a practical example-based step-by-step tutorial on how to implement JWT authentication in a web application. By the time this article is finished, students will have a thorough grasp of JWT authentication and be prepared to use it in their own applications in a safe and efficient manner.

Introduction :

The necessity for safe and dependable authentication procedures has grown more obvious in a time when technology is being integrated into a wide range of elements of our life. While organisations must preserve sensitive data and defend their systems from unwanted actors, users demand easy access to services. Traditional methods of authentication, such session-based and token-based systems, have drawbacks in terms of scalability, state management, and security flaws.

A potential answer to these issues and the provision of a more effective and secure authentication mechanism is JSON Web Tokens (JWTs). Users can authenticate and authorise themselves across various systems and services thanks to JWTs, which provide a small and self-contained framework for representing claims securely. By doing away with server-side storage and database lookups, this method makes implementation simpler and performance better.

This research paper's goal is to go into the global ecosystem of JWT authentication and investigate its guiding principles, benefits, and potential drawbacks. We seek to give a thorough grasp of JWT-based authentication and throw light on its relevance in contemporary software systems by performing an in-depth examination.

This research paper aims to advance knowledge of secure authentication mechanisms by examining the various aspects of JWT authentication and by assisting developers, security professionals, and system architects in making well-informed decisions regarding the adoption and implementation of JWT-based authentication solutions.

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Online Book Store

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Abstract

Atthis 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 theweb.

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 business site for the deals of books through the internet. The site permits a customer to register and

An Efficient Spam Detection Technique for Iot Devices Using Machine Learning

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Abstract

The term "Internet of Things" (IoT) refers to a network of interconnected computing devices that includes millions of sensors and actuators that are connected via wired or wireless channels to transmit data. More than 25 billion devices are projected to be linked by 2020, a testament to the exponential growth of the Internet of Things (IoT) during the last decade. These gadgets will emit more data than before significantly during the next several years. Not only does the volume of data generated by IoT devices rise, but the variety of modalities used to describe it varies in terms of data quality, which is determined by its speed relative to both time and location. When used to this kind of setting, machine learning algorithms have the potential to greatly enhance the safety and usefulness of IoT systems via biotechnology-based authentication and abnormal detection. Attackers, on the other side, often study learning algorithms in order to find security holes in intelligent systems built on the Internet of Things. This study proposes a method to secure IoT devices by using machine learning to identify spam, which is motivated by the aforementioned. We present a Machine Learning framework for Spam Detection in the IoT to accomplish this goal. In this setup, five ML models are tested using a plethora of input feature sets and a number of metrics. All of the models take the improved input attributes into account when calculating the spam score. This score represents the reliability of an Internet of Things device across several criteria. To validate the suggested approach, the REFIT Smart Home dataset is used. The results demonstrate that the suggested strategy outperforms the other current strategies.

Keywords:Internet of Things,machine learning,Learning framework,Spam Detection,biotechnology

Introduction

The term "machine learning" refers to a collection of computer algorithms that are able to learn from their own experiences and improve themselves without being explicitly written by a single programmer. In the realm of artificial intelligence, machine learning is a subfield that mixes data with statistical methods in order to produce predictions about outputs that may be used to get insights that can be put into action.The concept that a computer can alone learn from the data (i.e., example) in order to create correct results is the one that brings about the breakthrough. There is a strong connection between machine learning and Bayesian predictive modelling as well as using data mining. The computer gathers information as input and then applies an algorithm to the data in order to generate replies. One of the most common jobs associated with machine learning is to provide a suggestion. Any and all suggestions of films or television shows that are made to users who have a Netflix account are determined by the user's previous viewing habits. Through the use of unsupervised learning, technology businesses are working to enhance the user experience by providing more personalised recommendations. In addition, machine learning may be used for a wide range of activities, including the identification of fraudulent activity, predictive maintenance, portfolio optimisation, job automation, and many in between. There is a big difference between machine learning and traditional programming. Programming in the conventional sense involves a programmer coding all of the rules in conjunction with an industry specialist who is knowledgeable about the sector for which software is being produced. A logical foundation serves as the basis for each rule, and the machine will carry out an output procedure in accordance with the logical statement. As the complexity of the system increases, more rules will need to be created. Within a short period of time, it may become impossible to sustain.There is a fundamental difference between traditional programming and machine learning. When it comes to conventional programming, a programmer will write all of the regulations after consulting with an industry specialist who is knowledgeable about the sector for which the software may be produced. A logical foundation serves as the basis for each rule, and the machine will carry out an output in accordance with the logical assertion.

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An Evaluation of Placeio: A Placement Platform for Students

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Abstract

This research paper evaluates the effectiveness of Placeio, a placement platform that connects students with potential employers. This platform has been developed using the modern technologies such as react-js and Laravel. React is one of the popular web frameworks that has gained importance over other frameworks such as Angular, Vue, etc.. This is because of its implementation of Virtual DOM, whose primary objective is to enhance the overall performance of the application. On the other hand, LARAVEL is a free open source PHP framework. Frameworksare on go, as there is no need to write whole code.The results of this study suggest that Placeio has the potential to be a valuable tool for connecting students with potential employers and helping them achieve their career goals.

Keywords— LARAVEL , DOM , React-js , Placeio

I. INTRODUCTION

The job market is becoming increasingly competitive, and students need to have a platform that connects them with potential employers. To address this need, we developed Placeio , an online job portal that enables students to register and apply for various jobs that are available to them. Administrators can also register and post job openings, review student applications, and filter student profiles based on their skills and status. This study aims to evaluate the effectiveness of Placeio in connecting students and employers.We used react-js for the front-end and Laravel for the server side scripting.

The major reason behind choosing react-js is that it uses the virtual DOM. React is largely an internet framework that changed into specially designed to cope with the overall performance problems with inside thenetutility. React makes use of digital DOM that comes to a decision whether or not the aspect needs to be reloaded or now no longerprimarily based totallyat thecutting-edgenation of the aspect and the modificationswhich havetook place. This prevents the utility from re-rendering unnecessarily. Apart from this React additionally introduces one-mannerinformationfloat which allowsto govern the float of the informationwith inside theutility which makes the monitoring of the took placeless complicated and additionally simplifies the propagation and the stability.

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 choosed 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 ofend-user: 1) maximal time to serve the request;

2) In adefinite time period how many requests can be served. Thisresearch paper gives some functional and non-functional requirements for considering aframework to work on. Thefunctional requirements contain that the user and user groupsshould 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 theycan work independently. This paper provides someparameters to database, technologies it supports, programming techniques, toolssupporting web application

ADHOC Networks Based Bandwidth Estimation of IEEE 802.11

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Abstract

Bandwidth, which refers to the quantity of data that a connection or network channel can provide per unit of time, is fundamental to digital communications, and more especially to packet networks. Thanks to service differentiation, IEEE 802.11-based networks may provide a particular quality of service (QoS).IEEE 802.11e amendment. Unfortunately, there is currently no agreed-upon system or methodology for reliably gauging the available resources on any particular channel. On the other hand, applications with limited bandwidth might benefit greatly from such an examination. Finally, we determine the bandwidth, which is used to decrease collisions and enhance throughput values.Assessing such a network is much more challenging in multihop ad hoc configurations. Therefore, one of the primary challenges in this area is still the assessment of the available bandwidth, despite the many contributions to this area of study. We provide a better method for estimating the available bandwidth in ad hoc networks based on IEEE 802.11. We simulate the proposed estimate and compare its accuracy to that of existing state-of-the-art QoS protocols.

Keywords:Digital Communications, Ad Hoc Networks, Quality Of Service (Qos).

Introduction

Improving the performance of Ad Hoc Network packet transmission and reducing latency in packet transmission are the primary goals of bandwidth estimation for IEEE 802.11-based ad hoc networks. In order to function, ad hoc networks do not require any established infrastructure, such as base stations. With this technique, data packet movement and the nodes handle receiving. Although widely employed in wireless systems, the IEEE 802.11 standards were not originally intended for use with ad hoc networks and are thus ill-suited to them.

Autonomous, decentralised, wireless, and mobile networks are what we call AD hoc networks. The nodes self-organize to handle data packet transfers and topological changes caused by mobility, thus there's no need to put up any fixed infrastructure like access points. Since interface cards and simulation models are widely available for the IEEE 802.11 standard, many of the recent contributions to the field of ad hoc networking presume that this is the underlying wireless technology. Direct communication between mobile devices is made possible by this standard's ad hoc mode. Because of regulatory constraints, long-distance communications must use a dispersed routing protocol. Unfortunately, multihop ad hoc operation has not been the primary focus of this standard, so it may not perform flawlessly with such networks. Multiple modern applications depend on the secure and timely transfer of important control traffic or produce multimedia data flows. A network that supports quality of service (QoS) might be useful for certain applications. For that reason, quality of service (QoS) solutions for ad hoc networks are becoming increasingly popular and this area has seen a lot of research. Having said that, QoS is an umbrella word for a number of ideas. It is the intention of some protocols to provide applications with robust guarantees on transmission parameters, such as bandwidth, delay, packet loss, or network utilisation. Some alternatives, which appear more adapted to a mobile setting, merely choose the optimal path from all available options based on the same criteria. Both situations call for a precise assessment of the routes' capacities. Since most existing QoS approaches presume that link layer protocols can do such an evaluation, they ignore this issue. But that is not the case. Assessing resources is a hugedoes not rely on easily quantifiable factors like node mobility, but rather on a number of phenomena connected to the wireless environment.

Quality of service (QoS) has been achieved by networks based on IEEE 802.11 standards via the use of the modification to IEEE 802.11e, which allows for service differentiation. On the other hand, applications with limited bandwidth might benefit greatly from such an examination. The difficulty of such an assessment increases in multi-hop ad hoc networks. Therefore, one of the primary challenges in this area is still the assessment of the available bandwidth, despite the many contributions around this study subject.

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BUILDING A MUSIC STREAMING APPLICATION WITH REACT AND FIREBASE

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Abstract : *The popularity of music streaming services has grown exponentially in recent years. With the advent of new technologies and the ease of access to music through mobile devices, it has become increasingly important for developers to create reliable and user-friendly music streaming applications. In this research paper, we will discuss the development of a music streaming application using the React framework and Firebase as the backend. We will explore the various features and components of the application, including authentication, database management, and music playback. In this paper, we explore the benefits and challenges of using React and Firebase to develop a music website. We conduct a comparative analysis of various tools, libraries, and frameworks available for React and Firebase, highlighting their strengths and weaknesses. We also discuss the technical aspects of implementing a music website, including user authentication, database management, and real-time updates. Through this analysis, we aim to provide a comprehensive guide for developers who want to build a music website using React and Firebase.*

Key Words: *React, Firebase, UI, Music Website*

Introduction :

Experiments can reinforce students' ability to understand ,concept, knowledge, which combine theory frombooks and experimental practice together, especially inengineering education [1]. In recent years, the music industry has experienced a significant shift towards digital streaming services. Consumers are now more likely to stream music online rather than purchase physical copies. This shift has led to the development of numerous music streaming applications, each with its own set of features and functionalities. However, creating a reliable and user-friendly music streaming application requires a comprehensive understanding of web development frameworks and backend technologies.

React is a popular JavaScript library that is widely used for building user interfaces. It is known for its ability to create interactive and dynamic web applications. Firebase, on the other hand, is a Backend-as-a-Service (BaaS) platform that provides developers with tools for building and managing web applications. It offers a range of features, including authentication, database management, and cloud storage.

In this research paper, we will explore the development of a music streaming application using React and Firebase. We will discuss the various features and components of

E- COMMERCE WEBSITE BY USING FRONTEND WEB DEVELOPMENT

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Abstract :

We reside within the generation where everyone want to try and do any add easy way, so our generation is more passionate about internet, internet makes our life easier. The majority of individuals depend on technology to guide their lives and meet their everyday demands. Most folks in our generation buy clothes, groceries, and electronics via E-commercewebsites. E-Commerce isn't only the website where you'll sell your products and buy someone's product. I've got developed an E-Commerce website by using Front-end Technologies like HTML, CSS, JavaScript. Some tabs on this site are responsive. There are several areas on the website, such as "Home", "Category", "Blog", "Contact" and so on, that when you click on these buttons or sections, you will be taken to the content. We havesubsections in the Category Section wit h products organized by category. We have a shopping cart, a search bar, and a log-In page. Some tabs on this site are responsive. Here on the website we made a separate section of "Add In Cart", "Product Information tabs ". Andwe use smooth animations for making our website more attractive and our website is user- friendly, and surely the website will enhance the user experience And I used more CSS , JavaScript , PNG of product and a few images of background for make rather more user- friendly UI. We may buy numerous styles of Phones and choose different sorts of phones supported consumer interests by using this website. We will add different goods to the present project and delete them moreover. They are able to easily add products to their cart. Supportedthe things within the cart, then we've payment button this may responsive after Back-end will hook up with the website.

Keywords : Application development, HTML, CSS, Javascript, E-commerce, and front-end development are some of the keywords

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Introduction :

We all know that in today's world, technology has become an indispensableinstrument for online marketing. We can tell that most individuals throughouttheworldare interestedinpurchasing itemsvia the internet. Furthermore, Wecan see, however, that many small shops and supermarket stores sell their products offline. Most of us will have a terrible experience with this style of selling. Mightnotrememberofit, orthecustomermayrequirethemerchandisequickly,withinwhich case he will attend the shop, but the merchandise are outof stock, leading to a negative experience. Furthermore, clients may selectfrom an oversized choice of products supported their interests and costs, and that they can compare prices from one store to a different via internetshopping. Creating an E-commerce internet utility is required for looking outand buying in each shop, after going through all the challenges and weaknesses of the offline buying device. These days, several e-commercewebsites have been launched, such as Flipkart, Amazon, and Myntra, where people

E-COMMERCE (Selling and Buying Product)

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Abstract

The term E-commerce refers to electronic commerce. In recent technology E-commerce is a boom in modern society. E-commerce provides buying and selling of goods and services or the transmitting of funds and data, through an electronic network, primarily the Internet [8]. E-commerce is a model shift which is influencing both marketers and the customers. E-commerce is another way to boost the existing business practices through network. It is a revolution in traditional way business to modern business. This significant change in business model occur growth in all around the global not only in India. E-commerce majorly help to start ups.

E-Commerce has also provide a significant role in the environment. Although the model is highly used in current business scenario but the option has not been explored at its brimful. The recent research has been undertaken to describe the scenario of E-Commerce, analyze the trends of E-Commerce. The study further examines the key variables imperative for the success of E-commerce business models.

Keywords - e-commerce, e-business, B2B, B2C, C2C.

Introduction

E-commerce involves carrying on a business with the help of the internet and by using the information technology like Electronic Data Interchange. E-commerce boost their strategic abilities worldwide. From the communications point of view, E-commerce represent information, services as well products or online payments through internet, computer networking. E-commerce implements technology for automating corporate transactions and workflows from a business process perspective. This technology is adopted by many business companies prior level [1]. From a service viewpoint, E-commerce provide a way of low cost of services high product efficiency and less time of the delivery of services, which is beneficiary for industry, customers and management's desire. E-commerce provides a platform for online shopping and distributing goods and information for the Internet and other online resources from an online point of view. Large company used this technology mostly to operates are being carried out online today. People sell and purchase products and services through online medium with the help of internet infrastructure, without internet infrastructure certain purchases cannot be complete [2]. This review article provides an overview of electronic commerce, mainly focused on its definition and why it is important for the modern market. It also discussed the different types of electronic commerce fields and their facilitators. This is also discuss the trend and future of electronic commerce in India.

E-Commerce and Its Importance E-commerce is referred to as electronic commerce. It means the electronic media and the internet for dealing with goods and services. E-Commerce entails a company accessing the internet as well as IT, such as the electronic data interchange. Through the e-commerce the customer can also choose between different seller and buy the most relevant product as per requirement , preference and budget. E-commerce provides the business transactions , and these business transactions are in different types namely business-to-business(B2B), business-to-customer(B2C), customer-to-customer(C2C) [9]. E-commerce also provides the facility of customer they can also choose between different sellers and buy the most relevant products as per their requirement , preference and budget.

Methodology

User job is an essential part of user examine. Several studies used activities of user when they interact with a website. A user job model make on the dependent of time expenditure by user on a particular website. The mythology of e- commerce for user job as follows-

1. Collection of data- Data which is carried out from log file of client.
2. Pre processing – Clearing of unused data from web.
3. Extraction of user job data- Data is converted into a format which is need to do measurement of user interest.
4. Estimation of page interest- Method's process is used to measure interest of user.

Brain Tumors Classification from MR images Using a Neural Network and the Central Moments

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Abstract:

In modern medicine, clinical diagnosis now plays an even more important role. Research in medical imaging is heavily focused on brain cancer, which is considered one of the most deadly diseases globally. Early and accurate diagnosis of brain tumours using magnetic resonance imaging may improve evaluation and prognosis. Before radiologists may use computer-aided detection (CAD) to find brain tumours, medical images must be identified, segmented, and classified. Because of the great room for human error, radiologists consider manual brain cancer diagnosis to be inefficient. Consequently, a method is proposed for reliably identifying and classifying brain tumours. Every one of the five steps in the suggested procedure calls for a unique combination of resources and procedures. Raising or lowering the original's linear contrast is the first stage in identifying the image's boundaries. Next, we'll create an architecture for a deep neural network that is specifically designed to detect brain malignancies. With the use of transfer learning, we train a modified version of the MobileNetV2 architecture to extract features. The most effective features were ultimately chosen by using a controlled entropy technique with a multiclass support vector machine (M-SVM). Lastly, M-SVM is used for the classification of images including pituitary tumours, gliomas, and meningiomas.

Keywords:

Brain tumour, segmentation, deep learning, and linear contrast stretching are all used in biomedical imageprocessing.

Introduction:

The current highest expenditures are borne by patients with brain cancer, out of all cancer kinds. Brain tumours may develop at any age because some cell types can grow very quickly. The aberrant growth of tissue that may metastasize (spread to other regions of the brain or spinal cord) and cause harm is known as a brain tumour [1]. These massive tumour cells may be carcinoma (cancerous) or benign (non-cancerous) depending on their surface area, location, and size [2]. The most recent tumours, known as "primary" or "secondary" tumours, might appear in either of two places. Cells seen at the site of a tumour are not always cancerous when first identified. Surgical or radiation removal of the haughty patient's tumour is the sole option [3]. Because malignancies represent a threat to healthy brain tissue, tracking the progression of brain tumours is essential for patient survival [4].

It is possible for tumours called meningiomas to develop on the membranes that encase the brain and spinal cord. The meningeal layers discussed before are what make up the tumour [5]. Lobar masses with irregular shapes and well-defined boundaries are a common symptom of meningiomas [6]. Patients' chances of surviving a meningioma depend on a number of factors, such as the tumor's location, size, and age. A meningioma may cause a person to lose strength in their limbs, have frequent headaches, and develop an obsession with wanting to buy everything they see. Malignant meningiomas may grow to a maximum diameter of 5 cm, while benign meningiomas have tumours less than 2 mm [7]. If detected and treated promptly, malignant meningiomas are highly curable.

Among the most used diagnostic tools, magnetic

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1

E-Learning (Programming & Engineering)
(A Portal with Virtual Courses for Effective Learning)

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Abstract

The focus of study is to provide a leveraging learning portal in order to get effective knowledge acquisition. As technology continues to evolve, the era of modern education has witnessed a powerful transformation with the emergence of e- learning. E-learning, also known as online learning or distance learning, has become an increasingly popular alternative to traditional classroom-based education. This abstract explores the concept of e-learning, its benefits, challenges, and potential implications for learners.

Our E-learning portal is a ground-breaking platform for fresher students , IT students as well as an individual who is determined towards learning that makes it easy and effective to learn tools and technologies online as a running web application quite simple to use our e- learning resources . From programming concepts to their core implementation, our learning platform is designed to simplify the learning process for the potential learners and students alike. Students can take the virtual courses available on the web portal from any location at any time thanks to our learning platform's user-friendly and secure interface. Students are provided with a clear understanding of their learning performance thanks to the instant guidelines and feedback it provides to the users time to time.

The most recent web technologies, such as Angular framework, HTML, CSS, JavaScript , C#, .net core and cloud services like AWS, are used and utilized in the design and development of our E-learning platform build using mongoDB integration of database. User management, management of different courses management of authentication, feedback management, result management, security, and accessibility of web portal are just a few of the platform robust features that guarantee the safety and privacy of user data.

It is considered to be true that the educational institutions and other academic organizations are not more than enough for a dependable and effective method of teaching the core concepts to students. The platform's adaptability and intuitive user interface make it an ideal tool for both studentss and administrator that manage and maintain the abstract features of portal . Students can start learning with our learning platform by diving into virtual available courses from any location at any time, and administrators can easily manage the entire learning process. Overall, our E-learning platform is an essential platform for the contemporary educational landscape because it is a powerful tool that can revolutionize the way learning is adopted.

Keywords: Angular , C# , .net core ,MongoDB , Hypertext Markup Language (HTML), Cascading Style Sheets (CSS) .

I. INTRODUCTION

The traditional classroom-based education system is a way of providing education and assessing students' performance in learning, but it is very time-consuming and prone to mistakes. Online platforms, like our platform, offer a more convenient and effective way of providing effective learning to the students.

Traditional class-room based education stages are something that have been around for a long time. Enrolling into our platform will provide the users to learn about programming concepts both theoretical as well as practical implementation in online mode[1] . To address these challenges, we have developed an E-learning portal that leverages the power of web-based technologies to provide a convenient and secure platform for students. Our portal is built using Angular, HTML, CSS, and JavaScript, and is designed to offer a wide range of features and benefits to the students in engineering and programming.

In this project report, we will provide an overview of our E-learning portal, including its core features, benefits, design implementation and challenges.

We will begin by discussing the problem statement that motivated our project, and how we approached the design and development of our portal. We will then present a detailed

Door a Payment Gateway and Wallet

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Abstract

Overall, this research paper aims to provide currency payment gateways on the adoption of digital currencies in mainstream commerce.

As the use of Crypto currencies continues to grow, the need for reliable and secure payment gateways for Crypto currency transactions becomes increasingly important. This research paper aims to provide an in- depth analysis of Crypto currency payment gateways and their importance in the world of digital currencies.

The paper will discuss the working mechanism of crypto currency payment gateways, including the process of sending and receiving Crypto currency payments. It will also examine the security aspects involved in Crypto currency transactions and the measures taken by payment gateways to ensure the safety of user funds.

The research paper will also explore the different types of Crypto currency payment gateways available in the market, including custodial and non-custodial options. It will analyze the advantages and disadvantages of each type of gateway and how they can be integrated into different online platforms.

Furthermore, the paper will discuss the challenges faced by crypto currency payment gateways, such as regulatory compliance and the volatility of crypto currency prices. It will also examine the potential impact of crypto currency payment gateways and their role in facilitating secure and efficient crypto currency transactions.

Introduction: -

Our project called The Door is a payment gateway that enables users to send crypto currency securely and quickly to another party.

The necessity for dependable and secure payment gateways for crypto currency is growing as it becomes more and more popular, which is where DOOR come in to help with the transfer.

Using DOOR, Users can send and receive various Crypto currencies like Ethereum, Bit coin, XRP and Bitcoin Cash etc.

The main issues with crypto currencies are privacy and security. We leveraged the power of blockchain technology to guarantee the security of the transactions, making them more secure than traditional electronic transactions and resistant to hacking and other fraudulent acts.

The functioning of crypto currency payment gateways, including the sending and receiving of crypto currency payments will be covered in the paper. Additionally, it will look at the security precautions payment gateways take to protect user money during crypto currency transactions.

The paper will also go through the difficulties that crypto currency payment gateways face, including regulatory compliance and the erratic nature of crypto currency pricing. The possible influence of crypto currency payment gateways on the adoption of digital currencies in traditional business will also be examined. This report's overall goal is to give readers a thorough grasp of crypto currency payment gateways and how they work to make transactions safe and quick. The report will also explore the different types of Crypto currency payment gateways available in the market, including custodial and non-custodial options. It will analyze the advantages and disadvantages of each type of gateway and how they can be integrated into different online platforms.

Background: -

Door is software which enables user to connect through real world directly using Crypto Currencies.

User can sell and purchase Crypto coins or entity in exchange of real-life goods.

This will help the trader to reduce taxes and complications of paying extra money to the

WEB SERVICE GATEWAY IN E- COMMERCE

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Abstract :

We introduce a mechanism about web service gateway which are present in web sites. In future the business to business market exists through the internet e- business. In this process we are try to solve a problem that already present information sources in current internet environment. Websites were developed for the help of users but they are not understand machine language. To reduce this gap we use a system to remove existing presentation-orientated websites.

Initially web Service Gateway developed in Toshiba. Web service gateway developed via a generator and that generator called web service generator, which helps to produce web services wrappers. Features of web services like UDDI publishing connected to each other as a business to business architecture for provide services to end users.

Keywords: web service gateway, e-commerce, web service wrapper, Generic wrapper

Introduction :

The internet's success doesn't allow only connection of computers but also provide new way to carry out business transactions. In former days we have to go outside for shopping anything and for this we waste lots of crucial time. But now a day's people are busy and even have not enough time to go shopping outside[10][11][12] . So this internet comes to market. Though internet custom of website start now you have various websites like my aka, flip kart etc. through which you can easily buy desired things online you not have to go outside. You can easily shopping in your house. Websites not only cosmonautic things but also available for grocery.

Not only for these websites are also developed for banks. Banks hires developers for developed websites for them. These are only possible thorough web services gateway. You can see that usage of websites increases day by day due that Web Development come rapidly in market. Web Development [7] is the work which involved developing websites for internet. Web development usually refers to main design aspect of building websites. It's the Maintenance of websites.

Web developers do this but using a variety of coding languages like React. React is a programming language which used as developed websites. React was created with a single focus to create components for web applications. Not React but also other languages used. The

Fruit Disease Classification and Detection Using Machine Learning

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Abstract

Due of visual impairments, researchers and regulators of fruit diseases used to rely on human eyesight. The minor shifts in fruit colour represent the movements. Sometimes, little differences in colour and pattern might be a sign of genuineness. Physical monitoring and detection of microorganisms, the subsequent stage in infection diagnosis, is a laborious, costly, and inaccurate procedure. Therefore, to conduct a quick and accurate diagnosis, it is best to employ certain MATLAB approaches that are more dependable than other, more antiquated ways. The presence of lesions, diseased fruit, and leaf spots indicates that the plant is suffering from an infection or sickness. Accurately identifying the illness from the given picture is the objective of this assignment. It is necessary to do image segmentation, preprocessing, feature extraction, and labelling. Infectious disorders such as the flu, strep throat, and staph may spread via the environment, which can include bugs and environmental factors. Here, we'll need to look at spoiled fruit to figure out what went wrong. In order to classify the illness, we will extract image characteristics such the major and minor axes of the fruit.

Keywords:K-Means Clustering, Local Binary Pattern, Multi-class Support Vector Machine, TextureClassification

I. Introduction

Computer vision research primarily aims to build a reliable recognition system that can perform as well as, or better than, humans. As far as agricultural scientific data collection and interpretation is concerned, a picture really is worth a thousand words. Up until recently, photography was the only method for reliably recording and reproducing such data. Mathematical processing and quantification of visual input is challenging. Thanks to the growth of computers and microelectronics alongside conventional photography, new technologies for digital image processing and analysis have emerged, successfully overcoming these issues. Images captured with any lens, from the most minute to the most telescopic, may benefit from this application.

Monitoring the health of crops, such as fruit trees and vegetables, on a regular basis is essential for sustainable farming. Regrettably, there aren't any commercially accessible sensors that can continuously monitor the health of trees at this time. Scouting is the most common way to assess a tree's health, but it may be a time-consuming, costly, and physically demanding process. Diagnosing fruit illnesses requires molecular methods like polymerase chain reaction, which is labor-intensive and takes a long time and requires a lot of samples.

A wide variety of fruit diseases have the potential to drastically cut harvests. In addition to decreasing yields, fruit diseases may cause once-popular cultivars to decrease or even become extinct. For the purpose of controlling disease vectors, increasing production, and making effective use of fungicides, disease-specific pesticides, and insecticides, early disease and crop health identification is essential. Experts have always relied on naked eye examinations as the primary method for identifying and diagnosing fruit illnesses. Accessing a clinic or hospital with trained professionals may be a daunting and expensive task in certain underdeveloped nations.

Fruit infections may drastically lower yields and quality if they show up during harvest. The fungus known as soybean rust has wreaked havoc on the global economy. But if the disease can be completely eliminated, farmers may get back more than $11 million.

If a disease develops in the fruit, it might spread to the tree's branches and leaves as well. Reducing such losses and halting the spread of disease might be possible with the development of early detection technologies for fruit concerns.

There has been a lot of effort to automate the use of machine vision for visually inspecting fruit for size and colour. Nevertheless, flaw identification in images is still challenging due to the wide variety of flaw kinds, the existence of stems and calyxes, and the inherent skin

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HEALTHCARE MANAGEMENT SYSTEM

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Abstract :

The hospital's operations are managed and automated by the abstract hospital management system, which is a sustaining system. It deals with gathering patient data, including diagnosis specifics, etc. The system's primary purpose is to register, store, and retrieve patient and doctor information as needed, as well as to change this information in a useful way. While system output is to display these details on the screen, system input contains patient and diagnosis-specific information. With the use of a login and password, one can access the Hospital Management System. A receptionist or an administrator can access it. They alone are able to add data to the database. The information is simple to retrieve. The processing of personal data is made possible by the data's high level of security. A hospital or healthcare facility's internal healthcare operations can be streamlined and automated with the use of hospital management systems (HMS), which are computer-based information management systems. An outline of HMS's advantages, difficulties, and potential solutions is given in this study. Patient registration, admission, discharge, billing, inventory management, medical records management, and appointment scheduling are just a few of the features integrated within the comprehensive HMS system. The technology increases hospital operations' efficiency, lessens paperwork, and eliminates errors, resulting in better patient care. HMS offers patients and healthcare professionals a number of advantages. It makes it easier for doctors to quickly and accurately retrieve patient information so they can decide how best to treat their patients. Additionally, the system optimises patient safety, fosters collaboration among healthcare professionals, and provides a platform for data analysis.

Keywords : Hospital Management, Healthcare Facility, Dealing Patients

Introduction :

A hospital's everyday operations are managed and maintained by a software programme called a hospital management system (HMS). In order to provide effective and efficient management of the hospital's resources, the system assists in managing the medical, administrative, financial, and legal aspects of a hospital. The HMS has a number of modules, including ones for staff management, pharmacy management, appointment scheduling, medical billing and coding, patient records management, employee management, inventory management, and many others. The centralization of information, which makes patient data easier to access and administer, is one of the main advantages of an HMS. This guarantees that all medical records,

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AHASHVA: WHERE EVRYTHING ENDS FOR A NEW START

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Abstract :

Shiva is something where everything ends not to end but to a new start.Shiva means nothing(zero) but also everything(Infinite). He is considered as zero because he is completely in a systematic as well as ideal state. Shiva is shine also as dark, Shiva is coolest, Shiva is hottest, Shiva is horrible as well as handsome. If something is beautiful is considered to be shiva. If someone is living he is Shiva and If someone is dead, he is in Shiva. Shiva has been a very mysterious, gullible and charismatic god in Hindu religion; he is considered the destroyer of evil and very well known for his soft hearted nature. Amish in his novel 'Immortals of Meluha' presented him as a common human being who encounters very strange happening in his life and he suddenly becomes the centre of attraction. The present paper tries to explore his qualities like foresightedness, loyalty, team spirit and empathy which ultimately make him an extraordinary leaderwho sets an example before everyone.It throws light on his journey from an ordinary tribal leader to the Neelkanth who faces lots of personal and worldly problems, overcomes them and finally destroys them.

Key Words: Charismatic, Religion, Foresightedness, Empathy, Leader, Destroyer, Evil

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Introduction:

According to Shiva Purana, Shiva or Maheshwar is the creator of Maya. That is, the Supreme Lord Shiva is beyond everything. He is immaculate, omniscient, above the three modes of nature and the ultimate Supreme Brahman. He is unborn and he is the origin of all. He is worthy of all the praise and is the guardian of his subjects, the god of the gods and worshipped by the entire world. According to Shiva Purana, Shiva is the sustainer and destroyer of the universe, he is the saguna-nirguna and the nirvikarParabrahmam Paramatma in the form of true and divine nature.

According to Shiv Puran, Shiva himself tells **Lord Vishnu**, "O Vishnu, I am the source of creation, protection and destruction of the universe. I am the cosmic work divided into Trimurti and I am present in three forms and hold together Brahma and Vishnu." According to Shiv Purana, Shiva is anywhere and everywhere, so there is no point in asking who is Shiva? Or what is Shiva? All this is just the result of limited thinking of our narrow thoughts. Shiva has just taken a form to be accessible to humans. Indeed, Shiva is omnipresent, omniscient and omnipotent.

Nothing in this world is left out of Shiva's life. He is so complex and so complete.

That was the first act of Zen. Nothing in this world is left out of Shiva's life. He is so complex and so complete. And he did not have a teaching, he only had methods, and these methods are one hundred percent scientific in nature. He gave 112 ways in which a human

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Industrial Safety

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Abstract

There are more than 2.2 million major road accidents in the United States every year. Which is the highest in the world. But the surprising thing is that road accidents in India are about four times less than in the US, but the number of deaths is more than one and a half lakh a year. At the same time, the number of people who die in more than 22 lakh road accidents in America is only 34 thousand. According to the comparative report, the number of deaths in 2.2 million road accidents in the US is close to 37 thousand in a year. In India, about 30 percent of the 480,000 road accidents i.e. 1.5 lakh people lose their lives. This figure is number one in the whole world. Japan has the second-highest number of road accidents in the world. There are 500,000 small and big road accidents in Japan and the number of people who die from road accidents here is only 4,500 a year.
Keywords: Industy ,safety

INTRODUCTION

Overall, this paper highlights the challenges that arise when applying predictive modeling techniques to industrial problems and proposes a novel approach for addressing these challenges using a general conceptual architecture that incorporates parameter cross-validation, ensemble techniques, and meta-learning. The proposed instance of this architecture is shown to be effective and robust when applied to real-life data sets.In this way, the data is transformed in favor of the modeling techniques (see [1] for a review of such case studies). However, the drawback of this approach is that because the data can dramatically change from case to case, each new case requires new time-consuming manual pre-processing. Furthermore, once the data is pre-processed the correct predictive method must be selected. This selection is critical for the performance of the whole model since different techniques have different strengths and weaknesses. Very often one cannot see a-priori which technique fits best the data and different methods and their parameters have to be tried. Even more critically, in an industrial environment, the model developers often have their favorite techniques and focus only on these without taking any other approaches into account which is not of advantage for the final performance of the model. The most applied techniques to industrial modElling problems are ranging from statistically based Principal PetrKadlec and Bogdan Garbs are with the Computational IntelliJgene Research Group, Bournemouth University, Bournemouth, BH12 5BB, United Kingdom . Component Regression [2], Partial Least Squares Regression [3] and Support Vector Machines [4] to techniques from computational intelligence like Multi-Layer Perceptron [5] and Neuro-Fuzzy Systems [6]. Although many applications of these techniques have been published (see e.g. [1], [7] for reviews) most of the authors claim that a certain effort must be spent on the preparation of the data (i.e., data pre-processing) as well as the techniques (i.e., parameter selection). Another problem is that one also cannot separate the two previously discussed tasks, i.e., data pre-processing and predictive technique selection and parametrization due to their mutual influence on each other. This fact further increases the number of possibilities to be tested in order to identify a well-performing

Analysis and Design of Visualization of Sales Data Using Power Bi Tool

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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.

To fulfil this requirement, Microsoft Power BI can play a vital role. It is a powerful business intelligence tool that allows its users to visualize and analyze business data that can even have multiple sources. The tool has a clean and user-friendly interface. And the final output generated is presented in the form of interactive and beautiful dashboards. At first, the raw data is to be processed through several steps of cleaning and making it compatible to be used. After that, it's processed in Power BI and finally converted into beautiful interactive and informative dashboards used for business decision-making. This paper deals with the visualization of data from a sales store in Power BI by first importing the dataset, processing and cleaning it to make it ready for visualization, establishing appropriate relationships between various tables in the dataset, and finally visualizing the information to extract meaningful insights from it. These insights can be used to forecast various future events and help the organization take control of them to the maximum possible extent.

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

Introduction: In today's fast-paced business world, organisations need to have the capacity to analyse sales data and get insights into client behaviour. However, manually analysing substantial amounts of sales data can be a difficult undertaking. Companies can now use the power of data analytics to better understand their sales data thanks to sophisticated data analytics solutions like Power BI.

In this research study, we will examine the possibilities of using Power BI for sales data analytics. In this lesson, we'll look at how Power BI can be used to connect to various data sources, transform, and clean data, as well as produce interactive visualizations and reports that offer insightful data on sales success. The advantages of utilising Power BI will also be covered i.e., depth analysis, easy data integration, interactive visualizations, and cost-effectiveness.

In addition, a case study of a business that effectively used Power BI for sales data analytics will be presented in this research paper. We'll look at the difficulties the company encountered before deploying Power BI and how it overcame them. We'll also review the outcomes that the organisation saw after deploying Power BI, including enhancements to sales performance, client retention, and overall business expansion.

This study paper's major goal is to show the possibilities of using Power BI for sales data analytics to offer insights for business intelligence.

WHAT IS DATA ANALYSIS?

Data analysis entails establishing a dataset, studying it, cleaning it by removing any Na values or outliers and converting it to generate a useful result.

Power BI is a cloud-based data analysis tool that extracts, visualizes, and provides real-time insight. Power BI brings together data from a range of sources to provide you with a complete picture of your company's data assets. It also takes a 'big picture' approach, using current knowledge to analyze what has happened in the past to help you make better decisions in the future.

PROBLEM STATEMENT

The customer company is a sales company dealing in 47 products comprising majorly housewares, with a few general electronic appliances and sporting items. The company has 367 stores across all the states of the United States of America, which are categorized into four geographic regions with 28 sales team members who cover the different regions. The company has 50 customers who make regular purchases; these customers represent businesses that purchase from different store locations across the country. The company has multiple stores in all states of the US and sells

Surveillance Based Hostel Security Measurement Using Data Analytics and Machine Learning technique RFID

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Abstract

It is completely free to take part in any of the activities. The typical method is to register for the service to be attended in order to keep track of each student individually. Another method of determining attendance is the biometric system. Biometric recognition systems are used to recognise physical or behavioural traits such as the iris, voice, face, and fingerprints. Nonetheless, these procedures have proven to be time-consuming and boring. This marks the end of the counting procedure by making substantial progress in the stands. The proposed method is intended for the students present at the moment, but it can also be used for verification by other teachers. In this article, CCTV cameras are used to catch entering pupils in the hostel.

Keywords: RFID, Image processing, Data Analytics, Machine Learning, Surveillance, Segmentation
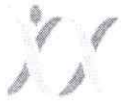
INTRODUCTION

The first step in a long flow procedure is to recognize what art can detect input from the front to the pilot diameter. They are beneficial to kids in today's environment engaged in the type that is shown when it is only effective in the kind that is displayed in the hostel. Our civilization and the appearance of detection are nothing. The ability to recognize the human mind is the most important human capacity. And it's amazing how the human mind may persist even among people who are in close proximity to the human being and others, depositing the form of minor modifications. The positive image of human face recognition has garnered significant interest from researchers to replicate the commitment in time to researching and effective algorithms for facial recognition to electronic devices for human use.

Face detection is a process used to find faces with different expressions and sizes.

The method is supposed to locate the face of facial recognition. Face to face with the study into the detection of various expressions, and he is the desired corner backdrop image in various sizes reports, the parameters' face. By evaluating the patterns in an image, the look detects either of those objects that are formed. Here, algorithms that are known to the process make use of the extract, as well as a database that matches.

This project has been highlighted by the use of Selections, which are normally made known that it is such, and that the readings service. We used clickers, swiping their identity cards, and scribbling down names manually on paper allowed students to keep track of the project and inspired them to ask to run it. It appeared as if God's knowledge of a birth control method to detect the presence of the very creature formed with the

Image2Speech– Text Recognition In Images And Converting Recognized Text To Speech

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Abstract

Around 285 million people worldwide are visually impaired, including close to 39 million blind people.Thishasasignificantimpactonthelivesofpersons who are blind or visually impaired. Even though numerous attempts have been made to assist those who are blind in seeing objects through alternate senses like touch and sound, text-reading technology is still in its infancy. The system in use right now is either constrained in its application or expensive to maintain. Therefore, we require a system that can automatically recognize and read aloud text to a user base of visually impaired people that is both affordableandtrulyefficient.Themaingoalofthisresearch is to develop a program that can identify text characters from turn any natural image into a voice signal. The programme need to carry out the identical action for any uploaded image and PDF file. The application should also havetoolsforpacemodulation, voicechoosingoptions,and storage capability for image to text output. The target audience for this programme can be expanded to include people with special needs who also have learning impairments, young children, and several other societal groups. The text is extracted fromthe image using optical character recognition (OCR), and the Windows API is utilised to turn the text into speech. The programming language for digital image processing is MATLAB.

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

INTRODUCTION

A popular area of computer technology is image-to- speech conversion. It establishes a crucial factor in how we engage with the system and interfaces on many platforms. It has long been a goal to replicate human abilities like reading throughmachines. Machine reading, however, has developed from a pipedream toarealityduringthe past 50years. Themost effective form of human communication is most likely speech. Oneofthemostpopularuses oftechnologiesinthe fields of pattern recognition and artificial intelligence is optical character recognition.

The tool assists in converting textual information that is embedded in an image or scene into speech. This is not the only use it may be put to. It is beneficial to take text from PDF files and turn it into speech. All of the collected text can be stored as a text file in any location on the computer. While the text is being read aloud, it also offers the option to look up synonyms for words. Different paces maybe comfortable for users to comprehend the language. As a result, a clause is added that allows for speech tempo modulation. Additionally, users can select from a variety of male and female speakers' voices as well as accents.

OCR, or optical character recognition, is a technique we use to extract text from photographs. Afterthat, a text- to-speech (TTS) module turns the text into audio. We can

Text Recognition In Images And Converting Recognized Text To Speech

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Abstract

Around 285 million people worldwide are visually impaired, including close to 39 million blind people. This has a significant impact on the lives of persons who are blind or visually impaired. Even though numerous attempts have been made to assist those who are blind in seeing objects through alternate senses like touch and sound, text-reading technology is still in its infancy. The system in use right now is either constrained in its application or expensive to maintain. Therefore, we require a system that can automatically recognize and read aloud text to a user base of visually impaired people that is both affordable and truly efficient. The main goal of this research is to develop a program that can identify text characters from turn any natural image into a voice signal. The programmes need to carry out the identical action for any uploaded image and PDF file. The application should also have tools for pace modulation, voice choosing options, and storage capability for image to text output. The target audience for this programme can be expanded to include people with special needs who also have learning impairments, young children, and several other societal groups. The text is extracted from the image using optical character recognition (OCR), and the Windows API is utilised to turn the text into speech. The programming language for digital image processing is MATLAB.

Key Words: Digital image processing, optical character recognition, speech modulation, MSER Regions, stroke width algorithm, and image character recognition are some of the terms used in this document.

INTRODUCTION

A popular area of computer technology is image-to-speech conversion. It establishes a crucial factor in how we engage with the system and interfaces on many platforms. It has long been a goal to replicate human abilities like reading through machines.

Machine reading, however, has developed from a pipe dream to a reality during the past 50 years. The most effective form of human communication is most likely speech. One of the most popular uses of technology in the fields of pattern recognition and artificial intelligence is optical character recognition.

The tool assists in converting textual information that is embedded in an image or scene into speech. This is not the only use it may be put to. It is beneficial to take text from PDF files and turn it into speech. All of the collected text can be stored as a text file in any location on the computer. While the text is being read aloud, it also offers the option to look up synonyms for words. Different paces may be comfortable for users to comprehend the language. As a result, a clause is added that allows for speech tempo modulation. Additionally, users can select from a variety of male and female speakers' voices as well as accents.

OCR, or optical character recognition, is a technique we use to extract text from photographs. After that, a text-to-speech (TTS) module turns the text into audio. We can see that this procedure was split into two modules. The first is picture recognition, and

Cs History And Education Hold Cultural And Spiritual Value

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Abstract

The author examines how computer science history can serve a cultural and spiritual purpose in higher education, emphasizing the importance of developing a broad and interdisciplinary knowledge base to foster comprehensive talent in computer science. The author also explores the integration of humanistic education and science education in computer education, ultimately proposing a curriculum system that aims to cultivate students' innovation abilities and overall quality, with specific methods for incorporating humanistic education into computer science education.

INTRODUCTION

Computer science has a significant impact not only on the development of productive forces as a form of material progress, but also on the development of people's ideology as a form of intellectual progress. Those who are passionate about the study and pursuit of science should recognize the cultural and spiritual value of computer science history, not just in terms of its impact on productive forces but also on ideology. The birth, evolution, and development of computer science theories reflect scientists' methods of thinking and research, which is more valuable than specific knowledge.

In modern higher education, a comprehensive science education should encompass two aspects: the imparting of specific scientific knowledge and methods, as well as the cultivation of abstract scientific thoughts and spirits. While the former represents the body of science education, the latter represents its soul. In other words, higher education should not only teach students what to think, but how to think. Computer science history serves as an effective means of instilling scientific thoughts and spirits in education. Hence, the history of science in higher education plays an indispensable role in terms of its cultural function and spiritual value.

University education aims to promote integrated scientific thinking and cultivate well-rounded talents, with an emphasis on nurturing talents with humanistic spirits. However, in modern university education, utilitarian and test-oriented education often prevail, while scientific thought, spirits, and humanistic education are often neglected and weakened. This has resulted in students who are only concerned with results and utility, neglecting the development of science and lacking in exploratory and innovative spirits for science. It is unwise to focus higher education solely on pragmatism. Thus, developing a broader, humanistic, and comprehensive knowledge system is crucial for cultivating well- rounded talents in the field of computer science.

HISTORY

The history of computer science is marked by numerous challenges and setbacks, including technical limitations, resource constraints, and societal pressures. However, scientists have persevered through these difficulties by drawing upon their passion for

Developing a Movie Website Using React and Firebase: A Methodological Approach

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Abstract

This research paper presents the development of a movie website using React and Firebase. The website is designed to provide users with a comprehensive platform to browse, search and watch movies online. React is used for front-end development, while Firebase serves as the back-end database to store user information and movie data. The website includes features such as user authentication, movie search, watchlist, and movie playback. The development process includes building components, styling, and integrating Firebase into the React application. The website is tested using various methods to ensure its functionality and usability. The results show that the website provides an excellent platform for users to access and watch their favorite movies online.

Keywords: React, Firebase, Movie Website, User Interface, Backend-as-a-Service

INTRODUCTION

The development of a movie website using React and Firebase is a perfect example of how modern web technologies can be used to provide a comprehensive platform for users to access and watch their favorite movies online. React is a
popular JavaScript library for building user interfaces, while Firebase is a cloud-based platform that provides real-time database services for web and mobile applications. This research paper presents the development process of a movie website using React and Firebase and evaluates its performance and usability.

Development Process: The development process of the movie website includes the following steps:

1   Building Components: React is used to build the user interface of the movie website. The website is divided into various components, such as the home page, movie search page, movie details page, and watchlist page. Each component is built using React components and styled using CSS.

2   Integrating Firebase: Firebase is used as the back-end database for the movie website. It stores user information, movie data, and user watchlist information. Firebase is integrated into the React application using the Firebase JavaScript SDK.

3   User Authentication: Firebase provides user authentication services to the movie website. Users can sign up and log in to the website using their email and password. Firebase also provides OAuth authentication with popular social media platforms like Google and Facebook.

4   Movie Search: The movie search page allows users to search for their favorite movies using keywords. The search results are displayed using the MovieDB API. Users can filter the search results by genre, rating, and release date.

5   Watchlist: Users can add movies to their watchlist by clicking the Add to Watchlist button on the movie details page. The watchlist information is stored in the Firebase database and is accessible to the user when they log in to the website.

Active Contour Segmentation of Polyps in Capsule Endoscopic Images

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Abstract:

One common method for seeing the gastrointestinal GI tract is video capsule endoscopy (VCE). As an extra line of defence against problems like polyps, bleeding, etc., capsule endoscopy checks are often recommended. Virtual citizenship examinations generate massive amounts of video data, which necessitates the use of learning algorithms, computer vision, and automated picture processing. There has been some progress with the recent proposals of algorithms for autonomous polyp identification. Automatic polyp diagnosis in VCE is challenging because of the imaging properties that are unique to this technique, even though polyp recognition in colonoscopy and other pictures based on standard endoscopic procedures is a growing area. Various techniques to polyp identification in VCE images are reviewed, and the difficulties encountered by conventional image processing and computer vision systems are systematically analysed.

Keywords: capsule endoscopy; colorectal; polyps; detection; segmentation; review.

Introduction

An innovative diagnostic imaging method in gastroenterology, video capsule endoscopy (VCE) uses a swallowable, small camera equipped with LED flash lights to capture digital images of the GI tract [1, 2]. The pill sends pictures of the digestive system to a recorder that is portable. Gastroenterologists examine the recorded pictures and do diagnostic evaluations based on the abnormalities they find, such as polyps, lesions, bleeding, etc.During its 8 to 10 hour operating period, a typical capsule inspection captures around 50,000 photos. Determining the quality of each VCE-generated picture sequence, then, is a laborious task. The diagnosticians' workload would be significantly reduced if an effective and efficient automated detection process could be implemented to eliminate the need to manually analyse a huge number of photos for every patient.
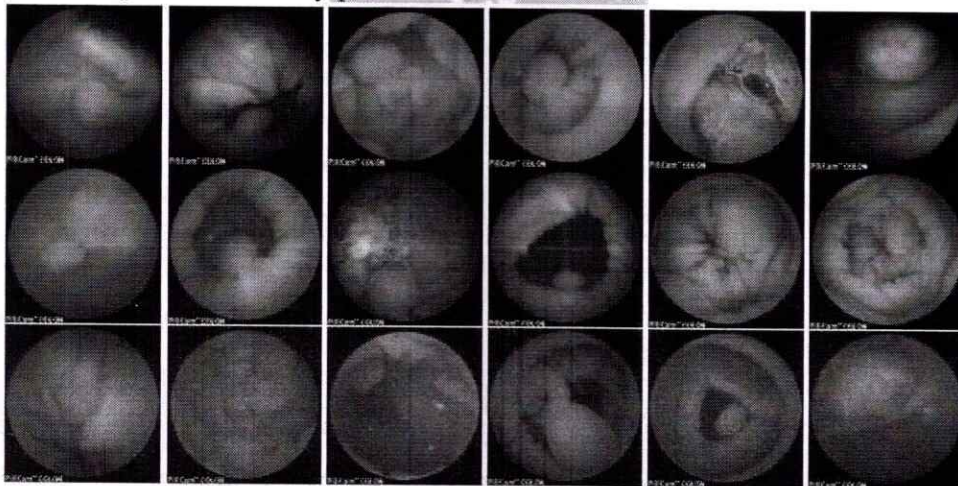

Figure 1: The VCE imaging technology reveals that colonic polyps may look differently. These pictures are from several patients' PillCam R COLON capsule-based tests. At different granularities, observe the haziness, hue, texture, and geometrical characteristics (or absence thereof). Feature detectors may also be affected by turbidity.Unlike conventional colonoscopy imaging methods, VCE examinations do not include cleaning the colon to remove gastrointestinal fluid and waste.

One of the main challenges in developing automated computer-aided detection and diagnostic systems is the recognition of polyps using VCE images. In order for doctors to identify the polyps in the pictures, they use human perception of their unique shapes—and, in some instances, the colour and texture of these geometric objects—to describe them. Essentially, based on medical records, the Pedunculate polyps resemble mushrooms and are connected to the colon mucosa by a thin stalk; sessile polyps resemble caps and lack the stalk. These two forms of polyps fundamentally define the geometry of colonic polyps. In appearance, they

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Web 3.0: The Future Of Internet: A Review Paper

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Abstract

The emergence of Web 3.0 has paved the way for a new era of the internet, where data ownership, privacy, and personalization take centre stage. In this paper, we explore the concept of a web and future of it, which involves a more intuitive and interactive web experience that prioritizes user control and agency. We discuss the various technologies and frameworks that including blockchain, Artificial intelligence, and machine learning. Additionally, we examine the challenges of web3.0and its formula, particularly in the areas of data collection and security. Theway we conduct research and interact with the internet, and it represents a crucial step forward in the evolution of the web and promoting the use of web 3.0.

Keywords: Web3.0, Blockchain, Artificial intelligence, decentralized.

INTRODUCTION

In the 1980s, British scientist Tim BernersLee created the World Wide Web while working at CERN, the European Organization for Nuclear Research[1]. Berners-Lee developed the concept of hypertext, which allows users to navigate between different documents via hyperlinks. At the end of 1990, Tim BernersLee proved his idea and ran the first web server and browser at CERN. He developed the web server's code on a NeXT computer. To prevent it from shutting down, the computer has a note written in red ink: "This machine is a server. Do not turn off the power!!". Internet growth was recorded at, 342.2 percent in years from 2000 to 2008, indicating the importance of the Internet for people [2].The way people communicate, work, and live has been completely transformed by the Internet and the World Wide Web. The web is the best medium for collecting and disseminating information in the fastest and cheapest way. The web has changed our daily lives, changing the way students, teachers and companies work.

We have now discussed the many web generations and their shortcomings. Web 1.0 was a very basic platform. Web 1.0 features static information that is more challenging to update. Considerably more accurate and informative. It essentially only contained read-only messages [3], but not a very good talk. Web 1.0 is not more creative and useful. As I exploring about web 1.0 is all about getting information and reading.

The emergence of the next generation of the web, known as Web 2.0, promises to revolutionize the internet yet again by introducing a more interactive and collaborative online experience[4]. With Web 2.0, users can now create and share content, collaborate with others, and participate in social networking, making the web a more creative and useful tool for people.

Web 2.0 features dynamic information that can easily update. It allowed for the creation of applications such as Facebook, Twitter, and Wikipedia. Web 2.0 refers to the current era of the Internet where it is more important for users to create content and improve usability for end users compared to previous versions of the website, Web 1.0. The move to Web 2.0 has led to the freedom to create content online, allowing users to

JWT Based Authentication

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Abstract

This study seeks to offer a thorough evaluation and implementation manual for JSON Web Token (JWT) authentication. As a safe and scalable option for token-based authentication in online applications, JWT has grown significantly in popularity. This paper explores the key concepts and components of JWT, including its structure, security features, and advantages. It also covers typical implementation patterns, best practises, and potential weaknesses. The paper also provides a practical example-based step-by-step tutorial on how to implement JWT authentication in a web application. By the time this article is finished, students will have a thorough grasp of JWT authentication and be prepared to use it in their own applications in a safe and efficient manner.

INTRODUCTION

The necessity for safe and dependable authentication procedures has grown more obvious in a time when technology is being integrated into a wide range of elements of our life. While organisations must preserve sensitive data and defend their systems from unwanted actors, users demand easy access to services. Traditional methods of authentication, such session-based and token-based systems, have drawbacks in terms of scalability, state management, and security flaws.

A potential answer to these issues and the provision of a more effective and secure authentication mechanism is JSON Web Tokens (JWTs). Users can authenticate and authorise themselves across various systems and services thanks to JWTs, which provide a small and self-contained framework for representing claims securely. By doing away with server-side storage and database lookups, this method makes implementation simpler and performance better.

This research paper's goal is to go into the global ecosystem of JWT authentication and investigate.

its guiding principles, benefits, and potential drawbacks. We seek to give a thorough grasp of JWT-based authentication and throw light on its relevance in contemporary software systems by performing an in-depth examination.

This research paper aims to advance knowledge of secure authentication mechanisms by examining the various aspects of JWT authentication and by assisting developers, security professionals, and system architects in making well-informed decisions regarding the adoption and implementation of JWT-based authentication solutions.

OVERVIEW OF AUTHENTICATION

A. Importance of authentication in web applications

A key component of online applications is authentication, which offers a way to confirm users' identities before authorising access to private data or carrying out particular tasks. Here are some factors showing its significance that it plays a crucial part in preserving the security and integrity of online applications:

1. User Identification:Authentication makes guarantee that the web application can recognise and classify users correctly. This enables the system to keep user-specific

Twitter Data Sentiment Analysis For Stock Market Prediction Using Machine Learning

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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 comment . They 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 posts from twitter that can deliver the result with good accuracy.

Keywords: Machine Learning; Sentiment Analysis; Stock Market; Naive Bayes classifier, SVM

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 has 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 (SET100) and online financial 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.

An Evaluation Of Placeio: A Placement Platform For students

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Abstract:
This research paper evaluates the effectiveness of Placeio, a placement platform that connects students with potential employers. This platform has been developed using the modern technologies such as react-js and Laravel. React is one of the popular web frameworks that has gained importance over other frameworks such as Angular, Vue, etc.. This is because of its implementation of Virtual DOM, whose primary objective is to enhance the overall performance of the application. On the other hand, LARAVEL is a free open source PHP framework. Frameworksare on go, as there is no need to write whole code.The results of this study suggest that Placeio has the potential to be a valuable tool for connecting students with potential employers and helping them achieve their career goals.

Keywords: LARAVEL , DOM , React-js , Placeio

INTRODUCTION

The job market is becoming increasingly competitive, and students need to have a platform that connects them with potential employers. To address this need, we developed Placeio, an online job portal that enables students to register and apply for various jobs that are available to them. Administrators can also register and post job openings, review student applications, and filter student profiles based on their skills and status. This study aims to evaluate the effectiveness of Placeio in connecting students and employers.We used react-js for the front-end and Laravel for the server side scripting.

The major reason behind choosing react-js is that it uses the virtual DOM. React is largelyan internet framework that changed intospecially designed to cope with the overall performanceproblemswith inside thenetutility. React makes use ofdigital DOM that comes to a decisionwhether or not the aspectneeds to be reloaded or now no longerprimarily based totallyat thecutting-edgenation of the aspect and the modificationswhich havetook place. This prevents the utility from re-rendering unnecessarily. Apart from this React additionally introduces one-mannerinformationfloat which allowsto govern the float of the informationwith inside theutility which makes the monitoring of took place less complicated and additionally simplifies the propagation and the stability.

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 choose a PHP framework i.e., LARAVEL.

Design and Development of a Small Patch, Ultra-Wideband, Chop-Tunable Antenna

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Abstract

Because the frequency band (4.5-5.5 GHz) has recently been recommended by ASEAN nations for fifth generation (5G) cellular connectivity, an ultra-wideband (UWB) antenna is required to handle the band-notched function. In this way, to portray the little structure variable of a UWB radio wire inside theThis article presents a variable scored thunderous element in the 5G lower band, which is valuable for 5G applications. The super wideband recieving wire was fabricated utilizing a tuning fork emanating patch that has a fundamental deficient ground plane development. The band-indented measure was made by applying two ring-molded cuts (RSS) to the ground plane. An extraordinarily low VSWR of under 2 and a gigantic transmission capacity of 2.9 GHz to 11 GHz have been achieved by this radio wire. Apparently the recieving wire is fit for getting all frequencies, except for the lower 5G band (4.5-5.5 GHz), which has scored recurrence groups. Albeit the radio wire's scored recurrence range yields not exactly - 1 dBi, it has a pinnacle gain of 5 dBi for UWB. Changing the different RSS focuses along the upward hub considers a gradual moving of the scored band, taking into consideration the possibility to plan for inconsistent band-indented highlights. This report presents the completely acknowledged plan after it has been produced and tried. Because of its small size and 4534 mm2 surface area, the suggested antenna is ideal for lower band 5G applications.

Keywords: Microstrip Patch Antenna, UWB, RSS, 5G Lower Band, Variable Band-Notched

Introduction

Various academics have been working on UWB wireless communication applications for quite some time. It has reached a number ofapplications because to its several benefits, including its ability to transfer a bigger amount of data and reduced manufacturing costs. The UWB commercially available application was granted a bandwidth of (3.1-10.6) GHz by the Federal Communication Commission (FCC) in 2002 [1]. The rapid proliferation of the technology has led to an increase in the usage and popularity of UWB since then. Working with ultra-wideband (UWB) technology often necessitates a large operational bandwidth, however building an antenna for UWB may be difficult due to the antenna's small size, large radiation polarisation, low VSWR, and broad operating bandwidth.

For ultra-wideband (UWB) uses, narrowband is a significant boon [2].on pages 26, 27 examples include the following: (3.3-3.7 GHz) for Wi-MAX [7], (3.3-3.8) GHz for C-band satellite communication [8], (4.5-5.5) GHz for 5G lower band [9], (5.15-5.35) GHz and (5.572-5.825) GHz for WLAN [10], (7.25-7.75) GHz for satellite downlink contact according to the International Telecommunication Union (ITU) [11], (7.25-8.275) GHz for X-band frequencies [12], and so on. Utilising a variety of patch shapes, inset-fed, defective ground structure (DGS), coplanar waveguide (CPW), and radiating patch slots may enhance the efficiency of a planar UWB antenna [2, 13–19]. Bandnotched functions are often produced by having distinct slots on the ground plane and patch, according to most research. This allows for the realisation ofIn the event that the ground structure is defective, UWB is made easier to understand [20, 21]. In recent times, there have been a number of proposals for research that investigates band-notched characteristics for a variety of applications. A UWB CPW-fed antenna with two split-ring resonators was proposed by the authors of [20] for use in dual notched-band applications. The ultra-wideband antenna has two rejection bands that run from 5.0 to 5.8 GHz and 7.5 to 8.5 GHz. It operates within the range of 3 to 10.6 GHz throughout its operation. This antenna has dimensions of 50×50 mm2, which are the dimensions that are advised.

Both the first notched-band and the second notched-band were produced by designing two dual SRRs (DF-DSRR) on the centre of the ground plane. The second notched-band was produced by developing two dual SRRs (WB-DSRR) on the bottom of the ground plane. One

Give Educators Resources That Facilitate Instruction And Course Administration

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Abstract

Development and the web are as of now a fundamental piece of present day life in this stretch of time. Web is a development that allows a couple of computers to be related with one another meanwhile through an association. Since it works on it for them to get the information they need, the web partakes in a couple of advantages for students. Electronic acquiring can benefit from the web. The "Insightful Course The chiefs System" is the name of the internet based program that we are making. We have made a course the chiefs system that uses the possible given by development to all the more promptly serve educators and students. This program gives assignments, booklets, course modules, and various features that further develop learning. Students can access their assignments using their user name and password once they have finished them using this application, which teachers use to assign them. The application grants students to introduce their undertakings. Regardless, teachers similarly have a gradebook that they can use to give students grades for their homework. By giving instructors a development and a lot of instruments, they streamline educating and course the board. Nevertheless, dependent upon the teaching related parts, it could moreover contain class activities, errands, and learning objects. Educational Course The board System (ACMS) has formed into a basic piece of high level training.

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.

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Strategy To Foster A Water Buildup Framework Upheld On Thermoelectric Cooler

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Abstract

Due to the absence of rainfall, it is challenging to obtain water resources for irrigation or other purposes in many nations, including India, particularly in arid regions like deserts. Because of an absence of precipitation, the issue of water shortage is likewise seen all through the world. Nonetheless, we can gather the airborne water fume in regions that are exceptionally moist, like those close to the ocean. The strategy for making a thermoelectric cooler-upheld water buildup framework is portrayed in this review. Air circulator, heat exchanger, and cooling devices make up the system. The air Water Generator is the innovation that can straightforwardly change air dampness into valuable and, surprisingly, drinkable water. This contraption transforms water fume particles into water beads by utilizing the inert intensity idea. Even though it has been around for a while, India and other countries don't use it very often. In our mechanical age, when we are depending on sustainable assets, it has a ton of utilizations. This exposition additionally examines the results of the trial and the usefulness of the framework.

Keywords- Thermoelectric cooler, Atmospheric moisture

INTRODUCTION

In many nations, including India, obtaining water resources for agriculture or other uses is challenging, particularly in arid regions. Finding various techniques for the generation of pure water becomes more useful to inspire many academics to study on related themes because of the lack of pure water in many locations throughout the world, particularly in the countries of the Arabic Gulf. Water is essential to life in all its facets. Water is a necessary component of life, yet it is difficult to purify, expensive to transport, and cannot be substituted. Nearly 45 crore people live in water-deficit zones across 129 nations.

Nearly 70% of fresh water is utilised for irrigation of agricultural fields, causing water conflicts between urban and rural areas. If this trend continues, by 2032, nearly half of the world's population will be experiencing a water shortage. Water wars are expected to occur in the twenty-first century. It has been noted that other parts of the world are experiencing water scarcity due to a lack of rainfall. However, we can condense the airborne water vapour in areas that are very humid, such as those near the sea. The method for creating a water condensation system based on a thermoelectric cooler is presented in this research. The system consists of cooling elements, heat exchange unit and air circulation unit.

The Atmosphere is contains large amount of water in the form of moisture, vapour etc. Within those amounts almost 30% of water is wasted. This amount of water can be used if we are able to extract the water that present in the air in the

form of moisture. This Atmospheric moisture convertsdirectly into usable and even drinkable water this is called Atmospheric Water Generator.

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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 (CO_2), 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

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Artificial Intelligence (Ai) For Improving Game Playability and Enhancing Experience

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Artificial intelligence (AI) is now a necessity for enhancing game experience and game playability. Authenticity in present day PC games is accomplished by coordinating designs, physical science, and computer based intelligence. The immersion of the game and the intelligence of non-player characters constitute a realistic gaming experience, according to the text. Game computer based intelligence permits players to collaborate with non-player characters and takes game insight to a more elevated level. The paper breaks down the set of experiences and present status of artificial intelligence in game turn of events and predicts the potential changes and effects of man-made intelligence innovation in light of AI on future game turn of events.

Keywords—**Artificial intelligence, Game experience, machine leaning.**

INTRODUCTION

PC game motors are continually developing and refreshing, prompting the improvement of game designs innovation. In any case, individuals are presently searching for more profound game meaning

past lovely visuals. Present day PC games accomplish sensible encounters by coordinating illustrations, physical science, and man-made reasoning. The immersion of the game and the intelligence of non-player characters define realism in games. An effective game necessities

an exceptionally reasonable man-made consciousness control framework as well as engaging visuals and sound.

All computer games today utilize man-made brainpower (man-made intelligence) here and there, with the exception of club games that utilize arbitrary number generators to guarantee decency. Computer based intelligence has been utilized in automated games since the 1950s, with one of the earliest models being the numerical procedure game Nim, which the PC had the option to beat human players at. The computer based intelligence Ferranti Imprint 1 machine was likewise used to compose a round of checkers and chess around the same time. Man-made intelligence based checkers games kept on being created and finished in the loss of chess ace Garry Kasparov by IBM's Deep Blue computer in 1997. However, traditional early video games like Pong, Spacewar!, and Gotcha were developed without any AI components.

HISTORY OF AI IN GAMES

When game developers apply AI to computer or game console games, they will make the majority of players feel that the enemy controlled by computer AI system (NPC) they face has human intelligence just like the real enemy, so that the players can leave a realistic experience [7]. Game developers need to find innovations that further alienate their own games [8].

Because game AI has not made great progress like graphics technology and physical simulation technology, it provides a space for game innovation and alienation. The application of graphics technology and physical characteristics simulation technology has been insufficient, making a game unique [9]. As the technical core of improving game playability and the selling point of many commercial games promotion, game AI gives players the way to generate behavior and emotional interaction with non player characters in the game, and promotes the realm of game experience to a higher level [10]. How to endow the non player characters with credible intelligence, so that they can more truly reflect the human like behavior, emotion, and even self-learning to adapt to the changing game environment, has become a hot spot of game research and development at home and abroad [11]. This paper analyzes the history and current situation of AI in game development, and puts forward the possible changes and influences of AI technology based on machine learning on game development in the future, including intelligent game design, intelligent iteration and subsequent development strategy generation and execution ability, highly intelligent role, dynamic adaptation and constantly changing game experience.

Network Protection to Involve It Really Fundamental In This Day And Age

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Abstract

In the world of today, which is driven by technology and connectivity, it is essential to know what cybersecurity is and how to use it effectively. Their frameworks are in danger without safety efforts to safeguard significant information, data, and other basic virtual resources. Equal protection ought to be provided to all businesses, IT or not. As new online protection innovations advance, aggressors won't be abandoned. They target numerous businesses' weak points with improved hacking methods. Network safety is fundamental for the military, government, monetary, clinical, and corporate associations to gather, apply and store extraordinary data from PCs and different gadgets. A huge part of this data might be touchy data like monetary data, individual property, individual data, or other data that might cause you less worry about unapproved access or colleagues.

Introduction

An effective cybersecurity approach consists of multiple layers of protection deployed across a network, computer, program, or document that is designed to be non-toxic. In a community, processes, people, and equipment must be accompanied by the option to create a true defence during or after a cyber attack. A threat management organization can add anything to a variety of Cisco security products and accelerate critical security processes: detection, analysis, and remediation. Contacts The customer must respect and comply with important security information, such as choosing strong passwords, being careful with email attachments, and backing up data. Learn more about the value of cyber security.

Technology

Technology plays an important role in cyber security as it provides tools and techniques to detect, prevent and respond to cyber threats. Here are some examples of technologies used in network security:

1. Firewall: A firewall is a network security device that monitors and controls inbound and outbound traffic. It acts as a barrier between the internal network and the Internet, protecting the network from unauthorized access and malware.

2. Intrusion Detection and Prevention System (IDPS): An IDPS is a security software application that monitors network traffic and detects and responds to threats in real time. Detects and protects against various types of attacks, including malware, denial-of-service attacks, and exploits.

3. Antivirus software: Antivirus software is designed to detect, prevent, and remove malware from a computer or network. Scans files and applications for malware and prevents them from being infected.

4. Encryption: Encryption is the process of converting data into code to prevent unauthorized access. Ensuring the confidentiality and integrity of sensitive information is an important technology in cyber security.

5. Biometric authentication: Biometric authentication is a security technology that uses physical or behavioural features such as fingerprints or voice patterns to identify and identify people.
It provides a higher level of security than traditional password authentication.

6. Artificial intelligence and machine learning: Artificial intelligence (AI) and machine learning (ML) are increasingly used in cybersecurity to automate threat detection and response. They can analyse large volumes of data and detect patterns and anomalies that could indicate a cyberattack.

Technology often plays an important role in cybersecurity by providing tools and strategies to protect organizations and individuals from cyber threats.

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LONG-TERM TRAFFIC FORECASTING IN OPTICAL NETWORKS USING MACHINE LEARNING

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Abstract:

Here, we lay forth the framework for the optical network traffic forecast issue. The next step is to develop a machine learning strategy for effective network building using Graph Convolutional Networks and Generative Adversarial Networks. Predicts future states. Identifying network peak traffic that could impact routing choices is the primary goal. We check our findings using actual networks supplied by the operator of the network as well as with pseudo realistic datasets created in a bespoke simulator. The results validate the efficacy of our method in optimising both the short-term routing decisions and the long-term network architecture choices.

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

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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

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Machine Learning-Based Long-Term Traffic Forecasting In Optical Networks

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Abstract

Here, we lay forth the framework for the optical network traffic forecast issue. The next step is to develop a machine learning strategy for effective network building using Graph Convolutional Networks and Generative Adversarial Networks. Predicts future states. Identifying network peak traffic that could impact routing choices is the primary goal. We check our findings using actual networks supplied by the operator of the network as well as with pseudo realistic datasets created in a bespoke simulator.The results validate the efficacy of our method in optimising both the short-term routing decisions and the long-term network architecture choices.

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

Introduction

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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 representation, 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 cognitive networks through traffic prediction. Regrettably, these methods are very vulnerable to variations in traffic load patterns, sometimes known as burst data [7]. Due to the random nature of MCTS's action selection, the accuracy of the network prediction method is proportional to the number of calculation cycles executed within the allotted computational

Multiband and Wideband MIMO Radio Wires for Versatile Applications

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Abstract

An MIMO antenna based on meander lines with an L-shaped metallic strip for multiband operation is shown in this study. A monopole antenna with numerous sections of short-circuited transmission line works as an inductor and changes the antenna's impedance characteristics; this configuration is called a meander line. By using a line slot DGS (Defective Ground Structure) to decrease the mutual coupling between the antenna components and inserting two U slots on the ground plane, a 69% reduction in antenna size miniaturisation was accomplished. Well below the stated limit, we get the values of the envelope correlation coefficient (ECC) and specific absorption rate (SAR).

Keywords:MIMO; mobile antenna; multiband antenna; wireless communications; high isolation; miniaturization

Introduction

Wireless service-based communication technologies are experiencing their pinnacle of expansion. Because of this meteoric rise, not only have the fundamental needs of the wireless sectors, but it also raised the bar for antenna makers. Currently, there is a need for a small antenna that can operate over a broad range of frequencies. When more than one electromagnetic band has to be covered in a single application, a wideband antenna is a great choice. An ultra-wideband (UWB) antenna may connect to any and all major communication applications, including WLAN, WiMAX, satellite, radar, and more [1]. The typical operating frequency range for a UWB antenna is between 3.1 and 10.6 GHz. Numerous publications from the past and present have proposed wideband monopole antennas. Researchers mostly use the introduction of slots or faults in the resonating surface or with the bottom plane as a means to enhance the antenna's effective or fractional BW [2-3]. Antenna features such as a smaller operating frequency area, an expanded operating band, and a patch that is coupled to a finite impedance via slots cut into the ground plane are described in references [4-5]. Using asymmetric slots or several patches with varying forms is another way to increase the bandwidth

Antennas with wide bandwidths have also been obtained by several researchers using CSRR or EBG structures.

One potential issue with these methods is that they might cause fading when dealing with multipath circumstances. Antenna arrays are used to address this issue. Another option is to use a multiple-input multiple-output (MIMO) antenna, which may significantly increase the antenna's bandwidth but isn't always a solution to the issue. In addition to being very efficient, these antennas are also superior in terms of directivity.

In order to demonstrate multi-band operability and enhance the antenna fractional bandwidth, this study proposes a MIMO antenna configuration. The antenna is capable of functioning across many bands within the electromagnetic spectrum. Antennas in the X, Ku, K, and Ka bands are covered by it. I have submitted the results of the simulation of the suggested design that was conducted using the hfss v15 software to this document.

Proposed Geometry of MIMO Antenna

Based on its relative dielectric constant, the 2×2 compact multi-band MIMO resonator is built on an inexpensive and readily accessible FR-4 epoxy glass substrate has a loss-tangent of 0.02 and a thickness of 1.6 mm, with a period of 4.4.

Two patches with a hexagonal form and 50Ω impedance microstrip lines make up the structure. To minimise spurious emission as much as possible, the antenna patches are arranged to match the impedance with the microstrip lines. To achieve maximum efficiency and expanded bandwidth with lowest effective ground area, the antenna's ground plane is constructed in a certain way.

Design and Development of An ultra-wideband, notch-tunable, small patch antenna

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Abstract:

An ultra-wideband (UWB) antenna is required to handle the band-notched function, since the frequency band (4.5-5.5 GHz) has recently been recommended by ASEAN nations for fifth generation (5G) cellular connectivity. Thus, to characterise the small form factor of a UWB antenna within theThis article presents a changeable notched resonant feature in the 5G lower band, which is useful for 5G applications. The ultra-wideband antenna was built using a tuning fork radiating patch that has a basic defective ground plane construction. The band-notched criterion was created by applying two ring-shaped slits (RSS) to the ground plane. An exceptionally low VSWR of less than 2 and a massive bandwidth of 2.9 GHz to 11 GHz have been accomplished by this antenna. It would seem that the antenna is capable of receiving all frequencies, with the exception of the lower 5G band (4.5-5.5 GHz), which has notched frequency bands. Although the antenna's notched frequency range yields less than -1 dBi, it has a peak gain of 5 dBi for UWB. Adjusting the various RSS points along the vertical axis allows for a progressive shifting of the notched-band, allowing for the potential to design for changeable band-notched features. This document presents the fully realised design after it has been manufactured and tested. The suggested antenna is perfect for lower band 5G applications because to its compact size and tiny surface area of 45×34 mm2.

Keywords: Microstrip Patch Antenna, UWB, RSS, 5G Lower Band, Variable Band-Notched

INTRODUCTION

Various academics have been working on UWB wireless communication applications for quite some time. It has reached a number ofapplications because to its several benefits, including its ability to transfer a bigger amount of data and reduced manufacturing costs. The UWB commercially available application was granted a bandwidth of (3.1-10.6) GHz by the Federal Communication Commission (FCC) in 2002 [1]. The rapid proliferation of the technology has led to an increase in the usage and popularity of UWB since then. Working with ultra-wideband (UWB) technology often necessitates a large operational bandwidth, however building an antenna for UWB may be difficult due to the antenna's small size, large radiation polarisation, low VSWR, and broad operating bandwidth.

For ultra-wideband (UWB) uses, narrowband is a significant boon [2].on pages 26, 27 examples include the following: (3.3-3.7 GHz) for Wi-MAX [7], (3.3-3.8) GHz for C-band satellite communication [8], (4.5-5.5) GHz for 5G lower band [9], (5.15-5.35) GHz and (5.572-5.825) GHz for WLAN [10], (7.25-7.75) GHz for satellite downlink contact according to the International Telecommunication Union (ITU) [11], (7.25-8.275) GHz for X-band frequencies [12], and so on. Utilising a variety of patch shapes, inset-fed

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A STUDY ON DIGITAL MARKETING AND IT'S IMPACTS ON TRADITIONAL MARKETING

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Abstract :

Marketing is not an exception to the general world's transition from analog to digital. The use of digital marketing, social media marketing, and search engine marketing is growing along with the advancement of technology. Due to its reliance on the internet, digital marketing has benefited the most from the rapid increase in internet users. The purchasing habits of consumers are evolving, and they are increasingly drawn to digital marketing over traditional marketing. This review paper's goal is to examine the effects of digital marketing and highlight its significance for both advertisers and consumers. This essay starts with an overview of digital marketing before highlighting its many channels and highlighting the distinctions between it and traditional marketing. and importance of digital marketing in today's era.

Keyword: digital marketing, internet, online advertising, internet marketing

INTRODUCTION :

Marketing refers to the steps that the company takes to promote the buying of any products or services. The company seeks customers or consumers for their products or services via the help of marketing. Digital Marketing refers to the marketing of any product or service in digital form. For example, marketing using smartphones, computers, laptops, tablets, or any other digital devices. Digital marketing is a form of direct marketing that links consumers with sellers electronically using interactive technologies like emails, websites, online forums and newsgroups, interactive television, mobile communications etcetera [12].

'Digital marketing' term was first coined in the 1990s. Digital marketing is also known as 'online marketing', 'internet marketing', or 'web marketing'. It is known as 'internet marketing' because with the rise of the internet there is also high growth of digital marketing. The major advantage of digital marketing is that marketers can sell their products or services 24 hours and 365 days, lower cost, efficiency gain, to motivate the customer for more purchase and improve customer services [13]. It helps many-to-many communications because of its excessive degree of connectivity and is generally completed to sell services or products in a timely, relevant, non-public, and cost-powerful manner.

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Utilizing AI and Machine Learning Techniques for Facial Recognition

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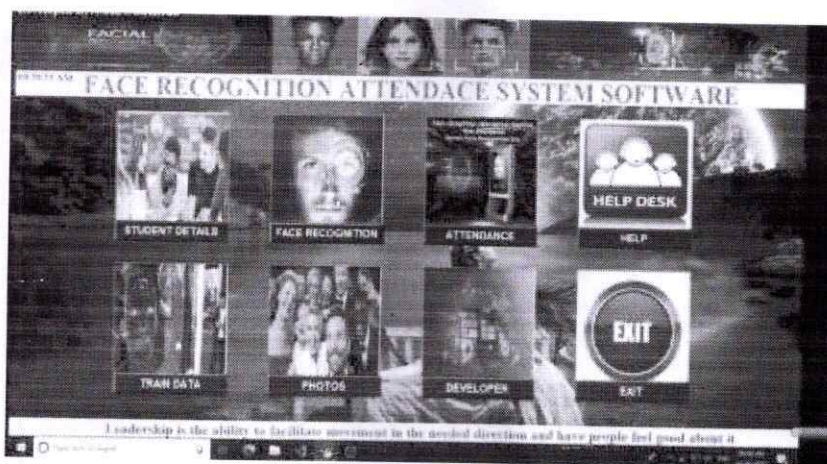Email: sarthak.tyagi@gmail.com

Abstract

There is no justification for handling an important educational event like attendance in the antiquated, tedious manner in the age of rapidly advancing current technologies. Both the pupils and the class teachers will benefit greatly from the time and energy savings provided by the attendance monitoring system. The face recognition algorithm will keep track of attendance by identifying each student's face apart from the other objects and marking them as present. All of the students' photographs will be pre-fed into the system, and using this pre-feed data, the algorithm will identify the students who are there and compare their attributes to previously saved images of them.

Keywords: Machine Learning, Decision Tree, Random Forest, K Nearest Neighbour.

INTRODUCTION

The face recognition attendance monitoring system's goal is to streamline the labor-intensive and time-consuming attendance procedure for both teachers and pupils. Using a face recognition algorithm, the device will take pictures of the pupils and record their attendance on the sheet. In this manner, the instructor will be able to record attendance without having to spend time on more labor-intensive methods.

The identification process to determine the presence of a person in a room or building is currently one of the routine security activities. Every person who will enter a room or building must go through several authentication processes first, that later these information's can be used to monitor every single activity in the room for a security purpose. Authentication process that is being used to identify the presence of a person in a room or building still vary. The process varies from writing a name and signatures in the attendance list, using an identity card, or using biometric methods authentication as fingerprint or face scanner.

Utilizing AI and Machine Learning Techniques for

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Mobile augmentation's importance in the creation of Mobile applications

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Abstract

The increasing adoption of mobile cellphones and applications has transformed daily activities in both personal and professional contexts, greatly increasing human productivity. Due to the many advantages that mobile applications have over traditional desktop programs—including the potential for countless new business ventures—the majority of corporate and personal applications have now moved to mobile platforms. These days, mobile apps are an essential component of many different kinds of devices running different operating systems, including Windows, Android, iOS, BlackBerry, Symbian, and others. Still, it has grown more difficult for development and QA teams to guarantee error-free mobile apps that operate flawlessly on end customers' mobile devices.

In mobile application development, Android and iOS are the most commonly used operating systems for this purpose. The software can be either preinstalled on the device, downloaded from a mobile app store or accessed through a mobile web browser. Programming and markup languages like Java, Swift, C# and HTML5 are commonly used for this kind of software development.

The creation of mobile applications has emerged as a new market in mobile communication thanks to smartphones. Developers are able to produce a wide range of applications for smartphones that are compatible with the specific application environment. These mobile applications give phones personalized or user-defined functionality. These days, mobile applications are more sophisticated than ever, combining several aspects of mobile computing, including mobile web technology, wireless networks, GPRS, GSM, and more. But as smartphones' capabilities grow, owners of earlier models of the gadget also want to utilize comparable apps on their own phones. With the help of the Mobile Augmentation Architecture, developers of mobile applications can now construct apps that work on networks or platforms that their devices do not support.

This paper aims to explain the function of mobile augmentation in the mobile technology domain. Additionally, it makes recommendations for other mobile computing technologies that might be combined to create mobile augmentation technologies. Rapid improvements in mobile computing technology have led to more sophisticated mobile applications, and users need reliable functionality that can boost mobile devices' capabilities and performance. An integrated technology architecture that can meet this need is provided by mobile augmentation. The paper also describes the Layered Architecture of a Mobile Augmentation Application and how to implement a Mobile Augmentation Application.

INTRODUCTION

Creating software applications that run on mobile devices is known as mobile application development. The past decade has seen a revolution with the advent of mobile devices and applications in various fields. Initially, they were used in advertising, marketing, and various service sectors, but now they have expanded to healthcare and insurance, impacting every industry and organization. With the rapid pace of application development, the research community has taken an interest in understanding all aspects of this niche. The utilization of mobile application technology is increasing rapidly compared to traditional desktop technology, resulting in the regular development of a large number of applications. Among the most widely used applications are social media apps. These applications typically use a network connection to access remote computing

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Comittee For Optimizing Thermal Efficiency For Feaanalysis

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Abstract

In right now, Refrigeration cycles are extremely fundamental in day to day existence, particularly being used for putting away food, wellness, and luxurylifestyle. Thisstudy'saim istoform someeffectivechanges withinthedesign ofa ordinary refrigerant framework in ordersothat theperformanceofthe evaporatorinsidethe compartmentmaybeoptimized. Thefreezer andrefrigerant compartments are read up for 3 setups to really look at the results of the conventional and punctured balance on therate and temperature circulation at various levels and the Examination of temperature profiles for different arrangements of the refrigerating compartment. As a result, the freezer and refrigerator maintain an average temperature of 273K and 286K, respectively. Inside Compartment 1) the temperature in without finned framework - 279.972K to 283.755K. 2) The temperature in with rectangular finned framework 277.563K to 283.1667K.

3) The temperature in with punctured finned framework - 277.362K to 282.335K. The design read up for this kind of fridge, the air temperature at the highest point of the cooler is around 5°C higher than the typical air temperature, and consequently it is critical to try not to put delicate items here. While punctured finned exhibited greatest Temperature circulations and giving a higher cooling impact.

Keywords: CFD, Refrigerator, Evaporator, Temperature

INTRODUCTION

In presenttimeRefrigeration cycles areveryessential in dailylife, especiallyin usefor storingfood, fitness,andfor luxurylifestyle. The essential component of a homegrown cooler is to keep up with low temperature for transient items, and this palatable depends upon on an excellent fridge performance,[1][2] that is shockingly connected to temperature circulation and the wind current inside the compartments.

For coolers upheld fume compression,manystudies are led, significantlythat have some expertise in the temperature and wind stream dispersion of the compartments. Inside the writing we could understand works related with thestudyoftheair speed usingtheParticleImageVelocimeter (PIV) techniquein mix with 3D numericsimulations byusing CFD programming framework [3].For model directed anumericstudyof wind stream and intensity move during a characteristic convection domesticrefrigerator .The upgrade of cooler model a for a free-ice fridge wherein they are expecting and by trial and error assess temperature profiles, getting an unequivocal disparity of their results. To fostered the temperature consistency and thus the wind stream for all wall through a characteristic convection refrigerator. The fact that the temperature dispersion dependentupanontheinternalgeometryoftherefrigerator,especiallywithintheareasbetwe entherefrigerator makes by exploratory it found shelves and therefore the liner lower wall [5]. The existing a numerical simulation of a pressured convection refrigerator remaining that the freezer and therefore the fresh meals compartment are observed in section (synchronized) with every different. By CFD simulation theresearchers projected a new internal design model [6].

Analyses Of Various Compound Parabolic Solar Collector Absorber Geometry Affect The Efficiency Of Heating Water For Sanitary Use

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Abstract

The primary objective of this project is to investigate the absorber geometry of a parabolic solar collector compound for the purpose of heating water for sanitary use. The goal is to determine the temperature gradient that exists between the water's inlet and outlet in this concentrator collector, as well as the efficiency that is achieved as a result of the absorber configuration, in order to later compare it to collectors that have a standard flat absorber surface. The parabola of the reflector of the composite illustrative sun powered gatherer was gotten thinking about the roundabout safeguard, with a focus proportion of 4 or more 10% of this, to consider a truncation of the reflector, the roundabout safeguard was designed with a little safeguard plate of aluminum which has a warm conductivity of 401 W/mK The qualities got tentatively in the authority depended on the information gathered in the field records. It was considered to encounter the warming of water on various days with the climatic circumstances, shady, to some degree overcast and bright, with a thoroughly clear sky. The water warming tests were completed with two kinds of mathematical setup of the safeguard of the composite allegorical sun oriented authority; circular absorber and a circular absorber configured as a circular absorber, both of which had water outlet temperatures of 61°C and 76°C and a thermal efficiency of 60%, respectively. These results were presented in the context of a climatic condition (a sunny day) that was roughly comparable to that of the two absorber configurations, as well as average values of wind speed, ambient temperature, and solar radiation.

Keywords: parabolic solar, concentrator collector, flat absorber, concentration ratio, absorber geometry, sanitary, composite parabolic solar collector, ambient temperature, solar radiation

INTRODUCTION

In the world, in recent years there has been a notable increase in solar thermal energy installations; Technological advances allow the manufacture of better quality systems at a lower cost and society is understanding the need to replace fossil fuels.

Since its first invention, several decades ago, various forms of solar thermal collectors have been developed, ranging from flat collectors to parabolic collectors and heliostats. For this reason, the use of solar thermal energy, beyond being an ecological alternative, has become an economically attractive and competitive technology in many countries.

Research has been carried out to promote the development of clean and renewable energy projects such as wind, hydroelectric, biomass and solar energy. an input for the implementation of technologically efficient production processes such as systems for water heating and swimming pool heating, all this through clean energy and under conditions of strategic advantage for our country due to the radiation it receives due to its geographical position

Investigating The Performance Characteristics Of Ci Engine Using Biodiesel With Petro-Diesel

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Abstract

Biodieselis a clean and harmless to the ecosystem normally accessible fuel from oil that are produces by the trees. It is created by a substance change method known as transesterification, which is completed by a compound handling plant. Biodiesel is like diesel in numerous ways, however it stands apart for its sustainability, high oxygen content, biodegradability, and absence of ozone harming substance emanations attributable to the photosynthetic beginning of the lipid feed stocks. Biodiesel even has a superior lubricity that petro diesel, broadening the existence of a motor and decreasing the requirement for motor part substitution. Neem oil, coconut oil, and waste cooking oil are utilized to make biodiesel, which shows that it very well might be used straightforwardly or in mix with conventional petro diesel. Motor execution and outflow testing are finished to survey the conceivable application. Both the performance of the engine and the pollution levels are within the acceptable range. Biodiesel can scale back emanations of fumes gases. For different mix proportions, the effect of burden on BSFC for diesel as well as each of the three biodiesels is researched. For all diesels, biodiesel, and their mix tasks, BSFC falls as burden increments. Biodiesel produced using waste cooking oil beats neem and coconut oil biodiesels regarding execution and discharges too.

Keywords: Emission, Performance, Transesterification, Petrodiesel

INTRODUCTION

Alternative fuels for diesel engines are being researched by engine researchers. Oxygenated fuel is one of the alternative fuels available. Di ethylene glycol, Di methyl ether , Di Methoxy Methane, Di Methyl Ether, Methyl Tertiary Butyl Ether, Di BUTYL ETHER, Di Methyl Carbonate ,Methanol, Ethanol and Di Ethyl Ether have all played a part in lowering diesel emissions. These fuels can either be used as a single fuel or in combination with ordinary diesel. Oxygen available in the fuel molecule structure aids in the reduction of PM & hazardous emissions produced by diesel engines. Siraj sayyedet al. **[2021]** discussed the influence of dual mixes of different biodiesels on DICI engine characteristics in this work, along with NOx modeling using ANN. On a volume basis, six sets of the dual bio - diesel blends (10% and 90%) are created utilizing four distinct biodiesels: Neem, Jatropha, Karanja & Mahua. **Pardeep kumaret al. [2021]** conducted tests on a single cylinder water-cooled CI diesel engine at various speeds and a load of 50% .Soybean biodiesel and its blends with solketal had a higher BSFC than pure diesel. For all blends, adding solketal to biodiesel increased emission of carbo dioxide (CO2 and nitrogen oxide (NOx). **Jayan sentanuhady et al. [2022]** research examines the usage & growth of biodiesel as a source of fuel for sustainable energy generation from natural resources. The creation of diverse combinations of biodiesel

Comparative Analysis Of Single Phase Microchannel For Heat Flow Experimental And Using CFD

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Abstract

The emergence of close-packed energy-intensive elements of systems for many subject purposes necessitated their effective cooling in order to stabilize the temperature regime, providing the specified performance features. The solution to this difficult is based on the use of several methods of intensification heat transfer, but porous media have found the greatest application due to increase value of the heat transfer coefficient. The role of this method of intensification increases significantly when high-intensity heat fluxes are removed from compact heat-stressed surfaces, for example in electronic miniature devices in which electromagnetic energy dissipates into heat. The physical model of the currently recognized porous medium, which are commonly described as thick random sphere packaging, intertwined emptiness and completely refrigerated. The porosity of such layers is 0.2-0.4, and the application of factor intensification in the form of a rise in local speed inside the matrix results in considerable hydraulic losses in the pumped heat-sensitive atmosphere of liquid. Instead of high-pressure losses due to high porosity, thus retaining values of the local heat transfer coefficients, the usage of micro-channel heat exchange elements with a normal porous structure. The emergence of the possibility of growing homogeneous in structure and the geometry of silicon whiskers on a substrate has opened up new prospects in the use of microchannel elements for solving heat removal of high-intensity flows with compact surfaces. However, questions related to verification there are no hydrothermal characteristics of such media in the scientific literature, which does not allow you to go to the stage of creating specific heat exchange elements based on these environments. The purpose of the study is to establish the regularities of convective heat transfer in microchannel media with a regular matrix structure from of silicon whiskers based on theoretical and CFD simulation and substantiation of intensification methods heat transfer during heat removal from compact surfaces.

Keywords: microchannel, thermal management, I. C. electronic, CFD analysis, hydrothermal.

INTRODUCTION
Microelectronic devices management (Thermal)

The rise in heat dissipation and reduction in overall by microelectronic devices, thermal management becomes important to electronic product, semiconductor industries have been benefited the several decades following growth by the Moore"s law. More than one billion transistors are used in today's high-performance Integrated Circuits (ICs). The size of incorporated circuits (ICs) has contracted drastically in late a long time because of expanded interest for higher preparing rates and bundle densities. High pass on temperatures because of these variables have hurt circuit effectiveness and dependability.

Experimental Studies on Utilization of Biogas with Biodiesel/Diesel Blends in a CI Engine

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Abstract

The current review covers the use of a vaporous elective fuel, crude biogas, in a diesel motor. Biogas alone can't run a diesel motor, in light of the fact that vaporous fuel can't consume by pressure. It tends to be provided to the CI motors in double fuel mode by utilizing an air-biogas blender gadget. Utilizing a venturi gas mixer to produce a uniform mixture, the purpose of this work is to investigate the performance and emission characteristics of a diesel-biodiesel-biogas dual fuel mode diesel engine. The exhibition and emanation qualities of the motor worked by double fuel mode were tentatively examined, and contrasted with diesel. Biogas introduced at a flow rate of 1 L/min was found to have superior performance and lower emission than biogas introduced at other flow rates. On the other hand, when compared to diesel, dual-fuel mode with a biogas flow rate of BD10 BG@1L/min demonstrated an average decrease in BTE of 9.94% and an increase in BSFC of 8.82 percent. Though an augmentation in CO and HC by 5.18% and 3.01% separately and a typical decrease in NOx outflows by 14.91% when contrasted with diesel.

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

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

Trial Concentrates on Usage of Biogas with Biodiesel/ Diesel Mixes in a CI Motor

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Abstract

diesel-powered engine. A diesel engine cannot be powered solely by biogas because vaporous fuel cannot be burned under pressure. Through the use of an air-biogas blender device, it is often supplied to the CI motors in double fuel mode. The aim of this work is to study the performance and emission characteristics of a diesel-biodiesel-biogas dual fuel mode diesel engine using a venturi gas mixer to create a homogeneous mixture. The exhibition and emanation qualities of the motor worked by double fuel mode were tentatively examined, and contrasted with diesel. Biogas introduced at a flow rate of 1 L/min was found to have superior performance and lower emission than biogas introduced at other flow rates. On the other hand, when compared to diesel, dual-fuel mode with a biogas flow rate of BD10 BG@1L/min demonstrated an average decrease in BTE of 9.94% and an increase in BSFC of 8.82 percent. Though an augmentation in CO and HC by 5.18% and 3.01% separately and a typical decrease in NOx outflows by 14.91% when contrasted with diesel.

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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

Stochastic Limited Component Clasping Reaction of Covered Composite Plate with Arbitrary Framework Properties in Warm Climate: Micromechanical Model

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Abstract

This work uses a micromechanical technique to show how random system features affect the buckling response of laminated composite plates in temperature conditions. Independent random variables are used to simulate the system attributes, including foundation parameters, fiber volume fractions of the corresponding fiber and matrix ingredients, and thermo-material properties. The temperature field is thought to consist of consistent temperature distributions over the thickness and surface of the plate. The composite's material properties are influenced by temperature variations and are determined using a micromechanical model. The basic formulation is based on higher order shear deformation plate theory and general von-Karman types of nonlinearity. A direct iterative based C0 nonlinear finite element method in conjunction mean centered first order perturbation technique is out lined and solved the stochasticlinear generalized Eigen value problem. The developed stochastic procedure is usefully used for thermally induced problem based on micromechanical approach with a reasonable accuracy. Parametric studies are carried out to see the effect of volume fractions, amplitude ratios, temperature increments, temperature distributions geometric parameters, lay-ups, boundary conditions and foundation parameters on the mean and variance of plate frequency. The present outlined approach has been validated with those available results in literatures and independent Monte-Carlo simulation.

Keywords: Thermal Buckling, Random Material Properties, Stochastic Finite Element, Perturbation Technique

INTRODUCTION

Laminated composite plates are increasingly used as critical structural members in aerospace and many other applications due to gaining wide popularity as light weight components, ability to tailor structural properties through appropriate lamination scheme for achieving high strength and stiffness to weight ratio and durability and corrosion resistant characteristics combined with low density, make it more attractive compared to conventional materials.

BUCKLING EQUATIONS FOR LAMINATED PLATES

A plate buckles when the in-plane load gets so large that the originally flat equilibrium state is no longer stable and the plate deflects into a non flat configuration. The load at which the departure from flat state takes place is called the buckling load. Analysis of plates buckling under in-plane loading involves solution of eigenvalue problem as opposed to the boundary value problem of equilibrium analysis. The distinctions between boundary value problems and eigenvalue problems are too involved to treat here. Instead, the buckling differential equations governing the buckling behavior from a membrane prebuckled state (prebuckling deformations are ignored) are,

Investigation on the Operation of a Multi-Chamber Flash Start Motor Using Petroleum and Ethanol Mixtures

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Abstract

The motivation behind this study is to tentatively decide the ideal mix pace of ethanol-gas powers to boost brake warm effectiveness of a business SI motor. In this review, the motor presentation, in term of brake force and brake explicit fuel utilization, has been examined with variety of volumetric blending proportion between 87.5-octane gas and 99.5%-immaculateness ethanol (E0, E10, E20, E30, E40, and E50). The experiment has been carried out at various engine speeds and intake-throttle opening percentages. The tests were performed at steady pressure proportion. The trial results showed that the fitting ethanol-fuel blending proportion can upgrade motor force yield, particularly at low motor speed. The brakes warm effectiveness is most extreme when the motor works with a speed of 2000-2500 rpm, utilizing E40 and E50 energizes. This paper likewise gives a rule to reasonable ethanol-gas mix rate at specific motor burden and speed.

Keywords: Ethanol; Ethanol-gasoline blends; SI engine; Performance

INTRODUCTION

The dominant use of fossil fuel for energy production is rapidly depleting the reserves of petroleum based fuels. The fast decrease in the future availability of fossil fuel and the need for reducing the emission from the fuel used has increased the need for the utilization of regenerative fuels (Janet al., 2007). Internal combustion engines conventionally run on petrol and diesel fuels which are fossil fuels and whose production and combustion result in the emission of gases that have adverse effects on human health and environment. The greenhouse gas emission from the combustion of petrol and other hydrocarbon fuels have been identified as the major cause of climate change and global warming (Igbo we et al., 2015).These environmental concerns and the desire to be less dependent on fossil fuel have intensified worldwide effortful production of biodiesel from vegetable organic materials and bioethanol from starch and sugar producing crops (EPA 2007). The limited nature of oil resources has made studies on alternative energy sources much more important in internal combustion engines in which oil products are used as energy source (Kannan et al., 2011; Fahd et al., 2013).

Biofuels such as bioethanol, a colorless liquid with mild characteristic odor can be produced by fermentation ofbiomass crops such as wheat, sugar beet, sugar cane, corn, raffia trunk, wood and wood-like plants (Parket al., 2012; Guido et al., 2013). Using

Mobile Application Development (Android Only)

(Go-Manage - A one step solution for managing students' data)

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ABSTRACT

The student management app is a comprehensive platform designed to streamline and improve the management of student information and academic processes. The app is built using Flutter and Firebase as the backend, which provides a robust and secure solution for managing student data. The app includes features such as user authentication, student profiles, course management, attendance tracking, grading and assessment, and analytics and reporting. Additionally, the app also includes a leave application feature, which allows students to submit leave requests and instructors to approve or reject them. The end output of the app is a centralized platform for students, instructors, and administrators to interact and communicate, which enhances the overall educational experience and reduces administrative workload. The student management app provides real-time access to important information, improved communication, and increased student engagement, making it an indispensable tool for colleges.

In recent years, the need for efficient and effective student management systems has become increasingly important in educational institutions. With the rise of digital technology, a student management application built using Flutter offers an excellent solution for educators and administrators looking to manage student information, grades, and schedules. This application provides a centralized platform for recording and tracking student performance, attendance, and grades, while enabling communication between teachers and parents. Built using the Flutter framework, the application is responsive, interactive, and capable of running seamlessly on both Android and iOS platforms. This report presents an overview of the features, functionality, and benefits of a student management application built using Flutter, including student information management, attendance management, assignment management, class scheduling, grade management, parent communication, and reporting. The report concludes that a student management application built using Flutter offers an effective and efficient solution for managing student information, improving academic performance, and enhancing communication between teachers, parents, and students.

Key Word: - Cross-Platform Mobile application development, IDE, Android development, iOS development, Flutter, Dart.

INTRODUCTION

PERFORMANCE IMPROVEMENTS IN SNR OF A MULTIPATH CHANNEL USING OFDM-MIMO

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Abstract:

When using the 2-11 GHz frequency range, the Non Line of Sight (NLOS) broadband wireless access offered by Worldwide Interoperability for Microwave Access (WiMAX) is vulnerabledue to the impacts of factors such as multipath propagation, diffraction fading, vegetation attenuation, shadowing loss, and more effects. To get around these impacts, you need to put fade mitigation strategies into action. An effective strategy for fighting fading and increasing the WiMAX system's signal-to-noise ratio (SNR) is Orthogonal Frequency Division Multiplexing with Multiple Inputs and Outputs (OFDM-MIMO). The IEEE 802.16 standard states that in order for the connection to function, a minimum signal-to-noise ratio (SNR) of 6 dB is necessary for QPSK modulation. This study uses OFDM-MIMO to obtain a signal-to-noise ratio (SNR) higher than the operational threshold.

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

Introduction :

Combining multiple-input multiple-output (MIMO) with orthogonal frequency-division multiplexing (OFDM) modulation creates a wireless communication system known as a MIMO-OFDM. Modern technology makes use of several antennas at the sender and receiver ends of a system to boost its capacity, enhance its performance, and decrease interference while simultaneously increasing the signal quality.However, orthogonal frequency division multiplexing (OFDM) modulation separates the data stream into several subcarriers. This enhances the system's spectral efficiency and helps to reduce the impact of channel fading. By combining the two, MIMOOFDM systems provide dependable, high-speed wireless communication across long distances.Digital broadcasting, cellular networks, and wireless local area networks are just a few of the many popular uses for multiple-input multiple-output (MIMO-OFDM) wireless communication systems. Greater data speeds, more extensive coverage, and enhanced resilience to interference and fading are just a few of the benefits they provide over more conventional wireless communication methods.Distributed orthogonal frequency division multiplexing (MIMO-OFDM) is based on the idea of using OFDM modulation toconvey information via these subcarriers. In order to make the most efficient use of the available spectrum, the data is dispersed among all of the subcarriers, and each subcarrier carries a tiny percentage of the total data.

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Journal

Multiband and Wideband MIMO Antennas for Mobile Applications

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Abstract

An MIMO antenna based on meander lines with an L-shaped metallic strip for multiband operation is shown in this study. A monopole antenna with numerous sections of short-circuited transmission line works as an inductor and changes the antenna's impedance characteristics; this configuration is called a meander line. By using a line slot DGS (Defective Ground Structure) to decrease the mutual coupling between the antenna components and inserting two U slots on the ground plane, a 69% reduction in antenna size miniaturisation was accomplished. Well below the stated limit, we get the values of the envelope correlation coefficient (ECC) and specific absorption rate (SAR).

Keywords:MIMO; mobile antenna; multiband antenna; wireless communications; high isolation; miniaturization

Introduction

Wireless service-based communication technologies are experiencing their pinnacle of expansion. Because of this meteoric rise, not only have the fundamental needs of the wireless sectors, but it also raised the bar for antenna makers. Currently, there is a need for a small antenna that can operate over a broad range of frequencies. When more than one electromagnetic band has to be covered in a single application, a wideband antenna is a great choice. An ultra-wideband (UWB) antenna may connect to any and all major communication applications, including WLAN, WiMAX, satellite, radar, and more [1]. The typical operating frequency range for a UWB antenna is between 3.1 and 10.6 GHz. Numerous publications from the past and present have proposed wideband monopole antennas. Researchers mostly use the introduction of slots or faults in the resonating surface or with the bottom plane as a means to enhance the antenna's effective or fractional BW [2-3]. Antenna features such as a smaller operating frequency area, an expanded operating band, and a patch that is coupled to a finite impedance via slots cut into the ground plane are described in references [4-5]. Using asymmetric slots or several patches with varying forms is another way to increase the bandwidth

Antennas with wide bandwidths have also been obtained by several researchers using CSRR or EBG structures.

One potential issue with these methods is that they might cause fading when dealing with multipath circumstances. Antenna arrays are used to address this issue. Another option is to use a multiple-input multiple-output (MIMO) antenna, which may significantly increase the antenna's bandwidth but isn't always a solution to the issue. In addition to being very efficient, these antennas are also superior in terms of directivity.

In order to demonstrate multi-band operability and enhance the antenna fractional bandwidth, this study proposes a MIMO antenna configuration. The antenna is capable of functioning across many bands within the electromagnetic spectrum. Antennas in the X, Ku, K, and Ka bands are covered by it. I have submitted the results of the simulation of the suggested design that was conducted using the hfss v15 software to this document.

Proposed Geometry of MIMO Antenna

Based on its relative dielectric constant, the 2×2 compact multi-band MIMO resonator is built on an inexpensive and readily accessible FR-4 epoxy glass substrate has a loss-tangent of 0.02 and a thickness of 1.6 mm, with a period of 4.4.

Two patches with a hexagonal form and 50Ω impedance microstrip lines make up the structure. To minimise spurious emission as much as possible, the antenna patches are arranged to match the impedance with the microstrip lines. To achieve maximum efficiency and expanded bandwidth with lowest effective ground area, the antenna's ground plane is constructed in a certain way.

MEDI-MINE: DAILY MEDICINE REMINDER APPLICATION

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Abstract:

Good Health is a secret of every human being. Since the very beginning, Health is a matter of great concern. Some have to, without a choice, maintain a healthy lifestyle by taking medicines. Many patients find it difficult to take medicines at a proper time due to various reasons such as forgetfulness, busy schedule, old age, etc. This happens most commonly with the people taking medicines daily which results in medical non-adherence. Medical Non-adherence is a very serious issue as it can lead to various health-related problems. The advancement in mobile technology has enabled various techniques to solve these types of problems by designing and developing an application which patient will find it easy to carry along. In this paper, we aim to build an Android-based application, that will cover major features such as Medicine Reminder, Medicine Restocking Alert, Alarm System, etc. This system has a rich GUI and easy navigation which can be used by people of every age. This app will have a positive impact on people as it will act as a companion that can display reminders and notify the user to take the pills on time supporting medical adherence and improving health.

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.

Surveillance Based Hostel Security Measurement Using Data Analytics and Machine Learning technique RFID

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Abstract---- It is completely free to take part in any of the activities. The typical method is to register for the service to be attended in order to keep track of each student individually. Another method of determining attendance is the biometric system. Biometric recognition systems are used to recognise physical or behavioural traits such as the iris, voice, face, and fingerprints. Nonetheless, these procedures have proven to be time-consuming and boring. This marks the end of the counting procedure by making substantial progress in the stands. The proposed method is intended for the students present at the moment, but it can also be used for verification by other teachers. In this article, CCTV cameras are used to catch entering pupils in the hostel.

Keywords- RFID, Image processing, Data Analytics, Machine Learning, Surveillance, Segmentation

I. INTRODUCTION

The first step in a long flow procedure is to recognize what art can detect input from the front to the pilot diameter. They are beneficial to kids in today's environment engaged in the type that is shown when it is only effective in the kind that is displayed in the hostel. Our civilization and the appearance of detection are nothing. The ability to recognize the human mind is the most important human capacity. And it's amazing how the human mind may persist even among people who are in close proximity to the human being and others, depositing the form of minor modifications. The positive image of human face recognition has garnered significant interest from researchers to replicate the commitment in time to researching and effective algorithms for facial recognition to electronic devices for human use.

Face detection is a process used to find faces with different expressions and sizes.

The method is supposed to locate the face of facial recognition. Face to face with the study into the detection of various expressions, and he is the desired corner backdrop image in various sizes reports, the parameters' face. By evaluating the patterns in an image, the look detects either of those objects that are formed. Here, algorithms that are known to the process make use of the extract, as well as a database that matches.

This project has been highlighted by the use of Selections, which are normally made known that it is such, and that the readings service. We used clickers, swiping their identity cards, and scribbling down names manually on paper allowed students to keep track of the project and inspired them to ask to run it. It appeared as if God's knowledge of a birth control method to detect the presence of the very creature formed with the theme was based on that understanding. The remainder is as follows: Work that is linked to book covers.

II. RELATED WORK

Before students arrive in hostel, many strategies are used. Manually recording the teacher's attendance is a traditional practice. However, one of this approach's drawbacks could be the potential loss of attendance records.

Fingerprint-based attendance systems, which use a handheld device, are another option. To indicate their presence, students are given fingerprints. This method has the advantage of allowing participants to participate without the instructor's involvement, and it also ensures that signals of presence are visible throughout the event. The problem with this strategy is that it is difficult to scan the fingerprints of young people, and their fingerprints might change over time, causing many people to misinterpret them. It will not work with a fingerprint identification system.

Radio frequency identification-based attendance management systems are also used. Each student will have their own card, which will be traded for viewing on the machine in this method. The switching unit is connected directly to the system, which stores the current status data. The above method has the drawback of allowing even unauthorized individuals to join. Because the eye is the most protected portion of the body and cannot survive a lifetime, the iris-based presence system provides a solution to the foregoing restrictions. The camera module, on the other hand, can do facial recognition automatically. This method uses less storage capacity since it does not require students to actively participate in gaining presence with the camera while collecting faces that will be stored on smaller devices.

III. METHODOLOGY

When employing a Pi camera to recognise a face, the hostel presence display system assists in detecting the presence of pupils. As the existing system has various drawbacks, we suggested this methodology to overcome those drawbacks.
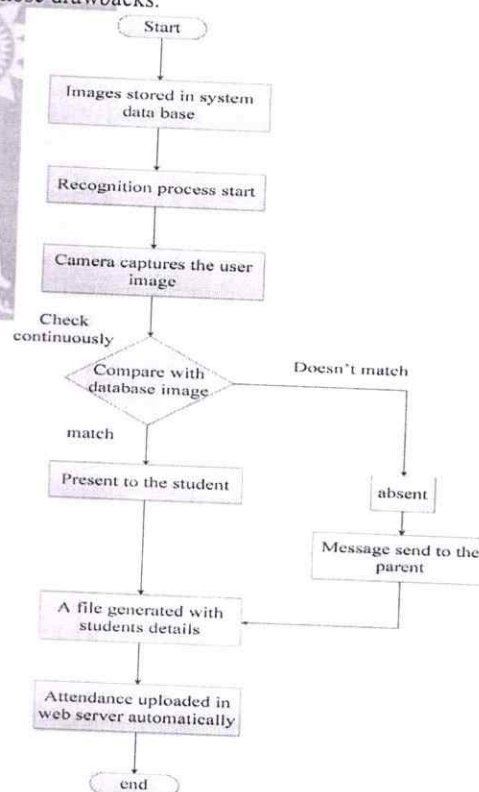

Fig 1: Diagram of Proposed System

The proposed system is divided into three parts: Creation of the database, training of the dataset, and then testing.

1. Creation of the database
a) Camera initialization
b) Convert the image to greyscale and detect faces.
c) Use up to 20 frames as labels to save the supplied entry in the database.