

3.1.1 Grants received from Government and non-governmental agencies for research projects, endowments in the institution during the year (INR in Lakhs)

3.1.2 Number of departments having Research projects funded by government and non government agencies during the year

Name of the Project/ Endowments, Chairs	Name of the Principal Investigator/Co-investigator	Department of Principal Investigator	Year of Award	Amount Sanctioned	Duration of the project	Name of the Funding Agency	Type (Government/non-Government)
Soft skill Development	Prof.Belagalli & Prof.Mahadik S.R.	E&TC Engg.	2022-23	Rs.0.12 Lakh	One Day	Leat College Activity, Shivaji	Government
Data Analysis using visualization tools	Prof.R.A.Sanadi	IT	2022-23	Rs.0.15 Lakh	One Day	Leat College Activity, Shivaji University.	Government
AWS Cloud	Prof.Nikam D.A.	CSE	2022-23	Rs.0.15 Lakh	One Day	Leat College Activity, Shivaji	Government
NEP 2020	Prof.Lambe J.S.	Civil	2022-23	Rs.0.23 Lakh	One Day	Leat College Activity, Shivaji	Government
Research sensitization scheme	Dr.Desai D.B.	Dean R&D	2022-23	Rs.0.10Lakh	One Day	Leat College Activity, Shivaji	Government
Student Training TPO	Prof.Malage P.P.	TPO Officer	2022-23	Rs.0.15 Lakh	One Day	Leat College Activity, Shivaji	Government
Construction site inspection using Drone or UAV	Dr.Desai D.B. & DR.Nikam D.A.	Civil & CSE	2022-23	Rs.0.20 Lakh	One year	Trimurti Associates, Old Satara Road	Industry



3.3.1 Extension activities are carried out in the neighborhood community, sensitizing students to social issues, for their holistic development, and impact thereof during the last five years.

Response:

Students are encouraged to participate in social activities and ethical ideals are cultivated at the Institute.

• **Multidisciplinary Research Projects** related to Social issues are being carried out to address community issues, like Construction site Inspection by using Drone or UAV.

• **ICT Enabled Education:**

Different workshops like Computer skills and application installation , Internet Awareness Technical awareness program etc. were carried out for school and college students .

• **Green Initiative**

Tree Plantation Program was planned, in which students participated actively in planting trees on the college campus and in nearby villages.

• **Ozone Day**

On September 16th, the institute hosts "World Ozone Day." and arrange a session on the ramifications of ozone depletion and the greenhouse effect.

• **NSS Activity:**

Students and faculty visit Gram panchayats and identify their difficulties as part of this work. In addition, swachataabhiyan are carried out in different areas. Blood donation, tree plantation, engagement with school students and other social activities are organized by the institute's NSS cell.

• **Social Awareness:**

- 1) Through Har Ghar Tiranga Campaign, Competition of Ecofriendly Ganesh Decoration , National Unity Day social values are instilled.
- 2) Teaching Faculty and Staff participate in yoga sessions on International Yoga Day.



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3.2.1 - Number of papers published per teacher in the Journals notified on UGC website during the year 2022-23

Sr. No.	Particulars
1	First page of paper
2	certificates

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Dr. J. J. Magdum College of Engineering, Jaysingpur

3.2.1 Number of papers published per teacher in the Journals notified on UGC website during the year							
Sr.No.	Title of paper	Name of the author/s	Department of the teacher	Name of journal	Year of publication	ISSN number	Link to the recognition in UGC enlistment of the Journal
1	Principal Component & Linear Discriminant Analysis for Apple Sorting			International Journal of Enhanced Research in Science	Jun-22	ISSN: 2319-7463, Vol. 11 Issue 6, June-2022, Impact Factor: 7.957	https://www.worldscientific.com/online/doi/epdf/10.1142/S1752890922500143
2	Fruit Quality Grading using Texture Feature Based PLIS-DA Technique	Dr.S.B.Patil		worldscientific	22-Nov	ISSN (print): 1752-8909 ISSN (online): 1752-8917	https://www.worldscientific.com/online/doi/epdf/10.1142/S1752890922500143
3	Analysis of chronic joint pain using soft computing techniques with feature extraction and classification based on SEMG signals	Dr.S.B.Patil		International Journal of Advance Research and Innovative Ideas in Education	Aug-22	ISSN:2395-4396 DUJ-160415	http://ijarjie.com/AdminUploadPdf/Analysis_of_Chronic_Joint_Pain_using_Soft_Computing_Techniques_with_Feature_Extraction_and_Classification_based_on_SEMG_Signals_ajarjie16023.pdf
4	Labour Work Monitoring System			International Journal of Research Publication and Reviews	2023	ISSN 2582-7421	https://ijrpr.com/uploads/V4ISSUE4/IJRPR12104.pdf
5	IOT Based Smart Locker System	Dr.S.R.Mahadik		International Journal of Research Publication and Reviews	2023	ISSN 2582-7421	https://ijrpr.com/uploads/V4ISSUE5/IJRPR13054.pdf



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7	"Automated Writing Machine"	Prof.P.P.Belagali
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9	Design & Operation of Agriculture Based Pesticide Spraying & Grass Cutting Robot	Prof.M.M.Kolap

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14	Customer Mail Segmentation using K-means algorithm	Dr. D. A. Nikam	Innovative Research in Computer and Communication Engineering	Apr-23	2320-9801	https://www.ijrccce.com/

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International Journal for Research in Applied Science and Engineering Technology	Mar-23	2321-9653	www.ijraset.com
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Principal Component & Linear Discriminant Analysis for Apple Sorting

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ABSTRACT

Spectroscopic imaging is non-destructive, non-invasive & chemical free technique which can be used to analyze wide range of biological materials. There are many varieties of apple fruits found in Indian market. To identify the variety of apples such as Fuji, Red Star and Gala based on their parameters various machine learning models can be used. In order to distinguish the variety more precisely a comparison of machine Learning based Principal Component Analysis (PCA) and Linear Discriminant Analysis (LDA) is proposed in this paper. The spectral database provided by CAPA Apple Quality Grading Multi-Spectral Image Database, ULG (Gembloux Agro-Bio Tech) – Belgium is used here. LDA & PCA are the dimensionality reduction techniques used in Machine Learning. It uses 'feature similarity' to predict the values of new datasets which further means that the new data point will be assigned a value based on how closely it matches the points in the training set. The developed model is evaluated in terms of the performance parameters.

Index Terms — PCA, LDA,

INTRODUCTION

Machine learning with big data technologies and other fast computing techniques is developing in various fields or applications. It can be defined as the scientific method that allows machines to learn without programming the devices. In this fast developing world, healthcare is one of the important concern. It is said that 'Eat apple a day keeps a doctor away'. It shows the importance of apples in fruit market. A variety of apples are produced in agriculture field. [2] Each variety may yield better income based on the quality, texture, shape etc. As per market survey, it is observed that higher grade apples generate larger revenues. Conventional methods of sorting or grading is human-dependent. Very often mechanical devices are also used to differentiate the variety based on dimensions and weight. More recently, machine learning algorithms along with some image processing techniques are emerged to improve the process of sorting. [1] It provides the substitute to the human eye, enabling to detect features which humans cannot detect. The machine vision based algorithms for grading and sorting are much more powerful than conventional methods. They have automatic learning capabilities and ensure a detection performance far beyond the speed and accuracy of any trained operator. This paper presents use PCA& LDA algorithm to detect the variety of apples.

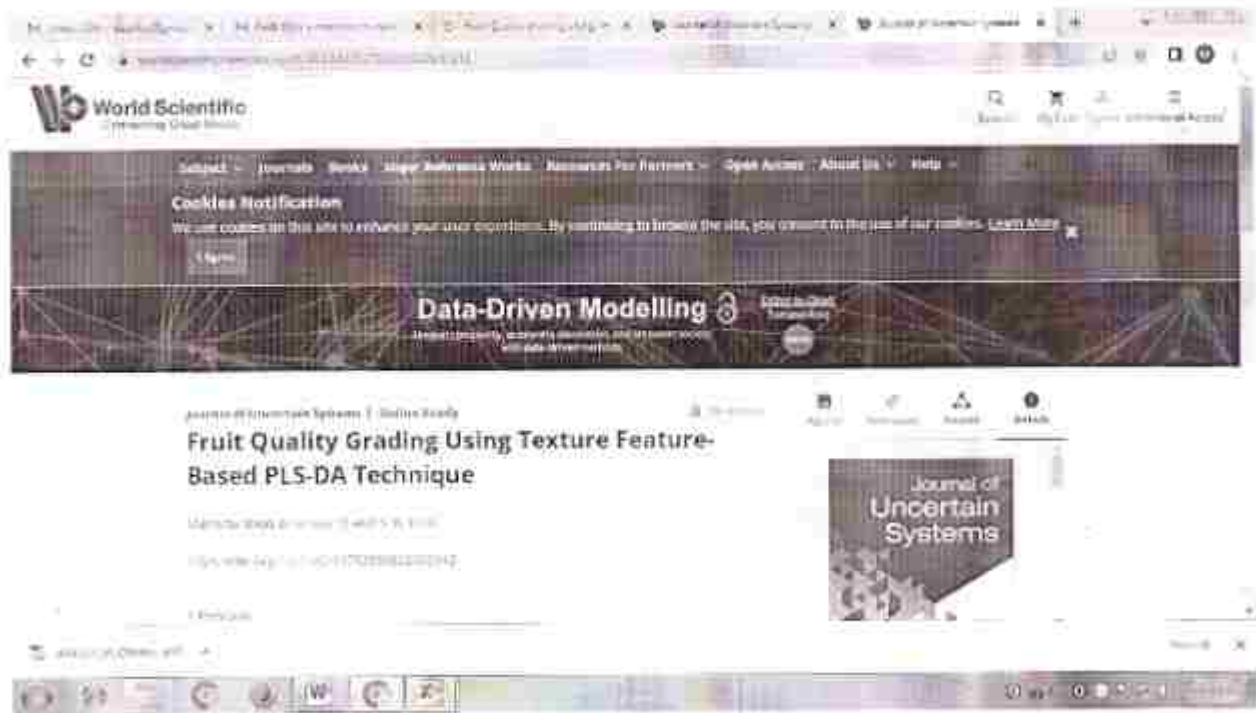
HYPOTHESIS

All the organic materials including fruits continuously emit and absorb energy at the molecular level by lowering or boosting their molecular energy levels. Molecules' structure determines the wavelengths at which they absorb, reflect, and transmit electromagnetic radiation.

Ultraviolet (UV), visible light (VIS), near-infrared (NIR), mid-infrared (MIDIR), and far-infrared (FIR) are examples of electromagnetic waves (FIR). [5] Each zone corresponds to a distinct type of atomic or molecule transition with various frequencies. Food tissues, like any biological material, are held together by a variety of molecular connections and pressures. O-H or C-H bonds are abundant in water, carbohydrates, and lipids. C-H or N-H bonds are abundant in organic molecules and petroleum derivatives.

Electromagnetic waves are transferred through a fruit sample when it is exposed to light. The stretching and bending vibrations of chemical bonds such as O-H, N-H, and C-H affect the energy of incident electromagnetic waves. As a result, spectroscopy can offer unique and detailed fingerprints of fruit samples using the changes in molecular energy levels that have been observed. The electromagnetic wave is viewed as light at the macro level, and the transitioning of the incidence.





Analysis of Chronic Joint Pain using Soft Computing Techniques with Feature Extraction and Classification based on sEMG Signals

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ABSTRACT

Joint pain is the one of the major health related problem reported by many numbers of patients. Accurate measurement of pain is not ever having universal standard reference unit of measure and overall subject's pain information solely depends on the survey form only. A study of finding the correlation between EMG signal and pain is the prime moto of current research work. Chronic joint pain especially in the area located at knee and ankle is a severe health concern today. Therefore, multiple clinical remedies have been suggested to get rid of these health problems. Level of pain measurement is a survey type questionnaire on ten-point scaling. Electroencephalogram (EEG) signal is best correlated with the physiological symptoms and overall pain related information, which is global in nature.

Support Vector Machine on processed sEMG data is used for the classification of pain in three different categories like Normal, Moderate and Severe. Performance analysis of present method is validated with the survey pain diagnostic feedback forms.

Keywords: sEMG signals, SVM, Feature Extraction, Principal Component Analysis

1. INTRODUCTION

EMG biomedical signal has become more popular to measure muscular activity. Surface electrode method is non-invasive, painless and easy to use with the 0.5 – 1% of the full-scale deflection and no risk to patients. EMG is the basically a technique of obtaining the electrical activity of the contracted muscles. Surface electrode EMG method is used to obtain the data that can be best realized using randomized static stochastic process. Localized muscle fatigue is the sustained contraction and variation in the EMG pattern related with the muscles [103]. This is further leading to time stretching and variation in shape of EMG signal. In addition to these, the EMG signal is used for the various cases such as assessment of physiological muscles, rehabilitation of muscles, medicine related to sports and evaluation of muscles performance. Power spectrum analysis reflects the time stretching and shape variation upon the reception of pain related signals but very difficult to separate this indirect information.

Electromyograms (EMG) signal obtained from localized muscle from the area where the pain is sensed having information of related parameters especially in the power spectrum domain. Chronic pain related pattern of localized muscles can be investigated using frequency domain and power spectrum analysis. However, EMG has the temporal and amplitude information in the pattern of muscles but does not have the linear relationship with the pain. In fact, the indirect information of joint pain in the muscle is hard to isolate from EMG signal. Independent Component Analysis (ICA) of EMG signal is able to distinguish the various data obtained from the surface electrodes and separating the pain related data from EMG signal. The main objective of EMG signal is to investigate muscle activity to access joint pain related patterns.

In the present work sEMG data is directly obtained from patients, hereafter called as subjects that undergoing into some kind of joint pain ranging from normal to severe pains. The subjects are from different age ranging from below 20 years to above 71 years and there are total 257 males and 290 females. There are total 150 healthy subjects were recruited for this work that to explore the normal data and contributing a normal type of healthy database. However, the subject's analysis is complex and



Labour Work Monitoring System

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Dr. J. J. Magdum College of Engineering, Jaysingpur, Maharashtra, India

ABSTRACT:

In past few years automation has reached to new revolution. Industrial relations is the term that describes how the management and the employees of a company interact with each other. We are going to implement this project in industries with the aim to monitor the work of labours. Designing a system which easy owner of industry/foundry by sitting in front of a single monitor and monitor its whole system is very profitable and time saving. The title of project is "Labour work monitoring system".

This system will record the operation time of the machine and also details of worker who is operation it. It can also be used to monitor safety and productivity of employees, but it also may help business financially. All the system is designed on basis of web server, and microcontroller. This system is based on microcontroller and web server designing. In this project we are going to have an RFID for technicians, which will interface by the microcontroller AT89C51. The production data will be upload on the Web Server through Wi-Fi module (IoT).

INTRODUCTION

Industry has become the second largest employment generating sector in the world. Data interpretation system is an Automated Information System which gives better control over production monitoring and takes corrective steps immediately. It provides better control over working process of labours. Continuous performance of every single worker in a mill gives a high productivity. With its increasing growth and demand, textile industry faces many problems which have to be changed. One of the methods to solve those problems is the use of automation in the industries. Automation can be defined as the process of reducing human assistance in the process performed. In most sectors of manufacturing, automation is one of the major key to improvement and maintain working hours of labour. A process control or automation system is used to automatically control an industry. The Process Automation System uses a network to interconnect sensors, controllers, operator terminals and actuators. During the past 15 years, the Internet revolution has redefined business to Consumer (B2C) industries such as media, retail and financial services. In the next 10 years, the Internet of Things revolution will dramatically alter manufacturing, energy, agriculture, transportation and other industrial sectors of the economy which, together, account for nearly two-thirds of the global gross Domestic product (GDP). It will also fundamentally transform how people will work through new interaction between humans and machines.

LITERATURE SURVEY:

- [1]. Prof. Niranjan M, Madhukar N, Ashwini A, Muddsar J, Saish M (Department of Electronics and Communication, Jain College of Engineering Belagavi, India) Internet of Things (IoT) in industries has created a new revolution in industries. IoT in industry has given rise to the term "INDUSTRY 4.0" where systems are connected to each other over the internet and can communicate with each other to take necessary decisions (also called as M2M communication) through artificial intelligence. In this paper, we shall design a system which will automatically control and monitor the industrial applications and also allow the user to control the application from anywhere in the world. Having control over the applications over the internet is one of the best ways to deal with the industrial applications. **Keywords:** Artificial intelligence, Industry 4.0, M2M communication
- [2]. D. L. Wu, Wing W. Y. NG, D. S. Yeung, and H. L. Ding, "A brief survey on current RFID applications," in *Proc. International Conference on Machine Learning and Cybernetics, Baojing, July 12-15, 2009*, pp. 2330-2334. Radio Frequency Identification (RFID) is the next generation wireless communication technology applicable to a wide range of application areas. There are an increasing number of retailers, banks, traffic managements, exhibitions and logistic providers practicing this new technology to their products and services. Therefore, it brings both opportunities and challenges to RFID researchers. In this paper, we provide a brief survey on RFID applications and suggest some opportunities in intelligent RFID applications.
- [3]. Umar Farooq, Mahmood ul Hasan, Muhammad Amar, Athar Hanif and Muhammad Usman Asad. This paper describes the design of RFID based security and access control system for use in hostels inside the Punjab University premises. The system combines RFID technology





IOT Based Smart Locker System

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ABSTRACT:

As mankind leads into a new age of modernization, security issues and measures have become exceedingly important. Considering an educational institute or workplace, keeping one's belongings safely with a minimal interface is the need of the hour. The traditional lock and key method of keeping personal items safe is clumsy and inconvenient. The recent developments in technology have provided innovative solutions to this problem. Gone are the days of the troublesome key and lock. Radio Frequency Identification (RFID), along with Internet-of-Things (IoT), is a secure, user-friendly and efficient method to safeguard things. This combination comes with advantages such as high security, simplicity, cost-effectiveness and "misplace-proof" methodology. This paper proposes a Smart RFID-IoT based Locker system. The locker works on RFID authentication technology, which is unique to every identity card of the user. It is also enabled with Wi-Fi connectivity to facilitate continual status monitoring, user login-logout data storage, and unauthorized access surveillance.

INTRODUCTION:

The main purpose of this paper is to design and implement a system based on a Password and a Radio-Frequency Identification RFID. This system is basically a password and an RFID based access-control system which permits only an authentic person to unlock. For doing this, the system will activate and authenticate the user. We have applied a security system via a passive type of RFID and a PASSWORD based on Atmega16 microcontroller. The RFID reader reads the ID number from RFID tag. Then enter the password from a Keypad, if the ID number of the tag and the password are correct, then the will unlock. The aim of constructing this system is to put in place a formidable locker security system with low cost and free of errors. Looking up after valuables is a common practice to protect them from thieves. Now days, atomization has reached in various fields. Atomization in banks has not yet been enrolled up to a desired level. Though bank plays an important role in a common man's life. Thus, we will be developing the system which will improve the level of atomization in banks.

Here's a sophisticated electronic code lock using micro controller 89s52. This code lock has following features:

1. Here we will be providing a 3 level security system.
2. A four by four matrix keypad is used for inputting the password.
3. RF-ID card has a code which will be read by microcontroller and microcontroller will compare this code with the permanently stored code.
4. The password comprises four digits which will offer a greater security. If the security has to be increased up to 9 or 10 digits it can be increased without modifying any component with the help of software only.
5. Two separate relays are provided. Relay A is provided for opening the lock and relay B is used for closing the lock.

LITERATURE SURVEY:

1] IOT BASED SMART LOCKER SECURITY SYSTEM

This project will focused on effective recognizing and controlling system for Bank locker room which is fully self determining. In cases of robberies, its commonly happen that the banned entrance in the locker room area which can be detected by our security system. If the robbery take place the banks are not be capable to recognize the robber due to absence of the proof by using the current human operated security system. The system will designed in effective way by recognizing and controlling illegal person to access the locker for the safety of bank locker room.

In this, we proposed a three phase confirmation of procedure for smart locker, by providing User Name and Password, using Fingerprints and OTP which check out the user. As compare to any other previous approaches our system uses the verification process which generates an OTP to registered mobile number which highlights the smart security.

2] FINGERPRINT BASED BANK LOCKER SYSTEM USING MICROCONTROLLER

The main aim of the paper is to design and implement the Fingerprint based bank locker system using microcontroller. Biometrics studies commonly include fingerprint, face, iris, voice, signature, and hand geometry recognition and verification. Many other modalities are in various stages of development and assessment. Among these available biometric traits finger Print proves to be one of the best traits providing good mismatch ratio and also reliable. The present scenario to operate a bank locker is with locks which are having keys. This does not provide good security to our lockers. To



FACE RECOGNITION-BASED INTELLIGENT CAR ANTI-THEFT SYSTEM USING RASPBERRY PI AND GSM MODULE

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ABSTRACT

Nowadays everyone has a car in the world, everyone wants to have a car, as the number of vehicles is increasing, the risk of theft vehicles is also increasing. The online report shows that in the last year (2022) around 10 lakh vehicles have been stolen, this is a very serious problem, no one wants his car to be stolen, and there is fear in the car owner that the car will be stolen. To overcome this problem, we have developed a system in which the vehicle will not start without its owner. This system image processing-based Image processing-based real-time vehicle theft detection and prevention system provides the ultimate solution for this problem. In this paper, we describe the system which we designed at a low cost and this is an extendable framework, which includes FDS (Face Detection Subsystem), a GSM (Global System for Mobile Communications) module, and a control platform.

Keywords: Raspberry Pi, Face Detection System, GSM USB Camera.

I. INTRODUCTION

The objective of this system is to deliver security to the car by using face detection and to control the vehicle from any place by igniting the engine. Smart car security system using real-time face recognition is a real-world application that comes with the day-to-day activities of drivers. From this, we have developed a system, by using a system the owner of the vehicle can save his vehicle from being stolen. This system can provide the important functions required by advanced intelligent car security, to avoid vehicle theft and protect from the usage of unauthenticated owners. With this system, we can know who tried to steal the car we have the photos of the theft in the system database. This project will help us demote the complexity, enhance security, and be much more affordable and smarter than traditional ones. Project results show that it takes about one photo 320*240 color jpeg image by software that is running on Raspberry Pi. It seems to be too long to be used in real-time detection.

II. METHODOLOGY

Numerous masses are intimate with Face detection technology through the Face ID used to unlock Phones and other smart devices, and facial attributes are probably the most common biometric features used by humans to recognize one another. The applications of facial recognition range from static, controlled authentication to dynamic, uncontrolled face identification in a cluttered background. Usually, facial recognition does not stand on a hefty database of photos to determine an individual's identity - it simply locates and recognizes one person as the owner of the device, while limiting access to others. While the authentication performance of the face recognition systems that are marketable available is reasonable, they impose several restrictions on how the facial images are obtained, often requiring a fixed and simple background with controlled illumination. One GSM module is added to the car security system to achieve important information about cars. GSM modem can rapidly send SMS messages to a set mobile phone or SMS server. So, the car owner and the police can be informed of the initial time. The Raspberry Pi is a series of credit card-sized single-board computers.

Face detection:

The camera detects and locates the image of a face, either alone or in a crowd. The image may show the person looking straight ahead or in profile.

Converting the image to data:

The face-capture process transforms analog information (a face) into a set of digital data based on the person's facial features.





Automated Writing Machine

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ABSTRACT:

In an Era of Automation nowadays more and more individuals are turning to robots to do their work, because robots are more versatile, accurate, and reliable and also reduce human efforts.

Aim of our project is to develop a robotic arm (Computer Numerical Control (CNC) plotter) compact and economical machine which plays significant role in our society by its engineering capabilities to helps the physically handicapped person to write. / Doctors to write their prescription in neat and clean writing/ make labeling of items in grocery stores/ shopping malls/medical stores / warehouses / storages etc.

The mechanism is programmed with speech recognition system and makes the user to write what he speaks. Bluetooth module is used for hands free and wireless operations. The robotic arm is programmed to write down the words that individual pronounces to the microphone. Or type and text through mobile phone. To perform the writing operations, the robotic arm will be fitted with a pen. It can also make you draw sketches. Write label directly on masking tape. It will be a low cost device.

After learning through the various websites, the utilization of ATmega328P microcontroller over PLC for implementation of CNC plotter machine. This CNC plotter is fabricated using two stepper motor, one servomotor and free open source processing software, used to generate the G code file for the given data and the GRBL Controller - processing software is used for feeding generated G-CODE. Files are feed into the ATmega328p controller which controls the output devices.

INTRODUCTION:

Nowadays more and more individuals are turning to robots to do their work, because robots are more versatile, accurate, reliable and also reduce human efforts. Writing Machine is an Open Hardware CNC pen plotter, capable of writing or drawing on almost any flat surface. It can write with pens, permanent markers, pencils, and other writing equipment's to handle an endless variety of applications. Its unique design features a writing head that extends beyond the machine, making it possible to draw an objects bigger than the machine itself.

The biggest advantage of the machine is that it can be placed over the desk because of the core X-Y extending design of the machine. It is powered by 12V/10A SMPS, An ATmega328P controller interfaced with a CNC Shield, and GRBL firmware, Controlling Applications available on Android/iOS. The proposed system is an auto composing machine through which one can make their work simpler by programming the venture.

LITERATURE SURVEY:

[1].Thiyagarajan, "Modern Design and Implementation of XY Plotter," 2018 Second International Conference on Inventive Communication and Computational Technologies (ICICCT), 2018, pp. 1651-1654, doi: 10.1109/ICICCT.2018.8473093

XY Plotter is entirely different from the older CNC Machines. It is capable to write and draw the critical structures with the exact output.

[2] S. Chamraz and R. Balogh, "Control of the mechatronic systems using an Integer arithmetics," 2014 23rd International Conference on Robotics in Alpe-AdriaDanube Region (RAAD), 2014, pp. 1-6, doi: 10.1109/RAAD.2014.7002269.

Plotters are simple mechatronic systems with two degrees of freedom in the XY plane. Not only the pen plotters, but also cutting plotters, die-cut machines, welding machines or 3D printers use the same basic architecture.

[3] M. S. Osman, N. Z. Alshwaili, T. B. Jaber and T. Alrawashdeh, "Generate use case from the requirements written in a natural language using machine learning," 2019 IEEE Jordan International Joint Conference on Electrical Engineering and Information Technology (JEEIT), 2019, pp. 748-753, doi: 10.1109/JEEIT.2019.8717428.





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Arshant Agarwal

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Automatic Filling and Weighing Machine by Using Android Application

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ABSTRACT:

Many owners of small-scale food production businesses and medium-scale grocery stores still rely on manual methods for weighing and packaging their products. This is especially true for those involved in the production of items like Rice and similar products, where weighing, filling, and packaging are carried out manually. The purpose of this project is to develop a machine that automates the process of weighing and filling food items using a microcontroller and sensors. The concept involves manually placing the bag, after which the machine takes over to perform the weighing and filling automatically. The primary objective of this project is to reduce human effort and save time. Furthermore, the machine design is based on simple mechanisms, making it easy to install. By improving the speed of the weighing process, this automated solution enables higher production rates, which can significantly benefit businesses. Additionally, this automated process can lead to a reduction in the number of paid workers required.

INTRODUCTION

In the present era, industrial automation has emerged as a global trend in the manufacturing sector. The Automatic Weighing Machines exemplify this trend by offering fully automated multi-head weighing capabilities. These machines are widely used in various industries such as packaging of seeds, vegetables, dry fruits, pharmaceuticals, and coffee. The adoption of automation has become a necessity for manufacturers today, considering the narrow profit margins they face. To meet the demands of today's customers in terms of timely delivery and competitive pricing, companies must incorporate automation into their operations. The growth of manufacturing is driven by several factors, including automation itself, along with low labour costs, the ability to customize products, mass production capabilities, flexibility, and access to information. The weighing process in these machines is facilitated by the utilization of electro-pneumatics and motors. The programmable logic controller, controlled by a computer, manages the hardware operations. The entire system executes two key processes: automation through the implementation of a microcontroller, and the filling of materials into the designated bags.

LITERATURE SURVEY:

1. Tawanda Mshiri and Charles Mbolwa provided valuable information in their paper published in Johannesburg in 2015 [1] regarding the design of a small-scale cereal packaging machine suitable for developing countries. The focus of their invention is on automating the weighing, packaging, and sealing processes using cost-effective and efficient alternatives to traditional food packaging machinery. The main objective is to create a compact cereal packaging machine capable of sealing 1 kg of cereal per minute. The proposed innovation incorporates simple pneumatic, hydraulic, mechanical, and electrical devices into existing production machinery to enhance productivity. The working principle involves the products being conveyed and detected by a proximity sensor, which triggers a counter. Once the product has completely passed the sensor, it deactivates, and a timer begins, which was pre-set with a specific delay.
2. In their paper published by Melchizedek Alipio and Angelo A. Beltran Jr. from De La Salle University in Manila, Philippines [2], they propose the automation of packaging and material handling using a programmable logic controller (PLC) as a replacement for the manual system currently employed in the industry. The objective of this research is to compare the time and manpower requirements between the existing manual system and the proposed automated system. The study focuses on automating the process of placing materials into a box, detecting good and defective items based on weight, and sealing the boxes using packaging tape. To achieve this, the Mitsubishi FX series programmable logic controller is utilized to mechanize the system, while sensors like proximity and load sensors provide input to the system. The output is controlled by motors, pneumatics, and solenoids.
3. In their research, M. R. Saraf, V. V. Ruiwale, V. V. Kulkarni, and S. M. Kulkarni [3] provide information on the design and development of a cost-effective automatic machine for powder packaging. The machine is designed to be simple and utilizes low-cost reliable components, resulting in a lower overall cost compared to conventional machines. The design incorporates a separate weighing mechanism that employs a load cell arrangement for accurate measurement of the material to be filled in the pouch. To enhance the speed and accuracy of the production process, an automation technique utilizing an Arduino Board was developed. A single load cell is used to measure the weight of the product.





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IoT – Based Health Monitoring System

Sufiya V. Rikibdar¹, Priya R. Sawant², Priyanka S. Shingade³, Prof. Vinay Kamble⁴

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Abstract - The expanded use of mobile technology and clever devices in the area of fitness has caused tremendous impact on the arena. health experts are an increasing number of taking benefit of the blessings those technologies carry, thus generating a great development in health care in scientific settings. affected person fitness tracking the use of IoT is a era to enable tracking of sufferers out of doors of conventional clinical settings (e.g. in the domestic), which may additionally increase get admission to to care and decrease healthcare shipping prices. this may drastically enhance an character's high-quality of lifestyles. It lets in patients to hold independence, save you headaches, and decrease personal costs. This system helps those desires with the aid of turning in care right to the home. in addition, patients and their circle of relatives contributors feel comfort knowing that they're being monitored and might be supported if a trouble arises. The number one intention became to broaden a reliable patient monitoring gadget the usage of IOT in order that the healthcare professionals can display their sufferers, who're both hospitalized or at domestic the use of an IoT based totally incorporated healthcare system with the view of making sure sufferers are cared for better. A mobile tool primarily based wireless healthcare tracking system was developed which can offer real time on line information about physiological conditions of a affected person especially consists of sensors, the records acquisition unit, microcontroller and programmed with a software program. The affected person's temperature, coronary heart beat rate are monitored, displayed and stored by way of the gadget and despatched to the website. accordingly, IoT primarily based patient tracking gadget efficiently screen patient's fitness fame and store life on time.

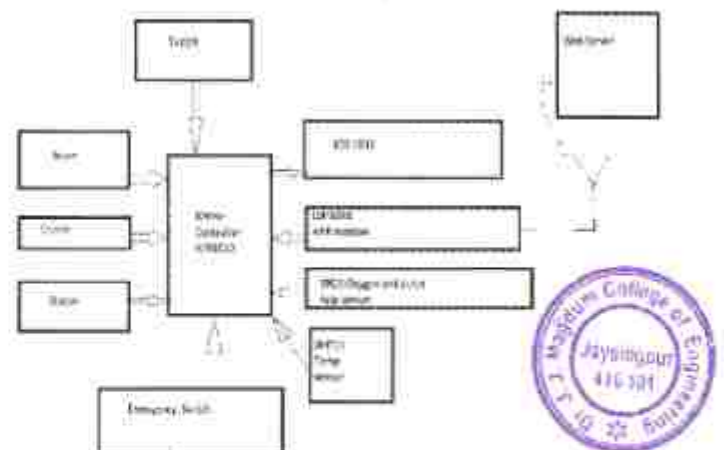
1. INTRODUCTION

Fitness tracking could be very vital, specially if the early detection of sicknesses can reduce struggling and medical fees. So net of things (IoT) primarily based fitness monitoring device is the answer of it.

far flung health monitoring is a manner to deliver healthcare offerings to patients from remote. it could be used to attain patients in rural areas, the patient is able to keep away from prices of an in-person visit, charges of journeying. every other gain of remote patient tracking is in stopping infectious disorder. patients do not should visit sanatorium or clinic so it could gets rid of the threat of needless contact, mainly for the aged.

the main goal of this venture is to measure temperature, oxygen degree and pulse rate. Pulse price and body temperature are the maximum primary parameters of human fitness. The regular frame temperature of someone depending on various factors, ordinary body temperature range from 97.8o F(36.5o C) to 99o F(37.2o C) for healthful adults. the heart beat rate is a size of the coronary heart price. that is the quantity of times the coronary heart beats per minute.the regular pulse charge degrees from 60 to a hundred beats in step with minute. The normal oxygen saturation stage is between ninety five% and one hundred%. on this device we used microcontroller, oxygen and pulse charge sensor, temperature sensor and wifi module. The measured facts can display on liquid crystal display display in addition to at the website, in order that patient can are searching for scientific interest although the doctors is bodily unavailable. The temperature sensor and oxygen sensor experience and take the records give to the controller which gives records to liquid crystal display show and wifi module and information might be display on liquid crystal display show and website. If a patients oxygen saturation and pulse fee is bizarre, the device have an emergency button.

1.1 Materials and Method



On this proposed paintings the crucial parameters which include temperature, oxygen and pulse charge readings which might be monitored with the aid of wifi module. these sensors signals are despatched to wifi module amplifier circuit and conditioning unit(SCU), because the indicators degree are low (benefit). so amplifier circuit is used to



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Editor-in-Chief



Customer Mall Segmentation using K-means Algorithm

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ABSTRACT: In today's world, a vast amount of data is collected daily, and analyzing this data is crucial. For businesses to succeed in this era of innovation and intense competition, it's essential to have a business plan that aligns with current circumstances. To cater to the confusion of potential clients about what to buy and what not to buy, cutting-edge concepts are used in the work completed today. One such concept is customer segmentation, where clients are grouped based on similar characteristics. This process enables advertisers to focus their efforts on specific groups of clients, increasing the chances of a sale. It also allows them to use explicit communication channels to reach out to different clients and draw them in. The use of online media posts and postal letters to reach everyone is no longer practical. Adopting customer segmentation aids companies in developing stronger relationships with clients, which enhances the overall presentation of the company.

KEYWORDS: Target Customers, Clusters, Segmentation, Market Basket Analysis, K-means algorithm

I. INTRODUCTION

In the past, building and maintaining strong long-term client relationships relied on managing and maintaining customer interactions. However, in the modern era, the value of considering consumers as an organization's primary asset is increasing. Businesses are willing to invest in developing customer acquisition, maintenance, and development plans.

Customer segmentation is a process that helps to identify customers with different preferences, expectations, desires, and other characteristics. The primary objective of customer segmentation is to group individuals based on their shared interests, enabling the marketing team to develop an effective marketing strategy. Clustering is an iterative process that involves extracting knowledge from vast amounts of unstructured and raw data. Clustering is used in many fields, including exploratory data mining, machine learning, classification, and pattern recognition.

Customer segmentation refers to the practice of dividing a customer base into various groups or segments, based on shared traits. As mentioned in [2], these traits may include gender, age, interests, and various spending patterns that are relevant to marketing.

Segmentation is crucial as it enables businesses to customize their marketing strategies to suit each customer segment, make informed business decisions, identify products that appeal to each segment, and manage supply and demand for these products. Additionally, customer segmentation helps businesses to identify potential customers, predict customer defection, and find solutions to various customer-related challenges. Therefore, it is an essential practice for businesses that want to thrive in today's market.

II. LITERATURE SURVEY

According to [1], "A Strategy for Targeted Customer Services" International Journal of Advanced Research in Artificial Intelligence (IJARAI), 4(10), 2015. – Papers purpose was to show how K-mean algorithm can be used for Segmentation.



According to [2]. New Strategy for Targeted Actions by Lahcen Abidar, Donnia Zaidouni, Abdeslam Ennouaary- Papers purpose was to propose a new model based on RFM model Recency, Frequency and monetary & k-mean algorithm to resolve those challenges.

According to [3], Paper focused on customer segmentation on their characteristics & attributes for E-commerce business.

According to [4] - In this paper ANOVA technique was carried out to test stability of clusters.

II. PROPOSED METHODOLOGY AND DISCUSSION

The process for customer mall segmentation that is being presented in this document consists of three stages.

Dataset: The mall will gather information about its customers' fundamental characteristics, such as Customer ID, age, gender, annual income, spending score, and email. The spending score can be assigned based on specific criteria such as customer behavior and purchase history.

Data Pre-processing (Data Cleaning): The input fields include Email, Customer ID, Gender, Age, and Annual Income. Customer ID is removed from the dataset for later processing. Gender data is converted to integer values using one-hot coding, such as Male=1 and Female=0. Records with empty emails are removed, and duplicates are deleted. Null values in the Age, Annual Income, and Spending Score columns are replaced with median values. Records with incorrect email addresses are removed, and only the Annual Income and Spending Score columns with values greater than 20 are selected.

Segmentation: Segmentation refers to dividing the mall's target market into groups of potential customers with similar demands and behaviors. This allows the business to market differently to each customer group according to their specific needs. The K-means clustering algorithm is used to calculate centroids, which iterate until the best centroid is found. It is assumed that the number of clusters is known, and the flat clustering algorithm is used. The 'K' in K-means stands for the number of clusters identified by the algorithm from the data.

Step 1: Specify the number of clusters, K, that the method should generate.

Step 2: Randomly select K data points and place each in a cluster.

Step 3: Compute the cluster centroids.

Step 4: Repeat previous steps until the ideal centroid is identified, which is determined by assigning data points to constant-size clusters.

Mailing: After data segmentation, the administrator will create offers, and corresponding emails will be sent to client

III. SIMULATION RESULT

The process of customer mall segmentation involves several steps. Firstly, random points are selected as centroids, and then the Euclidean distance of each point from randomly selected centroids is calculated. Based on the calculated distances, clusters are formed. The centroids are then re-calculated by finding the mean of the respective clusters obtained. This process is repeated until the constant value of centroids is obtained, and the latest cluster is considered the final cluster. The accuracy of the system is obtained as 0.9.





Fig.4: Main page

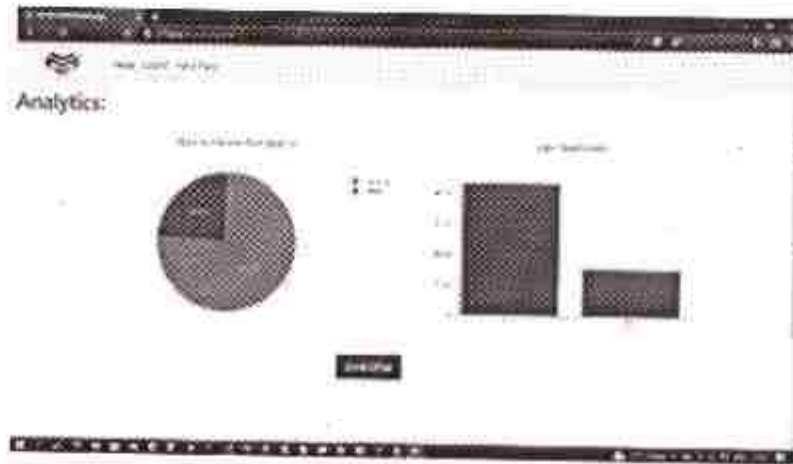


Fig.5: Analytics page

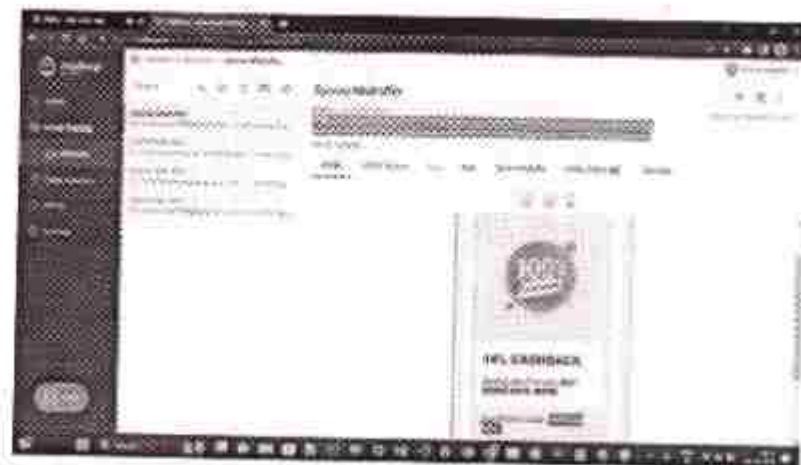


Fig.6: Email sending page



Handwritten signature



Fig 1. Home Page

The main objective of this project is to gather the mail dataset, followed by data pre-processing. After segmentation of the customer base using a machine learning algorithm, the segregated customers are then provided offers through email.



Fig.2. Login page

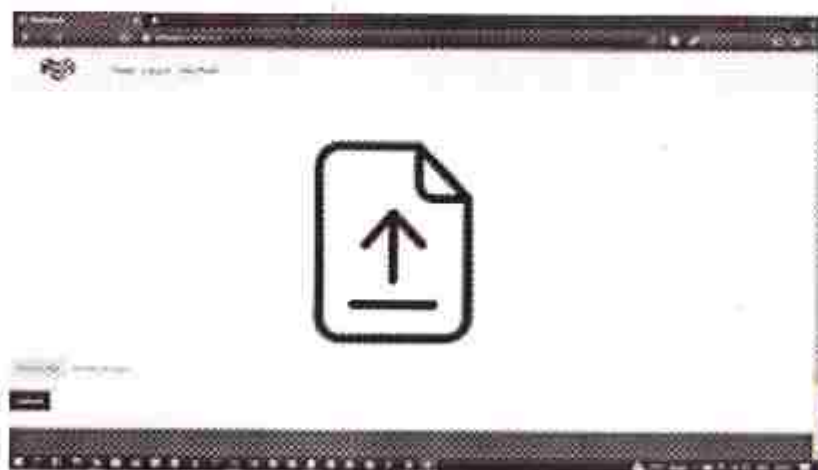


Fig.3: File uploading page





IV. CONCLUSION AND FUTURE SCOPE

Market segmentation is a practice that has arisen due to various factors such as the consumer movement, which has highlighted the underrepresentation of certain industries in the current system. As a result, managers are paying more attention to previously undisclosed client needs in response to these pressing demands. Another driver of market segmentation is intense competition, as companies seek to outperform their rivals by identifying untapped market niches. Additionally, the increasing use of technology for non-commercial purposes such as politics, religion, and public concerns has led to its frequent use in marketing efforts. Based on these factors, it can be concluded that:

Targeting the highest earning, highest spending customers can be an effective strategy, as they have more disposable income and can spend freely. Attracting high-income, low-spending customers can be achieved by soliciting feedback and improving product advertising. The average income and expenditure of customers who fall into the middle category may or may not benefit mall owners. To attract low-income, high-spending customers, businesses can offer incentives such as affordable EMIs. Low-income, low-spending customers may not be targeted by these businesses since they have modest incomes and make infrequent purchases.

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CONSTRUCTION SITE INSPECTION BY USING DRONE OR UAV

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Abstract—The objective of this paper is to perform the innovative idea for the new structures of Constructure Site inspection, in civil sector, currently ongoing constructions sites are monitored manually which time consuming and also need human energy, time & cost, so to overcome this problem we are trying to develop this system. Our Construction Site Inspection by using Drone or UAV based on organized real-time data that is gathered using a variety of cutting-edge instruments, such as drone, sensors, camera, and site photos etc. here advanced software is used to analyses the data, enabling better operations, planning and adjusting.

Keywords— Construction Site, Inspection, Monitoring, Drone.

I. INTRODUCTION

Construction site inspection drone or unmanned aerial vehicle (UAV) is based on organized real-time data that is collected using a variety of cutting-edge tools, including a drone, sensors (photo/video camera, imaging camera, and sensors, etc.) A weekly, biweekly, or advance information preparation of the construction of work progress control over and compliance monitoring for workplace safety and security is necessary to obtain the high-resolution photos and videos. We are developed this system since the monitoring of active construction sites in the civil sector at the moment is labour-intensive, time-consuming, and expensive. Using drones for construction site inspection can provide several benefits compared to traditional methods. Drones can capture high-quality images and videos from various angles and heights, allowing for a more comprehensive view of the construction site. Drones can capture high-resolution images and videos of the construction site from various angles, which can be used to create 3D models and maps. These models and maps can be used to track the progress of the construction project and identify any delays or issues that may arise. Drones can capture information about the construction site quickly and efficiently, which can save time and reduce costs compared to traditional inspection methods. Additionally, drones can be used to identify potential issues early on, which can help to prevent costly delays and rework. Overall, the use of drones or

UAVs for construction site inspection provides a range of benefits and can help to improve safety, quality, and efficiency on construction project.

II. LITERATURE SURVEY

"An overview of using drones for construction site inspections" by J. Sco and M. Al-Husseini. This paper provides an overview of the benefits of using drones for construction site inspections, including increased efficiency, accuracy, and safety. "Drone-based monitoring and inspection of construction sites: A review" by H. Rahimi and H. Shahrokni. This review paper summarizes the recent advancements and challenges in the use of drones for construction site monitoring and inspection, including data processing and analysis techniques. "Unmanned aerial vehicles for construction site monitoring and inspection: A review of applications and technologies" by A. Alharbi et al. This paper presents a comprehensive review of the different applications and technologies used in the field of drone-based construction site monitoring and inspection. "A review of unmanned aerial vehicle applications for construction site inspection" by S. Shukya et al. This review paper discusses the various applications of drones in construction site inspection, including site mapping, progress monitoring, and safety inspection. "A case study of drone-based construction site inspection for quality control" by B. Yang et al. This paper presents a case study of the use of drones for quality control inspections on a construction site, demonstrating the benefits of using drones for identifying defects and reducing inspection time. "Application of drone-based inspection for construction safety management" by Y. J. Kim et al. This paper discusses the use of drones for construction site safety inspections, including identifying hazardous conditions and monitoring workers' compliance with safety regulations. "Integration of drone and BIM technologies for construction site inspection" by Y. Li et al. This paper proposes an integrated approach using drones and Building Information Modelling (BIM) technologies for construction site inspections, including automatic defect detection and documentation.





which are then processed using specialized software to create a 3D model of the pothole. Once the 3D model is created, the volume of the pothole can be calculated by measuring the dimensions of the pothole in the model. This information can then be used to estimate the amount of material needed for repair, such as asphalt or concrete. Volumetric analysis of potholes is becoming more common in transportation infrastructure management as it provides more accurate measurements of the pothole and helps prioritize repair work based on the severity of the pothole.

3) AWS cloud.

AWS (Amazon Web Services) Cloud provides a range of services and tools that developers can use in coding and deploying their applications. Server less computing: AWS Lambda is a server less computing service that enables developers to run code without provisioning or managing servers. This means developers can write and deploy code without worrying about the underlying infrastructure.

BIM Model.

BIM is used to improve the efficiency and accuracy of the design and construction process. It allows stakeholders to visualize the building and make changes before construction begins, reducing errors and conflicts during construction. It also improves communication and collaboration between stakeholders, reducing the risk of delays and cost overruns. Additionally, BIM can be used to manage and maintain the building during its lifecycle, helping to reduce maintenance costs and improve energy efficiency.

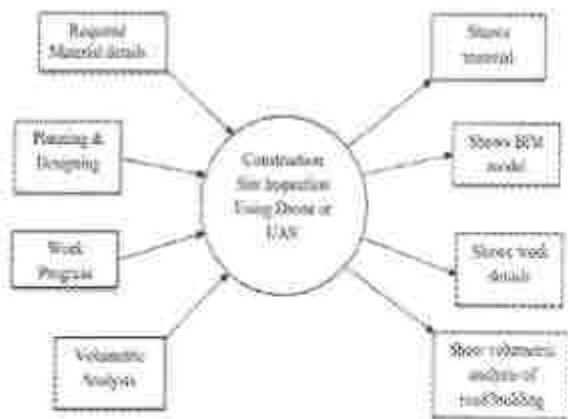


Fig 2: Data Flow Diagram of Construction Site Inspection using drone.

V. CONCLUSION

It is critical to keep all contractor and supervisor involved in the construction process informed. Progress reports are an excellent way to keep track of activities, keep investors involved, and save money by staying on track at all times. Drones collect accurate and timely data, which can then be

converted into reports and that report accessed by supervisor and contractor also using user interface. Drones are being delivered to construction companies more quickly than ever due to their numerous advantages. Drones have proven to be an invaluable tool throughout the entire life cycle of a construction project, whether they are used by construction companies for topographic terrain mapping, building surveys, land surveys, construction site inspections, remote monitoring, progress reports, thermal imaging recording, or for integration with laser scanners.

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*after review is found suitable and has been published in
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Weather Forecasting and Air Quality Analysis

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ABSTRACT: Weather vaticination, in general, is a complex process and gruelling task. It requires colourful parameters to read the rainfall. Monitoring and prognosticating rainfall help in colourful fields like husbandry, trip, pollution disbandment, communication, disaster operation, etc. hereafter, rainfall soothsaying plays a vital part in every day-to-day aspect, exercising the requirements of a common man to probe scientists. Air quality has a significant impact on mortal health. declination in air quality leads to a wide range of health issues, especially in children. The capability to prognosticate air quality enables the government and other concerned associations to take necessary way to shield the most vulnerable, from being exposed to the air with dangerous quality. So " rainfall soothsaying with air quality analysis " helps people to get rainfall conditions and the quality of air. Keywords: API, speech recognition, CNN(Convolutional Neural Networks), python, tensorflow, windows desktop operation, dataset.

KEYWORDS: API, speech recognition, CNN (Convolutional Neural Networks), python, tensorflow, windows desktop application, dataset.

I. INTRODUCTION

Using Wisdom and technology to read the atmospheric conditions at a certain area and time is known as rainfall soothsaying. Weather soothsaying has been done sporadically for glories and formally since the 19th century. Meteorology is used to prognosticate how the atmosphere will change at a certain position while quantitative data about the state of the atmosphere, land, and ocean are gathered to give rainfall vaticinations.

Weather warnings are pivotal vaticinations because they serve to guard property and mortal life. For dealers in the commodity requests, vaticinations grounded on temperature and rush are pivotal for husbandry. mileage companies use temperature protrusions to prognosticate demand for the forthcoming days. numerous people frequently consult rainfall vaticinations to decide what to dress each day.

Heavy rain, snow, and wind bite significantly circumscribe out-of-door conditioning, thus, vaticinations can be used to record conditioning around these conditions as well as to prepare for and survive them. Due to the fast industrialization and urbanisation, air pollution has surfaced as a serious environmental concern worldwide. The mortal body is significantly harmed by airborne particulate matter(PM) with a periphery of lower than 2.5 micrometres(PM2.5), which is one type of air pollution. PM2.5 is suitable to transmit dangerous chemicals into the mortal blood and lungs, which can lead to cardiovascular, respiratory, and cerebrovascular conditions as well as reduced lung function and heart attacks. PM2.5 attention has therefore been utilised as a crucial global index of air quality. The maturity of regions doesn't have access to air quality monitoring stations, which are the current standard because of their high setup costs and precious advanced detectors.

A. PROBLEM FORMULATION

Problem formulation plays an important role in order to get an idea of a project such as requirement, need and application of a project. so the problem statement of a is to develop an application which is able to give the weather forecast of any city entered and tells the air quality of an image provided to the model.



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Video Summarization of Surveillance Camera Using MobileNet SSD Object Detector

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ABSTRACT: The number of surveillance cameras used for security purposes in private and government property. Constant working surveillance cameras produce huge amounts of video data. These data are used as information not only by the owner but can be useful for criminal investigation points of view of police officers. So, it is necessary to process the captured video such that we can quickly overview the activities captured by the surveillance cameras' lengthy video. This paper proposes a powerful approach to multiple human action detection, recognition, and summarization of surveillance videos based on the MobileNet Deep Neural Network. The Proposed Mechanism will summarize only those frames which are detected that the object is moved, and dropping redundant frames. All Movable objects present in the captured video were detected and saved by our program. these active frames are then enclosed in a single clip.

KEYWORDS: Video Summarization, Surveillance camera video summarization, Video Summary.

I. INTRODUCTION

Security is become a primary concern in the recent days and surveillance plays a major role in security. Now a days the number of surveillance cameras installed on private & public properties increases rapidly. These surveillance cameras continuously capture videos 24 hours therefore produces considerable amount of data on daily basis. The storage, retrieval, management and analysis of the data became a demanding task. Processing videos requires considerable time, as to extract the relevant or most essential data the user has to watch the entire long videos. Moreover, a large part of these videos is non-essential and sometimes it is repetitive. Manually watching these long videos for hours can be wastage of much time and tiring. Besides, focusing on the same video or video screen for long hours sometimes became erroneous. The chances for a person to miss out any important event in the video are high.

Hence it requires to develop an efficient technique that helps in reducing the gap between lengthy video into short videos while still retaining important events. This can be also applied to any lengthy video where the entire content can be narrowed down to only those part with dynamic frames.

There are numerous techniques which provide video summarization. But most of these techniques used for videos such as sport, entertainment and many more. These techniques generally create a video summary that is highlights of sports videos and entertainment videos etc.

There are Multiple processing methods are present for reducing the storage of Surveillance video by containing only important frames here important frame means object movable frames. Surveillance video summarization is basically the short summary of long captured video. Video summarization of surveillance video should contain only important frames and drop the remaining frames.

This project approach for creating summarize video based on the object detection. After converting surveillance video into image frames this each frame comparing with adjacent frame and if there is difference in frame then it adds as an important frame. Remaining common frames drop from the video. Other important frames enclosed in single clip as output summarized video.





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Basecamp (Kanban Board)

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ABSTRACT: The Kanban board is a tool for workflow visualization, designed to help you bring clarity to your work process and enhance efficiency by limiting work in progress. Kanban is a tool developed to increase productivity and eliminate waste from their large-scale manufacturing processes. Recently, the system has been used as a tool of choice in Lean software development. New variations of the system are becoming increasingly popular in the industry, but ever since there has been no comprehensive and critical evaluation of the Kanban system applied to large-scale software projects. Basecamp(kanban board) is a tool developed to increase productivity and eliminate waste from their large-scale Recently, the system has been used as a tool of choice in Lean software development. New variations of the system are becoming increasingly popular in the industry, but ever since there has been no comprehensive and critical evaluation of the Kanban system applied to large-scale software projects. This report describes the Kanban system, its origins and recent adaptations to the area of software engineering. It also discusses the philosophy Kanban system is a very cost efficient process if applied in proper manner.

INTRODUCTION:

Basecamp(kanban board) is a tool developed to increase productivity and eliminate waste from their large-scale Recently, the system has been used as a tool of choice in Lean software development. New variations of the system are becoming increasingly popular in the industry, but ever since there has been no comprehensive and critical evaluation of the Kanban system applied to large-scale software projects. This report describes the Kanban system, its origins and recent adaptations to the area of software engineering. It also discusses the philosophy Kanban system is a very cost efficient process if applied in proper manner. Principles of kanban system Visualize work ,Limit work in process, focus on flow ,continuous improvement Key words: Kanban System, Just in Time, Lean Manufacturing, Total Quality Control. One of the main advantages of Kanban is its flexible and non-prescriptive nature. It provides the team with a small set of guidelines for managing any project. After the primary rules have been applied the project manager needs to make decisions based on his team's size and performance. The manager can make changes and modify certain attributes of the system. This apparent advantage of Kanban can become an issue for inexperienced users who have never used the method before.

Therefore, the purpose of this paper is to evaluate this new methodology in the context of small software projects and make recommendations about the best practices which could be applied to improve their current projects. In order to do that, exhaustive testing and evaluation of the method in question will be conducted. This project will address issues such as: the optimum size of the team, their experience and roles, projects size, use of time and resources. The main aim and originality of this project comes from the investigation of small projects whose scope is outlined in the next section.

LITRATURE SURVEY:

Mahgol Amin.,(2014 Malardalen University).

The aim of this paper was the focus on kanban as an engine software development methodology. The board has to upto date because an outdated kanban board may causes issues in the process of development.

Sanjay Pandit Patil, Dr. Jitesh. R. Neve (2018). International conference on advanced communication and computing technology. Visualize the workflow eliminate interruptions manage flow make. The board can becomes to complicated for the kanban team

Taiichi Ohno (1940 By a Japanese Engineer). Agile methodology process policies explicit improve collaboratively. The kanban system requires planned weakly and monthly production schedules coupled with day-to-day flexibility.

METHODOLOGY:

Kanban Cards – This is the visual representation of tasks. Each card contains information about the task and its status, such as deadline, assignee, description, etc.

Kanban Columns – Each column on the board represents a different stage of your workflow. The cards go through the workflow until their full completion.

Work-in-Progress Limits – They restrict the maximum amount of tasks in the different stages of the workflow. Limiting WIP allows you to finish work items faster by helping your team focus only on current tasks.

Kanban Swimlanes – These are horizontal lanes you can use to separate different activities, teams, classes of service, and more.

Commitment Point – A commitment marks a point in the work process where a work item is ready to be pulled into the system.

Delivery Point – The point in the workflow where work items are considered finished.

Problem Definition:

The kanban board is a perfect tool for visualizing potential problems in your process. The logic is simple; if you see a column in which tasks arrive faster than they leave Work will start to pile up, and the problem will become visible to the whole team. This happens because any fields that are hidden as per hiding or showing a field in a issue type are not considered for search results and in this Example- the fix version is not empty nor unreleased as it doesn't for this project /issue .

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E-Prescription using Speech-Recognition

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ABSTRACT: In our nation, medical prescriptions are still manually penned. However, there are times when the pharmacist cannot read the handwriting, which can lead to serious issues like patients consuming the incorrect drugs or insufficient amounts of those drugs. According to World Health Organization (WHO) statistics, medical and prescription errors cause 2.6 million deaths annually. Many mistakes in healthcare are caused by caretakers giving patients the incorrect medication or dosage because of unclear handwriting, medication interactions, unclear drug names, etc. The continuation of the medication process can occasionally be miscommunicated if there is no prior medical history. Additionally, the patient must keep getting in touch with the doctor repeatedly if they neglect the name or dosage of their medication. Our voice-based "E-prescription" will be crucial in resolving these problems. We are converting the provided voice input to text format using Natural Language Processing (NLP). For English, Hindi, and Marathi, we use Android Intents

KEYWORDS: Speech Recognition, NLP, Android Development, Authenticated Prescriptions, Kotlin, Doctor Authentication, Firebase.

1. INTRODUCTION

E-prescribing, also known as electronic prescribing, is a digital process that allows doctors and other healthcare professionals to create prescriptions and send them to patients or pharmacists via an application rather than using the more conventional handwritten or faxed recommendations. The electronically generated prescription is fully automatic, easy to understand, precise, and error-free. The creation of the E-prescription app is a way to reduce the risks that rise with routinely prepared manual prescriptions. The goal of our project is to develop a simple interface for doctors that accepts voice notes as input and converts them into text to create paperless prescriptions that are accessible in English, Hindi, and Marathi.

The main issue in India is that the majority of prescriptions are still penned by hand. If a doctor has prescribed certain medications, such as "Valcyte" or "Valtrex" only pharmaceutical professionals, such as pharmacists, can interpret these medications. People without medical backgrounds are unable to properly read prescription medications and cannot confirm whether the medication given by the pharmacist is in accordance with the prescription or not. We have suggested our application, which enables patients to recognize the names of the drugs and the quantity of each, in order to prevent patients from misinterpreting the doctor's handwriting on the prescription.

We have also given dosages so that the patient understands how, when, and in what quantity the drugs should be taken. We have provided extra cloud storage for prescriptions in order to safeguard prescriptions and patient information.

The doctor can easily replace a prescription if a patient misplaces it. In addition, we have provided customizable watermarks so that the prescriptions can be readily identified. A digital signature from a doctor is also given for authentication. There are numerous applications accessible today, such as Blue doc, E-prescription, and others, that generate prescriptions only in English.

a. Problem Formulation

Formulation of Problem plays an important role in determining the purpose, requirement, and usage of the project that is made. So the problem statement of this project can be formulated as, Developing and android application which takes



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Location Based Advertisement Using Geofencing

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ABSTRACT: A geo-fence is an virtual barrier that surrounds a physical region. A geo-fence can be created based on the user's requirements by taking various radius factors into account, or it can simply be a predefined set of boundaries. Geofencing is an innovative technology, an online marketplace for proactive contextual services that allows users to easily find interesting services, can easily subscribe to it and to allow providers offer their services for a variety of applications. Geo-fencing is use of geo-fence. The global positioning system (GPS) is a feature that is used to determine geographic borders. It has a vastly expanding range. Relatively very few applications deal with geo-notifications, which are meant to proactively inform mobile and stationary users of location-specific information. Geo-fencing is the name of the technology that underlies proactive location-based services. The main objective of this research was to understand how the use of spatial data can improve advertising performance for customers. Tracking systems and monitoring, based on global navigation services by satellite, and include geofencing function, could also contribute to the exact location of an institution or company and increase sales and business perspective efficiently. Instead of large billboards they can now advertise on smartphones which is economically and accurately tested.

KEYWORDS:- Geo-fencing, Location Based Services, Global Positioning System(GPS), Geo-notification.

I. INTRODUCTION

Geofencing hospitality is a prototypical geofence-enabled mobile application for the android mobile operating system. It consists of an exemplary user interface for activating respectively deactivating the geofencing service and a component that deals with positioning and communication. The core purpose is to demonstrate the feasibility of our approach in general.

Geofencing is a method of defining a virtual barrier on a real geographical location. Mobile marketing has been taken to the next level with geofence, which gives hotels the ability to advertise specifically to potential customers within certain geographic radius. Geofencing constructs a virtual boundary around a business location using a combination of technologies including GPS & RFID. Geofencing area can be as small as 50 meters and as large as an entire city. Geofencing technology defines a virtual boundary around a real-world geographical area and by doing so, a radius of interest is established that can trigger an action in a geo-enabled phone or other portable electronic device. Geofencing helps you in keeping control of your business by notifying you when a potential consumer is passing by your hotels, by a competitors, or entering into a predefined area.

Location tracking is the precursor to geofencing and everything that has anything to do with geo specific marketing. To get it working, you need to use a mapping product like Google map to map out the regions you want to geofence. This region can be in a circular shape in most cases. Once your desired region is mapped out for geofencing, you can then target your consumers via their mobile phones GPS. Then you can monitor your geofence through the day for potential prospects or customers who might be interested. Smarted in your offer. It keeps to track them until that to go out. Geo-fencing is a location-based service that allows marketers to send messages to smart phone users who enter a predefined geographical area. This helps them to target the foot traffic in the vicinity of a point-of-interest. Marketing messages can be personalized to each user segment and can be auto-triggered on entry/exit from a geo-fence. A geo-fence is a virtual perimeter for a real-world geographic area.

Our prototype is based upon the idea to transform each specification of geofence scenario into a complex event pattern which interns serves as the parameterization of the stream processing system. The problem to determine if





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Exploring DevOps Culture in Jewellery Web Application

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ABSTRACT: Agile methodology and DevOps processes have become popular approaches in the IT industry due to their ability to enhance software development processes and support business objectives. When applied to jewellery application development, agile methodology helps teams prioritize tasks and break down large projects into smaller, more manageable components. This approach promotes continuous feedback and collaboration, enabling teams to adjust and adapt to evolving customer needs and requirements. DevOps processes can further streamline the jewellery application development process by promoting collaboration between development and operations teams. With a focus on communication, automation, and continuous integration and delivery, DevOps enables jewellery development teams to deploy software more frequently and with greater confidence. This approach helps teams minimize downtime, reduce errors, and respond quickly to any issues that arise. Together, agile methodology and DevOps processes can help jewellery application development teams deliver high-quality software quickly and efficiently. By leveraging these approaches, jewellery businesses can enhance collaboration, speed up software delivery, and ultimately improve customer satisfaction. The ability to adapt to changing requirements and deliver software quickly is essential in the highly competitive jewellery industry, and agile methodology and DevOps processes provide a solid foundation for achieving these goals.

KEYWORDS: Agile; Devops; Git; Jenkins;Kubernetes.

INTRODUCTION

To effectively implement DevOps within an Agile framework, it is imperative that the development team collaborates continuously with the operational team throughout the software development lifecycle. This collaboration enhances the team's comprehension of the business objectives and the limitations and constraints of the software under development. DevOps is a culture that integrates the principles and practices of Development and IT Operations to bridge the gap between these two teams.

The primary goal is to merge both teams and enable fast software development. In DevOps, a single team is responsible for both development and operational tasks, including software development, deployment, and integration of various modules of a software product.[2][3]

DevOps facilitates Agile's release cycle by allowing communication of specifications and design documents. Sharing these documents is crucial to comprehend the complexities of continuous development and integration of the product, which speeds up the entire process. This paper highlights practical aspects of implementing DevOps in a Jewellery web application project using various DevOps tools. The actual name of the client has been concealed for confidentiality purposes.

THE NEED, MARKET AND IMPORTANCE OF DEVOPS TOOLS

DevOps engineers are currently in high demand worldwide, and this is due to the widespread adoption of the DevOps culture in many industries, which provides numerous benefits. The success of organizations and IT industries that have embraced DevOps is impressive, as they have reported higher returns compared to those that still employ traditional software development approaches. This is largely attributed to the continuous development and integration properties that DevOps offers.



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Smart Electric Vehicle Charging Station

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ABSTRACT: Currently we are facing issues related to lack of fuel and hence we are facing the problem of rise in the price of fuel. So people are shifting to the Electric Vehicles. Because Electric Vehicles are more efficient, and that combined with the electricity cost means that charging an Electric Vehicle is cheaper than filling Petrol for your travel requirements. Using renewable energy sources can make the use of electric vehicles more eco-friendly. But people are facing problem because of lack of number of availability of charging stations. At the same time the requirement of public charging portals is not sufficient to meet the demand of the consumers even if there are few Electrical vehicles manufacturing companies are available, they are not providing that charging stations, and it is necessary to increase the number of charging stations.

Electric vehicles are a relatively recent technology that is seeking place in the market. It has several advantages, such as the reduced greenhouse emissions, fuel savings and easy to use. Transportation electrification is one of the essential components in the future smart planning and electric vehicles. Charging stations are the main source of energy for EVs and their locations are critical to the accessibility of EVs in a city. They should be carefully situated so that an EV can access a charging station within its driving range. The charging stations successfully developed as desired features for electric vehical from renewable energy resources. This project is about charging E-vehicle module using Smart EV charging station and also there is a new term QR code. so user not need to carry all the time by just having mobile application user can do charging.

KEYWORDS:

1. Microcontroller
2. Charging Station

I. INTRODUCTION

Most aspects of our daily life continue to transform by the digital revolution. Recently the most popular form of green transportation is (EV) electrical vehicles. EVs have many advantages including that they are eco-friendlier, energy efficient, economical, and comfortable than conventional gasoline vehicles.

Certainly, EV has evolved to be produced by many mainstream automobile manufacturers. Batteries play an important role in EVs because they serve the purpose of being either the primary energy source or the backup source in hybrid EV's. Battery performance is dependent on certain factors such as temperature, chemical composition, age, and rate of charge or discharge.

In EV's, it is important to monitor the battery's state of charge (SoC) although this is not always easy because the characteristics of the battery itself. The boom of the World Wide Web has intensified interest in e-money that can be transferred over the internet. So, it is necessary to do the transactions for the charging of the vehicle electronically. The currently available charging stations are company based. That is the companies are having their individual charging stations for free of cost. And a person can charge their E-vehicle on the respective companies charging station only. No universal as well as paid charging stations are available.



Diabetes Prediction Using Machine Learning Techniques

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ABSTRACT:

Diabetes is one of the major and deadly diseases, it is also cause of many diseases such as heart-attack, kidney diseases, blindness etc. all among the world many people are suffering from the diabetes. Diabetes can be caused by obesity, lack of exercise, bad living style, due to heredity, high blood pressure. In traditional practices in hospital required information is collected through various tests and treatment is provided on the basis of the diagnosis. Here Big data analytics helps us to find hidden patterns and information which helps us to extract knowledge from the data and predict outcomes. In this paper we have proposed a diabetes prediction model for classification of diabetes based on some regular factors such as Glucose, BMI, Insulin, Age etc. and we have tried to find maximum accuracy with the help of machine learning algorithms.

KEYWORDS: Machine learning algorithms , Dataset, Random Forest ,SVM,

I. INTRODUCTION

Diabetes is chronic disease which is caused when your blood glucose also known as blood sugar is too high. Blood glucose is the main source of energy which comes from the food you eat. A hormone called Insulin which is created by a pancreas helps the glucose from the food to get into your cells to be used for energy. Sometimes the body doesn't make enough insulin or any Insulin then the glucose stay inside the body and causes disease such as diabetes. In the traditional process of identifying diabetes the patient has to visit the diagnostic centre again and again, go through various tests and have to wait for day or more to get their reports. It also requires lots of money for various steps. In this project we are using various machine learning techniques. Machine learning is a subset of AI which helps machines to automatically learn from previous data improve performance from past experiences and provide outcomes on the basis of learning. Machine learning contains bunch of algorithms that works on huge amount of data. This data is used to train the models and on the basis of the training the models performs specific tasks. Machine learning has various types such as:

o SUPERVISED LEARNING:

Supervised learning is one of the types of machine learning where labeled data is provided to the model. Labeled data contains a target variable or an output variables that answers a questions of interest. A supervised learning model is a model which learns under supervision, this supervision is provided by labeled data which contains target variables and independent variables, the model learns from the past data. The most widely used supervised machine learning algorithms are Logistic Regression, Random Forest, Gradient Boosted Trees and Support Vector Machine(SVM).





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“Thyroid Prediction Using Machine Learning”

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Abstract: The thyroid is an endocrine organ situated in the foremost locale of the neck: its principal task is to create thyroid chemicals, which are useful to our whole body. Its conceivable brokenness can prompt the development of an inadequate or extreme measure of thyroid chemical. Hence, the thyroid can become kindled or enlarged because of at least one swellings framing inside it. A portion of these modules can be the site of threatening growths. One of the most utilized medicines is sodium levothyroxine, otherwise called LT4, an engineered thyroid chemical utilized in the treatment of thyroid problems and sicknesses. Expectations about the treatment can be significant for supporting 'endocrinologists' exercises and work on the nature of the patients life. This work, in an unexpected way, plans to anticipate the LT4 treatment pattern for patients experiencing hypothyroidism. For every patient, the clinical history is accessible after some time, and hence based on the pattern of the hormonal boundaries and different traits thought of it as will be feasible to anticipate the course of every patient's treatment to comprehend on the off chance that this ought to be expanded or diminished. To direct this review, we will zero in on utilizing different AI calculations.

IndexTerms – Introduction, Literature Survey, Proposed methodology and Discussion, Algorithms, Conclusion, References

I. INTRODUCTION

Thyroid complaint frequentness have been on the rise in recent times. A large number of people are diagnosed with thyroid conditions similar as hypothyroidism and hyperthyroidism yearly. The thyroid gland produces levothyroxine(T4) and triiodothyronine(T3) and inadequate thyroid hormones may lead to hypothyroidism and hyperthyroidism. numerous approaches are proposed to desery thyroid complaint opinion in the literature. A visionary thyroid complaint vaticination is essential to duly treat the case at the right time and save mortal lives and medical charges. Due to the technological advancements in data processing and calculation, machine literacy and deep literacy ways can be applied to prognosticate the thyroid opinion in the early stages and classify the thyroid complaint types hypothyroidism, hyperthyroidism, etc.





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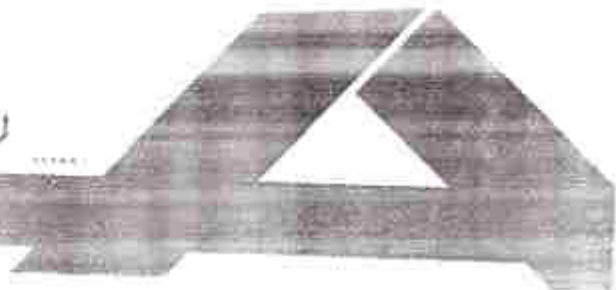
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DESIGN AND ANALYSIS OF LDR AND IR SENSORS BASED AUTOMATION SYSTEM

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ABSTRACT

In today's busy world, every person wishes to reduce human effort. Nowadays Automate systems are being preferred over manual system to make life simpler and easier in all aspects. Operating home appliances become easy as changing TV channels. Remote Controlled automation uses IR sensors to control home appliances using a TV/DVD/VCD remote. Home appliances like fan, light, radio, cooler, music system, home theatres etc can be turned ON/OFF using a remote. Remote Controlled home automation is expected to work in a range of 10 meters without barriers/walls in between. The IR rays transmitted by the TV remote control will be received by IR receiver installed in the circuit. A microcontroller processes the appliance's status and controls the load thereby controlling it. An LED would display the status of the particular appliance whether the device is ON or OFF. RC- automation would also consist of LDR dependent light control. Exterior light (light near the door way) needs to be switched on during night time, Light Dependent Resistor (LDR) is a type of sensor which actually senses the light as our eyes does. When the sunlight comes, visible to eye it automatically switches OFF the lights. The LDR would turn on the light as soon as it senses darkness and will turn off in the morning. Remote Controlled home automation is a small step towards reducing human effort and to use technologies smartly and efficiently to human benefit.

Keywords– LDR-Light Dependent Resistor, IR-Infra Red, LED-Light Emitting Diode, RC-Remote Controlled, IC-Integrated Circuit.

1. INTRODUCTION

In today's world need of automation is become necessary not only to reduce human effort but also to utilize maximum of the technology and to do everything smartly and efficiently in order to reduce both energy and time consumption. So, the idea of home automation is basically deals with such problems and provide home a smart system to operate household appliances conveniently. This helps to advance the living standards of new age people and also helps the old age aged or handicapped person to perform their task without any trouble. RC- home automation using LDR and IR sensor is a further step in home automation. The system uses IR sensors to control or to operate household appliances like TV, fans, music systems, tube light, radio within the range of 10 meters. Hardware requirement for RC automation are IR transmitter, IR receiver, transistor, IC, LED light, LDR sensor, battery, bread board and connecting wires. This system works as soon as the IR rays by the IR transmitter are sensed by the IR receiver. In response the IR receiver will turn on or will turn off the device accordingly. The IR transmitter is nothing but Remote controller of TV or of mobile phone. The IR receiver module of the circuit is been designed for all home appliances which the person wants to control. In making the home automation easy, convenient and with good performance. The system is beneficial as the system using IR sensor which has a longer wavelength than visible light, so the human eye cannot see it. For example, the IR sensor can see through the glass. Also use the LDR sensor the IR receiver will turn on or will turn off the device accordingly. The LDR (IR RC- automation) is a very smart technique to avoid unnecessary usage of it as mostly in homes many of the people forget to switch it off in day time as it is a very powerful approach in reducing such wastage of electricity.



2. LITERATURE SURVEY

It is a survey of existing work which can be taken as a reference for RC-automation. We surveyed around 11 different articles which can be explained as:

- [1] Design & Implementation of Smart Home Control Using Lab VIEW: It focuses on how computer device that provide with lab view software is the main controller unit for all systems in the house, but central receiver unit in the house is made using only RF Module.
- [2] Microcontroller Based Remote Control of Home Appliances: It focuses on development of microcontroller based IR remote control signal decoder and used Sony IR remote as transmitter. But the output of the IR receiver is not very high.
- [3] Remote Control of Home Appliances: RC automation allows the user to control the intensity of the light bulb and also allows the user to regulate the speed of the fan over the Internet but the major drawback is that the appliances are connected to the web of objects and disconnects when no internet.
- [4] RF based Remote Control for Home Electrical Appliances: The RF based wireless remote control system can change the state of electrical appliances either in on state or off state, it fails when multiple devices can be controlled using different receiver with different addressing mode.
- [5] Home Appliances Controlled by Infrared Remote Control System: It tells how the receiver uses an infrared sensor's module for sensing the IR signals from the transmitter section. It fails when IR beams (modulated at the same frequency) need a line of sight for control.
- [6] Home Automation Using Remote Control System: Here the home appliances are switched on/off using IR (without actually going near to the switch boards or regulator), it fails when IR beams modulated at the same frequency need a line of sight for control.
- [7] Electrical appliances in home control through IR Remote: RC-automation provide Control to the home appliances via any remote control device that is portable in the periphery of the room but this used Sony IR remote, connected with the AC mains, this may alter main connections.
- [8] Home Automation Using IR (Infrared) Sensor & Arduino-nano Single Board Microcontroller: RC automation provides a wireless communication link of the home appliances to the remote user and provides convenience and ease of work with more cost, complex circuit, not user friendly.
- [9] IR Based Home Appliances Control System: Here the micro controller stores the bit pattern of IR receiver and compares with the predefined bit pattern matches act as a switch to turn on/off any appliance. The major drawback is that the IR remote works on different protocol. Each IR remote has its own protocol. Micro-controller stores the bit patterns for specific buttons of remote.
- [10] Remote Control of Home Appliances with Smart Energy Efficient Model Using Android Application Based on Raspberry Pi Embedded Linux Board: It focuses on System controlling a remote Home appliance using a "Raspberry pi" card for receiving commands from an Android application on mobile phone in future but the system may not be easy to work with for all people.
- [11] Controlling Home Appliances by Using Universal Remote Control System (IoT and Bluetooth Technology): Home automation system uses IoT, Wi-Fi, Bluetooth technology. System consists of three main components such as server, which presents system care that controls, and monitors users but if the server goes down the whole system will be down.

3. SYSTEM ARCHITECTURE

The IR transmitter installed in the TV/VCD/DVD remote when pressed directed towards the appliance as the controller, the IR receiver of the circuit would sense the rays. This data/information is forwarded to the microcontroller unit. The micro controller unit then instructs the local driver to start the load. The user about the appliance and any on/off. The zero crossing detectors sense the status of the appliance and the microcontroller in change the status of the appliance on the LCD display of the respective appliance. The microcontroller is connected to the LCD module display.



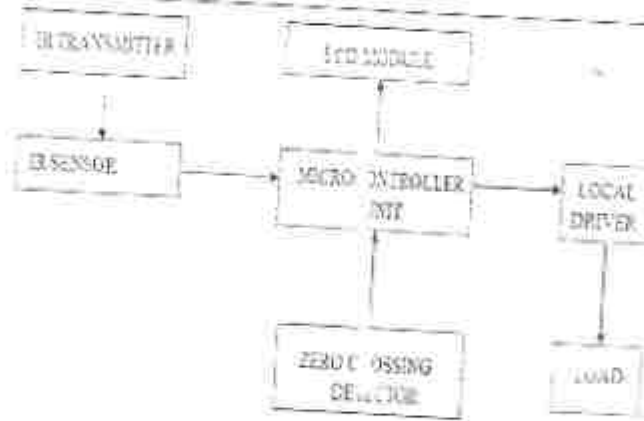


Fig: 1.1 Block diagram

The given circuit diagram is the reflection of how the Proposed system is going to control all the devices which comes under the range of the sensors. The circuit basically consists of transistor, capacitors, resistors, IC CD4017, LDR, and connecting wires. The appliance to be controlled is connected between the pole of the relay and neutral terminal of mains. It gets connected to live terminal of AC mains. As soon as the circuit senses the infrared radiation coming from the remote controller the control passes to the transistor and capacitors. Control then forwarded to IC CD4017 after the signal passes through integrated circuit according to requirement the appliance get switched off or switched on. The progress and work done can be shows through the status of Led.

The Result Of The Rc- Home Automation Using Ldr And Ir Sensors is based on the hardware and hardware requirements that are being used for the creation of RC- automation. An infrared sensor is an electrical device which is used to test certain attributes of its surroundings by emitting or detecting infrared radiation. Infrared sensors have the ability to measure the heat being emitted by an object and to detect its motion. An IR sensor can measure the heat of an object along with the detection of motion. Passive IR sensors measure only infrared radiation, rather than emitting it. Usually in the infrared spectrum, all the objects radiate some form of thermal radiations. The IR sensors being used in the first part of the system is for controlling home appliances. These sensors will be fitted in the home appliances so that they can be controlled via remote. RC- automation also consists of the use of LDR sensors. An LDR is a sensor that has a varying resistance that changes with the light intensity that falls upon it. They find their application in light sensing circuits. Light dependent resistors or photo resistors are mostly used in circuits where it is necessary to detect the presence or the level of light. The system consists of the working of an exterior light (of the house) through LDR. When light reflects onto the LDR its resistance decreases and current starts flowing into the base of the first transistor and thus the second transistor. The preset resistor can be turned up or down to increase or decrease gain, now this making the circuit sensitive.

4. PROPOSED METHODOLOGY

RC- automation tries to implement IR sensor for RC- home automation. Using RC- automation all the home appliances which are directly connected to the mains can be operated using a TV remote. Basic operations like turning on/off of the lights, fans etc can be done via the remote, there is no need of going to the switch board for those operations. The circuit would work in a range of 10 meter. The range also depends upon the intensity and orientation of the infrared waves and can also be affected by different barriers. The circuit the infrared rays generated by the remote controller are received by the IR receiver of the circuit. The signal is then forwarded to the microcontroller unit. The microcontroller unit is connected between the pole of the relay and neutral terminal of mains. It gets connected to live terminal of AC mains. RC- automation has been carefully achieved by making an intelligent home using technology which are going to help to control the appliances connected to the AC mains. The system can be made more and more efficient and handy by make it applicable for varied range of devices. The basic motive of the system is to access the home appliances remotely and to reduce human efforts. For suggestions for future research work on this paper can be like the user set an on/off timer for home appliances like domestic lighting etc.

5. CONCLUSION

RC- automation for the Home Automation using LDR and IR sensors with wireless applications in this technology can be made more and more efficient and handy by make it applicable for varied range of devices. The basic motive of the system is to access the home appliances remotely and to reduce human efforts. For suggestions for future research work on this paper can be like the user set an on/off timer for home appliances like domestic lighting etc.



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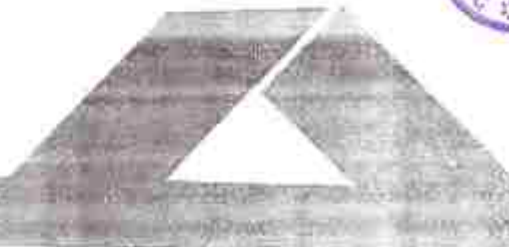
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ISSUU



IMPLEMENTATION OF ULTRASONIC DISTANCE DETECTOR USING ARDUINO

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ABSTRACT

This project proposes the principle of implementation of Ultrasonic Distance Detector using Arduino. In this process, distance will be measured using an ultrasonic sensor. Ultrasonic sensor is a device which will measure distance of the target object. LCD display will also be used in the implementation to display the detection of object and also the distance at which the object is located. The main implementation will be done using Arduino, which will code data regarding the range of object detection. In the process of detecting the object using an ultrasonic sensor, if any object is found below that specific range of distance, then it will display as object detected and display the distance of the object. If the object comes further near below the range mentioned, then the buzzer will start beeping indicating the object. Finally, the main objective of ultrasonic distance detector in the project is to portray the experimental results of detecting the vehicle in night times and on curve roads and calculate the respective longitudinal and the horizontal distance to the preceding vehicle and give an indication if the distance is less than the specified.

Keywords: Ultrasonic sensor, Arduino UNO, Ultrasonic bursts, distance detector, Obstacles.

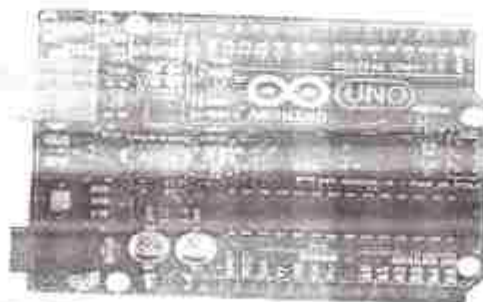
1. INTRODUCTION

The project is about the working concept of calculation of distance of the nearby objects or obstacles with the help of an ultrasonic distance sensor circuit using an ultrasonic sensor (HC-SR04) which is able to sense the obstacles in its way and the LCD display of configuration 16x2 to display the distance of the object from the ultrasonic sensor and the information regarding the object whether it is front or not. The Arduino UNO is a hardware as well as a software tool which is used all over in the progression of the project and the code to calculate the distance is run on the software Arduino IDE. The buzzer is also used in the project to indicate the existence of the object in a busy lane territory.

2. COMPONENTS

1. Arduino UNO:

The Arduino UNO is one of the major components used in the project which gives the power supply of 5V. It is a microcontroller board which is an open-source system. It is a microcontroller board with a large number of digital and analog pins. These analog and digital pins can used as input/output pins to interface various circuits.



The specifications of the Arduino UNO are:

- i. Microcontroller of ATmega328P Microcontroller.
- ii. The operating voltage of 5V.
- iii. The input voltage of around 7 to 20 Volts.
- iv. The Flash memory of 32KB out of which 0.5KB is used by the bootloader.
- v. A Clock speed of 16MHz.
- vi. Length of 68.6mm.
- vii. Width of 53.4mm.
- viii. SRAM and EEPROM of 2KB and 1KB respectively.
- ix. 6 Analog Input Pins
- x. 20mA of DC Current per I/O pin and 50mA of DC Current for 3.3V Pin.

Any new code can be dumped into the Arduino hardware without any help of an external hardware programmer as ATmega328 on the board is programmed in advance as it is proficient of automating without any external protocol.

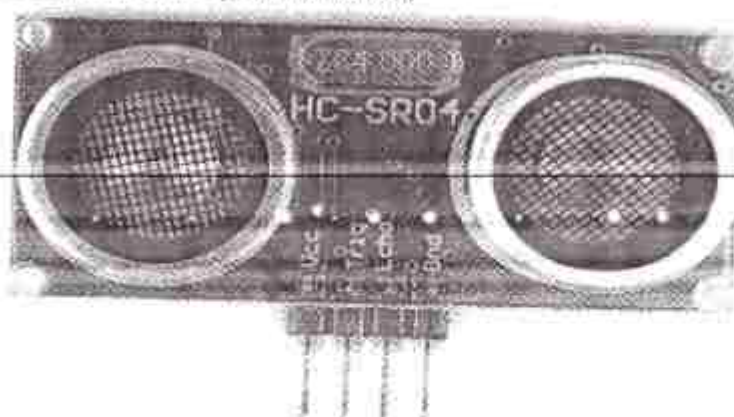
2. LCD Display

An LCD is an electronic display module which uses liquid crystal to produce a visible image. It has a wide range of applications. A 16x2 LCD display is a very basic module and is very commonly used in various devices and circuits. A 16x2 LCD displays characters in two lines, consisting of 16 characters per line. In this LCD, each character is displayed in a 5x7 pixel matrix. It is capable of displaying 224 different characters and symbols. It has two registers, namely Command registers and Data register.

Command registers stores various commands that will be given to the display. Data register stores the data that is to be displayed on the LCD Screen. The Contrast of the display can be adjusted by adjusting the potentiometer, which can be connected across the VEE pin.

3. Ultrasonic Sensor

The Ultrasonic sensor consists of two identical cylinders which are made of Aluminium and covered by a mesh which are known as the transmitter and the receiver which transmit and receive Ultrasonic waves. The Crystal Oscillator of frequency 4MHz is also present in Ultrasonic sensor which is useful in delivering the stable output for a required period of time which work on the principle called piezo electric effect.



The HC-SR04 Ultrasonic sensor commonly known as Ultrasonic distance detector is a sensor which has two transducers (one transmitter and one receiver) mounted on the top. The transmitter and receiver are made of piezoelectric material. The transmitter sends out ultrasonic waves and the receiver receives the reflected waves. The sensor can convert an ultrasonic signal into an electrical signal or energy signal. The sensor is known as an Ultrasonic sensor. The transmitter of the sensor is connected to the VCC pin and the receiver is connected to the Trig pin. The receiver of the sensor is connected to the Echo pin and the transmitter is connected to the Trig pin. The sensor is used to measure the distance of an object. The sensor is used in many applications. The sensor is used in many applications. The sensor is used in many applications.

The Ultrasonic Sensor consists of 4 pins. They are:

1. VCC
2. Trig
3. Echo
4. GND

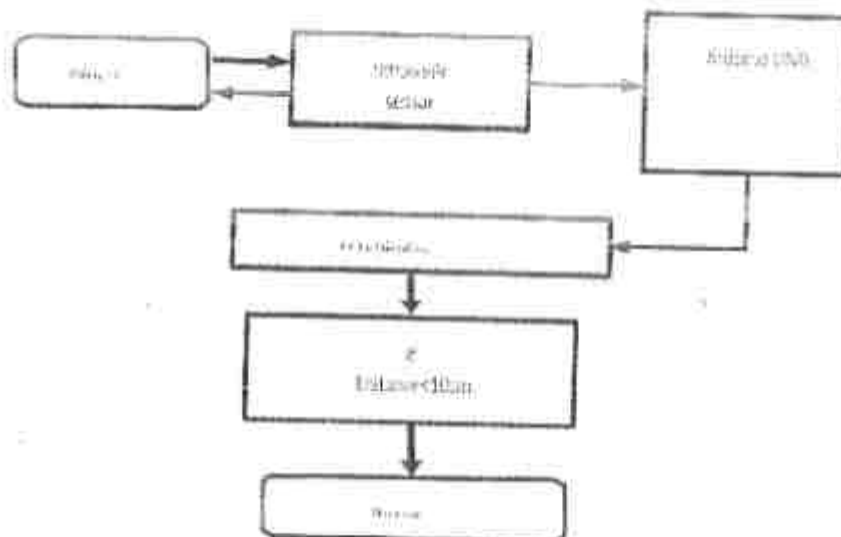


4. Buzzer:



A Buzzer is an audio signalling device that generates sounds. These sounds are due to the oscillating circuit present inside it. This device is typically powered by a DC Supply. Buzzers are mainly categorized into piezoelectric buzzers and electromagnetic buzzers. Applications of buzzer include Alarm circuits, Automobile electronics, Printers, Computers etc. Based on its design and use, the buzzer can produce various sounds like alarm, electric bell etc.

4. Block Diagram



The proposed block diagram consists of Arduino UNO, Ultrasonic sensor, LCD display and the buzzer. If the distance is below 10cm the buzzer starts buzzing and the distance is displayed on the LCD display.

5. WORKING OF ULTRASONIC DISTANCE

Detector.

The main principle of the Ultrasonic sensor is that when it releases the ultrasonic sound waves which hit by an obstacle or object gets reflected back. Firstly, a pulse of a least the duration of 10µs (microseconds) should be enforced to the trigger pin of the Ultrasonic sensor. In accordance to the 10µs pulse the sensor releases 8 pulses of sound having a frequency of 40KHz. The 8-pulse ultrasonic bursts form a unique pattern which makes it different from the transmitter waves and the noise.

The transmitter of the Ultrasonic sensor which has a trigger pin sends a pulse to the trigger pin of the Echo pin reaches HIGH in order to configure the formation of echo-track signal.

If the 8 pulses which are transmitted from the transmitter of the Echo pin reaches the receiver of the Echo pin, the signal is received.

When it is given to see if the signal is received back, the distance between the transmitter and the receiver is the Ultrasonic distance range.

The working of the Ultrasonic sensor as detector to detect the obstacle is as follows:

1. A sound wave of high frequency has been sent from the trigger pin of the transmitter of the Ultrasonic sensor.
2. If the high frequency signal detects any kind of object or obstacle then the signal is received back.
3. The reflected signal after hitting an obstacle is received by the Echo pin of the transmitter of the Ultrasonic sensor.



Language Lab as a Tool of English Improvement for The Students

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Abstract:

An English language lab can be an excellent tool for teaching English as a second language. It provides students with the opportunity to practice LSRW skills. An English language lab provides students with a multi-sensory learning experience. They can see, hear, and speak English, which can improve their retention and comprehension of the language. Remote Learning: An English language lab can be used for remote learning, which is especially important in today's digital age. Students can access the lab from home or from anywhere with an internet connection, which makes it easier for them to practice English outside of the classroom.

English language labs are an innovative and effective tool for teaching English language skills. These labs use multimedia technology, including audio and video resources, to create an interactive learning experience that engages students and helps them develop their language skills. In conclusion, an English language lab can be a valuable tool for teaching English as a second language. It can provide students with a variety of learning experiences that can improve their pronunciation, comprehension, and overall language skills.

Key words: language lab, tool, multi-sensory learning, language skills

The present research paper deals with the study of

language lab and its use for the improvement of English among students. An English language lab can be an excellent tool for teaching English as a second language. It provides students with the opportunity to practice listening, speaking, reading, and writing skills in a controlled and interactive environment. English language labs are increasingly being used in teaching English language, as they offer a wide range of benefits to both students and teachers. An English language lab is a computer-assisted language learning (CALL) facility that provides a platform for learners to practice and improve their English language skills. The lab includes multimedia resources such as audio and video materials, interactive software, and internet-based learning resources.

An English language lab is a technology-based learning environment that is specifically designed to help students improve their listening, speaking, reading, and writing skills in the English language. English language labs provide a range of interactive activities and exercises that are designed to improve language proficiency, including

pronunciation practice, vocabulary building, grammar drills, and communication activities.

Russel. N Cambell (1967-68), University of California, Los Angels, in his article entitled "The Language Laboratory and Pronunciation Teaching", published in the "Journal of English Language Teaching", expressed that the teaching of modern languages has become a responsible task. An English language lab can be a powerful tool for teaching English language, particularly in areas where access to native English speakers or immersion environments is limited. In an English language lab, students can listen to authentic recordings of native speakers, practice their pronunciation, and engage in speaking activities in a low-pressure environment. The lab can also be used for pair or group speaking activities, giving students the opportunity to practice speaking with their peers. English language labs can also be used for grammar and vocabulary practice. Interactive activities and games can be used to help students learn and reinforce grammar rules and vocabulary words. English language labs can also be used to help students reduce their accent and improve their pronunciation. The lab can be used to record and play back student speech, allowing students to hear themselves and make adjustments. English

**THE ENGLISH LANGUAGE LAB: A HANDY TOOL TO AUGMENT THE
LEARNERS' ENGLISH LANGUAGE SKILLS.**

Dr. Anirudha Maruti More

Dr.J.J.Magdum College of Engineering

Jaysingpur

Abstract

The English language lab is a very handy tool to imbibe and enhance the utmost important basic language skills. Without mastering these skills, it is highly difficult for any language learner to use language in daily life, which is called communication. It is the need of the hour for the English learner to acquire competency in English communication. As these days English is now the business language as it replaced its earlier status as a Second or foreign language. The place of English language is on top all over the world. It is now the language of employability. So each job aspirant needs to have a very good command over all the English language skills.

Keywords: Language lab, M Lab, English language skills, proficiency, communication,

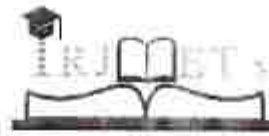
Introduction: English language lab is beneficial to those who want to enhance English language competency. As the Lab provides the learners with first-hand or real-time or hands-on experience from a native speaker of the English language. One can learn or acquire English language skills by listening from these native speakers may be British or American. The learner can grab this opportunity by continuously being in touch with the language lab. The English language will play a very dominant role in strengthening the required English Language skills which will automatically boost the fluency and confidence of the learner while communicating in English. The learner will feel at ease and will use English like their mother tongue. The English language will provide constant motivation. So the English language is advancing by using the advanced technologies of these modern days. Through the advancement of mobile technology English language lab is now also advanced.

The Journey of English Language Lab: The English language lab reached its primitive to the most advanced stage. As its journey started with radio, audio cassettes, and video cassettes that



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DESIGN, DEVELOPMENT, ASSEMBLY OF CNC MACHINE IN OLD LATH MACHINE APPARATUS

Shambhuraje Naikwade¹, Ayush Bhat², Swapnil Parit³,
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 Mechanical Engineering, India.

DOI: <https://www.doi.org/10.56726/IRJMET/519517>

ABSTRACT

This paper discuss how to reduce the human efforts and time in production line. Numerical control is the automated control of machine tools by means of computer. A CNC machine processes a piece of material to meet specification by following coded programmed instructions and without a manual operator directly controlling the machining operation. The investment cost of new work shop or purchase of new or second multi-axis machines like CNC,VMC,HMC that is very high so this retrofit reduce the investment cost. Optimize the cycle timing of job machining. This project going to develop an machine in old lath machine to increase the capacity of working and reduce the human efforts. This project work on principle to provide drive to both axis of lath machine by mounting the mechanical arrangement and to connect is combination of 4 station turret which reduce the time required to change the tool which allows to mount a lower 4 axis to work at one time. New scale method is introduced to take feedback of movement.

I INTRODUCTION

From past 20 years automation in every field is increasing rapidly. Human always tries to reduce human efforts and time and increase in speed of work and accuracy. After a survey of industry and small scale business, start-ups it is predict that the requirement of the such machines that work like three production unit and also low in cost. This project tries to fulfill the industry requirement and provide an opportunity to small scale business and startups also provide an work platform to skilled workers to recruit such machines. This project reuse the old machines that are outdated or not in use.

This project basically work on

1. Reduce human efforts.
2. Reduce investment cost of machines.
3. Provide opportunity to many small scale businesses.

II METHODOLOGY

Phase 1 : Detail study of design of machine. Work on mechanical mounting needed to develop a machine. Study of availability of resources. Data collection and detail analysis along with industry, importance of accuracy requirement of accuracy in work. All data collection and study work in phase 1.

Phase 2 : Actual project work (purchasing all required material), assembling and testing. After it is ready to run machine like grinding and scraping working under industry experts. developing machine to their production taking suggestions and improvements from sponsors.



Above are the images of the mounting elements stepper motor and 4 station turret to be mounted on the lath machine.



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22-23

A REVIEW ON VIBRATION ANALYSIS OF GEARBOX RESONANCE

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ABSTRACT

Resonance frequency problems are often encountered in mechanical systems. When this occurs, the level of vibration is generally quite high, and this in turn often causes premature failure of machine components. Often, attempts are made to address the rotating elements and shoring coupled components. It is very important to maintain good balance and alignment. However, in case of resonant conditions, the primary problem is generally not the magnitude of forcing function. The problem is that the forcing function, which may be of modest magnitude, matches a system resonance of natural frequency. General analysis of vibrating system is based on undamped forced vibrations. This analysis comprises determination of natural frequency of the system. Care should be taken in avoiding matching of this frequency with the frequency of external excitation and thus machines or machine parts are avoided from subjecting them to resonance conditions. Determination of effective mass and spring stiffness is a crucial part in the analysis. In complicated machinery where system may have many components interconnected to each other, it is difficult to determine effective mass directly. This can be carried out by preparing mathematical model to find effective mass of the system. The stiffness of the system may be found out by subjecting it to a known static force and measuring its deflection. When it not feasible to impart static force on the system, data from impact hammer test may be employed.

We have done a case study of worm and worm type gear box. The objective is to control vibrations in a worm and worm wheel type gear box by addition of the effective mass. The effective mass is relatively small part of the entire system. So it can be made possible to reduce the level of vibration with relatively small mass and simple in shape at required position on a gear box. Thus the resonance conditions of gear box can be controlled in a better way. Impact hammer test for the gear box, is performed and results obtained will be used to determine equivalent stiffness and the magnitude of required effective mass to snuff the resonance from the present gear mesh frequency. It was observed that a change at a resonance condition will be confirmed by performing the impact hammer test after adding the required effective mass.

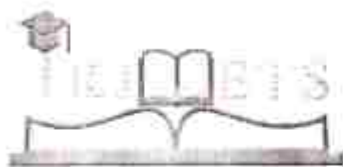
Keywords: Frequency, Resonant Frequency, Static Deflection, Dynamic Deflection, Transfer Function, Quality Factor.

1. INTRODUCTION

Vibration is a universal phenomenon. The vibrations are excited by mechanical systems which are made up of bodies interconnected by elastic elements and constrained to move relative to one another in a predetermined manner from the first input stage to the last output stage. For purpose of analysis the body is treated as a finite collection of material particles. A particle in turn is idealized as a mass point whose dimensions (ignoring its considering its motion). The motion of lumped entity is such as a particle in space is specified by its coordinates velocity and acceleration. The subject vibration deals with the behaviour of bodies under the influence of oscillatory forces, which are frequently produced by unbalance in rotating machines or by the motion of the body itself. All bodies possessing mass and elasticity are capable of vibration.

With the ushering in of the industrial revolution the engineer emerged on the scene with vibration problems, which began to bedevil the design and construction of machines and structures. Vibration problems facing the industry were grappled by engineers such as Timoshenko and Den Hartog, who drew copiously from the stockpile of knowledge built up by astronomers, physicists and mathematicians over the centuries.





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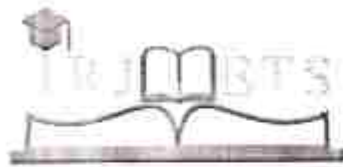
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MEDICAL MANAGEMENT SYSTEM

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ABSTRACT

A medical management system is built in order to replace manual-based system to computerize. Here the system is expected to be efficient, useful, and affordable in implementing tasks that are instructed by the pharmacy manager. Software does all things in pharmacy like sales, inserting new incoming goods, making bills, checking loans and debt, also computes employee salaries, gives information about products, makes different charts to see best month to sell some product via provided charts, and also manages employee work. The purpose of the Medical Management System is to automate the existing manual system.

I. INTRODUCTION

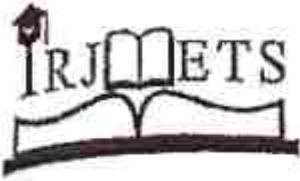
The system also enables the workforce of the medical store to offer their services in a manner which is more organized and systematic which also improves the medical store. This also helps in analyzing the performance of the store. The medical store management software can organize the daily activities in the medical store such as keeping track about tablets, billing, details of stock and others. The medical store management software enables to track the details of purchase stock by the store and the details of the selling stock by customer. The system generates the automated bill for every sale and also generates the reports for the customer detail, etc. The use of this system reduces the time and effort involved in managing inventory of the medical store. It also reduces the hard work involved in using paper for record keeping. The use of this system enables the manager to easily record the details of their suppliers and assess them whenever required.

II. LITERATURE SURVEY

[1] says A major amount of time is taken for writing the order as the pharmacist needs to check up the stock balance and make an estimate of the amount to order based on figures. As we know drugs are expired and be used after they have expired. This project work will notify the pharmacist about drugs that are expired, preventing those drugs from being sold and providing a solution to the earliest problems. This is a highly application for Pharmacists which reduces the burden and helps to manage all sections of the pharmacy like medicine management and billing etc. In Pharmacy, Billing management is the key process. The system helps the stores about medicine as well as fast searching, delete and update of medicines. This refers to the inventory management system project highly minimizes time and resources by which, searching the data you can get the data in quickest time. A summarized list of drugs dispensed to patient can be generated for monitoring purposes. Also, FMS will be able to generate report on the list of drugs dispensed in the pharmacy for a given period.

[2] Defined inventory control as an activity employed in maintaining the optimum number of each stock item or its stock. It defined inventory control system as a system that encompasses all activities involved in managing a company's inventories: purchasing, shipping, receiving, tracking, warehousing, and inventory control and re-ordering. stated that inventory control in pharmacy operations is referred to the stock management of pharmaceutical products retailed to meet future demands. The disastrous effects that would occur with the use of obsolete and manual inventory management were highlighted. Examples of such management were high levels of unnecessary inventory when sales forecast was not in line with actual transactions, no control over inventory and distribution process, safety stocks maintained were more than necessary and





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SENTIMENT'S PREDICTION

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ABSTRACT

In this paper, a audio sentiment analysis model is designed by recognizing the emotions using audio signal and also the live microphone audio signal as an input. The main objective is to design and implement this model is to determine the state of emotion of human being's voice. This study recognizes different emotions such as happy, sad, clam, angry, surprise, fear and neutral etc. In this design MPI classifier and sequential neural network (deep learning) models are used for prediction. RAVDESS dataset is given as input which contains lexically matched statements. These statements undergoes for training and testing under the CNN and displays the emotion related to it. With the machine learning model best results are gained.

Keywords: Multi Layer Perceptron Classifier (MLP), Convolutional Neural Network (CNN).

I. INTRODUCTION

As emotions play a vital role in communication, the detection and analysis of the same is of vital importance in today's digital world of remote communication. A SER (speech emotion recognition) system as a collection of methodologies that process and classify speech signals to detect emotions embedded in them. A Speech emotion recognition system is widely used in various applications in day to day life. This SER technology has improved the areas in Human computer Interfaces such as in gaming, eLearning, voice search, etc. and also in monitoring and controlling of aircraft cockpits, call centers. RAVDESS is the dataset of 2432 audio files, with 12 male speakers and 12 Female speakers, the lexical features (vocabulary) of the utterances are kept constant by speaking only 2 statements of equal lengths in a different emotions by all speakers. This the input file is given to train and test the model which further displays the emotion related to the input provided.

II. METHODOLOGY

Each of the 1440 files has a unique filename. The filename consists of a 7-part numerical identifier (e.g., 03-01-06-01-02-01-12.wav). These identifiers define the stimulus characteristics: Filename Identifiers

- Modality (01 = full-AV, 02 = video-only, 03 = audio-only).
 - Vocal channel (01 = speech, 02 = song).
 - Emotion (01 = neutral, 02 = calm, 03 = happy, 04 = sad, 05 = angry, 06 = fearful, 07 = disgust, 08 = surprised).
 - Emotional intensity (01 = normal, 02 = strong).
 - NOTE: There is no strong intensity for the 'neutral' emotion.
 - Statement (01 = "I like talking with you", 02 = "boy are going to home").
 - Repetition (01 = 1st repetition, 02 = 2nd repetition).
 - Actor (01 to 24. Odd numbered actors are male, even numbered actors are female).
- Filename example: 03-01-06-01-02-01-12. wav.

1. Audio-only (03)
2. Speech (01)
3. Fearful (06)
4. Normal intensity (01)
5. Statement "boy" (02)





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Dairy Automation

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Abstract: Dairy Automation is an application or software designed to manage activities related to daily work such as milk collection from members, sales to the customer and all the dairy-related processes. It became tough for dairy owners to manage all dairy work manually. To reduce manual work, A Dairy Automation System can help to make day-to-day dairy related activities easier. In this Dairy Automation application, we will provide information about animal feed in milk dairy. The whole process you can manage with one app. Dairy software also manage in reporting, and accounting. To Manage various rule of dairy, dairy owners need a dairy management system. It can ease a variety of a dairy process like member management, report analysis, accounting, milk supply and using more. Thus, the Dairy Owner can manage his contacts and daily working schedules through this application. This application avoids user to make manual contact daries to store the contact address. Dairy Owner who is working on systems can set events for the important work. Events will remind him about that work. The DairyMember also able to Read the Messages.

I. INTRODUCTION

In everyday life user faces some problems when they going to milk dairy like loss of passbook, fill incorrect data by dairy owner. For dairy owner it is also difficult to maintain and manage all records of user. As a technical student we are making a platform to make connection between the people and organizations easy.

Dairy Automation is an application or software designed to manage activities related to daily work such as milk collections from members, sales to the customer and all the dairy-related processes. It became tough for dairy owners to manage all dairy work manually. To reduce manual work, A Dairy Automation System can help to make day-to-day dairy related activities easier. In this Dairy Automation application, we will provide information about animal feed in milk dairy.

The Dairy Automation application is user friendly and user can handle it easily. The system saving time. This application is suitable for computerized data entry, Maintaining Dairy Information, Customer Information, Milk Rate Information etc. For develop android application of Dairy Automation we use Java, PHP, MYSQL and Android technologies.

Java: Java is a widely used object-oriented programming language and software platform that runs on billions of devices, including notebook computers, mobile devices, gaming consoles, medical devices and many others. The rules and syntax of Java are based on the C and C++ languages

PHP and MYSQL: MYSQL is used as a database at the webserver and PHP is used to fetch data from the database. Our application will communicate with the PHP page with necessary parameters and PHP will contact MYSQL database and will fetch the result and return the results to us.

Android Studio: Android Studio provides performance profilers so you can more easily track your app's memory and CPU usage, find deallocated objects, locate memory leaks, optimize graphics performance, and analyze network requests.

II. LITERATURE SURVEY

In the Paper [1] the create a dairy farming application for end users (Customers and also Farmers). In that application the price of milk is update with the current prices of Dairy Products. The App shows essential tips for keeping their Poultry and Farming animals healthy. The App shall consist of a Feedback page for further improvements and bug or error report. Mobile application development is the process by which application software is developed for small handheld devices such as smartphones, tablets, etc.

The aim of the paper [2] is the application also solves the differences between Vendor and his Customer. This application will be removing the basic situations like a disagreement between Vendors and Consumers about totaling, monthly estimation of total sales, and wastage of resources which otherwise would have caused losses to the small people who cannot afford such losses in their financial situation. It is easy to understand interface on both the ends of the application brings the convenience of its users to manage products and their availability and the history of when and where the product, gives Digital confirmation of delivering product.



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Fake News Detection using Machine Learning

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Abstract: A lot of research is already focused on detecting the Fake news. A lot of things read online, especially in the social media feeds, which may appear to be true, often is not. Fake news is news, stories or mislead or deceive readers. Usually, the Fake news on social media and various other media is spreading and creates serious concern, these stories are created to either influence people's views, or cause confusion and can often be a profitable business for online publishers. The spread of fake news in today's digital world has effected beyond a specific group. Mixing both believable and unbelievable information on social media has made the difficulty of truth. That is, the truth will be hardly classified. This paper comes up with the applications of NLP (Natural Language Processing) techniques for the process will result in feature extraction and vectorization using a bit learn we build (find) vectorization 'fake news', which is the misleading news that is being published through unknown sources usually through social media due to its ability to cause a lot of social with destructive impacts.

Keyword: NLP, logistic regression, naive bayes classifier, SVM, Fake News

I. INTRODUCTION

These days, fake news is intentionally written to mislead readers to believe false information, which makes it difficult and nontrivial to detect based on news content. The Fake news is creating different issues from irony articles to a news and plan government propaganda in some outlets. Fake news and real news in the media are growing problems in our society. Fake news contains misleading story is "fake news" but lately social media's changing its definition. Some of them are use the term to dismiss the facts counter to their preferred viewpoints. The importance of deception within American political discourse was the subject of weighty attention, particularly following the American president election. The term 'fake news' became common for the issue, which generally arises through the social media particularly to describe factually incorrect and misleading articles or information which published mostly for the purpose of making money through page views. In this paper, it is produce a model that can accurately predict the possibility that a given article is fake news. Facebook has been in the situation of much review following media attention. They have already implemented a feature to flag fake news on the site when a user sees it; they have also said publicly they are working on to distinguish these articles in an automated way. Certainly, it is complicated task. A given algorithm must be politically unbiased - since fake news exists on both ends of the spectrum - and also give equal balance to legitimate news sources on either end of the spectrum. In addition, the question of legitimacy is a difficult one. However, in order to solve this problem, it is necessary to have an understanding on what Fake News is. It is needed to look into how the techniques in the fields of machine learning, natural language processing help us to detect fake news. The main purpose of this system is to detect the fake news, which is a classic text classification problem with a straight forward proposition. It is needed to build a model that can differentiate between "Real" news and "Fake" news. It maintains lie about a certain statistics in a country.

II. METHODOLOGY

The main reason for utilizing Natural Language Processing is to consider one or more specialization of system or an algorithm. This method comes with the utilizing the applications of NLP (Natural Language Processing) techniques for detecting the 'fake news' or real, that is deceive news stories that comes from the non-reputable sources. In this paper a model is built based on the count the TFIDF vectorizer or a TFIDF matrix (i.e. word appears relatives to how often they are used in other articles in your dataset) can help. Since this problem is a kind of text classification, and implementing a Naive Bayes classifier and Logistic Regression will be better as for text-based processing. The actual goal is to reduce the time gap between a news release and detection developing a model which was the text transformation (count vectorizer vs TFIDF vectorizer) and choosing which type of text to use (headlines vs full text). Now the next step is to extract the most optimal features for count vectorizer or tfidf-vectorizer, this is done by using a knn K-Nearest Neighbor algorithm is the most used words, and/or phrases, lower casing not only removing the stop words which are common words such as "the", "when", and "there" and only using those words that appear at least a given number of times in a given text dataset.





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Driver Drowsiness Detection

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Abstract: Car crashes are the leading cause of death, killing around 1.3 million people every year. Most of these accidents were caused by distracted or drowsy drivers. The construction of highways reduces the margin of error for drivers. Careless people drive long distances on the highway every day. Lack of sleep or distractions, such as phone calls, conversations with passengers, etc. May cause an accident. This system uses convolutional neural networks to effectively assess levels of driver drowsiness and fatigue. The system can be divided into three parts: the model architecture, the mobile components and the website. It was created for logistics and ride-sharing companies to track and analyze the performance of their drivers. The system is designed to create a safer environment for drivers and has become a major asset for these companies.

Key Word: Drowsiness Detection, Machine Learning.

INTRODUCTION

Real-time drowsy behaviors associated with fatigue manifest as eye closing, head shaking, or brain activity. Thus, we can measure changes in physiological signals such as brain waves, heart rate, and eye blinks to monitor drowsiness, or consider physical changes such as leaning posture, driver head tilt, and sleepiness. Opening/closing of the eyes, the first technique, although more precise, is impractical because the highly sensitive electrodes must be attached directly to the driver's body, which can be inconvenient and distracting while driving.

Additionally, long hours of work can cause the sensor to sweat, reducing its ability to monitor accurately. The second technique is to measure body changes (i.e. eye opening/closing to detect fatigue) well suited to real-world conditions as it is non-invasive and uses a video camera to detect fatigue changes. In addition, short sleep durations of 2 to 3 minutes, the micro sleep, are good indicators of fatigue.

Therefore, by constantly monitoring the driver's eyes, it is possible to detect driver drowsiness and issue a warning in

The main idea behind this project is to develop a non-intrusive system capable of detecting fatigue in any person and issue a timely warning. Drivers who don't take frequent breaks on long journeys are likely to experience drowsiness, which goes undetected at first. According to expert research, about a quarter of serious road accidents are caused by drivers who are drowsy and in need of rest, meaning that drowsiness causes more traffic accidents than drunk driving. The system will monitor the driver's eyes using a camera, and by developing an algorithm, we can detect driver fatigue symptoms to prevent them from falling asleep. Therefore, this project will help detect driver fatigue in advance and give warning pop-ups in the form of alerts and pop-ups.

Drowsiness detection systems are considered an effective tool to reduce the number of road accidents. The parameters used to detect drowsiness are face and eyes. The warning system is used to warn the driver. Our goal is to implement effective solutions for road accidents and system development costs in real time. Driver drowsiness is one of the main causes of road accidents.

The number of deaths and injuries around the world is increasing every year. Provides Automatic Driver Drowsiness Detection System (ADDSD) to reduce the number of accidents due to driver fatigue, thereby improving transportation safety.

II. LITERATURE REVIEW

In this project, authors Anushka Vijay Sant, Atharva Shrikant Naik, Anirban Sarker Vandana Dixit mention[1] that one of the main causes of fatal road accidents is drowsiness and fatigue. Drowsiness threatens the safety of drivers, especially when they have to travel long distances. With that in mind, this article describes a system that can improve, analyze, and ensure driver safety. This article describes a research approach based on systems design. In the proposed system, drivers will be alerted when they are drowsy, and if the warning alert exceeds a threshold, the driver's current location would be sent to emergency contacts.

The system uses a convolutional neural network to efficiently assess driver drowsiness and fatigue levels. The system is divided into three parts: the model architecture, the mobile components and the website. It was created for logistics and ride-sharing companies to track and analyze the performance of their drivers.

According to the authors of this article, Mahamad Salah mahmoud, Hossam Alnuhushneh, Anwar Jarudal, Ahmad



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Stock Management System

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ABSTRACT-

To manage the organization's inventory system, this project aims to develop the Stock Management System web application. By conducting the survey in several businesses and malls. The word "stock management system" describes the processes and techniques utilized by a business to manage its inventory while implementing technological solutions. This system can be used to maintain track of inventory, update inventory depending on sales data, and produce daily or weekly sales and inventory reports. Software called an inventory management system is useful for companies that run hardware stores where the owner maintains records of sales and purchases. Workplace mistakes, minimal delays, and process speeding up. A store owner can use an inventory management system to keep track of sales and available stock, as well as to determine when and how much to reorder.

Keywords: Python, Inventory management system, Products, Sell.

INTRODUCTION -

A web-based system called Stock Management System is used to keep track of orders, sales, and deliveries. Stock management software's functions include maintaining an ideal stock level, tracking products as they are moved between locations, receiving new inventory, managing warehouse operations like picking, packing, and shipping, preventing product obsolescence and spoilage, and making sure your products are always in stock.

Stock management software's functions include maintaining an ideal stock level, tracking products as they are moved between locations, receiving new inventory, managing warehouse operations like picking, packing, and shipping, preventing product obsolescence and spoilage, and making sure your products are always in stock. Stock management software automates what was formerly a labor-intensive, manual process of counting each item one at a time and documenting it on paper. This technique can be digitized to increase accuracy while also saving time.

Today, it is increasingly popular to conduct business online in order to increase a company's target market. Given that the customer can save time and consider it

hassle-free, it becomes more efficient. The sales system and inventory system combine to form a web-based system, which is the most often used system by several businesses.

LITERATURE SURVEY -

Decision Support System for Inventory Management in Pharmacy Using Fuzzy Analytic Hierarchy Process and Sequential Pattern Analysis Approach, R. Gustriansyah, D. I. Sennise, and A. Ramadhan, 2015:

Before being supplied to the customer, pharmaceuticals are often stored in warehouses by pharmacies. The difficulty of predicting the stock of each product to the right in order to avoid excess/shortages arose since stacking products in a warehouse might decrease the productivity of the warehouse and increase the costs connected with inventory.

Development of an inventory management system by Y. Fan, 2010:

This paper introduces agent technology into domestic storage management and uses the autonomy, reactivity, and sociality of agents to define interaction and cooperation mechanisms among different agents, realizing the seamless connection among enterprises, achieving the goal of reducing and even eliminating inventory, making it a practical idea and method for enterprises to realize effective storage management.

"Autonomous Robot for Inventory Management in Libraries," R. Mehta and A. Sahu, 2020:

In order to save labour costs, improve the effectiveness of current inventory management systems, and offer a way to create an automated inventory, this study suggests an autonomous robot.

Taking care of a college library is one example of inventory management. Similar to an inventory management system, the library has issues with book availability.

METHODOLOGY -

By using python flask Stock management system is developed and also python sqlalchemy.



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Study and Design E-Commerce Website

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Abstract: business-to-consumer aspect of electronic commerce (e-commerce) is the most obvious commercial use of the World Wide Web. The main purpose of an e-commerce site is to sell goods and services online. The project involved the development of an advanced dynamic website for online sales. The system is implemented using a back-end database, a .NET framework, and a web browser as the front-end client. To develop an E-Commerce site, many technologies must be studied and understood. These include multi-tenant architectures, server-side and client-side scripting technologies such as programming languages, relational databases such as MS-SQL. In this project, the main objective was to demonstrate that better interaction with laptop and smart phone websites can increase online sales. It is a website that helps businesses to purchase various products over the Internet. It's useful because it makes it easier to buy and sell products online. E-commerce is an interactive e-commerce solution that provides users with the ability to buy and sell products. E-commerce is the leading online platform for trading new and used products in various fields.

Key Word: business-to-consumer, multi-tenant, e-commerce, scripting, relational database, dynamic.

1. INTRODUCTION

The development of "online e-commerce system" ignores the common problems in the practice manual system. This software is supported to eliminate and, in some cases, reduce the problems experienced by this existing system. In addition, the system is designed to meet the specific needs of businesses to run their business smoothly and efficiently. The application is minimized as much as possible to avoid errors when entering data. It also provides error messages when invalid data is entered. No formal knowledge is required from the user to use the system. So, through it all, it proves to be user-friendly. As mentioned above, an online e-commerce system can lead to an error-free, safe, reliable and fast business system. This can help users focus on their other activities instead of focusing on record keeping. Hence, it will help the organization to better utilize the resources. Every organization, big or small, faces the challenge of overcoming and managing Item Categories Male, Female, Address, Shipping Address, Order Information Every online e-commerce system has different dietary needs, so we design a system to help you Manage system administration requirements. It is designed to facilitate strategic planning and to help ensure that your organization has the appropriate level of information and detail for your future goals. Plus, for busy managers who are always on the go, our system comes with remote access functionality, which will allow you to manage your workforce at any time. These systems will ultimately allow you to better manage your resources.

An online store is a virtual store on the Internet where customers can browse a catalog and select the products that interest them. Selected items can be collected in a shopping cart. At checkout, the items in the shopping cart will appear as an order. At this point in more information is needed to complete the transaction. Typically, customers will be prompted to fill in or select payment information such as billing address, shipping address, shipping options, and credit card number. When an order is placed, an email notification will be sent to the customer.

II. PROPOSED SYSTEM

The E-commerce Management System has many advantages, compare to traditional store as one can compare the cost of a product with other e-commerce websites, and if a user dislikes any product, he/she can return it. While we can make use of the current technology to overcome the problem with the existing system. The e-commerce management system has many advantages over traditional stores, the cost of products can be compared with other e-commerce sites, and if a user does not like a product, he can return it. And we can use existing technology to overcome the problems of existing systems. The e-commerce management system provides customers with a better experience. When a user places an order without physically going there, the company ships the product to the location specified by the customer. It is a website that helps businesses to purchase various products over the Internet. It is very useful because it facilitates the purchase and sale of products online. E-commerce is an interactive e-commerce solution that provides users with the ability to buy and sell products.

E-commerce is the leading online platform for trading new and used products in various fields. On this site, we basically have 2 modules. The first module includes the client module and the second module includes the management module. Customers must register for any questions related to the product. A registered customer can see the detailed information of the product and he can buy and sell the product he needs. He must pay and he will be delivered. The



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Hospitality Services Management System

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Abstract: The system aims at the maintenance and management of the Rasika Hotel that are available in the Kolhapur. It mainly takes care of the Hotel management at the core area of the database. The system provides the information regarding the different Hotels that are available and their status specific to availability. The guests can visit the site and register themselves with the required information that is expected by the system. Each registered guest can raise a request for the unit bookings. The Guests are scheduled with the information of the availability of the units for they have requested the time. The total front end was dominated using Python standards applied with the dynamism of python server pages. At all proper levels high care was taken to check that the system manages the data consistency with proper business validations. The database connectivity was planned using the python Data Base Connectivity, the authorization and authentication was cross checked at all stages. The user level accessibility has been restricted into two zones the administrative and the normal user zone.

Key Word: Room Services, Food Ordering, Bar - Restro Management

Everyone needs the perfect hotels to stay when people tired because of travels. And our main motive is to served best quality of food and refreshment plan. All the above activity takes place manually, manually carrying out this activity in very tedious time consuming. As we have tried to develop computerized application so as to handle all the activity that takes place in Hotel. As all the activities that happen in the Hotel such as enquiry, check status booking, food order etc. can be handled on this system simultaneously.

INTRODUCTION

MATERIAL AND METHODS

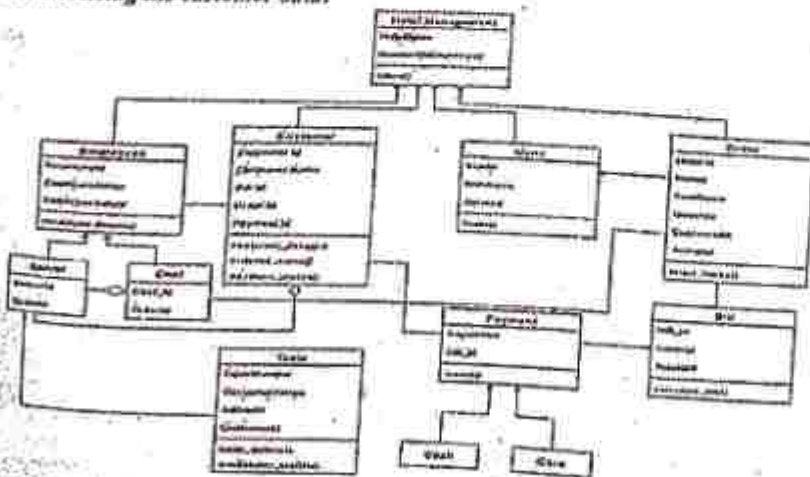
Software Requirements

Operating System:- Windows XP, Windows 7, 8, 10, 11, Linux
 Language:- Python
 Database:- MySQL server

Hardware Requirements

Any Processor
 Processor Speed >= 1 GHz to 2 GHz
 RAM >= 256 MB and above
 Hard Disk >= 2TB and above

User Interface for accessing the customer data:



KAMBLE ATISH
MAHAMUNI SHIREYAS

KHARE SURAJ
MULLA HAIDARALI

Prof. Mrs. S. J. Chougule

Department of Information Technology

Dr. J. J. Magdum College of Engineering, Jaysingpur

ABSTRACT:

One of the dreadful diseases that the world encounters moment is brain tumours. When abnormal cells form in the brain, it is called a brain tumor. There are a lot of variations in the sizes and positions of tumors, and hence this makes it really hard for a complete understanding of tumours. Radiologists can fluently diagnose the disease with the help of medical image techniques, but making this process automatic is obviously useful. Magnetic Resonance Imaging (MRI) is the most effective system for detecting brain tumors where, MRI images are trained and tested in order to describe the tumor. The automated system would be suitable to find and pinpoint the exact position of the tumor in an MRI image. Our study describes a method for segmenting abnormal brain tissues and determining whether the case has a tumor. This approach detects a unique area of the brain and forecasts the liability of a tumor developing there. Mask regional-based convolution neural network (Mask R-CNN) is a pre-trained deep neural network model that is used to distinguish objects from an image such as buses, animals, persons, trees, and other objects.

In comparison to numerous other analogous methods based on MLP, VGG-16 model, and U-net model, we discovered that Mask R-CNN method performs the best. The clarity of the MRI scans has a big impact on the delicacy. The proposed system was suitable to outperform similar systems on the same dataset, achieving a 74 percent crossroad over Union (IoU) score on the reference dataset, Brain MRI Images for Brain Tumor Detection. The demand for effective computer-aided brain tumour segmentation techniques has increased vastly in recent times. Still, accurate brain tumour segmentation is still a challenge because of its structural complexity such

as variations in position, size, shape, overlapping tumor boundaries with normal brain tissues, etc. Existing automated approaches for brain tumour detection can be broadly categorized into handwrought features and deep learning (DL) based approaches. Qasem et al. [1] used a watershed segmentation algorithm along with the KNN for brain tumour classification and segmentation. This method performs well on the selected MRI images and is unable to accurately segment the tumour regions on challenging images containing tumors with multiple structural complexities.

INTRODUCTION:

A brain tumor is a murderous-compliant million people around the globe and has a high mortality rate. Beforehand identification and segmentation of brain tumors help to increase the survival chances of the case and also save them from complex surgical processes. Moreover, the precise segmentation of brain tumors facilitates the surgeon for better clinical development and cure. The demand for effective computer-aided brain tumor segmentation ways has increased vastly in recent times. still, accurate brain tumour segmentation is still a challenge because of its structural complexity similar to variations in location, size, shape, and overlapping tumor boundaries with normal brain tissues, etc. Automated approaches for brain tumor discovery can be astronomically distributed into handwrought features and deep learning (DL) based approaches. Qasem et al used a watershed segmentation algorithm along with the KNN for brain tumor classification and segmentation. This system performs well on the selected MRI images and is unfit to accurately segment the tumor regions on challenging images containing tumors with multiple structural complications. In an





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A Review on Enhancing Terms of Social Housing in Construction Industry

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Department Of Civil Engineering & Dr. J. J. Magdum College of Engineering, Jaysingpur²

Abstract - This paper includes systematic literature reviews on Enhancing terms of Social Housing in Construction Industry. For this, analyze the Production of affordable rental housing in urban areas then identify adequate sites which will be made available to facilitate and encourage the development of a variety of types of housing for all income levels. Assist in the development of adequate housing to meet the needs of low- and moderate-income households and conserve and improve the condition of the existing affordable housing stock and to address and remark appropriate and legally possible; remove government constraints to the maintenance, improvement, construction and development of housing; so, from this study suitable parameters can be recommended with respect to Indian construction industry.

Key Words: Social Housing, low-cost housing, neighborhood, social housing

1. INTRODUCTION:

Studies assessing the conditions of economical housings have mostly focused on satisfaction levels and subjective perception of quality particularly with regard to the dwelling units or the larger neighborhood characteristics. However, residents usually react upon their immediate environment to achieve satisfaction and make the surrounding area as their home. This paper relates appropriation, attachment and identity in home-making mechanisms through which residents strive to achieve those satisfactions? Literatures are reviewed to identify the specific behavioral components of home-making. A range of informative cues is found in terms of human activities and physical traces observable in economical housing.

The relationships between the physical environment and social life of urban housing involve a complex interplay of a number of different perspectives, among others residential preferences and attitudes, community design features, residential crowding and attachment

have been used to explain the relationships of physical design and social aspects of housing. Social housing is a new concept which deals with effective budgeting and following of techniques which help in reducing the cost construction through the use of locally available materials along with improved skills and technology without sacrificing the strength, performance and life of the structure. There is huge misconception that low-cost housing is suitable for only substandard works and they are constructed by utilizing cheap building materials of low quality. The fact is that Low-cost housing is done by proper management of resources. Economy is also achieved by postponing finishing works or implementing them in phases.

The provision and management of social housing for those who are unable to access the housing market is essential to the maintenance of the fabric of society. Roughly 20 per cent of households in this country rely upon some form of subsidized housing provided by local authorities and housing associations, and many who would otherwise be homeless are housed in private sector accommodation procured by state and voluntary agencies. Yet others rely on housing benefits provided through tax receipts to help them afford the homes they rent. The social housing industry is vast and still growing, with an annual growth in the number of housing associations and management bodies, and is changing to adapt to new political and economic forces. There are very few countries in the world where some form of subsidized housing does not exist, and the total number of social homes is likely to grow worldwide, as are the challenges of the sector.

The analytical assessment of residential complexes in terms of environmental, social and economic sustainability can enable setting particular standards in design that should be followed in new projects to ensure increased sustainability. Besides, it allows developing a set of criteria for future projects to be used with the highest level of residential conditions as the state housing through sustainability evaluation.

These complexes are residential neighborhoods consisting of villas and houses and related administrative





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Review of Critical Success Factors in Construction Industry

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 Research Publication

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Abstract: Critical success factors (CSFs) are project management inputs that can lead to project success either directly or indirectly. It entails a number of components that must be coordinated in order for the project to be completed on time. The goal of this research is to determine the magnitude of the link between CSFs and project success. The research findings suggest that the company is evaluating project management performance. Finally, the conceptual framework was created by identifying five factors that contribute to project success: Project Management Action, Project Procedures, Human Factors, External Issues, and Project Related Factors.

Keywords: Critical Success Factors (CSFs), Project, Project management, Organization, Project implementation, Project managers.

1. INTRODUCTION

Over the life of a facility, a construction project is effectively completed as a result of many jobs and interactions, both planned and unexpected, with changing participants and procedures in a continually changing environment. Certain aspects are more important than others in project success. Critical success factors (CSFs) are a term used to describe these factors. Rockart (1982) coined the term "critical success factors" in the context of project management, and it is defined as those characteristics that contribute to project success (Santiva et al. 1992). Any growing country's development and expansion is contingent on the successful implementation of new initiatives. After agriculture, the construction industry is India's second major source of employment. Because of the shifting uncertainties in technology, government funding, and development procedures, the building sector is progressive. Project performance is also used as an objective measure of project goals, such as completing the project on time, on budget, with good quality, and with complete client satisfaction. Project performance is based on time, cost, and quality, but these factors alone do not provide a whole picture of project success. There are also a lot of issues to consider, such as finishing the project on time and on budget, quality of workmanship, client and project management satisfaction, technological advancements, environmental friendliness, and safety. Identifying critical success elements, building conceptual frameworks, and analysing the linkages among critical success factors and the link between critical success factors and performance are some of the other factors. Purchasing a piece of land, determining the project's marketing, developing the building programme and design, gaining the appropriate public approvals and finance, building the structure, then leasing, managing, and eventually selling it are all part of the construction project development process.

2. LITERATURE REVIEW

1. Critical success factors influencing performance of construction projects
 Sunesh Sathier Babu et al state that the study of project success and the critical success factors (CSFs) is considered to be a means for improving the effectiveness of project. Performance can be assured by identifying and eliminating the factors that cause poor project outcomes. Thus, project managers need better understanding of critical success/failure factors and how to measure them. Also he recommends that this study is to systematically investigate the causes of project failure and how these can be prevented, managed, or controlled. Construction projects are frequently influenced by 'success factors' which can help project parties reach their intended goals with greater efficiency. Their aim is to investigate the critical factors that influence project success. Success factors related to project success need to be essential environment because appropriate success factors will help project parties to reach their intended goals. Success factors related to project success are:





Use of Agricultural Material for Effective Industrial Noise Reduction in Textile Industries

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Abstract: Noise is unwanted sound of the major pollutant which cause major effect on human being and disturbing their life's one of the main root cause of generation of noise is in textile industry there are different kind of machinery which create unwanted noise so noise control is one of the major requirements to improve industrial working environment. The study of relevant research conducted to understand the use of agricultural material such as Bamboo, Tulsi, Banana stem, Rice straw husk, Sugarcane bagasse, Coconut coir, date palm, hemp etc. In the construction of structure around the textile machineries fully or partial closure for industrial noise reduction to give an effective solution for industrial noise problem. The specimens preparation with composite mixtures of two to three agricultural material with cement and water, checking of sound frequency of those specimen by sound level meter, frequency generator and stereo speaker which is experimental set up of impedance tube system and the Noise Reduction coefficient (NRC) was evaluated. The study of noise reduction in textile sector and the effective use of agricultural materials overcome this problem is discussed in this paper.

Key Word: Bamboo, Tulsi, Banana stem, Rice straw husk, Sugarcane bagasse, Coconut coir, date palm, Noise Reduction coefficient (NRC), impedance tube system.

1. INTRODUCTION

Noise is 'unwanted sound' one of the major pollutant as noxious gases in the environment which plays an important role in occurrence of annoyance, inconvenience and creating nuisance which causes Noise Pollution. As a result of industrialization, urbanization and population growth in the 21st century, noise pollution continues to grow in its extent and severity. Environmental noise pollution is a form of air pollution which has very adverse direct and cumulative effects on the health and degrades working, and living environments of wellbeing with corresponding real socio economic losses.

Noise pollution is an environmental problem all over the world, which has very harmful effects on health and life of the people who are exposed to continuous noise throughout the workday, may leads to some injuries such as hearing loss, weakness in nerves and pain in internal tissues, heart problems, and even higher blood pressure sustaining for long term. There is growing evidence that noise pollution is not merely an annoyance; like other forms of pollution, it has wide-ranging adverse health, social, and economic effects.

Noise pollution in its behavioural sense is very much complex phenomena because of insufficient knowledge about its effects on human being, but it is fact that noise pollution has widespread and imposes long-term consequences on health. The overarching worldwide sources of noise pollution are Transportation systems, Industrial Machineries, Office Equipment's, Power tools, Construction Equipment's, Household appliances etc. These sources contributes to increase the noise level parameter measured in decibels, but there are some other important factors to take into account like duration of exposure, frequency, incidence and distribution along the working day. The different types of numerous diseases are associated with various kinds of noise exposures which causes discomfort and dangerous impacts on the environment. However in most of the developing countries comparatively very little attention has been rewarded to the noise pollution issue, in spite of its importance in the urban and industrial sectors.

The agricultural materials have become safer, lighter and more technologically optimized. In addition, the concept of environment friendly, sustainable, recycled and green building materials will soon have an important role in the making of sound-absorbing materials.

1.1. LITERATURE REVIEW

[1] INVESTIGATION OF A FEASIBLE APPROACH TO REDUCE NOISE IN RAILWAY INDUSTRIAL NOISE
 [A] K.N. Hemantha Reddy et al. In: IJIRE-V3I03-286-289. This work is licensed under the Creative Commons Attribution International License (CC BY 4.0).
 some reduction material is given as follows: 1) Samples of 200mm height, 100mm length and 25mm (diameter) x 25 mm (thickness) were made by using Salvinia plant. Salvinia plant is mixed with cement and ratio of 10% and water was added. Noise Reduction Coefficient of these specimens was investigated by using an experimental set-up consisted



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Groundwater potential and recharge zones mapping using remote sensing and GIS for Kadegaon Taluka, Maharashtra, India

Digvijay S Shinde, Dr. DB Desai, Dr. JS Lambe and Dr. Abhijit M Zende

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Abstract
Year by year the water is becoming the scarce source all over the world. Water resources available in this area is the fresh water namely surface water and ground water. According to the work of scientist the total volume of the ground water is very less as compared to the total water available in the earth. There are many areas in our country that are facing scarcity of water, and this is due to the improper planning of the ground water development, results in the fall of water levels, drying of wells, etc. The over exploration of ground water in certain parts of the country may also leads in the lowering of ground water table, and this requires the scientific resource management and conservation. The source of water available below the surface of earth and that can be used as the prime source of water for water supply system majorly for agriculture, and also used for domestic and commercial uses. Groundwater has crucial importance and value for human life and economic development. The ground water has major contribution in the earth's water circulatory system known as hydrologic cycle. Keeping in mind the growing rate of the population and as result of it the needs of the society could not be satisfied by the available surface water resources. Thus the man has started massive search of water resources. Such massive mining of ground water has leads to drastic decline of ground water table. Thus the ground water has become the precious resources for the agriculture and domestic use. Hence in order to ensure a sensible use of ground water the proper evaluation and management is required.

Keywords: groundwater, precipitation, infiltration, groundwater level fluctuation etc.

1. Introduction

Geospatial technology is a quick and low-cost tool for producing valuable data on geology, geomorphology, lineaments, slope, and other topics that aid in determining groundwater potential zones. The systematic integration of these data with the subsequent hydrogeological investigation allows for the rapid and cost-effective delineation of groundwater potential zones. Although it is possible to visually integrate these data and delineate groundwater potential zones, it is time consuming, difficult, and introduces manual error. In recent years, digital techniques have been used to integrate various data in order to delineate not only the groundwater potential area but also to solve other groundwater-related problems. Using a geographical information system (GIS) software tool, these various data are prepared in the form of a thematic map. These thematic maps are then combined with the "Spatial Analyst" tool. The "Spatial Analyst" tool, which includes mathematical and Boolean operators, is then used to create a model based on the goal of the problem at hand, such as the delineation of groundwater potential zones.

In groundwater resource mapping and planning, integrated remote sensing and GIS can provide an appropriate alternative for some regions. In this study, the groundwater potential zones of the Kadegaon taluka of Yavatkar district, Maharashtra, India are mapped using remote sensing and GIS. The study area is selected because of its increased and rapid growth. Due to the increasing population and industrial development, the demand for water is increasing. The study area is selected because of its increased and rapid growth. Due to the increasing population and industrial development, the demand for water is increasing. The study area is selected because of its increased and rapid growth. Due to the increasing population and industrial development, the demand for water is increasing.

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Developing Skills for Successful Leader

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Abstract – This study sought to determine whether different job functions and different levels of leadership ability. Because leadership skills can be learned and developed, this study emphasizes them over other leadership constructs like leadership qualities. Leaders must inspire and exert influence over all stakeholders in order to be successful. This includes the board of directors, the shareholders, the staff, the vendors, and the clients. The goal of this study is to determine if there are any variations in the cognitive, interpersonal, and business leadership abilities of leaders in sales, finance, and human resources. Leadership involves creating and articulating a vision and inspiring others to want to work toward that vision. But leaders may not be skilled at or involved with the day-to-day management of the work needed to turn that vision into a reality.

Key Words: Leadership, Leader, Quality, Skill

transformational or charismatic leadership, and leader-member interchange are just a few of the numerous theories that have been put forth over the years to describe the kinds of behaviors that make effective leadership possible. These theories all have a similar emphasis on specific behavioral patterns and how these patterns affect the effectiveness of leaders. Contrarily, leadership might be defined in terms of the capacities, expertise, and skills that make effective leadership feasible rather than in terms of particular actions.

Leaders may be found and developed in the workplace by giving them some autonomy in their decision-making. There are persons in every culture who only perform the duties that are expected of them. Then there are those that just innately step up and assume more accountability and initiative. These are the individuals that truly possess leadership potential.

1. INTRODUCTION

The capacity to influence and direct followers or other members of an organization is referred to as leadership. Making wise – and occasionally challenging – decisions, defining and communicating a clear vision, setting realistic goals, and empowering subordinates with the information and resources they need to reach those goals are all aspects of leadership.

Leadership is the ability to influence others to follow your vision and to achieve the organization's goals.

2. Leadership Skills:

People with leadership qualities are able to direct and complete tasks, support initiatives, create a sense of unity, and empower others. A person's capacity to motivate staff, inspire them, instigate change, and produce outcomes are all examples of leadership capabilities. Employees need more than just leadership abilities to become leaders. Their managers need to motivate and inspire them.

3. Abstract



SLIP FORMWORK

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Abstract— Slip forming is one of the most effective processes for constructing unconventional structures such as cooling towers, chimneys, and silos, as well as roadway and bridge construction. Formwork made using slips techniques used on a construction with a height more than 16 meters and its unique design. Technology for erection that are both quick and cost-effective. Slip forming takes into account the fastest erection is 7.2 meters per day procedure. They have a variety of components, and when they're finished, they're ready to use. It was elevated up and further by the hydraulic jacks of certain height concerning. It's possible to undertake some concreting. As a result, these methods are quick and efficient. Savings, cost-effective, and fewer workers are required.

Keyword — Formwork, Timber, Concrete.

1 INTRODUCTION

Concrete pouring and curing involve temporary mould called formwork. Traditional formwork is made of wood, but it can also be made of steel, glass fibre reinforced polymers, and other materials materials. The term "slip form" refers to a construction procedure in which concrete is poured into a mould poured over the top of a constantly moving formwork. As far as the concrete. When the concrete is poured, the formwork is elevated vertically at a rate that permits the concrete to settle. Before the concrete can be removed from the bottom formwork, it must harden. For projects with more than seven stories, such as skyscrapers, slip form is the most cost-effective option. Because it is the quickest form of vertical building, bridges and towers use used, horizontally reinforced concrete constructions, but it can also be employed for vertically reinforced concrete structures. Examples are chimneys, cooling towers, and chimneys. The concrete that will be used must be suitable enough to be placed into the form and finished by spreading and leveling. Concrete must be poured. The formwork are not being completed with it is regularly removed by ascending the elevated formwork. The formwork usually comprises three platforms.

- The upper platform is used for storage and distribution.
- Middle platform: Levelled surface for all the slip forming platforms.
- Lower platform: This allows for concrete falling to be done.

The middle supporting platform must be rigid enough to support the other components to work properly. Particular care must be taken at the same time. If the shattering is slow, it can take a long time. The rate at which the concrete is ejected is inconsistent.

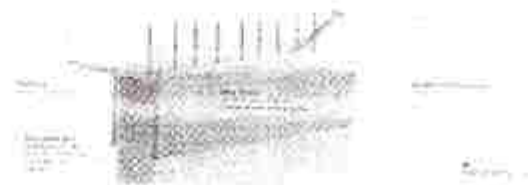


Fig 1- Slip Forming

SLIP FORMWORK HISTORY: In 1930, Amberg discovered the slip forming technology for building silos, grain elevators, and cooling towers.

- In Skyline, the slip formwork process was used for the first time. The Niagara Falls Tower, which was constructed in 1965, is Located near Niagara Falls, Ontario.
- For the Sheraton Waikiki, another remarkable structure was built. In 1969, a hotel in Hawaii was built.
- In the 1990s, slip forming was also used for paving in the United Kingdom. Includes the addition of slip technique in highways, bicycle paths, and kerbs equipment for paving. Furthermore, slip form paving was used. Airport runways, taxiways, and highways are paved using this material.

Slip forming entails building a wall-shaped form on the structure's base that is approximately 1.0 to 1.2 metres high. A bell-shaped cone, one on each surface, is used in this sort of formwork. Usually, there is 2 to 4 cm bleed and water in concrete. There are face supports on both the inside and outside of a wall. Scaffolding, cooling towers, and other structures like slope is deposited as the concrete is poured. It slowly and steadily lifted using jacks screws, hydraulic jacks. The construction of the form hydraulic jacks are a type of hydraulic jacks. The hydraulic jacks are used for raising the





RECYCLING OF SEWAGE WATER FOR APARTMENT.

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Abstract: Recycling of sewage water is most important topic in the world. In most of the areas waste water is thrown off in river and sea without any treatment. This wastewater contains many pollutant components that can be harmful for human health and environment. Due to wastewater natural resources of fresh water are polluted and aquatic life is dangerous. Knowing the importance of water and evaluating the risk makes water treatment necessary for avoiding future problem. The purpose of this project is to prevent natural water sources and to treat wastewater coming from human activity and prevent environment and human health. So minimize harmful component present into the wastewater using various method.

Keywords: Recycle, Sewage, Waste Water 3.

1 INTRODUCTION

1) Water

Water is a transparent, tasteless, odorless, and nearly colorless chemical substance, which is the main constituent of Earth's streams, lakes, and oceans, and the fluids of most living organisms. It is vital for all known forms of life, even though it provides no calories or organic nutrients. Its chemical formula is H_2O , meaning that each of its molecules contains one oxygen and two hydrogen atoms, connected by covalent bonds. Water is the name of the liquid state of H_2O at standard ambient temperature and pressure. It forms precipitation in the form of rain and aerosols in the form of fog. Clouds are formed from suspended droplets of water and ice, its solid state. When finely divided, crystalline ice may precipitate in the form of snow. The gaseous state of water is steam or water vapor. Water moves continuously through the water cycle of evaporation, transpiration (evapotranspiration), condensation, precipitation, and runoff, usually reaching the sea. Water covers 71% of the Earth's surface, mostly in seas and oceans. Small portions of water occur as groundwater (1.7%), in the glaciers and the ice caps of Antarctica and Greenland (1.7%), and in the air as vapor, clouds. Since from long time require water for day to day activity, such as drinking, cooking, bathing, washing, etc. From all this activity mostly the water is waste (polluted). According to

1.5 a human being requires about 135 liters of water per day for his activity & about 80% of this is wasted, means about 108 liter per person is wasted. This Waste Water is generated from various activities such as bathing, washing, cleaning, etc.

2) Waste Water:

Waste water means polluted water which requires treatment for its further use. The treatment may be physical, chemical, biological or combination all. Household wastewater comprises of two types of wastewater as considered below. Black water- Wastewater from the toilet, containing faecal matter and urine is called black water. It is also referred to as sewage. Grey water-Grey water is wastewater generated from the kitchen sink, clothes wash area, bathroom and other taps. Both grey and black water can be suitably treated and reused for non-potable applications. Generally waste water contains about 1-5% solid & 95-99% water. The current increase in production & disposal of this waste water has created problems. 3) RECYCLING & REUSE OF WASTE WATER: Approximately 80% of domestic water supplied is released as wastewater. In today's context of fresh water shortage, wastewater needs to be seen as a resource rather than as a waste. Wastewater can be recycled and reused for various applications such as for flushing and gardening. Grey water comprises 50-80% of domestic waste water and it is easier to treat and recycle than black water as the contamination levels in grey water are comparatively low. In any application, care needs to be taken to meet IS standards for water quality for the particular application. 4) TECHNOLOGIES FOR WASTEWATER TREATMENT: Besides the conventional treatment systems such as sewage treatment plants (STP) and septic tanks, there are other alternative technologies which can be implemented at the level of a neighborhood or housing complex which recycle black and/or grey water for reuse purposes such as for flushing and gardening in that premises. One can recycle the sewage water of residential apartment, where if the used sewage water is drawn in pipe without any treatment. This water contains many pollution components that can be harmful for human health and environment. Knowing the importance of water and evaluating the risk makes water treatment necessary for avoiding future problems. The purpose of this project is to prevent natural water resources and to treat wastewater coming from human activity and prevent environment and human health.





CONSTRUCTION SITE INSPECTION BY USING DRONE OR UAV

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Abstract—The objective of this paper is to perform the innovative idea for the new structures of Constructure Site inspection, in civil sector, currently ongoing constructions sites are monitored manually which time consuming and also need human energy, time & cost. so to overcome this problem we are trying to develop this system. Our Construction Site Inspection by using Drone or UAV is based on organized real-time data that is gathered using a variety of cutting-edge instruments, such as drone, sensors, camera, and site photos etc. here advanced software is used to analyze the data, enabling better operations, planning and adjusting.

Keywords— Construction Site, Inspection, Monitoring, Drone.

1. INTRODUCTION

Construction site inspection drone or unmanned aerial vehicle (UAV) is based on organized real-time data that is collected using a variety of cutting-edge tools, including a drone, sensors (photo/video camera, imaging camera, and sensors, etc.) A weekly, biweekly, or advance informational preparation of the construction of work progress control over and compliance monitoring for workplace safety and security is necessary to obtain the high-resolution photos and videos. We are developed this system since the monitoring of active construction sites in the civil sector at the moment is labour-intensive, time-consuming, and expensive. Using drones for construction site inspection can provide several benefits compared to traditional methods. Drones can capture high-quality images and videos from various angles and heights, allowing for a more comprehensive view of the construction site. Drones can capture high-resolution images and videos of the construction site from various angles, which can be used to create 3D models and maps. These models and maps can be used to track the progress of the construction project and identify any delays or issues that may arise. Drones can capture information about the construction site quickly and efficiently, which can save time and reduce costs compared to traditional inspection methods. Additionally, drones can be used to identify potential issues early on, which can help to prevent costly delays and rework. Overall, drones are a valuable tool for construction site inspection, providing a more comprehensive and efficient view of the construction site.

UAVs for construction site inspection provides a range of benefits and can help to improve safety, quality, and efficiency on construction projects.

II. LITERATURE SURVEY

"An overview of using drones for construction site inspections" by J. Seo and M. Al-Hajjeh. This paper provides an overview of the benefits of using drones for construction site inspections, including increased efficiency, accuracy, and safety. "Drone-based monitoring and inspection of construction sites: A review" by H. Rahimi and H. Saeedi. This review paper summarizes the recent advancements and challenges in the use of drones for construction site monitoring and inspection, including data processing and analysis techniques. "Unmanned aerial vehicles for construction site monitoring and inspection: A review of applications and technologies" by A. Alharbi et al. This paper presents a comprehensive review of the different applications and technologies used in the field of drone-based construction site monitoring and inspection. "A review of unmanned aerial vehicle applications for construction site inspection" by S. Shukla et al. This review paper discusses the various applications of drones in construction site inspection, including site mapping, progress monitoring, and safety inspection. "A case study of drone-based construction site inspection for quality control" by B. Yang et al. This paper presents a case study of the use of drones for quality control inspections on a construction site, demonstrating the benefits of using drones for identifying defects and reducing inspection time. "Application of drone-based inspection for construction safety management" by Y. J. Kim et al. This paper discusses the use of drones for construction site safety inspections, including identifying hazardous conditions and monitoring worker compliance with safety regulations. "Integration of drone and BIM technologies for construction site inspection" by Y. Li et al. This paper proposes an integrated drone-based system and Building Information Modelling (BIM) technologies for construction site inspections, including automatic defect detection and documentation.





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Groundwater potential and recharge zones mapping using remote sensing and GIS for Kadegaon Taluka, Maharashtra, India

Digvijay S Shinde, Dr. DB Desai, Dr. JS Lambe and Dr. Abhijit M Zende

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Abstract

Year by year the water is becoming the scarce source all over the world. Water resources available on earth are in the two forms namely surface water and ground water. According to the study of scientist the total volume of the ground water is very less as compared to the total water available in the globe. There are many areas in our country that are facing scarcity of water, and this is due to the no proper planning of the ground water development, results in the fall of water levels, drying of wells, etc. The over exploration of ground water in certain parts of the country may also leads in the lowering of ground water table, and this requires the scientific resource management and conservation. The source of water available below the surface of earth and that can be used as the prime source of water for water supply system majorly for agriculture, and also used for domestic and commercial uses. Groundwater has crucial importance and value for human life and economic development. The ground water has major contribution in the earth's water circulatory system known as hydrologic cycle. Keeping in mind the growing rate of the population and as result of it the needs of the society could not be satisfied by the available surface water resources. Thus the man has started massive search of water resources. Such massive mining of ground water has leads to drastic decline of ground water table. Thus the ground water has become the precious resources for the agriculture and domestic use. Hence in order to ensure a sensible use of ground water the proper evaluation and management is required.

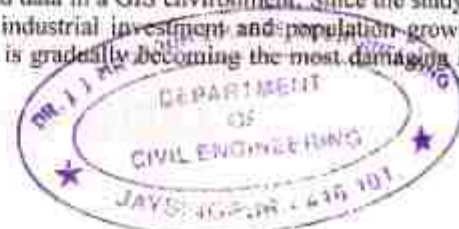
Keywords: groundwater, precipitation, infiltration, groundwater level fluctuation etc.

1. Introduction

Geospatial technology is a quick and low-cost tool for producing valuable data on geology, geomorphology, lineaments slope, and other topics that aid in determining groundwater potential zones. The systematic integration of these data with the subsequent hydrogeological investigation allows for the rapid and cost-effective delineation of groundwater potential zones. Although it is possible to visually integrate these data and delineate groundwater potential zones, it is time consuming, difficult, and introduces manual error. In recent years, digital techniques have been used to integrate various data in order to delineate not only the groundwater potential zone but also to solve other groundwater-related problems. Using geographical information system (GIS) software tool, these various data are prepared in the form of a thematic map. These thematic maps are then combined with the "Spatial Analyst" tool. The "Spatial Analyst" tool, which includes mathematical and Boolean operators, is used to create a model based on the goal of the problem at hand, such as the delineation of groundwater potential zones.

In groundwater resource mapping and planning, integrated remote sensing and GIS can provide an appropriate platform for convergent analysis of diverse data sets. This work aims to develop and apply integrated methods for better understanding the groundwater resource of the Kadegaon taluka in Sangli district, Maharashtra, by combining information obtained by analysing multi-source remotely sensed data in a GIS environment. Since the study area is connected by a national highway, both industrial investment and population growth have increased, and as a result, water scarcity is gradually becoming the most damaging issue in such a region.

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An Industry Skills Oriented Research Articles

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SOIL STABILIZATION BY USING HIGHLY VULCANIZED RUBBER SHEET: A REVIEWDr. Jagdish Lambe¹, Ajinkyaraj Raut², Suraj Jadhav³ and Sajid Mullani⁴¹Department of Civil Engineering, Dr.J.J.Magdum College of Engineering, Jaysingpur,
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Abstract— The road networks in India span an extensive 59, 03,293 km, making them a crucial aspect of the country's infrastructure. To improve road construction methods, a project has been proposed to replace the conventional base course of Water Bound Macadam (WBM) roads with rubber and steel stacked mats. India generates over 1 million tonnes of rubber tire waste annually, with approximately 60% of it being recycled. Additionally, about 15 million tonnes of rubber tyre waste is produced in the country. The choice of rubber and steel for the mats is based on their desirable properties: rubber provides flexibility, while steel offers high strength to bear the load from the road surface.

The methodology involves creating the mats by combining rubber and steel back-to-back, with grooves at regular intervals for rolling. These prepared mats are then placed over the sub base course and rolled. To increase the soil's density and bearing capacity, holes are made in the mats, allowing soil particles to fill them when the mats are inserted into the ground. Fine courses are subsequently dumped and rolled over the mats. The mats used in this approach are easily transportable as they can be rolled up. Moreover, by employing this mat system, the compaction period for the base course can be eliminated. It is important to note that this proposed methodology is specifically intended for Water Bound Macadam roads. By adopting this approach, the overall time required for road construction is reduced, waste tires are effectively recycled, and the overall project cost is minimized. The end result is an efficient road that can be constructed within a shorter timeframe.

Keywords— Soil Stabilization, Highly vulcanized rubber sheet, Construction technique.

INTRODUCTION

Soil modification plays a significant role in achieving the desired soil properties for construction purposes. Soil modification involves altering or improving the properties of the soil to make it more suitable for construction work. Various techniques and methods are employed to modify soil, depending





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“Use of plastic in bitumen for construction of road”

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Abstract: The use of plastic in bitumen will allow for the utilization of waste plastic materials it increase the quality of road in this cases plastic bitumen can reduce the overall cost of the project since plastic bitumen can increase the life of road & reduce the long term maintenance requirement it should provide long term cost saving to the agency when the proper use of plastic bitumen in construction of road. In this project we have to increase the concentration of plastic & to decrease concentration of bitumen by taking different concentration ratio of plastic & bitumen. We have to design the module of plastic bitumen blend which have all the standard properties of the regular bitumen by taking different test like flash fire point, penetration etc, on plastic bitumen blend.

Keywords: - plastic, bitumen, plastic bitumen blend

I. INTRODUCTION

Plastic is everywhere in world. In every industry the plastic are used as a main component like packing material in building construction, in making toys etc. Also in automobile industry the plastic materials are widely used in all over the world. Now a days the plastic is widely used in a plastic bottles, used for mineral water packing, cold rinks storage, detergent storage etc. After use of that bottles for one time purpose the are thrown here and there. And that creates pollution. By using these plastic bottles in bitumen we can increase the strength of the road. If the plastic is added in proper proportion in to the bitumen the life span of road would be increase. It can save money and also protects the environment. In various countries the plastic is used in a road construction. The proper use of these materials can help for build a economical road. The maximum proportion of plastic in plastic bitumen blend can help strong and durable road.

II. OBJECTIVES

1. To reduce the quantity of bituminous and to increase the quantity of plastic in construction of flexible pavement.
2. To increase the life span of road.
3. To reduce the overall cost of road.
4. To test the bitumen and modified bind.





"UTILIZATION OF PLASTIC WASTE IN PAVING BLOCKS"

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Abstract—A large number of plastic wastes have been collected from several places such as tourist and public places etc., High density polyethylene bags are collected, cleaned, and used as a replacement for cement in the manufacturing of Paver Blocks. Plastic waste is available in large quantity and hence the cost factor comes down, when we having waste plastic then we can use as reuse, recycle and reduce. Be mindful of what you do, pay attention to the items you buy, and always check yourself to see if you need it or if it comes in a package with less waste

Keywords—Paver block, Plastic waste, Ceramic Waste, Compressive Strength

INTRODUCTION

Plastic is evil. You can hardly do away with it. Every day we use plastic in daily lifestyle that is Garbage, coffee cup, electronic material, plastic bags Etc. so plastic is very harmful to humans, animals, marine and as well as to environment. But where is all the plastic going? It would be startling to note that billions of tons of plastic are ending up in the world's oceans. Pollution caused by plastic is not only harmful to marine life but is also affecting the health of humans. The harmful chemicals like PCBs, DDT, and PAH, which get absorbed in the plastic debris that floats in the seawater, have a varied and harmful range of chronic effects like endocrine disorders. The toxins are transferred in the food chain as they get absorbed in the animals' bodies after they eat the plastic pieces. Human beings consume these contaminated fish and mammals. Plastic pollution is affecting the global economy. It is destroying the fishing and aquaculture industries. Plastic is mostly produced by household, tourism and trekking etc. In many countries, the composition of Waste is different, that it is affected by the socioeconomic characters, waste management programs, and consumption patterns, but generally, the level of plastic in the waste composition is high. One of the largest components of plastic waste is polyethylene which is followed by polypropylene.

Definition of Plastic—Looking to the global issue of environmental pollution by post-consumer plastic waste, research efforts have been focused on consuming this waste on a massive scale in an efficient and environmentally friendly manner. Plastic contains in solid as well as in finished state.

GENERATION - India generates 5.6 million metric tons of plastic waste annually, with Delhi generating the most of at municipality at 689.5 metric tons every day, according to a report from the Central Pollution Control Board (CPCB). CPCB submitted the report to the Indian Supreme Court, which said, "We are sitting on a plastic time bomb."





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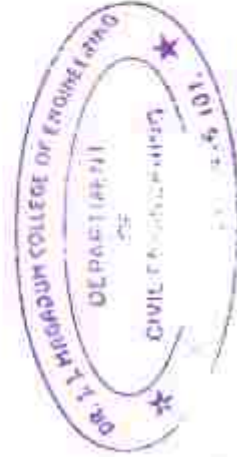
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Causes of Accident and its impact on construction work

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ABSTRACT:

Based on the responses of experts, we find different cause of accidents in construction industry. And according to that we provide field-specific recommendations. It was also recommended to take accident prevention measures. The study focusses on to find different reasons of accidents and its impact construction project. Literature study shows accidents causes delay in project work. Proper safety need to be taken to avoid major harm due to accidents. Construction is most dangerous field than any other industry. So care should be taken to avoid accidents. At the end, recommendations for implementing an effective occupational health and safety management system in an organization are also provided. We studied all that causes and provide preventive measures so that project should be completed within time. And more profit should gain from project.

KEYWORDS: Causes of accidents, Construction projects, Preventive measures, Safety Precautions.

I. INTRODUCTION:

The construction industry provides shelter for a variety of societies and for a variety of purposes. It provides employment for people. Construction is a more dangerous and risky sector than others, but it has lots of accidents. The sector is one that is competitive, complex, dynamic, and is scattered. Accidents in the construction industry are more common than in any other industry. Major accidents, minor accidents, first aid cases, deaths, and so on are all examples of accidents. Aside from the loss of life, injuries, and occupational illnesses, workplace accidents incur significant economic

costs. Accidents caused losses in the construction project, which impacted net income. As a result, it is critical to provide the budget for the construction site during the design phase.

II. CAUSES OF ACCIDENTS

On the job site, there are many possible causes of accidents, and it is the site manager's or supervisor's duty to find these causes and effective solutions. As a result, we must identify these causes and implement control measures for them. In that, we find specific causes and, based on this, provide ranks for all causes as well as safety measures. Construction workers' mistakes, poor judgment, lack of focus, awareness of the risks involved with the task, and lack of safety regulations are other factors that contribute to accidents. Every construction and building site employee needs to receive adequate safety training in order to increase their level of safety awareness.

III. LITERATURE STUDY:

S.L. Tang of the Hong Kong Polytechnic University's Department of Civil and Structural Engineering, located in Hung Hom, Kowloon, Hong Kong, researched and created a system for estimating the minimal safety investment for a construction project. It states that the ideal level of safety investment must be determined and that safety investments cannot be made indefinitely. In this analysis, only the economic costs of construction accidents are taken into account. The losses experienced by private investors, such as contractors, as a result of construction site accidents are represented as construction accident





PROJECT MANAGEMENT IN CONSTRUCTION BY USING PRIMAVERA P6 SOFTWARE

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ABSTRACT

The construction industry is an integral and developing part of nation's infrastructure and industrial growth. In that construction sector construction manager has to deal with lots of challenges regarding time management and its limitations. Primavera P6 is one of the software which is used for the management of construction activities. In this project, we carried out planning, scheduling, controlling, resource allocation and time management by primavera p6 software for mivan construction.

Primavera software has been use because of it use for large projects and gives comparable and optimum project plans to stimulate the adjustments. The wide acceptance of this software, especially in industries of developing cities has made the project managers to easily handle the large projects effectively. Effective time planning, is very important in determining the success of any project, poor planning and controlling of project will causes delay. To overcome this time running problem analysis can be done by using the primavera p6 software. This software gives better quality of construction management process and easily understanding results.

Key words: Mivan, primavera p6, software, planning, resource allocation, etc.

INTRODUCTION

Large construction project with huge budget it becomes very difficult for the project team to handle the task so it becomes very necessary to provide tool in hand of project team that keep a track activities. It helps in planning, scheduling and controlling effectively. In today's world great importance is given to a speedy construction practices, so mivan technology is one of them. Primavera p6 software is used to track and trace the activities of a C=7 mivan construction building.





Cracks In Construction Causes Prevention And Repair

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ABSTRACT

In this paper, we have discussed about the problem of crack development in construction and what preventive measures should be taken along with the techniques to repair the cracks. Cracks in construction pose a significant challenge in maintaining the structural integrity and durability of buildings and infrastructure. This abstract provides an overview of the causes, prevention measures, and repair techniques related to cracks in construction. Understanding the underlying factors that contribute to crack formation, implementing preventive strategies, and employing appropriate repair methods are essential for ensuring the long-term stability and safety of constructed assets. Cracking is a common problem in concrete structure in real life services. We all want to have a building which structurally safe and beautiful but it is not so easy because of natural calamity, soil failure, construction faults and improper design causing to develop cracks on the building. So, it is important to understand the types of cracks and their causes and the preventive measures to be taken to control the cracks.

Key words: Cracks, Causes of cracking, Preventive measures, Techniques etc.

INTRODUCTION

Cracks in a building is a universal problem in the world. Cracks in construction are a common occurrence and can be found in various structures, ranging from buildings and bridges to roads and dams. They are a result of stress, movement, or settling within the construction materials, leading to the formation of visible openings or fractures on the surface. While some cracks may be minor and harmless, others can indicate significant structural issues that require immediate attention and repair. Understanding the causes, types, and implications of cracks in construction is crucial for engineers, architects, contractors, and anyone involved in the building industry. By recognizing and addressing cracks early on, potential safety hazards and costly repairs can be minimized. The first and most common reason of cracks development is the stress such as dead load, live load, wind load and foundation settlement. Cracks affects the safety of structure and reduces the durability of structure. Cracks are generally divided into two parts. There are structural cracks and Non-structural cracks.





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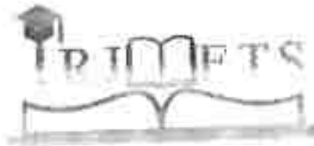
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“Use of plastic in bitumen for construction of road”

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Abstract: The use of plastic in bitumen will allow for the utilization of waste plastic materials if it increases the quality of road. In this case, plastic bitumen can reduce the overall cost of the project since plastic bitumen can increase the life of road & reduce the long-term maintenance requirement. It should provide long-term cost saving to the agency when the proper use of plastic bitumen in construction of road. In this project, we have to increase the concentration of plastic & to decrease concentration of bitumen by taking different concentration ratios of plastic & bitumen. We have to design the module of plastic bitumen blend which has all the standard properties of the regular bitumen by taking different tests like flash fire point, penetration etc., on plastic bitumen blend.

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Plastic is everywhere in the world. In every industry, plastic is used as a main component like packing material in building construction, in making toys etc. Also in the automobile industry, plastic materials are widely used all over the world. Now a days, plastic is widely used in plastic bottles, used for mineral water packing, cold drinks storage, detergent storage etc. After use of those bottles for one-time purpose, they are thrown here and there, and that creates pollution. By using these plastic bottles in bitumen, we can increase the strength of the road. If plastic is added in proper proportion to the bitumen, the life span of the road would increase. It can save money and also protect the environment. In various countries, plastic is used in road construction. The proper use of these materials can help to build an economical road. The maximum proportion of plastic in plastic bitumen blend can help to build a strong and durable road.

II. OBJECTIVES

1. To reduce the quantity of bituminous and to increase the quantity of plastic in construction of flexible pavement.
2. To increase the life span of road.
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“UTILIZATION OF PLASTIC WASTE IN PAVING BLOCKS”

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Abstract--A large number of plastic wastes have been collected from several places such as tourist and public places etc., High density polyethylene bags are collected, cleaned, and used as a replacement for cement in the manufacturing of Paver Blocks. Plastic waste is available in large quantity and hence the cost factor comes down. when we having waste plastic then we can use as reuse, recycle and reduce. Be mindful of what you do, pay attention to the items you buy, and always check yourself to see if you need it or if it comes in a package with less waste

Keywords—Paver block, Plastic waste, Ceramic Waste, Compressive Strength

INTRODUCTION

Plastic is evil. You can hardly do away with it. Every day we use plastic in daily lifestyle that is Garbage, coffee cup, electronic material, plastic bags Etc. so plastic is very harmful to humans, animals, marine and as well as to environment. But where is all the plastic going? It would be startling to note that billions of tons of plastic are ending up in the world's oceans. Pollution caused by plastic is not only harmful to marine life but is also affecting the health of humans. The harmful chemicals like PCBs, DDT, and PAH, which get absorbed in the plastic debris that floats in the seawater, have a varied and harmful range of chronic effects like endocrine disorders. The toxins are transferred in the food chain as they get absorbed in the animals' bodies after they eat the plastic pieces. Human beings consume these contaminated fish and mammals. Plastic pollution is affecting the global economy. It is destroying the fishing and aquaculture industries. Plastic is mostly produced by household, tourism and trekking etc. In many countries, the composition of Waste is different, that it is affected by the socioeconomic characters, waste management programs, and consumption patterns, but generally, the level of plastic in the waste composition is high. One of the largest components of plastic waste is polyethylene which is followed by polypropylene.

Definition of Plastic—Looking to the global issue of environmental pollution by post-consumer plastic waste, research efforts have been focused on consuming this waste on a massive scale in an efficient and environmentally friendly manner. Plastic contains in solid as well as in finished state.

GENERATION - India generates 5.6 million metric tons of plastic waste annually, with Delhi generating the most of at municipality at 689.5 metric tons every day, according to a report from the Central Pollution Control Board (CPCB). CPCB submitted the report to the Indian Supreme Court which said, "We are sitting on a plastic time bomb."





Design Of Slope Stabilization Scheme In Jotiba Hill Region

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Abstract—This report focuses on prevention of landslide by slope stabilization. Landslides are a serious geological hazard caused when masses of rock, earth and debris flow down a steep slope during period intense rainfall. The western Ghat of India is subjected to many landslides every year. The material may move by falling, toppling, sliding, spreading, or flowing. Some landslides are rapid; occurring in seconds, whereas some may take hours. This report aims to stabilize the slope in Jotiba hill region. We conducted various field tests and some lab tests on the sample collected from the site. From the results obtained we analyzed the data by using slide software to find stability of the slope. From the software analysis it is found that Reprofilng and Reprofilng plus soil nailing these two solutions for slope stabilization. The main purpose of this exercise is to achieve safety as well as economy at a same time for better prevention of landslides.

Keywords—Landslide, Slide software, Reprofilng, Soil Nailing.

INTRODUCTION

The study is about to provide various slope stabilization schemes for landslide prevention. Landslides causes the severe loss of life and economy. In recent years Maharashtra has witnessed various landslides like Malin village in Pune district, Taliye village in Raigadh district and many others. These landslides caused loss of lives of hundreds of people. These landslides mostly occurred in rainy season because of additional water pressure. Hence rainy season becomes scary for various villages. To prevent these types of disasters we need a proper solution which should be economical as well. Government provides various preventive measures to these villages. Some villages get rehabilitated. Slope stabilization is done on tendering basis. Various consultancies provide a slope stabilization schemes for these types of sites. Slope stabilization of landslide prone area can result in saving the lives of people. This motivated us to develop a slope stabilization design for a landslide prone area.





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Abstract— Generation of Solid wastes in general and biodegradable waste in particular is increasing house hold level over the last two decades. Any material which can be decomposable by the action of microorganisms in a short period of time is called biodegradable. Mostly food waste; vegetable peels and fruit pulp are biodegradable. These materials readily mix with the soil by the action of bacteria. During decomposition, these materials release carbon dioxide, methane, ammonia and hydrogen sulphide into the environment thereby contributes to air pollution. Biodegradable kitchen waste that is collected from residential societies which can be utilized for the benefits of the society.

Biodegradable waste is the waste that can be decomposed and will be broken down into carbon dioxide, water, methane or simple organic molecules by the action of micro-organisms in reasonably less time. Normally biodegradable wastes are food and kitchen waste, manure, agricultural and forestry waste.

Keywords— Biodegradable waste, solid waste

I. INTRODUCTION

Due to scarcity of petroleum and coal it threatens supply of fuel throughout the world also problem their combustion leads to research in different corners to get access the new sources of energy. like renewable energy resources, Solar energy, wind energy, different thermal and hydro sources of energy, biogas are all renewable energy resources. But biogas is distinct from other renewable energies because of its characteristics of using, controlling and collecting organic wastes and at the same time producing fertilizer and water for use in agricultural irrigation. Biogas does not have any geographical limitations, nor does it require advanced technology for producing energy also it is very simple to use and apply.

Deforestation is a very big problem in developing countries like India, most of the part depends on charcoal and fuelwood for fuel supply which requires cutting of forest. Also, due to deforestation it leads to decrease the fertility of land by soil erosion. Use of dung, firewood as energy is also harmful for the health of the masses due to the smoke arising from them causing air pollution. We need an eco-friendly substitute for energy.

Kitchen waste is organic material having the high calorific value and nutritive value to microbes that's why efficiency of methane production can be increased by several order of magnitude as said earlier. It means higher efficiency and size of reactor and cost of biogas production is reduced. Also in most of cities and places, kitchen waste is disposed in landfill or discarded which causes the public





Investigation of COVID-19 Effect on Material Cost Used in Construction within Maharashtra State (India): Material Based Approach

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Abstract: Construction industry contributes majesty in world economy, whereas it is highly influenced by availability as well as purchase cost of construction material. As per cost optimization is concerned, it is very important to evaluate the impact of corona epidemic on the construction industry in Maharashtra state (India). As long as the economy is considered contractors must check the rates of material used for construction activities & overall construction cost can be revised and kept in front of clients. Price escalation plays crucial role in such cases. Building materials as a raw element contributes 40-50 % of total cost of project. In this paper the factor which affects the cost of project is studied. This paper focuses on the market survey in Maharashtra state (India) to prepare the cost comparison statement of post corona and pre-corona stage.

KEYWORDS: Epidemic, Construction Industry, cost comparison statement

I. INTRODUCTION

Various factors influence the cost estimation of a construction project. Preparation of a construction cost estimate for any project is a very complex process which consists of many variable factors. Every variable has to be correctly estimated based on proper study, past experience and research to calculate total project cost of construction. Many researchers worked on the precautionary measures on construction site, theoretical and explanatory research sharing the workforce issue [1]. This paper shed light on the price escalation in construction industry and relatively the increased rate of production of a building; in short, the expenses on material purchase will be studied and compared to concluding the effect on production cost of building at Maharashtra state.

II. OBJECTIVES

1. To identify the factors affecting construction cost of project.
2. Investigate the market rates on construction site before and after corona.
3. To compare the project cost considering the material price only.

III. LITERATURE REVIEW

1. Hsan Ali Husien, 2021 COVID-19: Key global impacts on the construction industry and proposed coping strategies, E3S Web of Conferences **263**, 05056, pp 2-4.

The author states that supply of construction material and delay of project occurred due to Covid 19. Shortage of imported construction material affected all over the world. All the parties who participated in project have to undergo financial consequences for through the completion of work.

2. Apurva Panslimukkala, 2021, Impact of Covid 19 on field and office workforce in construction industry, (<http://creativecommons.org/licenses/by-nc-nd/4.0/>), Project Leadership and Society 2, ppno 5 August 2021, 2666-7215

The author states due to material costs and difficulties that owners had making timely payments to contractors during the pandemic, cash flow delays became a major issue and negatively affected the delivery of materials, slowed productivity, delayed projects' progress, and sometimes even led to projects being suspended.



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