RESEARCH PUBLICATIONS

DEPARTMENT OF BIOTECHNOLOGY

RESEARCH PUBLICATIONS			
ACADEMIC YEAR	**NAME OF THE STUDENT**	**PAPER TITLE**	**NAME OF THE JOURNAL**
2022-2023	Rabitha .R Sivasree.B Nivedha.B Sanjay Stalin .J	Adsorbent Potential of the leaf powder of Artocarpus heterophyllus lam (Jackfruit) in efficiently removing hexavalent chromium from landfill leachate	Global Nest Journal

Global NEST Journal, Vol 25, No 9, pp 88-96

Adsorbent potential of the leaf powder of *Artocarpus heterophyllus* lam (jackfruit) in efficiently removing hexavalent chromium from landfill leachate

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Received: 29/07/2023, Accepted: 02/09/2023, Available online: 07/09/2023

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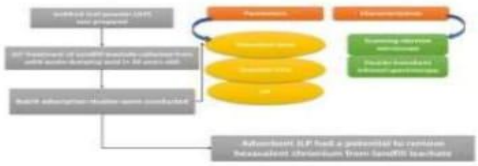
https://doi.org/10.30955/gnj.005269

Graphical abstract



Abstract

Chromium (VI), a ubiquitous toxin, has been associated with several human cancer types as well as immunologic, cardiovascular, developmental, neurological, and endocrine disorders. The present study investigated the selective adsorption capacity and chromium (VI) removal ability of jackfruit leaf powder (JLP, *Artocarpus heterophyllus* Lam.) in landfill leachate collected from eastern region of southern India. The efficiency of prepared JLP in removing chromium (VI) from landfill leachate was examined using a number of variables such as adsorbent dose, pH, and reaction time by employing the batch adsorption process. The maximum chromium removal efficiency was observed by increasing the adsorbent dose, pH, and reaction time, while the optimal dose of JLP, pH, and adsorption reaction time were found to be 0.5 g/L, pH 8, and 120 min, respectively. Batch adsorption process under optimal conditions showed adsorption capacity value of 0.19 mg/g and the chromium (VI) removal efficiency of 95%. The data were examined using kinetic and equilibrium models. The experimental data and the Freundlich isotherm and pseudo-second order kinetics models were well-matched. The SEM and FT-IR of fresh and recovered JLP revealed similar surface morphology and functional characteristics, representing the active site present in the adsorbent (JLP) showing no significant change. We performed experiments on chromium (VI) recovery from the adsorbent that resulted in the higher recovery % of chromium (VI) with 0.5 M HCl (90%). The results suggest that JLP may be employed as a cost-effective bio-adsorbent for the removal of chromium (VI) from contaminated soil and water resources.

Keywords: Jackfruit leaf powder; bio-adsorbent, batch adsorption, chromium (VI) removal, isotherm, Kinetics models

1. Introduction

Globally, the landfilling process is used to dispose up to 95% of the municipal solid waste (MSW) (Kurniawan *et al.,* 2006). Landfill method is considered one of the most cost-effective methods for disposing MSW and industrial solid waste (Detho *et al.,* 2021). The dispersion of pollutants from landfill leachate could cause deterioration of soil, surface water, and groundwater (Sangeetha *et al.,* 2023; Deng and Englehardt, 2006). Leachate contains a large amount of inorganic and organic compounds such as heavy metals, sulphate, chlorides, and refractory compounds (Sangeetha *et al.,* 2023). The leachate concentration varies depending on numerous factors such as precipitation, age of landfill, and type of waste and composition (Mahtab *et al.,* 2021). The landfill leachate age is classified into three major categories: young (less than 5-year-old), intermediate (between 5 and 10 year-old), and old or mature (more than 10 year-old) (Deng *et al.,* 2021; Li *et al.,* 2022; Lu *et al.,* 2023; Sangeetha *et al.,* 2023). The precipitated liquid comes in contact with dumped wastes; it leaches the hazardous chemicals, heavy metals, toxic constituents, and some emerging contaminants like pharmaceuticals and pe

Sangeetha A., Rabitha R., Sivasree B., Nivedha B., Stanlin J.S., Arun C., Shanmugam K. and Balakumar P. (2023), Adsor
the leaf powder of *artocarpus heterophyllus* lam (jackfruit) in efficiently removing hexavalent chromium from landf
NEST Journal, **25**(9), 88-96.

products, endocrine disrupting compounds, and persistent organic pollutants, among others (Sanguanpak *et al.,* 2019). This may cause various health complications, including liver pathology, kidney abnormalities, skin irritation, genetic damage and birth defects. In addition, neem leaves, coconut shell, sawdust, rice straw, rice bran, rice husk, hyacinth root, fly ash, rubber leaf powder, onion peel, bamboo leaf, mango leaf, and among others, as green adsorbents for the removal of chromium (VI) ion from wastewater (Mitra and Das, 2019).

DEPARTMENT OF CIVIL ENGINEERING

RESEARCH PUBLICATIONS			
ACADEMIC YEAR	**NAME OF THE STUDENT**	**PAPER TITLE**	**NAME OF THE JOURNAL**
2022-2023	Chandru R Deva Prakash R K Haririthik P Jalal Hussain J	Comparative study on conventional and GFRG building for affordable construction	International Research Journal of Engineering and Technology
2022-2023	Aathavan E Hanupriyan S Sivachandran S Varun R	Planning, Analysis And Design Of G+3 Shopping Mall Using "Staad-Pro V8i" Software	International Research Journal of Modernization in Engineering, Technology and Science
2022-2023	Dinesh J Mohamed Abdullah E Mohamed Fayaz F Rosario A	Assessment of existing water bodies and identifying the water storage areas in Budhalur Block, Tamilnadu, India using GIS	Journal for Basic Sciences
2022-2023	Mohamed Abbas M Safeen Abdulla M Sathiyapriya S Sivaprakash M	Parametrical study on building cracks and repair measures.	International Journal of Innovative Research in Technology
2022-2023	Keerthika P Ruthra Sonali R Shamili A Bala Gunaa B	Design of sewage treatment plant and performance evaluation of activated sludge process in a lab scale reactor	International Research Journal of Modernization in Engineering, Technology and Science
2022-2023	Jaisheelan M Chadhurya P Mohamed Ijaz N	Integrating planning, analysis, design, estimation and scheduling for a multi-speciality hospital with building information modeling(BIM)	International Research Journal of Engineering and Technology
2022-2023	Mohamed Ashiq Nathar M Mohamed Nowfal S Mohamed Hafiz A Prem Kumar S	Design of 3.5 MLD sewage treatment plant for a town panchayat.	International Journal of Advances in Engineering and Management
2022-2023	Naveen S John Veniston P Santhosh K Surya V	Experimental investigation on structural stability of conventional bitumen using rubber and glass powder	International Journal of Advances in Engineering and Management
2022-2023	Praveen V Tamizh A.S Jainul Harrish S	Design of grey water treatment unit	International Research Journal of Modernization in Engineering, Technology and Science

© April 2023 | IJIRT | Volume 9 Issue 11 | ISSN: 2349-6002

Parametrical Study on Building Cracks and Repair Measures

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Abstract **—This Investigation gets into the causes, effects and prevention of building cracks with Estimation. Cracks are kind of defects which occur into building structure that rendered building unsightly and decrease building stabilities. May be cracks has structural failure or non-structural failure that may act, moderate or several. The size and characteristics of cracks ranges from 0 – 25 mm were considered for investigation. Physical inspections of building were made in some selected areas with the support of photographs. Based on literature and site investigation poor workmanship, poor supervision, poor material, faulty design and overloading, environmental problems, faulty construction, foundation settlement, lack of soil test, inappropriate mix were identified as the reason for cracks in building. Cracks may be significantly vary in width from thin hair crack rarely visible to naked eye to gaping crack depending upon the crack width. The categorized cracks were dealt technically in the aspect of severity of damage and repair possibility. The Ultrasonic pulse velocity & Rebound hammer test were done for test results of the building. The results were interpreted with the existing literature and possible causes were identified. Based on the rigorousness of the problem the possible repair solution was offered for the cracks with detailed Cost Estimation.**

Index Terms **— Building cracks, Ultrasonic test & Rebound hammer test, Remedial measures, Cost estimation**

I. INTRODUCTION

Occurrence of various cracks patterns in the building during construction, and after completion when it is subjected to super imposed load or during the service life, is a common phenomenon. A building component develops cracks whenever the stress in the component exceeds its strength. Stress in the building component could be caused by externally applied forces, such as dead, live, wind and seismic loads, foundation settlement etc. or it could be induced internally due to thermal movement, moisture changes elastic deformation, chemical reaction etc. Building cracks are a global problem. The component will crack if the stress applied on it exceeds its strength. Component stress can be produced by a variety of external forces, including foundation subsidence, seismic loads, wind, dead, and active loads. It can also be caused on inside by changes in humidity, temperature, and chemical variables.

1.1 UNDERSTANDING THE CRACKS

Structural Cracks: These might affect the building's safety because they result from incorrect design, poor construction, or overloading. One example is the significant cracking of an RCC beam (reinforce concrete course).

Non-structural Cracks: These are mostly caused by internally produced stresses in a structure, although they can be unsightly, give the impression of poor workmanship, or even give the sense of instability in some circumstances owing to moisture seeping through them. Non-structural cracks, such as a vertical fracture in a long compound wall caused by shrinkage or thermal movement, can damage interior finishes, raising the cost of maintenance, or they might corrode the reinforcement, impairing the stability of the structure over time.

II. LITERATURE REVIEW

Anitya S. Zanke, (01-12-2020) gives a various types of cracks start to appear on the non-structural and structural part of any construction. These cracks are the result of some unwanted or faulty steps taken during construction. Sometimes, cracks can be a serious concern about the safety of any construction.

Assessment of Existing Water Bodies and Identifying the Water Storage Areas in Budalur Block, Tamil Nadu, India, using GIS

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Abstract: *Water bodies are significant natural resources that are essential for a variety of goals, including agriculture, forestry, which provides habitat for aquatic organisms, and daily requirements for human needs. For many years, the issue of poor water quality in and around metropolitan areas has attracted attention. But recently, the water bodies have been disappearing as a result of urbanization. Consequently, an analysis of water quantity is required. For several decades, the study has dealt with variations in water bodies caused by a wide range of anthropogenic activities. The impact of these activities on water body shrinkage is being investigated, and pond areas have begun to disappear significantly. This is due to poor rainfall, increased population, and widespread industrialization, which has resulted in encroachment. The aim of study is to assess existing water bodies and Using GIS technology, locate the water storage sites in the Budalur block. Water resource management typically uses spatial data, which may be recorded, handled, and presented using geographic information systems (GIS). Water resource management is increasingly using GIS. The GIS assists us in providing a quick and cost-effective study of various applications. This study's findings provide a high-quality perspective for understanding the issues with existing water bodies. GIS studies on slope, drainage characteristics, and land use patterns may be used to forecast the safety of a certain area's water supply. The finest tool for water resource management is GIS. Many software's, including ARC-GIS software, are provided by GIS technology. It is appropriate for evaluating current water bodies and locating water storage locations. We can obtain the outcome by feeding this software the appropriate data.*

Keywords: GIS, Watershed analysis, Remote sensing, Classification, Water resource management and Water storage locations

1. INTRODUCTION

The amount of water that is worldwide accessible for human use without significantly harming ecosystems or other users is referred to as global water availability. Runoff and ground water releases both provide water to surface waterways. In turn, ground water is dependent on water recharge from the surface of the soil. With the use of GIS technology, the study's objective is to evaluate the current water bodies and locate the rainwater storage facilities in the Budalur block. utilizing GIS to map the watershed for the Budalur block using the data that is currently available. to determine the catchment area and to forecast potential future conditions regarding water resource availability. Due to satellite remote sensing's extensive instantaneous coverage and repeatability over time, efficiently and precisely retrieving water information has become a major technical instrument in water resource study, water resource assessment, maintaining wetlands, and disaster mitigation and prediction. There are several techniques for removing water bodies. The supervised classification approach of waterbody extraction is utilised in this study to include the High spatial resolution image from the Landsat class of satellites, which is now extensively used as the data source to analyse the impact of water extraction. This research also examined watershed analysis at Budalur block. Supervised classification hard job, large effort, high accuracy demand, rework with carelessness. The Indian Space Research Organization (ISRO), which has its headquarters in Bangalore, is the country's national

International Research Journal of Engineering and Technology (IRJET) e-ISSN: 2395-0056
Volume: 10 Issue: 04 | Apr 2023 www.irjet.net p-ISSN: 2395-0072

Comparative Study of Conventional and GFRG Building for Affordable Construction

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Abstract - *In India, Economically Weaker section group of people miss, have no opportunity of owning a home like Stronger section group of people. In this Technology world were using smart building materials for building construction purpose. The cost is reaching sky-high and the current mode of construction adopted Reinforced Cement Concrete (RCC) construction, which is time consuming, costly and not environmentally friendly calls for the use of smart construction materials. One such material Glass Fiber Reinforced Gypsum (GFRG) Panels is adopted. This material is manufactured in a close environment and perform better when compared to RCC in many factors denotes which method is more suitable for today's changing world . The study consisted of comparison of Drawings using AUTO CAD, Exterior design using SKETCH UP, Load analysis using STADD PRO , Estimation using MS EXCEL , Scheduling using MS PROJECT between the conventional RCC construction and GFRG construction. It requires innovative, energy efficient, strong and durable in fast method construction at economical cost.*

Key Words: Reinforced Cement Concrete, Glass Fiber Reinforced Gypsum, Drawings, AUTO CAD, Design, SKETCH UP, Analysis, STAAD PRO, Estimation, MS Excel, Scheduling, MS Project.

1.INTRODUCTION

Primary need of human being in today's world is food, clothing and shelter**.** House construction is a dream for low-income people in India. Whether he is a farmer, labour or private employee, cost of construction is high because of high wages and high material cost. A poor man has to spend hisentire life in construction of a house. Low-cost housing is reasonable for low-income owners, if they can invest 30% of their household income. India as a developing country, has 20% of high-income population that can afford a house High- and middle-income people takeover most of the lowincome housing. There is a necessity of cost-efficient construction technology and construction materials. A lowcost housing doesn't mean to sacrifice the strength or build with operational materials but it means effective use of local materials and techniques that are durable and require less maintenance. Low-cost material reduces the cost by using alternative techniques. In India, there is a huge requirement for building materials due to the existing housing shortage mainly in urban India and till date, it takes a lifetime worth of savings to buy a house. To overcome this problem, India needs innovative, high efficient building materials for strong and durable housing at an affordable cost. GFRG Panel provides fast construction and provides environmental protection. A lot of efforts had been made earlier by the industry experts to find an alternative method to existing construction technology to make it more affordable and innovative. Glass Fibre Reinforced Gypsum (GFRG) is one of the such technologies in the construction field that could reduce the construction cost .and construction period. In this project we are comparing GFRG building with conventional RCC building.We design a house plan using AutoCAD, Exterior design using Sketch up Software, analyse the building using staad pro for both RCC and GFRG building. Then we compare the results of RCC and GFRG Building and conclude which is best.

2.LITERATURE REVIEW

Pranay Thergaonkar , Mohit Nagpal et al. (2018) There is a rapid increase in the requirement of building materials in India due to the existing condition of transformation from temporary housing to a permanent housing causing shortage of housing material. Construction industry was still using traditional methods, techniques and conventional technologies. Low-cost and affordable housing is a better way to provide the shelter to the lower middle class and poor families which can be reached through the use of proper techniques. To achieve effective and affordable construction, a material known as GFRG (Glassfiber reinforced gypsum) has been studied. Glass fiber reinforced gypsum (GFRG) wall panel consist of gypsum in its plaster form and glass fibres which are bonded together. This panels have hollow cavity from inside and so can be used as load bearing walls. The hollow cavity inside the walls is filled with reinforced concrete based on the needs. There is various other material which can be used for affordable housing but in this study the main focus is kept on GFRG.

International Journal of Advances in Engineering and Management (IJAEM)
Volume 5, Issue 4 April 2023, pp: 1430-1433 www.ijaem.net ISSN: 2395-5252

Design of 3.5mld Sewage Treatment Plant for a Town Panchayat

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Date of Submission: 15-04-2023 Date of Acceptance: 26-04-2023

ABSTRACT: Since the inception of time, sweepers had manually collected, transported, and disposed of the waste items generated by society, including human excretion, at a safe site of disposal. This ancient method of gathering and discarding society's wastes has now been modernised and replaced with a system in which these wastes are combined with enough water and transported through closed containers while flowing gravitationally. Thus, after undergoing the necessary treatments, this mixture of water and waste—commonly referred to as wastewater—automatically flows up to a location where it is disposed of, alleviating the need for carrying garbage on people's heads or in carts. Our project's goal is to build a waste water treatment facility for the estimated population of 32.500 people and 3.5 MLD of sewage. A number of treatment sewage plant elements have been physically planned for this project. To collect domestic and household waste and remove the materials that affect the general public, a sewage treatment facility is absolutely necessary. Through this project, treated effluent or sludge that will be acceptable for disposal or reuse, which are in charge of the sewage treatment like inflow channel, have produced an environmentally safe environment. Activated sludge aeration tank, secondary clarifier, screen chamber, grit chamber design of the drying beds for sludge The entire sewage of the proposed area can be effectively and safely treated by the project's execution.

KEYWORDS:Design Approach, Sewage Treatment Plant, Sludge

I. INTRODUCTION

The process of sewage treatment involves removing impurities from waste water. To remove impurities from waste water, it makes use of physical, chemical, and biological processes.The sewage effluents after treatment can either be discharged in a body of flowing water, like a stream, or used to irrigate fields. In affluent nations like the United States, the traditional conservancy system of sanitation has been totally supplanted by this contemporary water-carried sewage system. India, a developing nation, continues to use the outdated conservancy system in a number of locations, particularly in its villages and smaller towns. Without a doubt, the metropolitan areas and a few bigger communities in our nation have already been provided with the amenities of this modern water conveyance sewerage system. As soon as funds are available, endeavours will be made to provide the remaining cities and towns with this system.However, depending on the characteristics of the source of disposal, sewage must normally be treated to make it safe before being dumped in river streams or on land. Only 20% of the wastewater generated worldwide receives adequate treatment. 1.8 million children die each year from water-borne illnesses, and 2 million tonnes of sewage, industrial, and agricultural waste are released into world rivers every day. Therefore, it is essential to treat sewage effluent in a way that improves water quality while protecting the environment.

II. STUDY AREA

The project will be located near a 3.5 MLD sewage treatment facility. In Tamil Nadu, India's Thanjavur district, Thiruvaiyaru Taluk office, The current population will be 20,000 in 2022. Three decades' worth of population were computed. In total, there are 42 panchayat villages. Thiruvaiyaru in Thanjavur district has been a developing place due to steady increase in

e-ISSN: 2582-5208
International Research Journal of Modernization in Engineering Technology and Science
(Peer-Reviewed, Open Access, Fully Refereed International Journal)
Volume:05/Issue:04/April-2023 Impact Factor- 7.868 www.irjmets.com

PLANNING, ANALYSIS, AND DESIGN OF G+3 SHOPPING MALL USING "STAAD-PRO V8I" SOFTWARE

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DOI : https://www.doi.org/10.56726/IRJMETS35607

ABSTRACT

Design is the art and science of creating economical, usable, and sustainable structures. This work is usually based on the planning and analysis of building materials. The entire planning and design process requires ideas, in-depth knowledge, conceptual analysis, and design planning of the G+ 3-story shopping mall using the IS Code system. STADD Pro V8i software has completed all analysis and Design. All drawings and details are made using Auto CAD, a basis for transferring the Design for analysis and Design to STAAD Pro. In this project, the Design of the slab, beam, column, stairs, etc., is calculated using the "limit state method" using IS 456-2000 code book. Various working loads on elements are considered as per IS 875-1987 (Part 1, Part 2, Part 3). Hence, the mall is properly organized per the National Building Code of India.

Keywords: Planning, Analyze, Design, Shopping mall, STAAD PRO

I. INTRODUCTION

Our project is to analyze and design the (G+3) Shopping mall using advanced design software, "STAAD Pro v8i". We have chosen STAAD Pro for the following advantages:

- Easy-to-use interface,
- Compliance with the Indian Standard Codes,
- Various ways to solve any problem
- Accuracy of the solution.

STAAD Pro has advanced tools, modeling tools, and a robust analysis and design engine with high-resolution and dynamic analysis capabilities. From model generation, analysis, and design to visualization and verification of results, STAAD Pro is the professional choice for the design of steel, concrete, wood, aluminium, and cold steel, ground and roof risers, culverts, petrochemical plants, tunnels, bridges water, piers, and many others.STAAD Analysis and Design Engine is a general-purpose calculator for structural analysis and design of steel, concrete, wood, and aluminum. In the early days of our work, we talked about getting a house. The structural analysis includes all the physical and mathematical laws necessary to study and predict the behavior of structures. Structural analysis can be viewed clearly as a method to guide the engineering design process or to demonstrate the quality of a design without directly testing it.A structural engineer must determine information such as structural loads, geometry, support conditions, and properties to perform an accurate analysis. The results of such research often include supportive, stressful, and dismissive reactions. This information is compared to criteria that indicate failure conditions. Advanced structural analysis can assess dynamic responses, stability, and non-existent behavior. The design aims to achieve an acceptable probability that the designed structure will perform well during its expected life.

A. Facilities Available in the shopping mall:

The mall has various facilities such as emergency exits, air vents, valet parking, and stores for clothes, bags, shoes, jewelry, kitchen appliances, and home decor. One can find playgrounds, restaurants, entertainment, department stores, theaters, exchange offices, etc.Amenities such as elevators, stairs, stairs, and toilets are provided on all floors. The proposed mall has essential facilities such as a 24-hour CCTV security system, proper drinking water facilities, telecommunications facilities, electrical facilities, the nearest railway station, and underground drainage.

International Research Journal of Engineering and Technology (IRJET) e-ISSN: 2395-0056
Volume: 10 Issue: 04 | Apr 2023 www.irjet.net p-ISSN: 2395-0072

"Integration of Planning, Analysis, Design, Estimation and Scheduling of a Multispeciality Hospital By Building Information Modelling (BIM) "

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Abstract - *This study aims to assess the application of Building Information Modeling (BIM) in the design and construction of a multispeciality hospital project. The project was executed using a combination of software technologies including AutoCAD, Revit, STAAD.Pro, RCDC, and MS Project. The study demonstrates the integration of various design and construction processes into a unified digital model, leading to improved collaboration among project stakeholders and more accurate project planning and analysis phases. Utilization of Revit and other BIM tools enabled creation of an interactive and immersive 3D model of the hospital, resulting in enhanced communication and decision-making. Implementation of RCDC and MS Project facilitated accurate estimation of quantities and scheduling of construction activities, reducing time and cost overrun risk. This project highlights the benefits of BIM technology implementation in the design and construction of multispeciality hospitals, contributing to overall project efficiency and productivity. The findings of this study serve as a valuable reference for building professionals considering BIM technology integration in their projects.*

Key Words: AutoCAD, Revit, STAAD.Pro, RCDC, and MS Project.

1. INTRODUCTION

Building Information Modeling (BIM) is a powerful digital tool that has revolutionized the construction industry. BIM enables the integration of planning, analysis, design, estimation, and scheduling processes into a unified digital model, resulting in improved collaboration and communication among stakeholders. In this study, we explore the application of BIM technology in the design and construction of a multispeciality hospital project. This project utilized a combination of software technologies, including AutoCAD, Revit, STAAD.Pro, RCDC, and MS Project, to enable accurate project planning and analysis.

1.1 Problem Statement:

Healthcare facilities are critical for providing medical services to the community, but the design and construction of such facilities often face challenges related to accuracy, collaboration, and efficiency.

These challenges can lead to delays, errors, and increased costs, which can ultimately affect the quality of care provided to patients

1.2 Solution:

The use of Building Information Modeling (BIM) and other software technologies such as AutoCAD, Revit, STAAD.Pro, RCDC, and MS Project, enabled us to integrate the planning, analysis, design, estimation, and scheduling of the project into a unified digital model. This approach resulted in improved collaboration among project stakeholders, more accurate project planning and analysis phases, and ultimately, the timely delivery of the project within budget.

The adoption of BIM and other software technologies can improve the construction process in many ways, including reducing errors, increasing efficiency, and saving time and costs. By showcasing this project, we hope to inspire other professionals in the field to adopt similar approaches and contribute to the advancement of the construction industry.

1.3 Objectives

The primary objective of this study is to assess the application of BIM technology in the design and construction of a multispeciality hospital. We aim to demonstrate how the use of BIM tools can enable accurate planning, analysis, and estimation of quantities and scheduling of construction activities.

2. LITERATURE REVIEW

V. J. Saran and S. S. Pimplikar examined BIM technology has the potential to revolutionize the healthcare infrastructure planning process, including design, construction, and facilities management. The authors hypothesize that BIM can facilitate accurate planning, analysis, and estimation of quantities and scheduling of construction activities, leading to improved collaboration among project stakeholders and more efficient project management, as well as reducing the risk of time and

International Journal of Advances in Engineering and Management (IJAEM)
Volume 5, Issue 4 April 2023, pp: 1830-1837 www.ijaem.net ISSN: 2395-5252

Experimental Investigation on Structural Stability of Conventional Bitumen Using Rubber and Glass Powder

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Date of Submission: 20-04-2023 Date of Acceptance: 30-04-2023

ABSTRACT
Bitumen is a binding material and is mostly used various purpose like road pavement and roofing, etc., which has been used for thousands of year in various ways, E.g. as adhesive, sealant, preservative, waterproofing agent and pavement binder. Ancient inhabitants directly used the conventional bitumen which is usually in the earth's surface. The world consumption of bitumen has increased rapidly, most of which was used in road construction. The growth in various types of industries together with population growth has resulted in an increase in production of various types of waste material world over. The creation and disposal of non-biodegradable waste materials such as Rubber, Blast Furnace Slag, Fly ash, Steel Slag, etc. have been posing problems in the developed as well as developing countries. Rubber is everywhere in today's lifestyle. Use this non-biodegradable product is growing rapidly and creating the problem of its disposal. Modified bitumen obtained through mixing of elastomeric as well as plastomeric substances possesses better quality than conventional bitumen. Therefore, these waste Rubber are used to alternate the bituminous mix, to improve the physical properties and structural stability.

Keyword: Bitumen, Rubber, Glass Powder, Stability

I. INTRODUCTION

Bitumen is a black or dark brown non-crystalline solid or viscous material, composed principally of high molecular weight hydrocarbons, having adhesive properties, derived from petroleum either by natural or refinery processes and substantially soluble in carbon disulphide[4]. The modified binder are more stable under heavy loads, braking and accelerating forces and shows increased resistance to permanent deformation in hot weather. It resists fatigue loads and having better adhesion between aggregates and binders. This produces a product with good flexibility, elasticity and adhesion while maintaining high temperature properties that are better than conventional Bitumen[2]. And the rubber that is high in natural rubber content is vulcanized to ensure a greater degree of reaction between the rubber and bitumen at high temperatures. The natural rubber also provides better elasticity and adhesion than synthetic rubber[3]. For this reason a minimum of 30% by mass of the rubber component of the blend must be natural rubber. Non-uniform dispersion requires high temperatures and long mixing times andcan yield a heterogeneous binder, with the rubber acting mainly as flexible filler however crumb rubber is essentially a combination of natural rubber, which improves elasticity, carbon black, and synthetic rubber, both of which improve thermal stability[1]. In addition, crumb rubber has been found to increase rutting resistance and decrease reflective cracking Nevertheless, it was found that natural rubber showed superior reactivity as compared to crumb rubber and that the reacted particles became tacky, which improved adhesion The strong cohesion between aggregates is one of the benefits of using natural rubber to modify asphalt. Natural rubber increases the stiffness of the binder at high temperatures, thereby enhancing the latter's performance,

e-ISSN: 2582-5208
International Research Journal of Modernization in Engineering Technology and Science
(Peer-Reviewed, Open Access, Fully Refereed International Journal)
Volume:05/Issue:04/April-2023 Impact Factor- 7.868 www.irjmets.com

DESIGN OF SEWAGE TREATMENT PLANT AND PERFORMANCE EVALUATION OF ACTIVATED SLUDGE PROCESS IN A LABSCALE REACTOR

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DOI : https://www.doi.org/10.56726/IRJMETS36591

ABSTRACT

Wastewater is any water that has been contaminate by various household, commercial, industrial, agricultural, etc. The characteristics of wastewater vary depending on the source .Wastewater can contain physical, chemical, and biological pollutants. Wastewater treatment, commonly known as sewage treatment, also refers to the processing of industrial effluent. The sewer system in many cities carries a percentage of the industrial wastewater that has already undergone treatment in the plants to reduce the pollution is sent to the sewage water treatment facility. Wastewater treatment, another name for sewage treatment, also refers to the process of treating industrial effluent. In many cities, a portion of the industrial wastewater that has already undergone treatment in the factories to reduce the pollutant is transported by the sewer to the sewage water treatment facility. Pipes and pumps gather and transport the sewage water to the sewage water treatment facility. Sedimentation, aeration, and disinfection are three of the essential steps of sewage water treatment plants. Environmental and public health protection is the ultimate purpose of wastewater treatment. It is advised to perform such initial treatment because of the nature of the effluent. Prior to final disposal, treatment and secondary treatment will be performed. With the examination of the sewage characteristics from the in-fluent, the project work was completed. Based on the wastewater design quantity, the primary and secondary treatment units were created. Each and every treatment unit was created with the proper specifications and criteria. The decision that the treatment units will comply has been made..

Keywords: Sedimentation, Aeration, Disinfection, Physical, Chemical, Biological Pollutants.

I. INTRODUCTION

Any water that has been tainted by human activity is considered wastewater. Water that has been used for home, industrial, commercial, or agricultural purposes, surface runoff or storm water, and any sewer inflow or sewer infiltration, is referred to as wastewater. Wastewater is therefore a result of home, industrial, commercial, or agricultural operations. Depending on the source, wastewater has different characteristics. Physical, chemical, and biological contaminants may be present in wastewater. Sinks, dishwashers, washing machines, and flushing toilets all contribute to household wastewater production. Showers and bathtubs. Compared to households that flush toilets , dry toilet households produce less wastewater. A sanitary sewer that exclusively transports sewage can be used to transport waste water. An alternative is to use a combined sewer to move both wastewater and stormwater. Storm water sewage and runoff, as well as possible industrial wastewater. Wastewater that has been treatment at a treatment facility is discharged to a receiving water body as effluent. If the treated waste is put to use for something else, the words "wastewater reuse" and "water reclamation" apply. Untreated wastewater dumped into the environment might result in water contamination pollution. Wastewater is frequently treated on-site by different sanitation systems in developing nations and rural areas with low population densities rather than being transported through sewers. These systems include vermi-filter systems, on-site sewage systems (OSS), and septic tanks connected to drain fields.

II. LITERATURE REVIEW

- Rupesh Kumar Patel and Deepak Lal (2016), proposed the sewage treatment plant for SHIATS Hotels and Residential Area with the ultimate objective of reduce the water deficiency of the assessment region. The model

International Journal of Advances in Engineering and Management (IJAEM)
Volume 5, Issue 4 April 2023, pp: 1830-1837 www.ijaem.net ISSN: 2395-5252

Experimental Investigation on Structural Stability of Conventional Bitumen Using Rubber and Glass Powder

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Date of Submission: 20-04-2023 Date of Acceptance: 30-04-2023

ABSTRACT
Bitumen is a binding material and is mostly used various purpose like road pavement and roofing, etc., which has been used for thousands of year in various ways, E.g. as adhesive, sealant, preservative, waterproofing agent and pavement binder. Ancient inhabitants directly used the conventional bitumen which is usually in the earth's surface. The world consumption of bitumen has increased rapidly, most of which was used in road construction. The growth in various types of industries together with population growth has resulted in an increase in production of various types of waste material world over. The creation and disposal of non-biodegradable waste materials such as Rubber, Blast Furnace Slag, Fly ash, Steel Slag, etc. have been posing problems in the developed as well as developing countries. Rubber is everywhere in today's lifestyle. Use this non-biodegradable product is growing rapidly and creating the problem of its disposal. Modified bitumen obtained through mixing of elastomeric as well as plastomeric substances possesses better quality than conventional bitumen. Therefore, these waste Rubber are used to alternate the bituminous mix, to improve the physical properties and structural stability.

Keyword: Bitumen, Rubber, Glass Powder, Stability

I. INTRODUCTION

Bitumen is a black or dark brown non-crystalline solid or viscous material, composed principally of high molecular weight hydrocarbons, having adhesive properties, derived from petroleum either by natural or refinery processes and substantially soluble in carbon disulphide[4]. The modified binder are more stable under heavy loads, braking and accelerating forces and shows increased resistance to permanent deformation in hot weather. It resists fatigue loads and having better adhesion between aggregates and binders. This produces a product with good flexibility, elasticity and adhesion while maintaining high temperature properties that are better than conventional Bitumen[2]. And the rubber that is high in natural rubber content is vulcanized to ensure a greater degree of reaction between the rubber and bitumen at high temperatures. The natural rubber also provides better elasticity and adhesion than synthetic rubber[3]. For this reason a minimum of 30% by mass of the rubber component of the blend must be natural rubber. Non-uniform dispersion requires high temperatures and long mixing times andcan yield a heterogeneous binder, with the rubber acting mainly as flexible filler however crumb rubber is essentially a combination of natural rubber, which improves elasticity, carbon black, and synthetic rubber, both of which improve thermal stability[1]. In addition, crumb rubber has been found to increase rutting resistance and decrease reflective cracking Nevertheless, it was found that natural rubber showed superior reactivity as compared to crumb rubber and that the reacted particles became tacky, which improved adhesion The strong cohesion between aggregates is one of the benefits of using natural rubber to modify asphalt. Natural rubber increases the stiffness of the binder at high temperatures, thereby enhancing the latter's performance,

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

RESEARCH PUBLICATIONS			
ACADEMIC YEAR	**NAME OF THE STUDENT**	**PAPER TITLE**	**NAME OF THE JOURNAL**
2022-2023	Samweslin S	Congestive heart failure prediction using deep learning	Journal of clinical Otorhinolaryngology, Head, and Neck surgery

Journal of Clinical Otorhinolaryngology, Head, and Neck Surgery

CONGESTIVE HEART FAILURE PREDICTION USING DEEP LEARNING

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Keywords:Congestive Heart Failure, Artificial Neural Network, Prediction, Heart disease.

Published 22-06-2023

Issue
Vol: 27 Issue: 01, 2023

ABSTRACT:-

In early days the diagnosis and treatment were improved the quality and length of life for people who have congestive heart failure, since the heart failure was predictable after the very first attempt Myocardial Inflammation. The Congestive heart failure may cause of various reasons like age, anemia, Creatinine Phosphokinase, diabetics, Ejection Fraction, High BP, Platelets, Serum Creatinine, Serum Sodium, Sex, Smoking, Time and etc. Therefore, many techniques were used for diagnosing and for prediction the Congestive heart failure, here we using the Artificial Neural networks (ANN) to predict the early stage of heart failure. It consists of three different layers (input layer, multiple hidden layers and an output layer). In this ANN network nodes are in one layer that it is connected to another node in the next layer. The very first layer of ANN layer is an input layer which is train and validate data, second layer is a hidden layer are known as distillation layer, this layer which is help to extract the data. Final layer is the output layer this could be predicting the data of Heart Failure events of (Death Event) early stage. Here, the ECG or EKG dataset are used for heart failure prediction. By using the data mining technique, we predict the heart failure death event accuracy level of 89.92%. Here, the dataset was collected and used from Kaggle datasets (https://www.kaggle.com/).

PDF

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

RESEARCH PUBLICATIONS			
ACADEMIC YEAR	**NAME OF THE STUDENT**	**PAPER TITLE**	**NAME OF THE JOURNAL**
2022-2023	Avinash K. Akash S. Raja M.	Intravenous therapy supervising and handling using IoT	International Research Journal of Engineering and technology
2022-2023	Kogula Rajan J. Manobala B. Murugavel R.	Automatic health monitoring and optimizing of lithium-ion battery in E-vehicle	International Journal of Advances in Engineering and Management
2022-2023	Hariharan S. Vishnuvarathan P. Afzal Ahamed M.	Transformer monitoring and controlling using IoT and GSM	International Journal of Advances in Engineering and Management
2022-2023	Ajithkumar A. Sanjay Suriya S. Praveen P.	Design of smart hamlet for accident avoidance	International Journal of Advances in Engineering and Management

International Research Journal of Engineering and Technology (IRJET) e-ISSN: 2395-0056
Volume: 10 Issue: 03 | Mar 2023 www.irjet.net p-ISSN: 2395-0072

Intravenous Therapy Supervising And Handling Using IoT

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Abstract: *An automatic Intravenous Fluid Administration and handling using IoT saline level monitoring consists of Load cell sensors which are used to measure the level of Intravenous fluid in the container whether it is Full or Low with warning status. The detection of the load is in Analog format. The output obtained from the sensor is displayed in the LCD display. When the level of saline goes below a threshold level, the alarm sound will be produced. Thus, the flow rate can also be controlled by the doctor using IoT as well as automatically with the help of input sensors placed for patients and displayed graphically in LabVIEW software.*

KEYWORD: IoT, Solenoid Actuators, Heartbeat sensor, LabVIEW

I. INTRODUCTION

Modern problems always require modern solutions A Lifesaving system. This paper proposes a proof-of-concept system that uses no pain, level sensing with a lesser power-consuming computing platform to deliver continuous infiltration monitoring around the IV catheter site. This kind of system could be able to detect an infiltration non-invasively monitoring for known symptoms: swelling of soft tissue and increased skin firmness; these symptoms can be sensed by measuring skin stretch and local bioimpedance. This project was designed in order to help the nurses and caretakers as it is considered as automation application. The nurses can able to handle a large number of patients in an hourly manner when this project is implemented.

Adequate hydration via a saline drip is essential during surgery, but recent reports suggest that getting the balance of salt and water just right could have an important impact on patient recovery.

This Intravenous Drug administration includes various drugs namely saline, plasma, blood and all the other haemolytic diagnosis .it is necessary to find the reasons for the intravenous infusion process so as to analyse the presence of any underlying diseases may affect the patients during the infusion process like respiratory issues, anaemia, feel nausea over time. The Intravenous fluid plays an important role in maintaining a good blood flow and liquid movement after the patient is identified as weak. The IV fluid reduces the complication of water retention on the underlying tissues causing unwanted issues on the body of the patient The nurses who are working over time should have to care themselves so our project gives every minute details in perfect to the last patient if the patients are in a larger numbers, it requires a lot of nurses and care takers to be in the times of emergency as we all know that in the year 2020 the COVID 19 affected the entire globe causing a large no of casualty . thus, it is necessary to hold a larger work strength to handle that much of people with less work power. If we use a network of this project, we can able to monitor all the patient's data in a single window as it can be beneficial for a large number of patients in the absence or a smaller number of nurses to patient ratio. The LabVIEW is very helpful for people with less technical knowledge So, This project can be easily acknowledged by everyone around the globe without any barrier to the communication

Due to the increase in the population, there is a need for improvement in health care. As the saline bottle goes below the threshold level, it is necessary to change the saline bottle. So new idea called LabVIEW-based Saline Level Monitoring System is emerged. The main objective of system is to provide authentic, accessible, easy and economic system for saline level monitoring. The saline is inserted into blood by considering certain characteristics like heart rate, blood pressure, body temperature, pulse rate and body weight of patient. So, nurses do not need to go to patient's bed every time because they can check amount of Fluid injected into each patient via this system. This system is a low-cost system and comfortable for a nurse. Thus, it was placed in rural villages and remotely villages can have this system to cope up the upcoming issues. Initially, this might be inferred as an event. But the consequences are harmful. When the IV bottle Thus, Thus, Unique health monitoring systems have been developed with less human interference which will be available at low cost in remote areas as well as highly populated areas. The system objective is to trouble-shoot the above-mentioned problem efficiently. By means of this the nurses can supervise the amount of IV fluid remains even from the control room. The Intravenous supervising and handling using IoT consists of load weighs the bottle fixed to the end in an Analog format and it can be converted using ADC

International Journal of Advances in Engineering and Management (IJAEM)
Volume 5, Issue 4 April 2023, pp: 540-546 www.ijaem.net ISSN: 2395-5252

Automatic Health Monitoring and Optimizing of Lithium-ion Battery in E-Vehicle

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Date of Submission: 01-04-2023 Date of Acceptance: 10-04-2023

ABSTRACT - This paper is working based on the concept of BMS. Battery Management Systems (BMS) are used in many industrial and commercial systems to make the battery operation more efficient and for the estimation to keep the battery state, as long as possible, away from destructive state, to increase battery lifetime. For this purpose, many monitoring techniques are used to monitor the battery state of charge, temperature and current. In the current paper, the monitoring system for battery powered Electric Vehicles (EV) has been implemented and tested. This system evaluates and displays the battery temperature/humidity, charging/discharging current and State Of Charge (SOC) for the considered model battery. For monitoring purpose, digital and analog sensors with microcontrollers are used. The project consists of two working blocks namely Mother-board and Dash-board. Wirelessly connected between these two blocks using Bluetooth 2.0. The battery information and the obtained results explaining the main characteristics of the system are presented by the LCD screen at Dash-board. A typical fan is used to cooling the battery while battery heat increased. However, BMS on the market is very expensive and not suitable for low-cost embedded systems. As the Arduino Uno R3 is widely used for low-cost microcontroller boards, easy programming environment, and open-source platforms for building electronic projects, therefore, this study focuses on Arduino Uno BMS based system. This system consists of current and voltage sensors, two Arduino Uno microcontroller, two Bluetooth modules, GSM module and an I^2C liquid crystal display (LCD). In order to develop this system, there are three objectives to be achieved. First, the relationship between input and output of the sensors must be derived mathematically. The mathematical expression obtained can be verified by connecting and disconnecting the circuit with load and monitoring the value of output sensors. The health status of the battery will be sending to Vehicle owner as SMS through a GSM module.

Key words:Battery Management System (BMS), Electric Vehicles (EV), State-of-Charge (SOC), Mother-board, Dash-board, Bluetooth 2.0, I^2C(Inter-Integrated Circuit),GSM.

I. INTRODUCTION

Environmental issues triggered by emissions from conventional vehicles have accelerated the adaptation of electric vehicles (EVs) for urban transportation. The most favorable battery technology which can closely fulfill the minimum goals of the United States Advanced Battery Consortium (USABC) for commercialization of EVs are the lithium-ion batteries. Although there are various types of lithium-ion batteries have been widely used to power the EVs, the performance characteristics of these batteries are not clearly specified in a more comparable way. A BMS (Battery Management System) is essential in a Lithium-Ion battery system. This device manages a real-time control of each battery cell, communicates with external devices, manages SOC calculation, measures temperature and voltage, etc.. In order to achieve real-time monitoring of battery status, prevent overcharging and over discharging of batteries, and prolong battery life. Beneficial to improve the utilization rate of the battery, the

International Journal of Advances in Engineering and Management (IJAEM)
Volume 5, Issue 4 April 2023, pp: 457-462 www.ijaem.net ISSN: 2395-5252

Transformer Monitoring and Controlling Using Iot and GSM

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Date of Submission: 01-04-2023 Date of Acceptance: 10-04-2023

ABSTRACT: We developed a project aimed at providing a solution that ensures the safety of the transformer and serviceman. So, we are implementing a password-based circuit breaker. Our system reads the serviceman's RFID tag information with help of an RFID reader and then this system generates passwords and a relay switch to turn the ON or OFF transformer using the GSM module. A special number given is a key part of this system. Along with increasing the lifespan of a distribution transformer by measuring some of the parameters like oil level, temperature, silica gel color condition, winding fault, and power supply fault. Use of IoT and GSM for controlling and monitoring for transformer.This solution is necessary to maintain transformer health and less maintenance.

Keywords: IoT, RFID, GSM, KEYPAD, COLOR SENSOR.

I. INTRODUCTION

Computers and microcontrollersplay a very important role in industries to reduce the n error and increase productivity. This is one of the projects by using the microcontroller to monitor the parameters of the substation transformer using IOT and to control it in abnormal conditions.

The electrical parameters of the substation transformer are sensed by the different sensors and the feed to the microcontroller. The voltage is measured using the potential transformer with low rating and the current flow is measured by Current transformer. The temperature is sensed by the LM35 sensor. These signals are converted into digital signals through the ADC and fed to the microcontroller. The oil level of the transformer can also feed to it. And the colour sensor senses the colour of the new silica gel used in the transformer as blue. Silica gel is a good absorbing chemical solid gel used for moisture areas to remove it. These parameters' status is monitored wirelessly through internet of things (IoT) technology. Thus, we can monitor and control the substation transformer and load using IOT.

The addition of this project focuses on the safety of the lineman while working so they do not feel the sudden electric shock. As a serviceman has to deal with live wires so it is important to take care of the power supply during the repair period. However, with the right amount of coordination among servicemen and substations, a lot of these accidents can be avoided. The project aimed at providing a long-life transformer with less maintenance and OTP protected circuit-breaking mechanism for servicemen. Our system reads the lineman's RFID tag information with help of an RFID reader and then this system generates passwords and a relay switch to turn on or off the transformer using the module. A special number given is a key part of this system. For particular circumstances, the serviceman has to risk their lives to regain the power supply and repair the issues in the power line. So, it is necessary to ensure the circuit is open and there is no return power supply in the phase line due to false grounding. when the one-time passcode received by the servicemen in his mobile. He enters the Keypad and after that, the power supply is disconnected and the repairing process takes place. Once the work is done, When the RFID reader is shown back the RFID reader recognised the number shown is the same as the previous one. Ifthey are the same the power supply is connected and power flows through the line.

II. PROPOSED SYSTEM

At first, we designed a system that coordinates all the important parameters of the transformers having oil, temperature changes, load demand, and mechanical strength. These sensors qualify for monitoring of equipment such as transformers and power lines.The voltage and current

International Journal of Advances in Engineering and Management (IJAEM)
Volume 5, Issue 4 April 2023, pp: 1264-1269 www.ijaem.net ISSN: 2395-5252

Design of Smart Helmet for Accident Avoidance

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Date of Submission: 15-04-2023 Date of Acceptance: 25-04-2023

ABSTRACT: The theme of our design is Helmet Wearing System. In India, nearly 200 million people commute by two- wheelers every day. The main purpose of this helmet is to give safety for the rider. This can be enforced by using Artificial Intelligence. Our intention is to make our country a safe riding terrain. It should try to find whether the motorcycle rider is wearing a helmet or not in realtime. Driving without a helmet is like danger one's life. In the event of an accident, a motorcycle lacks the structural support that a auto does to keep motorists safe and defended. Indeed when a rider takes all possible preventives, accidents performing in injury still do the proposed system design of smart helmet for accident avoidance Road accidents are adding in our country, utmost of them are caused due to negligence of not wearing the helmet, drink and drive and over speeding which numerous leads to death or severe injuries due to lack of medical treatments handed to the injured person at right time. This motivates us to suppose about making a system which ensures the safety of biker, by making it obligatory to wear the helmet by the rider to help head injuries that may lead to immediate death, help drink and drive script by testing the breath of the rider before the lift, help over speeding and rash riding by waking the rider and also to give proper medical attention, if met with an accident by notifying the concerned person with the position details

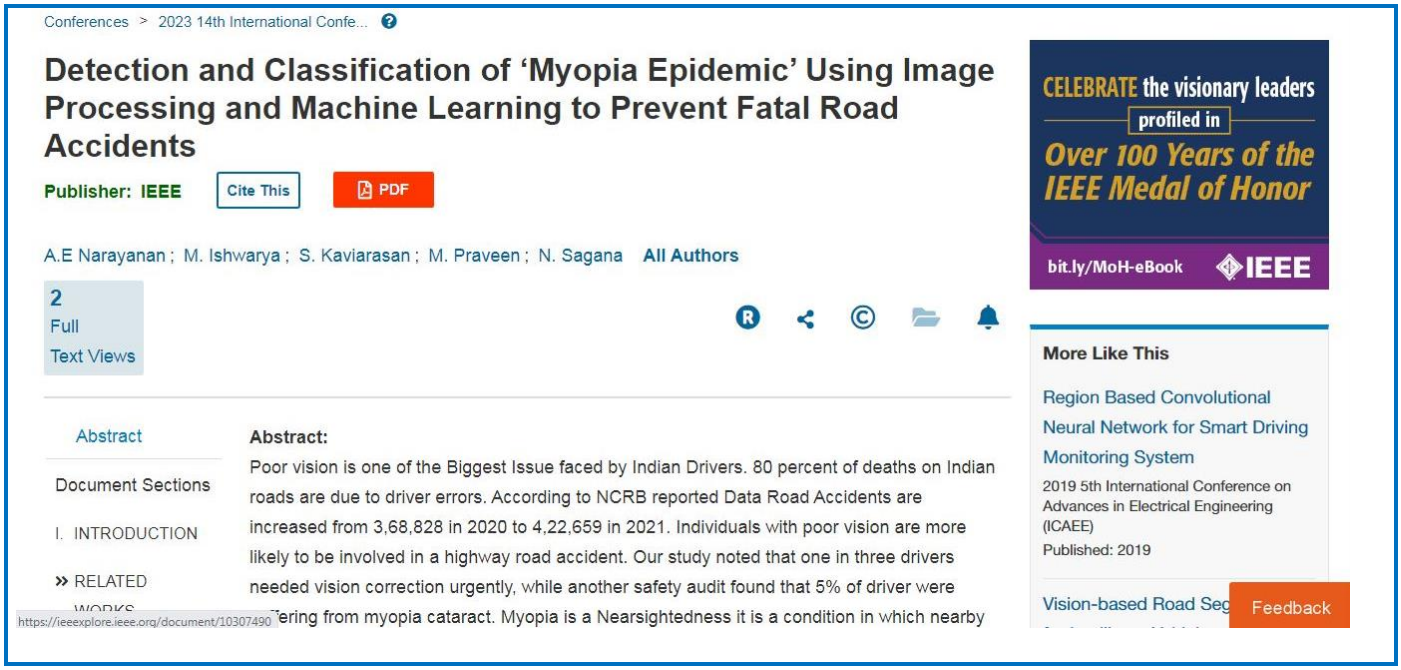
KEYWORDS:Machine Learning, Credit Card Fraud, detection,Random forest algorithm

I. INTRODUCTION

A helmet is a form of defensive gear worn to cover the head from injuries. More specifically, a helmet aids the cranium in guarding the mortal brain when accidents do. The design aims to give total safety for bike riders. neglectfulness and drunk and drive is the major factor for numerous accidents. The business authorities give a lot of instructions to the vehicle drivers. But numerous of them don't observe the rules. lately helmets have been made mandatory, but still people drive without helmets. Despite creating important mindfulness about the accidents and significance of wearing helmet, people violate the laws. Business police covering for helmets isn't the endless result. As business police can not be present at all places. Hence to make the helmet obligatory this smart helmet with accident forestalment system is innovated. This system will start the vehicle if the motorist wears the helmet and should be non- alcoholic. While driving if the riders palpitation goes abnormal he can not concentrate in driving for this a buzzer is used to indicate the other riders about the riders abnormal condition which ultimately makes the others to decelerate down their speed so that accident and injuries can be avoided. All this process can be done by using microcontroller, a RF module which communicates the data wirelessly, a relay for the actuating and a buzzer for the sound suggestion .Present assiduity is decreasingly shifting towards robotization. Two principle factors of moment's artificial robotizations are programmable regulators and robots. In order to prop the tedious work and to serve the humanity, moment there's a general tendency to develop an intelligent operation. The proposed system " **SMART IOT HELMET** " is designed and developed to negotiate the colorful tasks in an adverse terrain of an assiduity. The intelligent machine is loaded with several units similar as Alcohol detector & Receiver, TV, microcontroller, RF transmitter and receiver that synchronously

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

RESEARCH PUBLICATIONS			
ACADEMIC YEAR	**NAME OF THE STUDENT**	**PAPER TITLE**	**NAME OF THE JOURNAL**
2022 – 2023	Ishwarya M	Detection and classification of myopia epidemic using image processing and machine learning to prevent fatal road accidents	2023 - 14th International Conference on Computing Communication and Networking Technologies (ICCCNT), 6-8 July 2023.



DEPARTMENT OF COMPUTER SCIENCE AND APPLICATIONS

RESEARCH PUBLICATIONS

ACADEMIC YEAR	NAME OF THE STUDENT	PAPER TITLE	NAME OF THE JOURNAL
2022-2023	Gokul C	Classifier based predictive analysis of available data	International Journal Of Research Publication And Review
2022-2023	Krishna Kumar B	Bioinformatics of athletes to record the cardiovascular issues through our classifier	International Journal Of Research Publication And Reviews
2022-2023	Monika R	Supervised collaborative filtering using multilayer perceptron	International Journal Of Research Publication And Reviews
2022-2023	Srinivasan A	Intrusion detection	IJSR
2022-2023	Ragini J	Iot based energy saving assistance for home automation	IJRPR
2022-2023	Jeevitha S	Multitasking and it's prognostic process for a exceptional solution	International Journal Of Research Publications And Reviews
2022-2023	Prakash K	Real-time detection of littering from vehicles in traffic surveillance videos	International Journal Of Research Publication And Reviews
2022-2023	Tittusmanoprasanna M	College bus tracking system	International Journal Of Research Publication And Reviews (IJRPR)
2022-2023	Siyamala S	Residual applicative life of an appliance and its prognosis on its lasting life expectancy	International Journal Of Research Publication And Reviews
2022-2023	Abirami R	Smart ration shop virtual queue system using web application	International Journal Of Research Publications And Reviews
2022-2023	Angaleswary R	Anomaly Perception Data and Computation for further utilization	International Journal Of Electrical And Computer System Design.
2022-2023	Sangeetha R	Integration of Location Based Garbage Collection	International Journal Of Electrical And Computer System Design
2022-2023	Anand S	Fake news detection system using feature based optimized Msvm Classification	International Journal Of Electrical And Computer System Design
2022-2023	Ajithkumar B	Exploitation of recommendation framework for inadequate approach	International Journal Of Electrical And Computer System Designs

2022-2023	Hariharan J	Crime reporting system	International Journal Of Electrical And Computer System Design
2022-2023	Siva M	Levying and Anticipate of a Structural Project using our In-depth Analysis process	Electrical And Computer System Design
2022-2023	Manjula R	Linear approximation computational complexity with multivariate correlation	International Journal Of Electrical And Computer System Design
2022-2023	Mugesh R	Predictive Analysis for Big Mart Sales Using Machine Learning Algorithms	IJECSD- International Journal Electrical And Computer System Design
2022-2023	Ranjithkumar G	Diabetic disease prediction using machine learning algorithm	Electrical And Computer System Design
2022-2023	Karishma Beevi N	Nutrition assistance application	International Journal Electrical And Computer System Design
2022-2023	Abarna V	Multiple disease prediction using machine learning algorithm	International Journal Of Research Publications And Reviews

\International Journal of Research Publication and Reviews, Vol 4, no 5, pp 3905-3909 May 2023

WWW.IJRPR.COM

International Journal of Research Publication and Reviews

Journal homepage: www.ijrpr.com ISSN 2582-7421

Classifier-Based Predictive Analysis of Available Data

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ABSTRACT:

A subset of advanced analytics called predictive analytics uses historical data along with statistical modelling, data mining, and machine learning to forecast future results. Utilizing trends in this data, businesses use predictive analytics to spot dangers and opportunities, which results in a delay in adaptation moreover the concept is applied in various domains likewise one of the use case characteristics called "fraudulent" with values of "yes" or "no" that indicates whether a particular transaction is fraudulent may be the goal notion in a fraud detection application. Or, there may be a number of target concepts, such as temperature, pressure, and humidity, in a weather forecast application. In our paper, we propose the Recently, we anticipated the silicon shortage due to a number of factors, including how major electrical companies handle those shortages and the use of the predictive analysis method employed in our project predictive analysis methods used to identify the right peripheral using classifier algorithms, particularly predicting using the given input. We use two classifier algorithms, one of which is used to find the necessary measurement materials, and using that, we are going to predict the right primacy products using the segment drift concept

Keywords: Classifier, Predictive analysis, Predictive modeling, Machine learning, Classification algorithms.

I. INTRODUCTION

Predictive analytics, a subset of advanced analytics, forecasts future outcomes using historical data, statistical modelling, data mining, and machine learning. Businesses employ predictive analytics to identify threats and opportunities using trends in this data, which delays adaption because the concept is used in so many different fields. Similarly, the target idea in a fraud detection programmer may be one of the use case attributes named "fraudulent" with values of "yes" or "no" that signals whether a specific transaction is fraudulent. Or, a weather forecast application can have a number of target concepts like temperature, pressure, and humidity. In this paper, we offer the Recently, we predicted the silicon shortage due to a variety of reasons, including how major electrical companies handle those shortages and the usage of the predictive analytic approach applied in our project. This method specifically predicts using the input that is provided. Using the segment drift notion, we will anticipate the appropriate primacy products using two classifier algorithms, one of which is used to locate the relevant measurement materials.

II. LITERATURE SURVEY

[1]. This paper published in 2016 - Hierarchical change-detection tests - Cesare Alippi, Giacomo Boracchi, Manuel Roveri HCDTs are effective online algorithms for detecting changes in data streams, composed of a detection and validation layer. They achieve a better tradeoff between false-positive rate and detection delay and can reconfigure after detecting and validating a change.

[2]. This paper published in 2020 - Stock Price Prediction Based on LSTM - Yuqiao Guo. This study compares the forecast outcomes of an LSTM neural network that takes sentiment components into account with a model that only takes historical stock fundamentals into account. The model with greater prediction accuracy.

[3]. This paper published in 2012 - Learning in Non-Stationary Environments: Methods and Applications - M. Sayed-Mouchaweh, E. Lughofer. Learning in Non-Stationary Environments: Methods and Applications focuses on dynamic learning techniques for producing models with high accuracy in unsupervised issues, supervised classification, and supervised regression problems.

[4]. This paper publised in 2010 - Massive Online Analysis - Albert Bifet, Geoff Holmes, Richard Kirkby, Bernhard Pfahringer.Massive Online Analysis is a software environment used to create algorithms and experiments for online learning, distributed under the GNU GPL licence.

[5]. This paper published in 2022 - Semi- Supervised Adaptive Novel Class Detection - Ahsanul Haque, Latifur Khan, Michael Baron. The technique put forth in this paper employs change detection to recognise concept drifts and dynamically determine chunk boundaries, as well as to recognise outliers with strong intragroup cohesion.

International Journal of Research Publication and Reviews, Vol 4, no 6, pp 2013-2017 June 2023

WWW.IJRPR.COM

International Journal of Research Publication and Reviews

Journal homepage: www.ijrpr.com ISSN 2582-7421

Athletes Bioinformatics to Record Cardiovascular Problem Using Our Classifiers

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ABSTRACT –

This project can be used to find out the performance of athletes and improve the training process in order to reduce the risk of injuries. It can help to predict the athlete's health status and prevent injuries. The system can also provide the federation with information about the athletes' physical and mental health, which can help them to develop better health for athletes. The system allows athletes to choose their own games according to their grades, provide their physical bio data, and provide their full medical report. The KNN (K – Nearest Neighbour) is used to analyse the test report and the result will show the athlete's decision whether to continue or not. The existing system of analysing the health report is not effective, but this project provides an evident report to support their life.

Keywords: athletes, health report, training, prevent injuries, sports.

I. INTRODUCTION

This project can be used to evaluate athletes' performances and enhance training methods to lower the chance of injuries. It can be used to evaluate data from various sporting competitions and activities and forecast how well sportsmen will do. It can also be used to pinpoint potential training process weak points and suggest performance-enhancing tactics. Finally, it can aid in injury prevention and health status prediction for athletes. The system allows athletes to select their own sports based on their grades, but first they must provide their physical bio data and the whole medical report. The test report is analysed using the KNN (K - Nearest Neighbour)

algorithm, which will display the results and allow the athlete to decide whether to continue or not.

II. LITERATURE SURVEY

[1] The paper published in 2020 - Heterogeneous Dynamic Graph Attention Network - Li, Qiuyan and Shang, Yanlei and Qiao, Xiuquan and Dai, Wei.

This paper proposes a heterogeneous dynamic graph attention network (HDGAN) to take the heterogeneity and dynamics of the network into account. It is based on three levels of attention: structural-level attention, semantic-level attention and time-level attention. Experiments on two real-world heterogeneous dynamic networks show the effectiveness of the HDGAN model.

[2] The paper published in 2017 - Embedding Learning with Events in Heterogeneous Information Networks - Gui, Huan and Liu, Jialu and Tao, Fangbo and Jiang, Meng and Norick, Brandon and Kaplan, Lance and Han, Jiawei.

This paper proposes hebe is a framework to learn object embeddings with events in heterogeneous information networks, where a hyperedge encompasses the objects participating in one event. It is robust to data sparseness and noise, and scalable when data size spirals. Experiments on large-scale real-world datasets show efficacy and robustness.

[3] This paper published in 2022 - Hypergraph Learning: Methods and Practices - Gao, Yue and Zhang, Zizhao and Lin, Haojie and Zhao, Xibin and Du, Shaoyi and Zou, Changqing

This paper proposes hypergraph learning is a technique for conducting learning on a hypergraph structure, and this paper reviews existing literature, introduces existing learning methods, and presents a tensor-based dynamic hypergraph representation and learning framework.

[4] This paper published in 2020 - Harmless Overfitting: Using Denoising Autoencoders in Estimation of Distribution Algorithms - Malte Probst, Franz Rothlauf

WWW.IJRPR.COM

International Journal of Research Publication and Reviews

Journal homepage: www.ijrpr.com ISSN 2582-7421

SUPERVISED COLLABORATIVE FILTERING USING MULTILAYER PERCEPTRON

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ABSTRACT

Collaborative filtering is a technique which is used extensively in Machine Language, which is used to find the relationship between pieces of data. It is used to provide recommendation system to find the similarities between user data and items. Typically, recommendation systems play a significant part in any business or sector. This is especially true when collaborative filtering is used to uncover similarities as well as to obtain the output of one's data, which is then transmitted to the input of other data. Here in our model, we have used MLP Classifier which stands for Multilayer perceptron classifier, which are associated with neural networks and it also works fine with the regression. It produces highly accurate results when it comes to classification. Multilayer Perceptron (MLP) is the most fundamental type of neural network architecture when compared to other significant types, including Convolution Neural Network (CNN), Recurrent Neural Network (RNN), Auto encoder (AE), and Generative Adversarial Network (GAN). Collaborative filtering is a methodology for categorising information or patterns that makes use of various actors, points of view, and data sources. In this, we categorize users into neural networks of similar types and recommend each user based on the preferences of its classifier rather than recommending products based on their features.

Keywords: Collaborative Filtering, Multi-layer Perceptron, Neural Networks, Supervised Learning.

I. INTRODUCTION

A sort of recommendation system called collaborative filtering suggests products to other users based on the interests and actions of numerous users. By using collaborative filtering, the algorithm first collects information on how people have interacted with things, such as their ratings or past purchases. The system then employs this information to determine user similarities based on their preferences or behavior. Lastly, based on the preferences of other users, the system offers recommendations for products that a user has not yet engaged with. In the rubber business, where several production processes take place and inputs with similar characteristics share output with other inputs, we have put this collaborative filtering notion into practice. Upload the details of the raw materials in the sub-module name 'raw materials' and view the raw materials of natural and rubber. We find the best output and we suggest the rubber output to the input of the similar addictives in the making of rubber, so that the recommendation system works better with this concept of collaborative filtering, in this module analyze the report and then upload the raw materials for a testing report using classification algorithm.

II. LITERATURE REVIEW

Citation recommendation is a hybrid user-based CF that uses network representation learning to recommend citations in heterogeneous academic information networks. It outperforms state-of-the-art methods in precision, recall, and MRR (Mean Reciprocal Rank), and can better solve the data sparsity problem compared to other CF-based baselines.[1]

The recommender system is an information filtering technology used in many items, such as movies, music, venue, books, research articles, tourism, and social media. It needs an efficient searching and filtering mechanism to choose quality research papers so that the effort and time of researchers can be saved. a recommender system using a collaborative filtering approach to recommend a user with the best research papers in their domain according to their queries and based on the similarities found from other users.[2] An improved collaborative filtering algorithm is designed based on network site users and weighted fusion to improve recall rate.[3]

To predict flight's arrival delay using Artificial Neural Network (ANN). Two approaches have been adopted: historical flight data extracted from Bureau of Transportation Statistics (BTS) and selective-data training. The MLP was able to predict flight arrival delay with a coefficient of determination R2 of 0.9048 and a better R2 score of 0.9560, outperforming all existing benchmark methods.[4]

Network representation learning is a new learning paradigm proposed to embed network vertices into a low-dimensional vector space, preserving network topology structure, vertex content, and other side information. This survey reviews the current literature on network representation learning in the data mining and machine learning field, proposes new taxonomies to categorize and summarize the state-of-the-art network representation learning techniques,

International Journal of Research Publication and Reviews, Vol 4, no 5, pp 2246-2249, May 2023

WWW.IJRPR.COM

International Journal of Research Publication and Reviews

Journal homepage: www.ijrpr.com ISSN 2582-7421

INTRUSION DETECTION USING MACHINE LEARNING ALGORITHMS

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ABSTRACT:

A software programme called an intrusion detection system (IDS) is designed to watch over network or system activity and detect any harmful activity. The massive expansion and use of the internet creates questions about how to securely store and transmit digital information. Hackers now employ a variety of techniques to obtain vital information. New things like viruses and worms are imported as the internet enters society. In order to weaken the system, malicious individuals employ various methods like password cracking and the detection of unencrypted information. Therefore, security is required for users to protect their system from hackers. One of the common types of defence is the firewall technique. the private network from the public network, and it serves this purpose. IDS are utilised by insurance companies, medical applications, credit card fraud, and network-related operations. These attacks can be found using a variety of intrusion detection techniques, methods, and algorithms. The primary goal of this project is to present a comparative analysis of several machine learning and deep learning algorithms for intrusion detection. In real-time network datasets like Intrusion Detection System (IDS) datasets and UNSW datasets, a variety of machine learning algorithms, including Back Propagation, Feed Forward, Recurrent Neural Network, and Multilayer Perceptron (MLP), have been utilised to build IDs. . MLP is a popular neural network classifier based on the number of classes (output) and hidden layers. MLP employs weights for each node at the neural network; the most useful attributes will receive large weights, whereas variables that have little impact on predicting class will receive smaller weights. The proposed system may be implemented in a Python tool for performance analysis and its error rate and accuracy numbers can be evaluated.

Keywords: Intrusion, Network, Data, Detection

1.Introduction:

An intrusion detection system (IDS) is a tool or software programme that keeps an eye out for hostile activities or rule violations on a network or in a system. Any unlawful behaviour or violation is often recorded either centrally using a security information and event management (SIEM) system or notified to an administrator. In order to separate harmful activity from false alerts, a SIEM system integrates outputs from many sources and employs alarm filtering mechanisms. IDS types come in a variety of sizes, from small networks to many machines. Network intrusion detection systems (NIDS) and host-based intrusion detection systems (HIDS) are the two most used categories. An example of a HIDS is a system that keeps track of crucial operating system files, whereas an example of an NIDS is a system that examines incoming network traffic. IDS can also be categorised according to detection methods. The most well-known variations are anomaly-based detection (which frequently uses machine learning) and signature-based detection (which recognises deviations from a model of "good" traffic, such as malware). An intrusion detection system (IDS) is a tool or software programme that keeps an eye out for hostile activities or rule violations on a network or in a system. Any unlawful behaviour or violation is often recorded either centrally using a security information and event management (SIEM) system or notified to an administrator. In order to separate harmful activity from false alerts, a SIEM system integrates outputs from many sources and employs alarm filtering mechanisms. IDS types come in a variety of sizes, from small networks to many machines.An example of a HIDS is a system that keeps track of crucial operating system files, whereas an example of an NIDS is a system that examines incoming network traffic. IDS can also be categorised according to detection methods. The most well-known variations are anomaly-based detection (which frequently uses machine learning) and signature-based detection (which recognises deviations from a model of "good" traffic, such as malware).

2.PURPOSE OF THE PROJECT

The IDS can be identified based on the location of the detection and the method or methodology used to make the detection. IDS are divided into two specific niches: host intrusion detection systems (HIDS) and network intrusion detection systems (NIDS). The first system stated assists in the analysis of incoming networking traffic, whereas HIDS operation depends on operating system activity. Clustering and classification were the primary data mining on IDS topics that were initially covered. Since the initial data set for the clustering problem lacked a label, the object produced by the clustering algorithm

International Journal of Research Publication and Reviews, Vol 4, no 5, pp 3649-3653, May 2023

International Journal of Research Publication and Reviews

Journal homepage: www.ijrpr.com ISSN 2582-7421

IOT-BASED ENERGY-SAVING ASSISTANCE FOR HOME AUTOMATION POWER SYSTEMS

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ABSTRACT:

In today's world, everyone is in their sophisticated zone and is overly reliant on automatic machines. They are made up of a large number of business buildings where the room light and fan are not automatically controlled. That is, manual methods are used in practically every structure where the room lights and fans must be turned on and off. People are forgetting to turn off the lights and fans when they leave their rooms. As a result, if the lights and fans are left on in the absence of a human person, a significant amount of energy is lost, resulting in power overutilization. As more and more consumer electronic gadgets are left on even when they are not needed, this indifference by users results in increasing wasteful power consumption; on average, 411 may be saved every month. If the previous system is totally changed, it generates a huge quantity of e-waste and is also costly; hence, the work given here is a compromise between the former method and an automated control system.

Keywords — IoT, Home appliances automation, automatic control.

I.INTRODUCTION

There are several systems available for home automation and also for all organization. Several attempts have been made to establish, implement, and maintain some kind of standards for home automation power systems. Automation of control systems is in the focus of technical advancements. Home technology is used to create a digital environment by regulating room temperature, various gadgets, security, and lighting. Home automation systems are designed to automate tasks such as controlling of home environment equipment like fan, light, AC, Television, etc... Wireless sensor networks can benefit for home automation systems. One of the most advantages in sensor networks with limited resources is energy efficiency. They should monitor and save energy in household appliances based on the human habits. This system was built so that users would not have to spend a lot of time configuring it.

II.METHODOLOGY

When the power supply flow on the components the light will glow on the relay which indicates that the system is on but the fan will remain idle. At initial stage there is no compression on the weight sensor the fan will be idle. Which means there is no human activity on the weight sensor so that it doesn't sense any weight on the sensor. The step down transformer is used because of the electronics are working in direct current (DC) but we have the components source in alternate current (AC).

For converting the 23V alternative current into the 12V alternative current we have used the step down transformer. Then we should convert the AC to DC for that purpose we have used the rectifier. It will store the DC current into the power supply board. With help of Arduino UNO, the relay is receiving the signal from weight sensor after the weight detection. Already mentioned above that the physical tension/compression on the weight sensor will be converted as a signal to the Arduino UNO the same process will be continued. Once the sensor gets compressed that physical tension will convert into the signal and that signal will pass on to the Arduino UNO. Through that the relay get activated and the fan also activated.

When the human gets into the system automatically the weight will be detected. Weight of that human is sensed by the weight sensor by the given pressure on the load cell. After the detection of the weight Arduino UNO will check the condition given to that. If the condition satisfies the fan will switch on otherwise the fan will not activated.

LCD display projection is used to display the weight unit measured by the weight sensor. The LCD display gives the projection of the measured weight and the condition given in the Arduino UNO. It displays the condition in two ways one is normalized and overloaded. The "Normalized" condition shows that the weight which is measured is on under the condition and results in idle position of the fan. The other one "Overloaded" indicates that the weight measured is satisfying the condition so the fan gets switch on.

The DC motor(fan) is Controlled by the weight detection is the main process. Here the fan has taken as an example of the whole home appliances. The weight sensor is the activator for the fan by the help of the Arduino UNO and the relay. When the human enters into the diameter the human weight is sensed by the weight sensor and the weight measurement is sent as a signal to the Arduino UNO. The condition applies now whether the measured weight

International Journal of Research Publication and Reviews, Vol 4, no 5, pp 3577-3580 May 2023

WWW.IJRPR.COM

International Journal of Research Publication and Reviews

Journal homepage: www.ijrpr.com ISSN 2582-7421

Multitasking and its Prognostic Process for a Exceptional Solution

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ABSTRACT—

It sounds like you have developed a model using an adaptive boosting algorithm to efficiently solve multiple tasks simultaneously, particularly in the field of biopharmaceuticals. The model combines both classification and regression techniques, with a focus on classification for greater accuracy. The evolutionary multitasking approach has also been used to solve related optimization problems simultaneously. Boosting is an ensemble technique that involves combining weak classifiers to build a strong classifier. The model sequentially builds upon previous models to correct errors and improve accuracy. This approach can be useful for tasks that require multitasking and problem-solving, as it allows for efficient use of time and resources. Overall, it seems that your model has the potential to be a valuable tool in the biopharmaceutical industry for assessing disease severity and extracting accurate results through analysis. By incorporating multitasking and boosting techniques, you have developed an efficient and accurate solution to complex problems.

Keywords: Multitasking, Biopharmaceutical industry, Tablet, Adaptive boosting, Bio pharmaceuticals, classification, regression, accuracy, disease severity, analysis.

I. Introduction

This passage highlights the importance of utilizing machine learning techniques to solve complex problems, particularly in high-priority and high-value situations. Collecting, cleaning, organizing, and analyzing data is a time-consuming process, but it can lead to better decision-making and risk reduction. The adaptive boosting algorithm is a statistical technique that is well-suited for finding the best-fitting curve among data points and quickly calculating total error and stump performance. This allows for multitasking and the ability to solve multiple problems simultaneously, with the potential for useful information to be applied to future problems. In the pharmaceutical industry, this model can be particularly valuable for assessing disease severity and extracting accurate results through analysis. The ability to multitask using the adaptive boosting algorithm allows for more efficient problem-solving. The advancement of technology has made everything computerized, and managing multiple tasks and solving problems takes time and effort in any industry, particularly in pharmaceuticals

II. Literature review

[1]Cavazzuti, Marco"He informed usThis book is divided into two sections: an overview of optimisation theory and applications to guide readers throu gh the process of setting up optimisation exercise" Jan 2012.

[2] Glenn Maguire and Jean-Baptiste Mouret are told about "The QD algorithms can solve multiple tasks at once, but not when fitness needs to be evaluated separately. This paper proposes an extension of the MAP-Elites algorithm, Multi-task MAP-Elites, which outperforms the CMA-ES algorithm in both cases." 2020

[3] The clause describes a paper authored by Li Shuijia, Wenyin Gong, and Qiong Gu, "which reviews meta-heuristic algorithms used for extracting parameters of photovoltaic models. The authors evaluate these algorithms based on factors such as reliability, robustness, computational resources, and time complexity and provide recommendations for efficient parameter extraction to improve the performance, control, and design of PV cells. The paper is likely useful for researchers and practitioners working in PV cell design and optimization."May 2021

[4] Chuan-Kang Ting and Abhishek Gupta et all; the authors are discuss about in this paper "Having standardized test problems in optimization research is essential, particularly for emerging fields like MTSOO. The report proposes nine test problems for MTSOO, each requiring simultaneous optimization of two single-objective tasks with varying relationships between them. These problems will provide a comprehensive evaluation of MFO algorithms, enabling researchers to compare algorithm performance, identify strengths and weaknesses, and develop new and improved algorithms. The proposed test problems have the potential to inspire researchers to advance the field of MTSOO." June 2017.

[5] Rohitash Chandra and Yew Soon Ong and also Chi-Keong Goh these authors are told about "The clause discusses a novel approach for multi-step time series prediction that integrates multi-task learning and cooperative coevolution techniques. The authors propose a network architecture with

International Journal of Research Publication and Reviews, Vol 4, no 5, pp 3187-3190 May 2023

WWW.IJRPR.COM

International Journal of Research Publication and Reviews

Journal homepage: www.ijrpr.com ISSN 2582-7421

Real-Time Detection of Littering from Vehicles in Traffic Surveillance Videos

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ABSTRACT:

In recent years, traffic volume and its management have become a significant concern for many cities worldwide, leading to a decline in the quality of life in urban areas. Littering while driving is a common practice globally and is a criminal offense that burdens the municipality and can even lead to accidents. In this paper, we propose a machine learning-based technique to identify and prevent this type of behaviour, which is illegal and punishable under section 279 of the Indian Penal Code. The proposed system is an automatic decoration garbage detection system based on the improved YOLOv2 network and narrowband Internet of things (NBIoT). The system can not only prevent littering but also aid in traffic management and monitoring road. conditions, creating a more sustainable and resilient transportation. system that enhances public safety and improves the quality of life in modern cities.

INTRODUCTION:

With the increase in urbanization, the volume of traffic on roads has also increased, leading to a decline in the quality of life in urban areas. Littering while driving is a widespread issue worldwide and is a criminal offense. It burdens the municipality and can even lead to accidents. Therefore, there is a need to develop a system that can

detect and prevent this type of behaviour. In this paper, we propose an automatic decoration garbage detection system based on the improved YOLOv2 network and narrowband Internet of things (NBIoT) that can identify and classify vehicles engaging in this type of behaviour. The proposed system can aid in traffic management and monitoring road conditions, creating a more sustainable and resilient transportation system that enhances public safety and improves the quality of life in modern cities.

LITERATURE REVIEW

In today's world, the use of intelligent transport systems (ITS) and location intelligence planning has become increasingly important, necessitating precise vehicle classification and tracking. Deep learning (DL) and computer vision are advanced methods used to achieve this objective, though real-time accuracy is a challenge. Another important issue is littering from vehicles (TWV), which poses a threat to the environment and sanitation workers who clean up roads. Therefore, using intelligent methods to detect instances of TWV in real-time traffic surveillance footage is imperative.

Furthermore, in the construction industry, estimating the generation of construction and demolition (C&D) waste is crucial. This can be achieved by utilizing a methodology based on waste generation rates (WGR) through regression analysis. Additionally, recycling C&D waste offers economic benefits and should be further investigated.

Video surveillance systems are used to monitor traffic, and they consist of three main modules: the segmentation module, vehicle classification module, and vehicle counting module. The segmentation module utilizes the Codebooks method for background subtraction to identify regions of interest corresponding to vehicles. The vehicle classification module uses histograms of oriented gradient in conjunction with support vector machine to classify vehicles according to their type. The overall goal of the video surveillance system is to accurately detect and count vehicles in the surveillance footage.

METHODOLOGY:

The proposed system is based on the You Only Look Once (YOLO) object detection algorithm, which is renowned for its ability to detect objects quickly and accurately. It segments the input and searches for potential objects to detect using an end-to-end neural network. VGG16 is a convolutional neural network (CNN) architecture that achieved success in winning ILSVR (ImageNet) and is considered one of the best vision model architectures to date.

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International Journal of Research Publication and Reviews

Journal homepage: www.ijrpr.com ISSN 2582-7421

Pmist Bus Tracking System

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ABSTRACT

This paper proposes for particular college named as Periyar Maniammai Institute Of Science & Technology (Pmist) bus tracking system is an web application that was created to track the whereabouts of the bus using a web application. This application is intended for students and drivers of college buses. The system allows for the addition of new bus information and drivers, with a driver id and password produced and saved in the system. The driver will have the web application open on his phone, and when he logs in, his GPS position will be received and saved in the database. As soon as the driver logs in, the programme immediately tracks the driver's GPS location and records the GPS co-ordinates in the database every 5 minutes. When the driver logs out of the application, the GPS location is Saved yet again. To be able to.

Keywords : GPS, Tracking system.

1. INTRODUCTION

College Bus Tracking System is a system developed on Web Application Platform using python programming language. It is built on client-server technology and employs longitude, latitude, and a database. One user (College Bus Driver) gives the server the bus's real-time position as well as other date and time information. The information submitted by the user is saved in the server's database. Other Android users can access the information via the server. The login page for the college administrator is available on the user web application. The administrator can keep a record of the bus on the database, such as the bus number, timetable, route information, driver contact information, and so on. The administrator also has the ability to modify the bus record as needed. Students must log in. Students can use the map to locate a certain bus. Students are updated on the bus location at regular intervals so that they do not have to wait for the bus while not knowing if it is coming or has gone. So, in essence, our system manages all data regarding the present position of the bus, and utilising this data, real-time tracking of the bus is possible, and this information is then provided to distant users that wish to know real-time bus information. Some technologies, such as GPS (Global Positioning System) and Google Maps, are employed for development purposes. The solution contains a server-client application that provides real-time bus position on Google Maps.

2. LITERATURE SURVEY

[1] Shubham Jain et al., "Application-based bus tracking system", 2019 International Conference on Machine Learning, Big Cloud and Parallel Computing, 1416 Feb 2019.

This study is based on a bus tracking system that uses a GPS Tracking software to track the bus. The passengers are uninformed of the bus timing information and hence waste time waiting for the bus on their specific route. GPS technology is user-friendly, allowing you to obtain navigation instructions at any moment. The location of the bus is obtained from the satellite and then analysed and transmitted to the web-server through cellular networks. The coordinates are analysed using the Google Maps API. Google Maps API assists in the collection of data such as latitudes and longitudes, places, and so on.

[2] Sharmin Akter et al., "A Cloud- Based Bus Tracking System based on Internet of Things Technology", 2019, 7th International Conference on Mechatronics.

A Cloud-based bus tracking system based on IoT is suggested in this study. The integration of cloud computing and the Internet of Things allows for the monitoring of bus services, which must be saved, processed, and evaluated. This study offered a mobile application that focuses on the problem with buses, namely that passengers do not know the precise moment of bus arrival. The bus's location and the routes travelled by the buses People go from one location to another on a daily basis, and the majority of the population takes the bus to get there. This research article

[3] Priyanka V. Narkhedeal, "Bus Tracking System based on Location-Aware Services", International Journal of Emerging Technologies in Engineering Research, Volume 6, Issue 3, March 2018.

People go from one location to another on a daily basis, and the majority of the population takes the bus to get there. This study is primarily concerned with the issue of bus passengers not knowing the actual time of arrival of buses. The position of the bus and its travels may be readily traced using a

International Journal of Research Publication and Reviews, Vol 4, no 5, pp 3684-3688 May 2023

WWW.IJRPR.COM

International Journal of Research Publication and Reviews

Journal homepage: www.ijrpr.com ISSN 2582-7421

Residual Applicative Life of an Appliance and its Prognosis on its Lasting Life Expectancy

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ABSTRACT

The amount of time a device can perform the same task while being competitive is referred to as its remaining useful life. Manufacturers can reduce development costs by deciding when to replace parts and utilities by calculating the remaining usable life. The amount of time that the machine's original parts are expected to maintain working perfectly before being upgraded is known as the machine's remaining useful life. The amount of time, or the number of cycles or cycles, that a machine can still technically be used in regular service is known as its remaining useful life. The amount of years (often) that a component of equipment or machinery is anticipated to last before becoming outdated is known as its remaining usable life. A decision tree classifier is employed in this model to determine whether or not you demand service guess it depends on the machine's monthly earnings. Using a decision tree classifier, the machine learning method is used to determine whether a service is needed or not. Data classification can be done in many different ways. Decision tree learning, which is a strategy for determining the best decision tree from a collection of input values to achieve the maximum of each of its leaf nodes, is one of the most well-liked classification strategies. Decision tree learning is an algorithm in use by data scientists to label objects in a dataset. In our model, I will compute the remaining useful life (RUL).I will use lasso regression to determine the age of a machine's investment spending. This machine's average service is added toward its life expectancy, and the estimvaluate the machine's remaining useful life.

KEYWORDS— deep learning, degradation alignment, prognostics, remaining useful life (RUL) prediction.

I. INTRODUCTION

Remaining useful life (RUL) describes the expected time frame within which a certain product or asset will continue to function as intended before it becomes dated or useless. This phrase is frequently used in the context of planning for maintenance, repair, and replacement, especially in sectors where machinery or equipment is essential to an organization's ability to function. To estimate the remaining usable life of its machinery and equipmentfor instance, a manufacturing company would utilize data analysis and predictive modeling.

This would enable the business to plan and budget for repairs, replacements, and upgrades. The business may prevent unplanned downtime or expensive emergency repairs by forecasting when equipment will reach the end of its useful life. This will also ensure that operations continue to run smoothly. A number of variables, including usage, maintenance history, and machine age, are taken into account when estimating a CNC machine's remaining usable life. For instance, if a CNC machine has been in use for a particular period of time and has a history of routine maintenance and repair, its estimated remaining usable life may be longer than that of an older or less-maintained machine. Manufacturers may plan for necessary repairs or replacements in a timely manner and keep their operations operating smoothly and efficiently by knowing the anticipated remaining useful life of a CNC machine.

II. OBJECTIVE

To find the perfect RUL(Remaining Useful Life) of a machine. RUL utilizes the tools included in our platform to determine the useful life that remains for your products and assets and it is simple to use. It empowers you to decide on strategic actions like acquisitions or disposal of assets with knowledge. The main goal is to achieve an uninterrupted production process. Periodic service check through analyzation for a smooth process.

III. LITERATURE REVIEW

K. Zhong et al[1] proposed a ensemble deep SVDD method (EDeSVDD) is an improved SVDD method proposed to monitor process faults more effectively. It uses a deep feature extraction procedure and Bayesian inference to generate a series of DeSVDD sub-models. A fault isolation scheme is

International Journal of Research Publication and Reviews, Vol 4, no 5, pp 3692-3695 May 2023

WWW.IJRPR.COM

International Journal of Research Publication and Reviews

Journal homepage: www.ijrpr.com ISSN 2582-7421

Smart Ration Shop Virtual Queue System Using Web Application

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ABSTRACT:

Public Distribution System is a government-sponsored network of stores tasked with providing essential food and non-food necessities at deeply discounted rates to the underprivileged segments of society. The public distribution system distributes a number of important goods, including wheat, rice, kerosene, sugar, etc. One technique of the public distribution system is the ration shop. It undoubtedly benefits the populace, but it also has a lot of disadvantages. Those that provide goods for the ration shop sometimes take some of them and retain it for themselves. In order to obtain the goods, there is a large queue of individuals who must wait, wasting their time. This makes the ration shops crowded. People can use this application to find out the status of the queue's availability. Through a web application, the suggested solution offers customers a simple method to reserve their tokens online without having to wait in queue. Using an application, this article aims to reduce crowding at ration stores. The web application first get information before it can connect to the appropriate ration shop. This application's ability to connect to the appropriate servers and retrieve data will undoubtedly let clients reserve tokens online without standing in queue.

Keywords *— Queue, the public distribution system, and token.*

1. INTRODUCTION

The system for waiting in queue in virtual form is known as Virtual Queue. We may then apply it to public distributed systems. Because people must wait in huge lines at government ration shops to acquire commodities such as sugar, rice, oil, wheat, kerosene, and so on from the centre. Farmers purchase products for these supermarkets and resale them to receive subsidies. The bulk of grocery store owners are immoral, and the rations offered to clients are not given to authorised workers. Most clients do not have the patience to wait in a long queue, thus they do not receive their goods. It's an opportunity for those suppliers. This application was used to reserve their token and confirm the current status of the queue. It undoubtedly minimises the queue in front of the ration shop and also saves them time.

2. LITERATURE SURVEY

[6] The idea of "Smart Ration Distribution and Controlling" was put up by Kashinath Wakde et al. A Personal Data Assistant device with an RFID tag is implemented and used as an e-ration card in place of a standard ration card in this study.This PDA gadget is comparable to the bank pigmy agent's or bus conductor 's ticketing machine, and the e-ration card is comparable to a swipe card. The RFID reader validates an identification card when it is presented to a PDA device. If it is legitimate, it will display the name of the ration card holder and account information, including the food grains allotted to his household and the government-recommended prices. Then it requests the delivery of the quantities. It displays the amount due after inputting the quantities. After that, it prints the receipt and notifies the consumer of the transactions. Only at the ration shop will the public have access to the stock information. It may make the ration shops crowded.

[7] "Mobile App for Smart Ration Card System" is the idea put out by Mrs. B. Buvaneswari et al.Each user in this system has their own unique authentication login. Information about the user's family members, supplies that are available and have been received, and their pricing list are all presented in their user profile. The user will receive a confirmation message when the buyer blocks the necessary materials and makes a request to the admin. They can purchase their items at the relevant ration shop by utilising this message. The admin of the ration shop will post the information after it has been given to the appropriate user. This document does not take any steps to minimise crowding in the ration shop, even though it lessens corruption.

[5] The "Web Enabled Ration Distribution and Corruption Controlling System" has been proposed by DhanashriPingale et al.The goods in this system are kept in storage tanks. The number of products is updated on the web server when they are added to the ration shop. The collector can use the webpage anytime he needs a ration from a certain ration shop. The user must input the product and quantity needed through a keypad and LCD display into the computer, which already has a database filled with all of the user's information, in order to obtain the precise amount of needed items. The web server updates the ration shop's inventory numbers once again. Power supply is crucial for computer use. The subscriber under this scheme must visit the website each time they want a ration.

International Journal of
Electrical and Computer System Design
ISSN: 2582-8134 www.ijecsd.com

Anomaly Perception Data and Computation For Further Utilization

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Abstract: The outlier identification method has a lot of applications and has recently attracted a lot of attention. Applications for the usage of outlier identification techniques have included clinical trials, voting irregularity analysis, data purification, network intrusion, severe weather prediction, geographic information systems, athlete performance analysis, and other data-mining activities. Outlier identification is an essential task in many safety-critical settings since an outlier flags aberrant operating conditions that may result in considerable performance loss, such as an aviation engine rotation failure or a pipeline flow issue. An outlier is a strange object in a picture, like a land mine. Early detection is essential because an anomaly may reveal a malicious breach into a system. In order to identify aberrant data and use it efficiently for production, this paper explores research on outliers in the automotive industry. Developers should choose an outlier identification method that is acceptable for their data collection in terms of the correct distribution model, the relevant attribute types, scalability, speed, and any incremental capabilities to enable the saving of more exemplars. With less computational complexity and experiments using data from various reporters as well as a synthesis of processed data from deep analysis and forecasting the acquired data for further acknowledgement, our project proposal can cost-effectively identify outliers in large-scale datasets from a variety of data views.

Keywords: Outlier Identification, Automobile Industry, Outlier Detection, Anomaly Detection, Decision Tree Algorithm.

1. Introduction

A substantial majority of data analysis tasks need the recording or sampling of numerous variables. Finding outlying findings is one of the initial steps in creating a cohesive analysis. Even though outliers are typically rejected as error or noise, they may contain important information. Detected outliers are candidates for aberrant data that could otherwise have a detrimental impact on model design, result in skewed parameter estimation, and yield false conclusions. Prior to approval or payment for application processing, such as loan application processing or social security benefit payments, an outlier detection system can identify any abnormalities in the application. Additionally, to ensure that the payout has not deteriorated into fraud, outlier detection can follow a benefit claimant's circumstances over time. Because irregular entries make it difficult to analyze and provide engine specs to the production team, finding outliers will help to speed up the process. The industry will benefit from its assistance in avoiding irrelevant data, improving the right production system, and leading to development across a variety of disciplines in addition to finding the most significant differences.

2. Literature Review

The study of this paper, using longitudinal sMRI slices, we use a GAN-based encoder-decoder framework, where the error between the reconstructed and actual neighbouring three slices stacks is used to identify ASD data as outliers. Reconstruction quality and, thus, the effectiveness of ASD detection were tested for three architectures: UNet, GAN, and SAGAN. The SAGAN with self-attention modules obtains the highest level of reconstruction and detection accuracy,

International Journal of
Electrical and Computer System Design
ISSN: 2582-8134 www.ijecsd.com

INTEGRATION OF LOCATION-BASED GARBAGE COLLECTION

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Abstract: Multiple mobile or web applications are combined in smart cities to create comfortable human habitation. Making an efficient, effective, and ecologically friendly rubbish management system is one of these alternatives. The current trash collection system involves daily or weekly rounds of routine garbage trucks, which not only don't cover every part of town, but may also be a wholly inefficient use of public funds. This idea offers a low-cost mobile or web-based system that the government may use to effectively handle the enormous volumes of trash that are collected every day, as well as a much better answer to the nuisance of electric pigs for the people. Additionally, all users of this app can access the Google map to view the whereabouts of the garbage collector. This is accomplished by a network of smart bins that employ cloud-based monitoring and analysis tools to provide garbage trucks with predicative routes. For the workforce and therefore the citizens, an internet app is created that principally offers the generated routes for the labour and locates the closest available smart bin for citizens.

Keywords: Rubbish management, Smart bin, Garbage trucks, Generated routes, Smart city.

1. Introduction

Based on the data collected, garbage trucks can be given routes generated through Google maps API to efficiently route through all necessary garbage bins and finally reach the dumping site. In the city of metropolitan urban communities, many individuals are passing a similar area around one moment. Around of individuals are conveying food covers, polythene packs, and plastic jugs. In the event that they arrange all them without a moment's delay, the containers will be filled in a few minutes. At the point when they top off individuals simply litter their rubbish around the trash containers on the grounds that there is no place else to put them.

The obvious solution to this is for the cleaning crew to continually stay close to trash canisters until they are full so they can clean them. This arrangement is definitely not real. It requires a lot more cleaning employees than usual and is very expensive. It makes no sense in this way. Workstations are experiencing a similar scenario.

When this is done for a considerable amount of time, it initially starts to smell bad. In this way, later visitors are less likely to approach and throw their trash towards the trash cans. Throwing it causes any further food items to spill if there are any. Additionally, these species spill them much more. The spread of infections has an adverse effect as well. They were dispersed by rubbish, although wildlife can also serve as a source.

2. Literature Survey

[1] "IoT Based Waste Management for Smart City" is an article by Prabu Parkash published in February 2019.

The article explores the application of Internet of Things (IoT) technology in waste management within the context of a smart city. It likely discusses how IoT devices, sensors, and data analytics can be utilized to optimize waste collection, monitoring, and disposal processes. The article may provide insights into the benefits, challenges, and potential solutions related to implementing IoT-based waste management systems in smart cities.

[2] Rushikesh Wanjare , Harshad Pawar , Sarthak Kadu , Pratik Nikam , Prof. Pradnya Narkhede is an article “Location based garbage management system” published in 2022.

The proposed solution for rubbish management in smart cities involves a mobile or web-based system that utilizes smart bins and cloud-based tools. The system optimizes garbage collection routes through predictive algorithms and provides an internet app for garbage truck workers and citizens. By leveraging real-time data and analysis, the system offers an efficient, cost-effective, and environmentally friendly alternative to traditional trash collection methods. It improves resource utilization, reduces costs, and enhances overall rubbish management in smart cities.

International Journal of
Electrical and Computer System Design
ISSN: 2582-8134 www.ijecsd.com

FAKE NEWS DETECTION SYSTEM USING FEATURE BASED OPTIMIZED MSVM CLASSIFICATION

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Abstract: The arrival of the World Wide Web and the rapid-fire relinquishment of social media platforms (similar as Facebook and Twitter) paved the way for information dispersion that has noway been witnessed in the mortal history ahead. With the current operation of social media platforms, consumers are creating and participating further information than ever ahead, some of which are deceiving with no applicability to reality. Automated bracket of a textbook composition as misinformation or intimation is a grueling task. Indeed, an expert in a particular sphere has to explore multiple aspects before giving a verdict on the probity of a composition. In this work, we propose to use machine literacy ensemble approach for automated bracket of newspapers. Our study explores different textual parcels that can be used to distinguish fake contents from real. By using those parcels, we train a combination of different machine learning algorithms using colorful logistic retrogression styles and estimate their performance on 4 real world datasets. Fake news discovery attracts numerous experimenters' attention due to the negative impacts on the society. utmost being fake news discovery approaches substantially concentrate on semantic analysis of news contents. We propose a new fake news Logistic retrogression fashion.

Keywords: Fake news, Spam detection, Machine Learning, NLP, Pandas.

1. Introduction

In modern days boom of social media has change people mind about taking the information. Presently there are decreasingly farther people consuming news through social media, which can give timely and comprehensive multimedia information on the events taking place all over the world. Compared with traditional textbook news, the news with images and videos can give a better liar and attract farther attention from readers. Unfortunately, this is also taken advantage by fake news which generally contain misrepresented or indeed forged images, to mislead the readers and get rapid dissipation. The dissipation of fake news may cause large -scale negative effects, and sometimes can affect or even manipulate important public events. Thus, it is in great need of an automatic detector to mitigate the serious negative goods caused by the fake news.

2. Categorization and Description of Works

[1] This Paper Published 2022: Fake News Detection System Using Featured-Based Optimized Msvm Classification- Ravish, Rahul Kalarya, Deepak Dahiya, Saksham Checker. This is cross check project for news Responsibility. It is also known as "House of Common and Cross Check". In this paper we are Multi-Support Vector Machine(MSVM) for Fake News Prediction. [2] This paper Published 2020: Fake News Detection Using Machine Learning Approaches-Z Khanam,B N Alwasel, H Sirafi, M Rashid. The people on Social Media Shares Many News Without any crosscheck.Some news may be fake so this project is made for detecting the real and fake news.In this project we use scikit-learn,NLP for textual Analysis.

[3] This paper Published 2022: Fake News Detection Technique on Social Media: A Survey - Ihsan Ali, Mohamad Nizam Bin Ayub, Palaiahnakote Shivakumara, Nurul Fazmidar Binti Mohd Noor.

In Twitter they are more Fake News are Spready this Paper focous on identification of Fake News. This will Eliminate the fake news. [4] This paper Published 2018: Detection Fake News in Social Media Networks - Monther Aldwairi, Ali Alwahedi. Some People speared Fake News on internet.The Readers not checking the

International Journal of
Electrical and Computer System Design
ISSN: 2582-8134 www.ijecsd.com

Exploitation of Recommendation Framework for Inadequate Approach

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Abstract: Recommender Systems (RS) are widely and successfully used in online applications today. A recommendation system is a service that connects users and projects through information. This is accomplished by assisting both users and project providers in the discovery and delivery of projects and various solutions. A suggestion system is a powerful tool that can help an organization or business. This paper reviews the overcome of data sparsity research on the recommendation systems helps an accumulate the sparsity overcome delays and increase the efficiency of the Firm or simply to solve the recommender systems' cold-start and data sparsity issues. Recommender systems not only make it easier and more convenient for people to receive information. Many approaches have been developed over the years For purpose of recommended systems team will receive the massive datasets from the team that is experiencing problems with cold starts and data sparsity, and in order to address these difficulties to complete their project with in the deadline, we apply a powerful predictive regression technique called gradient classifier algorithm an algorithm which minimizes a loss function by iteratively choosing a function that points towards the negative gradient; a weak hypothesis to identify the problems and provide solutions.

Keywords: Recommender system (RS); Data Sparsity; Gradient Classifier Algorithm (GCA);

1. Introduction

Today's internet applications often and successfully employ recommender systems (RS). A recommendation system is a service that uses information to link users to projects. This is done by facilitating the discovery and delivery of projects and different solutions for both consumers and project providers. A significant tool that may benefit a company or organization is a recommendation system. The recommended technique, also known as personalized information filtering, is used to predict whether a given user will like a particular project (predictive problem) or to identify a set of solutions for the (recommendation problem).A powerful tool that can benefit a company or organization is a recommendation system. This paper analyses the research on recommendation systems' ability to overcome data sparsity, which can either assist the firm become more efficient or simply address the cold-start and data sparsity problems with the recommender systems.In the software sector Yet when a project team lags and it affects the client deadline, it creates issues that are in the future. By utilizing the classifier algorithm and aiding in the resolution of the cold start-problem, the suggestion concept in this situation will be able to address the problem and successfully complete the project within the allotted time. The recommendation system can essentially be used to resolve the core idea or scope of the issue that emerges from the organizing team.

2. Literature Survey

[1]. Bogdan Walek, Petra Spackova, published the paper (Content-based recommender system for online stores using expert system) in the year of 2018. This paper said an algorithm that modifies material according to user preferences and the stuff they have watched. To propose and provide is the recommender system's primary objective appropriate content for the user.

[2]. Xuesong Zhao, published the paper (A Study on E-commerce Recommender System Based on Big Data) in the year of 2019. In this paper, numerous recommendation algorithms are discussed, as well as the difficulties that traditional recommender systems face in the context of massive data. Finally, a Hadoop-

International Journal of
Electrical and Computer System Design
ISSN: 2582-8134 www.ijecsd.com

Crime Reporting System

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Abstract: The Crime Reporting System is an application that covers complete case management system and this project will help in managing all activities of the police station. It can be used to report crimes and manage all the activities in a police station using computers by tracking all the details of complaints. Currently most tasks are done manually, but by computerizing all the activities inside a police station the working systems can be managed easily and effectively. Crime reporting is a service that police provide. By the time number of reported crime cases get increases. But law enforcement finds out there is a gap between reported crimes and not reported crimes. Numerous reasons may involve for this gap. It is not a good thing to giving a chance for criminals to stay safe in the community as innocents, and that motivates criminals to do more crimes. Because of that, the community at high risk of being a victim. And as law enforcement, they are unable to do their jobs because many crimes are not getting reported. Sometimes that affects the ongoing investigations too. To fill this crime report gap, some law enforcement launched online crime reporting systems for the public to report crimes. So, this paper discusses how crime reporting systems are going to help law enforcement and ongoing investigations. And the involvement of the public in these systems. The effectiveness of the system to police is also discussed in this paper. This paper has included previous studies to show the impact of crime reporting systems in modern-day policing. The police department and the administrative department This system registers the complaints from people through online and it will also helpful to police department in catching criminals, in system and person can give any complaint at any time.

Keywords: Crime reporting system-police station-done manually-cases increased-law enforcement-ongoing investigation-administrative department-catching criminals.

1. Introduction

Crime reporting is a service that police provide. By the time number of reported crime cases get increases. But law enforcement finds out there is a gap between reported crimes and not reported crimes. Numerous reasons may involve for this gap. It is not a good thing to giving a chance for criminals to stay safe in the community as innocents, and that motivates criminals to do more crimes. Because of that, the community at high risk of being a victim. And as law enforcement, they are unable to do their jobs because many crimes are not getting reported. Sometimes that affects the ongoing investigations too. To fill this crime report gap, some law enforcement launched online crime reporting systems for the public to report crimes. So, this paper discusses how crime reporting systems are going to help law enforcement and ongoing investigations. And the involvement of the public in these systems. The effectiveness of the system to police is also discussed in this paper. This paper has included previous studies to show the impact of crime reporting systems in modern-day policing.

There are different forms of crimes that are happening every day in different regions. Huge number of these crimes go unreported either because there is no law enforcement in the region or people are sometimes scared to reveal their identity to the police. Also, crime goes unreported, because people do not have enough evidence to help police with the investigations. In order to address this problem, this paper proposes an automatic crime reporting and immediate response system that is developed based on system integration which combines Raspberry Pi, Microsoft IoT, mobile application, and web application. An automatic crime reporting, and immediate response system does not only guarantee informer's safety and secrecy, it also stops cases and reports from being deleted or removed and guarantees information integrity. The automatic crime reporting system has an incredible potential to assist informers to report crime anonymously or by providing their details using mobile phones. It also

International Journal of
Electrical and Computer System Design
ISSN: 2582-8134 www.ijecsd.com

Levying and Anticipate of a Structural Project using our In-depth Analysis process

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Abstract: In modern world predicting the possible outcome is a huge task and in our day to day life usage of technology becomes the part of our life. A better understanding of how momentum is absorbed into the initial non-negative terms in the pressure expression of a shock wave is made possible by Momentum-incorporated Symmetric Non-negative (MSNS), an analytical and computational tool. We focus on the scenario with negative momentum in particular. Latent Factor Models (LFM) is a statistical method for estimating the association between latent variables derived from a collection of items or instances and observable data, which is the dependent variable. The LFM approach, in essence, enables us to quantify the contribution that each item makes to the estimation of an outcome variable. In recent years, technology has start eddo play a significant role in the area of research. That to the process of construction research and analysis takes a huge part, which becomes more fruitful if we reduce the waiting time through our analysis process and by getting the price estimation. Here Qualitative research was quickly adapted and aided by the technology. This qualitative research is done through the process of Qualitative Data Analysis (QDA) process, which helps in the in-depth analysis. It is also used in statistics, which is also known as the categorical data. Next Theil-Sen estimator, which has been proposed as preferable to least squares estimation due to its high precision in the presence of data. Here we predict the estimation with high efficiency, and accuracy level is very high.

Keywords: Big mart, Web scraping, Sales forecasting, Future prediction, Machine learning.

1. Introduction

The potential risks associated with building, as it can provide a thorough evaluation of the project in order to ensure the safety of the structure. Additionally, technology can also provide data that can be used to improve the overall efficiency of the entire project, from planning to completion QDA allows researchers to efficiently and accurately analyse qualitative data, including text, audio, and video, to identify patterns and themes. It also allows for the ability to visualize the data and gain insights, as well as to make connections between themes. It can also be used to identify patterns or trends in the data and to generate hypotheses or theories about those patterns. Additionally, QDA can be used to compare and contrast different data sources, as well as to identify relationships between data points. The use of technology in qualitative research has allowed researchers to gain deeper insights into their data and to draw more meaningful conclusions. QDA has enabled researchers to save time, as well as to gain a better understanding of their data. QDA. Technology has made it easier for researchers to analyse large amounts of data, as well as to quickly identify patterns and trends in their data. The Next Theil-Sen estimator, which has been suggested as an alternative to least squares estimate due to its high precision in the presence of data, is used for more precise trend and pattern detection. Here, the estimation is predicted with a high degree of efficiency and accuracy.

2. Categorization and Description of Works

[1]. Ragy Jose, Restina Mathew, Sandra, Mohit Y S and Sankerthana Venu (2017) "Analysis and Design of Commercial Building by ETABS". Structural Analysis is a branch which involves in the determination of behaviour of structures in order to predict the responses of different structural components due to effect of loads. Each and every structure will be subjected to either one or the groups of loads, the various kinds of loads normally considered are dead load, live load, earth quake load and wind load. ETABS is a software which is incorporated with all the major analysis engines that is static, dynamic, Linear and non-linear, etc. and especially this Software is used to analyse and design

International Journal of
Electrical and Computer System Design
ISSN: 2582-8134 www.ijecsd.com

Linear approximation Computational Complexity with Multivariate Correlation

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Abstract: In recent years, the term "carbon footprint" has become common among meteorologists due to the pressing issue of climate change being a top priority for both corporations and politics. As a result, there is a high demand for calculating carbon footprints, with scholars proposing various approaches ranging from simple online calculations to more complex techniques such as input-output-based analysis. However, despite the widespread use of the term, there is no universally accepted academic definition of "carbon footprint." This lack of clarity is evident in the scientific literature, despite numerous studies on energy and ecological economics that should have defined the term precisely. Typically, carbon footprints are calculated by averaging the number of people living in a specific region with the total number of people in that region. However, we propose a system that will calculate the emissions from homes and industries separately, addressing the current system's drawbacks, which average out the footprints in a given region. Our system will use calculations that predict accurate results for each individual.

Keywords: Sparse regression, Sparse coding, Decision tree. Carbon emission, Multivariate correlation

1. Introduction

The calculation involved in evaluating emissions at each stage is complex, whereas calculating the carbon footprint of an individual or industrial area is relatively straightforward. The emissions occur during various stages such as the assembly plant, the creation of machinery, transportation of component parts, factories producing components, and mining. To estimate the greenhouse gases emitted to support one's lifestyle, calculators ask questions about household fuel use and travel patterns. Decision Trees are a type of supervised machine learning that segments training data based on a specific parameter. The algorithm used in Decision Trees is more efficient than existing systems of sparse regression. The output is efficient, time-saving, and accurate. By implementing this method, it is possible to calculate the carbon footprint of a particular region and identify emitters with a significant impact on the environment. Scholars have raised concerns about the carbon footprint, and the algorithm used for Decision Trees is a solution to this problem.

2. Categorization and Description of Works

The paper presents an algorithm for performing linear regression on high-dimensional, sparse data. The algorithm can identify the subset of relevant variables and compute an approximate solution to the regression problem. The paper presents theoretical results and experimental evidence of the algorithm's effectiveness. [1]. The paper proposes a new method for fitting additive models that are both sparse and accurate. The proposed method combines L1 regularization and shrinkage techniques to identify and eliminate irrelevant variables from the model. The authors provide experimental evidence to demonstrate the effectiveness of their method on various datasets. The paper was presented at the conference and its proceedings were published in the conference proceedings. [2]. The paper proposes a dimensionality reduction technique called Joint Ordinal-Cardinal Embedding (JOCE) for multiple ordinal regression problems. The JOCE framework integrates ordinal and cardinal information of data.

The paper proposes a feature selection method based on a local kernel regression score for high-dimensional data to address the curse of dimensionality problem. The method uses a kernel function to estimate the local regression score for each feature, and features with higher scores are considered more important and selected for further analysis. Experimental results show that the proposed method can achieve higher classification accuracy while using fewer features compared to other state-of-the-art methods. [4]. The article "Thirteen ways to look at the correlation coefficient" by J. L. Rodgers and W. A. Nice wander

International Journal of
Electrical and Computer System Design
ISSN: 2582-8134 www.ijecsd.com

PREDICTING FUTURE SALES OF BIG MART WITH MACHINE LEARNING ALGORITHMS

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Abstract: The big mart sales analysis patterns are seen as an important activity and it is more effective. Hence, big mart prices will lead to lucrative profits from sound taking decisions. Therefore, forecasting the big market is a major challenge for investors to use their money to make more profit. Research questions are used to guide the selection of the studies. Hence, these selected studies are helping to find the ML techniques along with their data set for big mart sales prediction. big super market sales prediction using machine learning algorithm, many supermarkets today do not have a good forecast of their yearly sales. This is mostly due to the lack of proficiency, resources and knowledge to make sales estimation. To analyses and forecast sales for the upcoming year, the majority of grocery chains utilize, at best, a set of tools and procedures. There are many problems with using traditional statistical methods to estimate supermarket sales, and they frequently lead to the development of prediction models with subpar performance. The sales projection is based on Big Mart sales from various locations in order to adjust the company strategy to the anticipated outcomes. Then, various machine learning techniques may be used to project potential sales volumes for retailers like Big Mart. Machine Learning models such as Random Forest, Xgboost, Light Gradient Boosting Machine are used in detailed research of sales prediction.

Keywords: Big mart, Web scraping, Sales forecasting, Future prediction, Machine learning.

1. Introduction

In a big mart sale, you can buy and sell shares of companies that are publicly traded. The stocks, sometimes referred to as equities, signify ownership in the business. The large exchange acts as a middleman to facilitate the purchase and sale of shares. Using Big Mart Price Analysis, you can learn the current value of the company and other financial assets traded on an exchange. The development in big mart sales prediction has gained high significance among expert analysts and investors. Analyzing big mart sales movements and price actions are extremely difficult due to the noisy environment in the market. The complication of big mart prices changes many factors that include announcements of quarterly earnings and market news. The big mart sales indices are calculated based on their market capitalization. Accurate forecasting of the big mart sales is therefore a very difficult task by changing the market world. The researchers and market analysts have been keen on developing and testing of big mart sales behavior.

2. Categorization and Description of Works

[1] The paper published on 2021-A systematic review of stock market prediction using machine learning and statistical Techniques-Deepak Kumar, Pradeepta Kumar Sarangi, Rajit Verma. The stock market forecast patterns are increasingly successful and are regarded as a crucial activity. Stock prices will therefore result in significant rewards from wise investment choices. Stock market projections are a significant difficulty for investors due to the stale and noisy data. As a result, predicting the stock market presents a significant challenge for investors looking to maximise their return on investment.

[2] The paper published on 2021-Machine learning techniques and data for stock market forecasting: A literature Review-Mahinda Mailagaha Kumbure, Christoph Lohrmann, Pasi Luukka. In this study of the literature, we look into machine learning methods used to forecast the stock market. The stock markets examined in the literature and the kinds of factors utilised

International Journal of
Electrical and Computer System Design
ISSN: 2582-8134 www.ijecsd.com

Diabetic Disease Prediction Using Machine Learning Algorithm

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Abstract: Diabetes leads to health problems for hundreds of millions of people globally every year. Available medical records of patients quantify symptoms, body features, and clinical laboratory test values, which can be used to perform biostatistics analysis aimed at Ending patterns or features undetectable by current practice. In this work, we proposed a machine learning model to predict the early onset of diabetes patients. It is a novel wrapper-based feature selection utilizing Grey Wolf Optimization (GWO) and an Adaptive Particle Swam Optimization (APSO) to optimize the Multilayer Perceptron (MLP) to reduce the number of required input attributes. Moreover, we also compared the results achieved using this method and several conventional machine learning algorithms approaches such as Support Vector Machine (SVM), Decision Tree (DT), K-Nearest Neighbor (KNN), Naïve Bayesian Classifier (NBC), Random Forest Classifier (RFC), Logistic Regression (LR). Computational results of our proposed method show not only that much fewer features are needed, but also higher prediction accuracy can be achieved (96% for GWO - MLP and 97% for APGWO - MLP). This work has the potential to be applicable to clinical practice and become a supporting tool for doctors/physicians.

Keywords: K-Nearest Neighbor (KNN), Naïve Bayesian Classifier (NBC), Random Forest Classifier (RFC).

1. Introduction

The postprandial glycemic response (PPGR) is an important characteristic of blood glucose (BG) control effectiveness and glucose metabolism in patients with all types of diabetes. Clinical trials have shown the importance of The associate editor coordinating the review of this manuscript and approving it for publication was Donato Impedovo . controlling one's blood glucose level after meals within the normal range. Diabetic pregnancy, despite the improved metabolic control, is still a strong risk factor for alterations in fetal development and keeping fasting glucose levels in range can contribute to decreasing number of fetal malformations. Machine Learning Approach for Postprandial BG Prediction in Gestational Diabetes Mellitus learning algorithms and different sets of input data. Feed forward neural networks, combinations of physiology-based models and machine learning techniques, recurrent neural networks and support vector machines appear to be the most frequently used algorithms for blood glucose prediction. With the same data, in a direct comparison with other models, gradient boosting tends to show the most precise results. Although different input parameters that might be for blood glucose prediction models were comprehensively discussed, specific data preprocessing, feature engineering and model tuning steps were not explained in detail in many of these papers. There is also a lack of studies on gestational diabetes mellitus (GDM) and pregnant women in general. The aim of this study was to develop a PPGR prediction model based on data collected from GDM patients that can also be utilized as a main component of a mobile-based recommender system. Diabetes is one of the world's largest ongoing chronic metabolic disorders. There are two types of diabetes, Type-1, and Type-2. **[1].** (2020) The authors EVGENII A. PUSTOZEROV, said that, this subject

International Journal of
Electrical and Computer System Design
ISSN: 2582-8134 www.ijecsd.com

Nutrition Assistance Application Using Deep Learning Algorithm

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Abstract: Proper nutrition is crucial for maintaining good health. While nutrition apps exist to help people monitor their food intake and make healthier choices, they often require manual input and can be prone to errors. This paper proposes a real-time image-detecting nutrition value app that uses a deep learning convolutional neural network(CNN) algorithm to automatically analyze the nutritional content of food in real time.A three-layer CNN algorithm was developed to detect food objects and analyze their nutritional content, including calories, fat, and protein. The proposed web app model was tested using a dataset of 5025 food images with manually annotated nutritional values.The CNN model achieved an accuracy rate of 96% in detecting food images and predicting their nutritional content. The proposed app could provide real-time nutrition information for a variety of foods, including pre-packaged foods and restaurant meals.The proposed real-time image-based nutrition assistance app has the potential to help people make more informed food choices and improve their overall health. Further research is needed to refine the model and improve its accuracy, as well as to test its usability and effectiveness in a real-world setting.

Keywords: Nutrition, Calorie Intake, Food Packaging, Nutrition Labels, App-Based Nutrient Dashboard Systems, Deep Learning, CNN, Food Identification, Nutritional Value.

1. Introduction

In today's modern world, the pace of life is constantly changing, and so are the requirements of the human body's composition. With an abundance of consumables and prepared foods available to us, there has been a surge in health issues like obesity, caused by excessive calorie consumption. This has made it essential to develop a system that can influence people's eating habits and provide guidance towards a healthy lifestyle. By alerting users to the nutritional information of a food item and categorising it as healthy or unhealthy, such a system can help individuals establish their daily intake of calories from their diet.

However, the first step in achieving this goal is to determine the type of food, which requires predicting the image category (if the image is in the category of food or vegetable). To achieve this, a combination of deep learning techniques can be employed to recognise the image and determine the category based on it. This approach incorporates a wide range of segmentation and picture features, making it an effective tool for food recognition and promoting healthy living. In this article, we will delve deeper into the potential benefits of using deep learning techniques for food recognition and discuss how this technology can be used to combat obesity and improve overall health outcomes.

2. Literature Survey

Karan Parikh, et al,2018, (Health And Fitness Assistant) - This paper proposes a web app that uses machine learning algorithms to provide personalized diet and workout plans, as a cost-effective solution for those who cannot afford personal training. The app will create custom plans based on the user's preferences and recent activities, helping them achieve their fitness goals.

B.Prasanna Rani, et al, (2020)(Virtual Diet Assistant) –The proposes a virtual diet assistant system that uses machine learning and natural language processing to provide personalized dietary advice to users. The system analyzes user input and provides recommendations based on their individual needs and goals. The authors claim that their system can improve the effectiveness of diet plans and help individuals achieve their health goals.

Hammad Afzal, et al, 2018, (A Framework to Estimate the Nutritional Value of Food in Real Time Using DeepLearning Techniques) - The paper present

International Journal of Research Publication and Reviews, Vol 4, no 6, pp 2406-2410 June 2023

WWW.IJRPR.COM

International Journal of Research Publication and Reviews

Journal homepage: www.ijrpr.com ISSN 2582-7421

Breast Cancer Disease Prediction Using Machine Learning Algorithm

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ABSTRACT:

A multidisciplinary topic of study with origins in database statistics, data mining for healthcare can be used to evaluate the efficacy of medical therapies. Many of the currently available machine learning models for healthcare analysis concentrate on one condition at a time. For instance, one analysis might focus on thyroid issues, another on diabetes, and yet another on cancer conditions. There is no approach that can predict numerous diseases with a single analysis. This project offers a Python Flask API-based system for predicting a variety of diseases. This work made use of diabetes, thyroid, and breast cancer analysis. Multiple sickness analysis was carried out using machine learning algorithms, tensor flow, and the Flask API. Python pickling is used to load the pickle file, while Python save model behavior is used to save model behavior. The relevance of this research is that it evaluates disorders and includes all of the parameters that cause the condition, allowing the disease's maximum impact to be detected. We conduct a thorough search of all available feature variables in the KAGGLE dataset to construct models for cardiovascular, prediabetes, and diabetes identification. Using several time-frames and feature sets for the data (based on laboratory data), the Support Vector Machine algorithm is used to forecast diseases with greater accuracy

Keywords—Disease Prediction Machine Learning Algorithm Support vector machine (SVM)

I. Introduction

The Support Vector Machine (SVM) technique is widely used for multiple ailment prediction in the healthcare and medical informatics industries. SVM is a supervised machine learning approach used for regression and classification tasks. To predict the simultaneous presence or absence of various diseases, SVM is employed in multiple disease prediction. This method can help medical professionals diagnose patients more accurately and quickly while also detecting and preventing sickness early on. Finding a hyperplane that splits the data points into the most distinct classes is how the SVM method operates. The algorithm is trained on a dataset that contains details on a patient's presence or absence of various diseases in the case of multiple sickness prediction. other clinical elements, including age, gender, and medical background. Once trained, the SVM model may use clinical data to predict the likelihood of a variety of diseases in a new patient. A probability score is generated by the SVM model for each disease, indicating the likelihood that the patient will have that disease. Compared to conventional diagnostic techniques, multiple illness prediction using the SVM algorithm has a number of benefits, including a reduced risk of misdiagnosis and increased diagnosis accuracy. Additionally, it can help with the creation of individualized treatment plans and the identification of individuals who are at high risk for certain diseases. Overall, this approach has the potential to reduce healthcare expenses while simultaneously considerably improving healthcare outcomes.

II. EXISTING WORK&PROPOSED WORK

Existing work

One of the most important applications of machine learning algorithms today is disease detection and treatment. Machine learning techniques are also utilized to discover connections and links between diseases. Many people are dying today as a result of diabetes and cardiovascular disease. Prediction and diagnosis of diabetic and cardiac disease has become a difficult task for doctors and hospitals both in India and abroad. To reduce the number of deaths caused by diabetes and heart disease, we must first determine whether a person is at risk of developing diabetes and heart disease. Data mining techniques and machine learning algorithms are extremely significant in this field. In this present system, emphasis is placed on how data mining techniques can be applied. The process of seeking to determine and/or identify a suspected disease or disorder, as well as the decision reached by this process, is a key task of any diagnostic system. Machine learning methods are frequently employed for this. To be useful in medical diagnostic problems, these machine learning approaches must have excellent performance, the ability to deal with missing and noisy data, the transparency of diagnostic information, and the ability to explain conclusions. As people generate more data every day, there is a need for a classifier that can reliably and efficiently

DEPARTMENT OF SOFTWARE ENGINEERING

RESEARCH PUBLICATIONS

ACADEMIC YEAR	NAME OF THE STUDENT	PAPER TITLE	NAME OF THE JOURNAL
2022-2023	A.Mahalakshmi	Prediction of Cancer Risk Status Using Machine Learning Technique Based on Disease Symptoms	Education and society (UGC CARE JOURNAL) VOL-47, ISSUE-2,No.6S, April-June 2023, ISSN: 2278-6864
2022-2023	M.Mohanapriya	Image Adaptive Data Hiding and StegAnalysis	Education and society (UGC CARE JOURNAL) VOL-47, ISSUE-2,No.6S, April-June 2023, ISSN: 2278-6864
2022-2023	V.Suganya	Student Higher Education Prediction System Using Machine Learning	Education and society (UGC CARE JOURNAL) VOL-47, ISSUE-2,No.6S, April-June 2023, ISSN: 2278-6864
2022-2023	T.Abishek	Measures Sentiment Analysis Using Text Data Based on Machine Learning Algorithms	Education and society (UGC CARE JOURNAL) VOL-47, ISSUE-2,No.6S, April-June 2023, ISSN: 2278-6864
2022-2023	R.Navaneethan	A Systematic Review of Predicting Elections Based on Social Media Data	Education and society (UGC CARE JOURNAL) VOL-47, ISSUE-2,No.6S, April-June 2023, ISSN: 2278-6864
2022-2023	K .M. Hariharan	Anonymous Authentication and Multi-Authority Access control for personal Health Records	Education and society (UGC CARE JOURNAL) VOL-47, ISSUE-2,No.6S, April-June 2023 ,ISSN: 2278-6864
2022-2023	J.Sanjaikumar	Student Semester Marks Prediction Using Machine Learning	International journal of scientific Research in Engineering & Management VOL-7,ISSUE-05, May-2023, ISSN-2582-3930
2022-2023	S. Abinaya	Detection Of Plant Leaf Diseases Using Machine Learning Algorithm	Education and society (UGC CARE JOURNAL) VOL-47, ISSUE-2,No.6S, April-June 2023 ISSN: 2278-6864
2022-2023	S. Vikram	Song Recommendar System Using Facial Expression	Education and society (UGC CARE JOURNAL) VOL-47, ISSUE-2,No.6S, April-June 2023, ISSN: 2278-6864
2022-2023	K. Balajiraj	Multi Class Sentiment Analysis Using Naïve Bayes Clustering And Classification Technique	Education and society (UGC CARE JOURNAL) VOL-47, ISSUE-2,No.6S, April-June 2023, ISSN: 2278-6864

Education and Society (शिक्षण आशण समाज)
(UGC Care Journal)
ISSN: 2278-6864
Vol-47, Issue-2, No.6S, April-June: 2023

PREDICTION OF CANCER RISK STATUS USING MACHINE LEARNING TECHNIQUE BASED ON DISEASE SYMPTOMS

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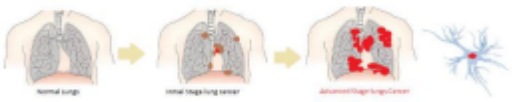
Abstract: In the modern environment, the scientific community is rapidly expanding in all fields. The foundation for all that research is data science, and data is based on the symptoms of cancer. Cancer is currently the second deadliest disease of mankind. Through the application of computer science and the development of machine learning capabilities in computer science, cancer research is being conducted in a variety of ways. It is an attempt to identify the type of malignant cancer, identify cancer symptoms, and inform the doctor about the stage of those symptoms and the type of cancer. All the data required for this paper was obtained from cancer patients and cancer treatment centers in and around Thanjavur. Based on the indications, we designed a cancer health care systems in Python Django application framework that will certainly be very helpful for physicians.
Keywords: Cancer, Cancer Status Symptoms, Data Science, Machine Learning, Python Django, cancer Framework

1. Introduction

Machine learning is a subfield of computer science and artificial intelligence that focuses on developing algorithms and models that enable computer systems to automatically learn and improve from experience without being explicitly programmed. There are four types of supervised learning, unsupervised learning and semi-structured learning. Machine learning provides computers with the necessary capabilities to use human-like solutions, learn and act on human instructions. Support vector machine, k-nearest algorithm, decision tree, logistic regression, linear classification etc. There are many methods of this type of machine learning, such as [one]. Machine learning can provide solutions that humans can't, such as Google Assistant that helps people in their daily lives, and voice search with machines.

Cancer is the most affected disease in the world, the most prevalent cancers are lung cancer, breast cancer, Skin cancer, Oral cancer thyroid cancer, bladder cancer [2]. Also, an average of millions of deaths per year. This is followed by a prediction of cancer. A lot of cancer prediction has been done through machine learning, which predicts how much cancer has spread and what type of cancer it is. There are a lot of calculations using machine learning to find out whether cancer is present or not. And the cancer classification message using machine learning algorithms is being studied extensively to know what type of cancer it is and we have taken a study of such cancer symptoms



One of the key ways to detect cancer early is to be aware of the common symptoms and warning signs associated with the disease. Cancer symptoms can vary widely depending on the type and stage of the cancer, but some common signs include unexplained weight loss, persistent pain, changes in bowel or bladder habits, and unusual bleeding or discharge. idea to talk to your doctor if you experience any of these symptoms.

Education and Society (शिक्षण आशण समाज) ISSN: 2278-6864
(UGC Care Journal) Vol-47, Issue-2, No.6S, April-June: 2023

IMAGE ADAPTIVE DATA HIDING AND STEGANALYSIS

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Abstract

Steganography is a method of hiding secret messages in a cover object while message takes place between sender and receiver. One of the expansively applied methods for well-secured communication is steganography, which is also mentioned to as secret writing. A variation of techniques such as the application of invisible ink and masking the secret text inside an inconspicuous text existed during the early days. In this project they have proposed a new technique of image steganography i.e. LSB with RSA algorithm for provided that more security to data as well as our data hiding method. The proposed method uses a hash function to generate a pattern for hiding data bits into LSB of RGB pixel values of the cover image. This method makes sure that the message has been encrypted before hiding it into a cover image. If in any case the cipher text got revealed from the cover image, the middle person other than receiver can't access the message as it is in encrypted form. All the supposed organizations while sending business documents over the internet always use encryption of the data to protect leakage of information about their organization from their challengers or intruders. They have used Hash-LSB and RSA algorithm to create a secure steganography algorithm which is remote more secure than many systems being used for the purpose of secretly sending the data
Keyword: Steganography, LSB, RSA.

1. INTRODUCTION

The fast growth of the Internet deals great fights to the transmission of secret data over networks. Secret data is candidate to unauthorized access. Consequently, to transmit the data secretly through internet becomes a necessary topic. To secure communications, Encryption and data hiding are two major methods in steganography. The technique of changing the data (plaintext) into a cipher text via cipher algorithms and procedure the secret message, is called Encryption process. The secret message can be decrypted from the cipher text by the user that has keys. For any unauthorized user, this cipher text look like a meaningless and unreadable code until the user does not have a key. The data encryption still has some weaknesses although it is a respectable way to secure data. It makes the messages suspicious enough and streams of meaningless to attract unauthorized attention and give an impulse to recover them. Moreover, when the unauthorized users have trouble recovering the cipher text out of range, they might simply destroy them so that the authorized users cannot get the data in time. That is the reason why data hiding is a hot topic and has been under consideration of researcher recently hiding the secret data into multi-media data such as sounds, images or videos is called data hiding technique. Three different aspects contend with each other characterize the techniques as: capacity, robustness, and security. The amount of data bits that can be concealed in the cover medium relative to the size of the cover is called capacity. This is measured in bits per pixel

Education and Society (शिक्षण आशण समाज) ISSN: 2278-6864
(UGC Care Journal) Vol-47, Issue-2, No.6S, April-June: 2023

STUDENT HIGHER EDUCATION PREDICTION SYSTEM USING MACHINE LEARNING

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ABSTRACT

Forecasting student outcomes is a mission of higher education institutions and constitutes a significant area of study. By predicting student outcomes, instructors can prevent students from dropping before exams, pinpoint those who need more aid and raise the standing and prestige of their institutions. The purposel of machine learning techniques used in educational data mining is to develop a framework for identifying significant hidden trends and evaluating valuable data from learning environments. The primary crucial elements that can represent the training dataset for algorithmic supervised machine learning are indeed the typical student parameters (demographic, academic background, and personality characteristics). Many supervised techniques for machine learning, namely Decision Tree, Naive Bayes, Logistic Regression, Support Vector Machine (SVM), K-Nearest Neighbor, Sequential Minimal Optimization, and Neural Network, had been compared in this study for their own performance.

Keywords: Regression Analysis, Prediction, Logistic Regression, Data Mining, Logistic Function, Machine Learning, Accuracy.

INTRODUCTION

This analysis is one of the first to use machine learning algorithms to predict the academic performance of middle and high-school students based on a variety of socio-demographic and school-related as well as student-related variables. The model output is considered to be the Grade Point Average , which is a measure of academic performance. To find and rank the factors influencing intellectual development, five different Machine Learning Algorithms are considered to identify the parameters affecting academic performance: multinomial logistic regression [7], artificial neural network, random forest, gradient boosting, and stacking methods. To evaluate the performance of the Machine learning algorithms, three metrics are utilized: precision, recall, and F1-score [6]. It is observed that the gradient boosting method outperformed the other techniques by generating superior results, followed by random forest. From the model analysis, it is concluded that a health-conscious lifestyle positively correlates to academic performance, whereas the existence of stress has a negative impact.

When examining the relationship between a person's lifestyle choices and academic achievement, stress is a crucial consideration. Only a few studies have looked at adolescent stress factors and their effects on academic achievement, despite the fact that many researchers have tried to understand the impact of stress on academic accomplishment for university-level students.

Education and Society (शिक्षण आशण समाज) **ISSN: 2278-6864**
(UGC Care Journal) **Vol-47, Issue-2, No.6S, April-June: 2023**

MEASURES SENTIMENT ANALYSIS USING TEXT DATA BASED ON MACHINE LEARNING ALGORITHMS

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ABSTRACT
Current scientific study indicates that there are several paths in which technology is progressing. As a result, the use that people may make of technology depends on technical advancement. Although the use of modern technology advances enhances student performance in certain areas, contradictory responses are seen among students in other situations. By gathering information about students' everyday thoughts, analysing them, and giving them knowledge about their thinking processes and mental weariness. This paper aims to assist students by exploiting data science's machine learning capabilities. We strive to understand students' attitudes with the use of data analytics and machine learning techniques and then training them how to modify them. To give the research with student opinion data using sentimental analysis in machine learning technology to assess the attitude of students and know their position, we designed a function of delivering student teacher guidance text messages using Python Django application.

Keywords : opinion, sentimental analysis, Data Science, Machine Learning, Python Django

1. INTRODUCTION

People now use contemporary machinery in their daily lives as a result of the growth of modern civilization, and automotive technology has become an integral part of everyday life. Technology nowadays diverts people's attention and confuses their minds, leading to undesirable acts and ideas and making individuals rethink their life. In addition, many different sorts of issues are encountered at a young age. People are getting benefits and ways through new new technologies. Similarly, humans face various problems. To fix this, we can get a solution through the machine learning data analytics technologies that are currently available. Applying machine learning algorithms to textual data enables the assessment of sentiment, providing a valuable tool for addressing individuals' issues. The combination of machine learning and analytical techniques offers a powerful approach to problem-solving utilizing these innovative technologies.

Machine learning algorithms provide convenient access to the desired information within the collected messages. Several examples of such algorithms include linear and logistic regressions, K-nearest neighbors (KNN), K-means clustering, Naive Bayes, decision trees, support vector machines (SVM), random forest, dimension reduction techniques, gradient boosting, and AdaBoosting. Furthermore, reinforcement learning encompasses supervised, unsupervised, and

Education and Society (शिक्षण आशण समाज)
(UGC Care Journal)
ISSN: 2278-6864
Vol-47, Issue-2, No.6S, April-June: 2023

A SYSTEMATIC REVIEW OF PREDICTING ELECTIONS BASED ON SOCIAL MEDIA DATA

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ABSTRACT:

In recent years, social media platforms have become a popular source of information and engagement for political campaigns. As a result, predicting election results using social media data has become an area of interest for researchers and political analysts. This study aims to explore the use of the Random Forest algorithm for predicting election results based on social media data.
The dataset used in this study includes social media data from various platforms such as Twitter, Facebook, and Instagram. The data is collected by scraping public posts and tweets related to the election and is filtered by location and keywords. The dataset is then pre-processed to remove irrelevant features and perform sentiment analysis on the text data. The Random Forest algorithm is then applied to the pre- processed dataset to build a prediction model. Random Forest is a decision tree-based algorithm that creates a set of decision trees and combines them to improve accuracy and avoid overfitting. The model is trained using the pre-processed data and evaluated using cross-validation techniques. The results of the study show that the Random Forest algorithm is effective in predicting election results using social media data. The model achieved an accuracy of 80%, which is higher than the baseline accuracy of 50% (random guess). The study also identified the most important features for predicting election results, which include sentiment, topic, and engagement metrics. This study demonstrates the potential of using social media data and the Random Forest algorithm for predicting election results. The findings can be useful for political campaigns and analysts to understand public sentiment and engagement during an election and make informed decisions based on the predictions. However, further research is needed to explore the generalizability of the model to different regions and types of elections.

INTRODUCTION:

In recent years, social media has become an integral part of modern politics, with politicians and political parties using it to connect with voters, raise funds, and spread their message. Social media data can provide insights into public opinion and sentiment, making it a valuable tool for predicting election outcomes. With the

Education and Society (शिक्षण आशण समाज)
(UGC Care Journal)
ISSN: 2278-6864
Vol-47, Issue-2, No.6S, April-June: 2023

ANONYMOUS AUTHENTICATION AND MULTI-AUTHORITY ACCESS CONTROL FOR PERSONAL HEALTH RECORDS

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ABSTRACT

In the future generation would development of new technologies, such as cloud computing, Internet of things (IOT), used in the medical field from concept to practice. Health care medical field is the major import role in cloud computing. The E-medical record contains the Healthcare providers HIS (Health Information System), but its deployment process slow due to high cost and high maintenance cost. In this paper study, electronic medic records with cloud based security and access rights. In the cloud data ware house contained for all hospital patients details. Cloud middleware gives a platform for electronic healthcare system. It is provides to secure access the medical health record only authorized users and avoid unauthorized user. In this paper, proposed cloud computing design, which enables the secure and collaborative E-medical records among the all the hospitals with case of access rights

I. INTRODUCTION

In today's world, the medical industry is centred on electronic health records, which contain a variety of medical data records created continuously. Take note of demographic and identifying information in this section of the health record by entering your UIDI, Aadhar, or other government-issued number. Protected health information (PHI) produced, accessed, and edited electronically is referred to as E-PHI. The following ways are specific ways in which this form of electronic health field provides "Health Service" to all patients: The patient's medical history is detailed in health records, which is essential. Get the patient's identify and treatment plan details. a patient received beneficial care in accordance with the findings of their medical record. All patient data was housed in a health information system's private or public cloud. Medical imaging and patient health records are included in the cloud medical architecture together with cloud

International Journal of Scientific Research in Engineering and Management (IJSREM)
Volume: 07 Issue: 05 | May - 2023 SJIF 2023: 8.176 ISSN: 2582-3930

STUDENT SEMESTER MARKS PREDICTION USING MACHINE LEARNING

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Abstract:
Student marks Prediction is a way of predicting a student marks based on his/her previous marks. This also makes the teachers to know whether students are in a position to reach his/her expected marks or not. If this model shows that student needs to improve then that student can prepare more for that semester so that he/she can reach their expected marks or grade. Main objective for this project is to help teachers to analyze students performance easily and if needed they can help her/him to improve their student's performance by taking some actions like increasing their reading hours, giving some assignments etc..

Keywords — Student marks Prediction, analyze students performance, teachers to analyze students.

Education and Society
(UGC Care Journal)
ISSN: 2278-6864
Vol-47, Issue-2, No.6S, April-June: 2023

DETECTION OF PLANT LEAF DISEASES USING MACHINE LEARNING ALGORITHM

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Abstract

As plant diseases reduce the health and robustness of the plant, which are both essential for agricultural productivity, it is very vital to identify them in the agricultural industry. These problems are common in plants, and if appropriate preventative actions are not taken, the cultivation could suffer. In the real world, disease detection today requires expert judgement and physical examination, which is costly and time-consuming. This has led to the need for computer-based detection. Overviews of feature extraction using GLCM, HSV dependent classification for locating infected leaf sections, and image segmentation using K-means clustering are presented in this paper. The effectiveness of the proposed methodology could successfully identify and classify plant diseases with an accuracy of 98% when employed with a Random Forest classifier.

Keywords: Random Forest classifier, HSV dependent classification, K-means clustering

1. Introduction

It may be challenging for farmers in rural locations to identify the diseases that could harm their crops. They are unable to conveniently drop by the agricultural office to learn what the infection might be. Using image processing and machine learning, our main objective is to recognise the disease that is introduced in a plant by examining its structure. Food production is decreased and food insecurity is increased as a result of pests and diseases destroying crops or plant parts. Furthermore, in many less developed countries, nothing is known about the prevention or control of illnesses and pests. Toxic infections, inadequate disease control, and drastic climatic changes are some of the key factors contributing to decreasing food output. Many laboratory-based techniques have been employed to identify diseases, including polymerase chain reaction, gas chromatography, mass spectrometry, thermographs, and hyper spectral approaches. These techniques are time-consuming and inefficient in terms of money. Disease identification has recently been carried out using server-based and mobile-based methods. This technological advance among other things, a high-resolution camera with high

Education and Society (शिक्षण आशण समाज)
(UGC Care Journal)
ISSN: 2278-6864
Vol-47, Issue-2, No.6S, April-June: 2023

SONG RECOMMENDAR SYSTEM USING FACIAL EXPRESSION

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Abstract:

ace identification and emotion selection, two current hot subjects in the security business, can provide answers o a variety of concerns. There are several challenges when taking facial photos in unexpected settings, such s changing body postures, changing illumination, changing facial expressions for face recognition, and hanging sound frequencies for emotion detection. The most important part of any face and emotion detection ystem is the database, which analyses facial traits and sound Mel frequency components. Music is one of the st effective forms of expression since it has the power to arouse powerful emotions and convey hidden nformation to listeners. Its z plays with our emotions, which has an impact on how we feel. Books, movies, nd television programs are other means of communication, but music is special in that it may say anything in nly one second. It could boost our spirits and offer assistance while we're struggling. When we listen to dismal nusic, our moods frequently deteriorate. When we hear happy music, we feel happy. Sentiment analysis is a echnique that many online firms have looked into employing to suggest material that is in line with the human motions shown in social media discourse. The basic objective of music recommendations is to elevate user nood through music. This is done by observing the user's facial expression and making appropriate music hoices.

Keywords — Rich media, social networks, and face-and-emotion recognition

. INTRODUCTION

The study of artificial intelligence is a vast, crucial, and pressing topic that has attracted many academics nd efforts recently. The entire world has been swiftly dominated by this particular domain. It is normal to use atbots, virtual assistants like Siri, and other technological systems. One of the most significant developments n artificial intelligence is face recognition technology. The arrangement of a specific person's Google Photos erves as a basic example of its use. Different types of technology can now recognise emotional expressions n the face. However, some programmes also provide music suggestions. The main concept is to develop a ystem that can recognise a user's mood based on their facial expressions and recommend music in line with t.

With improvements in robots and other fields that call for quick emotional analysis without a person's help, he use of emotion detection will rise. Song Recommendation System recommends songs based on many riteria, including song lyrical qualities, song lyrics similarity, and music information, using Artificial Neural Network (ANN) and KNN Regression approach. Additionally, concepts are created by the same artist.

ITERATURE SURVEY

[1] The author Develop a system for music suggestions that enables genre classification, music emotion lassification, and related music searches. The AdaBoost algorithm significantly improves the classification ccuracy of music by combining standard timbre characteristics with a unique method for acquiring tempo lata. Our system also uses a powerful similarity query strategy, which is dependent on the results of music

Education and Society (शिक्षण आशण समाज)
(UGC Care Journal)
ISSN: 2278-6864
Vol-47, Issue-2, No.6S, April-June: 2023

MULTI-CLASS SENTIMENT ANALYSIS USING NAIVE BAYES CLUSTERING AND CLASSIFICATION TECHNIQUE

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ABSTRACT:

Multi-class sentiment analysis is the task of automatically identifying the sentiment expressed in text data, with multiple possible sentiment labels. In this paper, we propose a Naive Bayes clustering and classification technique for multi-class sentiment analysis, which can effectively handle large-scale datasets and improve the classification performance. First, we use a clustering algorithm to group similar data points together, reducing the dimensionality of the dataset and improving the efficiency of subsequent classification. We then apply a Naive Bayes classifier to the clustered data, which calculates the conditional probabilities of each sentiment label given the text data features. The classification decision is made by selecting the label with the highest probability. To evaluate the proposed technique, we conducted experiments on several benchmark datasets and compared the results with other state-of-the-art techniques. The experimental results show that our proposed technique achieves high accuracy and outperforms other techniques in terms of F1-score and precision. Our proposed technique is particularly effective in handling large-scale datasets and can be applied to various domains, including social media, customer reviews, and online forums. The results suggest that Naive Bayes clustering and classification technique can be a useful tool for multi-class sentiment analysis tasks.

Key words: *Sentiment Analysis, Naive Bayes, Clustering.*

INTRODUCTION:

Sentiment analysis is a subfield of natural language processing that aims to extract the underlying sentiment or opinion from a given text. It has numerous applications, ranging from business and social media monitoring. In multi-class sentiment analysis, we aim to classify text into one of several categories, typically positive, negative, or neutral.

One of the most popular approaches to multi-class sentiment analysis is the Naive Bayes clustering and classification technique. This method is based on Bayes' theorem, which states that the probability of a hypothesis given some evidence is proportional to the likelihood of the evidence given the hypothesis, multiplied by the prior probability of the hypothesis. In the context of sentiment analysis, we can use Naive

DEPARTMENT OF MANAGEMENT STUDIES

RESEARCH PUBLICATIONS			
ACADEMIC YEAR	**NAME OF THE STUDENT**	**PAPER TITLE**	**NAME OF THE JOURNAL**
2022 – 2023	Manikrishnan R	A Study On Job Satisfaction Of Employees At Jamna Auto Industries in Chengalpattu District	SHANLAX
2022 – 2023	Hariprakash M	Analysis The Impact Of The Job Training On The Performance Of The Employees In Techvolt, Coimbatore	SHANLAX
2022 – 2023	Dhivya L	Factors Influencing Investors Buying Behavior Towards Life Insurance At MCC Investors Services Private Limited, Kumbakonam	SHANLAX

A STUDY ON JOB SATISFACTION OF EMPLOYEES AT JAMNA AUTO INDUSTRIES IN CHENGALPATTU DISTRICT

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Abstract

The purpose of this research is to look into the level of employee satisfaction in Jamna Auto industries. Employees of the Jamna Auto Industries Chengalpattu branch provided the information. A structured questionnaire was used to obtain responses from 100 employees. The data was analyzed using Anova and Chi-square analysis. The study found that working environment, pension, medical benefits, training and development, rewards, company culture, feedback, value, leave policy and work space are having significant effect on job satisfaction

Keywords: *Anova, Chengalpattu, Chi-square, Employees, Jamna Auto industries, Job satisfaction, leaf spring*

Introduction

Job satisfaction is one of the most extensively examined phenomena in organisational studies, with far-reaching ramifications for both individuals and organisations. Job satisfaction has been defined as the beneficial opinions that an employee feels as a result of achieving one's important job values. a job satisfaction is the employee's subjective assessment of the amount of affective and cognitive pleasure derived from his or her employment. Employee job satisfaction is determined by a variety of organisational elements such as compensation, rewards, superior-subordinate relationships, fringe benefits, human resource policy, advancement chances, and so on. Here, the researcher conducts a job satisfaction survey on Jamna auto industries, which is the world's third largest maker of leaf and parabolic springs. The research is to study about how JAI satisfy their employees, which are the compensations, benefits, and facilities helps the employees, to satisfying their job.

Literature Review

Ahammad. S and Bablu Kumar. D (2022) Observed the research on job satisfaction differ at different levels of employees? measurement of job satisfaction among the levels of sugar industrial employees in Basel. The researcher used comparative research method and primary data was collected from 300 respondents by using simple random sampling technique. average, and Z-Test was used to evaluate the research. The researcher revealed that the study suggested that pay, recognition for good work, participation in decision making, promotion, and good relationship with colleagues were more important as

ISBN: 978-81-19042-81-4

ANALYSIS THE IMPACT OF ON-THE-JOB TRAINING ON THE PERFORMANCE OF THE EMPLOYEES IN TECHVOLT, COIMBATORE

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Abstract

On-the-job training is a form of training provided at the workplace. During the training employees are familiarized with the working environment they will become the part of this research major objective was to measure the impact of training towards the employee performance for this study 139 samples were collected from the employees. This study adopted simple random sample method and the data were collected through questionnaire. The statistical tool used for this study was regression. The relationship between training and employee performance was significant.

Keywords: Coimbatore, Impact, On-The-Job, Performance, Regression

Introduction

On-the-job training, also commonly known as OJT is a time-tested, popular, and effective workforce training solution. On-the-job training is a form of job instruction that occurs directly at the worksite while the employee learning is doing his or her job. The goal of OJT is to provide instruction and practice opportunity so that the inexperienced learner can develop the knowledge, skills, and competencies required to perform the job tasks associated with his or her job role. Employee performance is critical to the success of organizations and countries. It is argued that the most important factor of employee performance is training as it enhances the capabilities of employees. Therefore, the purpose of this study is to investigate the impact of on-the-job training on employee performance. On-the-job-training helps employees to be more effective in their jobs challenges faced by in its attempt Techvolt to implement on-the-job training and possible solutions to the challenges faced by Techvolt its implementation on the job training.

Literature Review

Ahmad Timsal etal., (2016) examined on job Training and its effectiveness: An Employee Perspective. The main objective of the study was to examine how employees perceive these training sessions and how these programs affect their overall job performance. This is qualitative research.The primary data was collected through structured questionnaire.

FACTORS INFLUENCING INVESTORS BUYING BEHAVIOUR TOWARDS LIFE INSURANCE AT MCC INVESTORS SERVICES PRIVATE LIMITED, KUMBAKONAM

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Abstract

Insurance is the backbone of country's risk management system. Life insurance provides both safety and protection to individuals. Competition in the country among the insurance companies is strong as there have been new entrants into the market. Therefore, it is important to identify factors that influence investor's choice for insurance companies. This study attempts to explore the factors that influence investors buying behaviour towards life insurance. The primary data for the study has been collected through questionnaire from 190 investors in Kumbakonam using Simple Random Sampling technique. Mean Analysis was applied to identify factors influencing investors buying behaviour. The study has revealed that the policyholders were satisfied with their investment in the company's life insurance policies due to the benefits and services offered by the company and it was found that the image of the company and service quality were the two major factors which influence the buying behaviour of the investors on life insurance.

Keywords: *Factors, Investors behaviour, Life Insurance, MCC Investors Services*

Introduction

Insurance industry is the mainstay of any financial system which plays a major role in reducing risk and uncertainties. Insurance is the backbone of a country's risk management system. Risk is an inherent part of our lives. The insurance providers offer a variety of products to businesses and individuals in order to provide protection from risk and to ensure financial security. The insurance business is broadly divided into life, health, and non-life insurance.

Life Insurance is a contract between an insurance policy holder and an insurance company, where the insurer promises to pay a sum of money in exchange for a premium, upon the death of an insured person or after a set period. Life Insurance policies are legal contracts, and the term of the contract describes the limitations of the insured events. The business of life insurance in India in its existing form started from in India in the year 1818 with the establishment of the Oriental Life Insurance Company in Calcutta.

Life insurance is universally acknowledged to be an investment which eliminates risk and substituting certainty for uncertainty and comes to the timely aid of the family in unfortunate event of death. The life insurance companies have gained an investment

ISBN: 978-81-19042-81-4

DEPARTMENT OF MATHEMATICS

RESEARCH PUBLICATIONS

ACADEMIC YEAR	NAME OF THE STUDENT	PAPER TITLE	NAME OF THE JOURNAL
2022 – 2023	Reshmaa Raaj M R	Evaluation Of Student Performance Using Fuzzy Interference System	Education and Society
2022 – 2023	Sri Ram Siddharth M	Deteriorating Inventory Items With Quadratic Time Dependent Demand With Shortage Cost Under Trade Credits: A Fuzzy Approach	Indian Journal of Natural Sciences
2022 – 2023	Ashwin K Ayesha Umma Hani L Subashini V	A Study On Continued Fraction And Expression Of Continued Fraction Interms Of Jacobsthal Numbers	GIS Science Journal
2022 – 2023	Vivedha S Jayalakshmi S Matharasi Regina T	A Study On Expression Of Continued Fraction In Terms Of Star Numbers	GIS Science Journal

Education and Society (शिक्षण आणि समाज)
(UGC Care Journal)
ISSN: 2278-6864
Vol-47, Issue-2, No.68, April-June: 2023

EVALUATION OF STUDENT PERFORMANCE USING FUZZY INFERENCE SYSTEM

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ABSTRACT

In this paper, Fuzzy Inference System is used to evaluate student performance based on their academic activity. Assessment of a student's performance is an integral component of the teaching and learning process. This paper proposes a new flexible performance evaluation technique using the fuzzy inference system for the outcome-based students learning process. Additionally, this paper provides a new grading system for assessing student's academic performance instead of classical evaluation assessment techniques by using linguistic variables. Finally, the proposed fuzzy logic approach integrates the fair assessment and participative.

KEYWORDS: Fuzzy logic, Membership function, Academic performance, Linguistic variable

INTRODUCTION

In today's fast-paced and competitive educational environment, it is essential to have an effective and accurate way of evaluating students' academic performance. The traditional grading system has been the primary method for evaluating students' academic progress for many years. The knowledge potential of a nation lies in its educated youthful people. To develop the educated children with knowledge potential is one of the reasons academic institutions are working to improve educational practices in elementary and secondary schools [1].

The process of assessing a student's performance in relation to the learning goals is known as their learning progress. No matter what opportunities a student has, an efficient evaluation system guarantees that all students receive fair grades. In order to ensure that the system is accurate and fair, it should be reviewed and updated. As a result, the system must be open, unbiased, comprehensible, and simple to use. The use of a fuzzy inference system can deliver these qualities [2].

One promising approach to overcome these limitations is the use of a fuzzy inference system (FIS) for evaluating students' academic performance. Fuzzy logic is a mathematical framework that can handle uncertainty and imprecision in input data and produce a more accurate and objective output. The primary aim of this research is an assessment of student academic achievement. It suggests using fuzzy logic techniques and a fuzzy rule induction strategy to obtain user-comprehensible knowledge from historical data in order to validate any evaluation[3]. In this paper, we propose the use of an FIS to evaluate students' academic performance. The FIS takes into account multiple input variables such as grades, attendance,

Indian Journal of Natural Sciences www.tnsroindia.org.in ©IJONS

Vol.14 / Issue 77 /April / 2023 International Bimonthly (Print) – Open Access ISSN: 0976 – 0997

RESEARCH ARTICLE

Deteriorating Inventory Items with Quadratic Time Dependent Demand with Shortage Cost Under Trade Credits: A Fuzzy Approach

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Received: 14 Nov 2022 Revised: 28 Jan 2023 Accepted: 15 Mar 2023

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ABSTRACT

In this study, we established an inventory model for deteriorating items with quadratic time dependent demand with shortage cost under trade credits in crisp and fuzzy provisions. We have to determine the optimum cycle time, optimum relevant profit and optimal order quantity under two various situations i.e. for Case I; the credit period is less than the cycle time for settling the account and for Case II; the credit period is greater than or equal to the cycle time for settling the account. The working out of these formulas for optimal time, optimal profit and economic order quantity (EOQ) are established. For this anticipated model, we provide a numerical example and sensitivity analysis.

Keywords: Inventory, Deteriorating Items, Holding Cost, Deteriorating Cost, Ordering Cost, Shortage Cost, Quadratic time – Dependent Demand, Credit Period, Trade Credits – Defuzzification – Graded Mean Integration method.

INTRODUCTION

Inventory management is a perilous component of the supply chain. It is the tracking of inventory from industrialists to warehouses and from these facilities to a point of sale. The aim of inventory management is to have the correct products in the correct place at the correct time. Inventory management plays a vital role in the supply chain management because a company must balance the customer demand with storage space and cash restrictions.
The main purpose of inventory management is to determine the optimal amount and various types of input

A STUDY ON CONTINUED FRACTION AND EXPRESSION OF CONTINUED FRACTION INTERMS OF JACOBSTHAL NUMBERS

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Abstract: *In Number Theory the study of Jacobsthal Numbers has various approaches. The concept of Kynea Numbers, Star Numbers, Square Numbers, Jacobsthal Numbers, Perfect Numbers, Fermat Numbers, Fibonacci Numbers, Pell Numbers and Pell Lucas Numbers are presented. Also, the concept of Continued Fraction is given and an attempt has been given for the representation of Continued Fraction in terms of Jacobsthal Numbers as base.*

Keywords: ***Continued Fraction, Simple Continued Fraction, Jacobsthal Numbers, Square Numbers.***

1. INTRODUCTION

Number Theory is a branch of pure Mathematics devoted primarily to the study of the integers and integer valued functions. German Mathematician Carl Friedrich (1777-1855) said Mathematics is the Queen of Sciences and Number Theory is the Queen of Mathematics. In Mathematics, a Continued Fractions in an expression obtained through an iterative process. A Rogers-Ramanujan continued fraction is a fraction that has been independently discovered by Srinivasa Ramanujan (1894) and that is closely related to the Rogers-Ramanujan identities. It can be explicitly evaluated under a large range of its arguments.

Throughout the history, number and numbers have a tremendous influence on our culture and on our language. There are different kinds of numbers, in particularly interesting family is the prime numbers. Although arithmeticians have studied prime numbers for thousands of years, there are many open problems. The Theory of numbers [1], [2] & [3] is concerned with the properties of the natural numbers 1,2,3,4… also called the positive integers. Properties of these numbers have been studied from earliest times.

A STUDY ON EXPRESSION OF CONTINUED FRACTION IN TERMS OF STAR NUMBERS

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Abstract: *In Number theory the study of Star numbers and Pyramidal numbers has various approaches. This paper presents the concept of Continued Fraction, Star numbers, Pyramidal numbers, Triangular Pyramidal numbers, Square Pyramidal numbers, Pentagonal Pyramidal numbers, Hexagonal Pyramidal numbers, Heptagonal pyramidal numbers. Also, an attempt has been given for the representation of Continued Fraction in terms of Star numbers as base.*

Keywords: **Continued Fraction, Simple Continued Fraction, Convergence of Continued Fraction, Periodic Continued Fraction, Star numbers, Pyramidal numbers.**

1. INTRODUCTION

Number theory is a branch of pure Mathematics devoted primarily to the study of the integers and integer valued functions [1], [2] & [3]. German Mathematician Carl Friedrich (1777-1855) said Mathematics is the Queen of Science and Number theory is the Queen of Mathematics. The Theory of numbers is concerned with the properties of the natural numbers 1,2,3... also called the positive integers. These numbers, together with the negative integers and zero, form the set of integers. In Mathematics, a Continued fraction is an expression obtained through an iterative process. A Rogers – Ramanujan Continued fraction is a fraction that has been independently discovered by Srinivasa Ramanujan (1894) and that is closely related to the Rogers- Ramanujan identities. It can be explicitly evaluated under a large range of values of its arguments. Continued fraction provide much insight into Mathematical problems, particularly the nature of numbers.

The 18^{th} century was a golden age of continued fractions. Three great Mathematicians studied Continued fractions. Leonhard Euler gave the first basic Recurrence relation for

DEPARTMENT OF LANGUAGES

RESEARCH PUBLICATIONS			
ACADEMIC YEAR	**NAME OF THE STUDENT**	**PAPER TITLE**	**NAME OF THE JOURNAL**
2022 – 2023	Mifrila M	Cultural Insensitivity and Patriarchal Oppression: Resistance Strategies in Anita Desai's Fasting Feasting	International Journal of English and Studies
2022 – 2023	Shajahan M	Social Strife and Class Conflict in George Bernard Shaw's 'Pygmalion'	International Journal of English and Studies
2022 – 2023	Vishaalini M	The Backdrop of Myth and Mysteries in Amish Tripathy's 'The Immortals of Meluha'	International Journal of English and Studies

SP Publications
International Journal Of English and Studies (IJOES)
An International Peer-Reviewed Journal; Volume-5, Issue-5(May Issue), 2023
www.ijoes.in ISSN: 2581-8333; Impact Factor: 6.817(SJIF)

Cultural Insensitivity and Patriarchal Oppression: Resistance Strategies in Anita Desai's *Fasting Feasting*

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Article Received: 22/04/2023
Article Revised: 12/05/2023
Article Accepted: 22/05/2023
Published Online: 25/05/2023
DOI:10.47311/IJOES.2023.5.05.82

Abstract

Anita Desai is recognised as being the first Indian author to properly address feminist themes while writing in English and focussing on the plight of women in India. The article examines the culturally based oppression of women in modern Indian society and compares it to the psychological suffering of women in current American society, concluding that women are viewed as domesticated second-class people with no opportunity to participate fully in society. The topic is chosen for the analysis of patriarchal society and to know the similarities between two cultures as Cultural Indifference. To demonstrate Anita Desai's focus on the actual freedom of women, which only results from inside and requires self-realization and revolting consciousness in order to overcome their enslavement in the home and society.

Keywords: Patriarchal society, self-realisation, Gender Discrimination, Powerlessness, Marginalization, culture.

Anita Desai started to show the psychological realities existing in contemporary Indian society in her fiction and she uses different aspects of postmodern literature. Anita Desai's women characters fought against the patriarchy and discover their power to live on their own, without anybody's help and they do not give any regard for the consequences that such a silent rebellion may have on their lives. *Fasting, Feasting* is an affecting book that approaches the subject of separation, family and escapes in a unique way. Anita Desai's *Fasting Feasting* is a novel about the difference between two different cultures Indian, which is recognised for its piety and long-standing practises

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International Journal Of English and Studies (IJOES)
An International Peer-Reviewed Journal; Volume-5, Issue-5(May Issue), 2023
www.ijoes.in ISSN: 2581-8333; Impact Factor: 6.817(SJIF)

Social Strife and Class Conflict in George Bernard Shaw's '*Pygmalion*'

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Article Received: 22/04/2023
Article Revised: 12/05/2023
Article Accepted: 22/05/2023
Published Online: 25/05/2023
DOI:10.47311/IJOES.2023.5.05.82

George Bernard Shaw, born on July 26, 1856, was an Irish playwright, critic, polemicist, and political activist. He recognized simply as Bernard Shaw. Shaw's influence on Western theater, culture, and politics spanned from the 1880s until his death and continues to be significant even today. He was a prolific writer, penning over sixty plays, including notable works such as *Man and Superman (1902), Pygmalion (1913), and Saint Joan (1923).*

Shaw's writing encompassed a wide range of styles, from modern satire to historical allegory. His plays often delved into social and political issues of the time, challenging conventional norms and questioning established beliefs. Shaw's wit and sharp social commentary made him a leading dramatist of his generation.

In recognition of his literary achievements, George Bernard Shaw was awarded the Nobel Prize in Literature in 1925. His plays continue to be performed and studied around the world, and his ideas on topics like social equality, feminism, and socialism remain influential. Shaw's legacy as a playwright, critic, and activist continues to shape and inspire the fields of theater, culture, and politics.

George Bernard Shaw's *Pygmalion* explores the themes of social strife and class conflict, which are central to the story. Set in early 20th century London, the play revolves around the transformation of a working-class flower girl, Eliza Doolittle, into a refined and eloquent lady under the tutelage of Professor Henry Higgins.

One of the main aspects of social strife in Pygmalion is the stark division between different social classes. Shaw highlights the stark contrast between the upper class, represented by characters like Higgins, and the lower class, represented by Eliza. The play showcases the prejudices and stereotypes that exist between these classes and the challenges faced by individuals attempting to transcend their social status.

The class conflict in *Pygmalion* is exemplified through the character of Eliza. As a working-class woman, she experiences marginalization, poverty, and limited opportunities. Through her transformation, Eliza becomes acutely aware of the disparity in treatment and the

SP Publications
International Journal Of English and Studies (IJOES)
An International Peer-Reviewed Journal; Volume-5, Issue-5(May Issue), 2023
www.ijoes.in ISSN: 2581-8333; Impact Factor: 6.817(SJIF)

The Backdrop of Myth and Mysteries in Amish Tripathy's '*The Immortals of Meluha*'

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Article Received: 22/04/2023
Article Revised: 12/05/2023
Article Accepted: 22/05/2023
Published Online: 25/05/2023
DOI:10.47311/IJOES.2023.5.05.88

Abstract

Amish Tripathi's novel *The Immortals of Meluha*, draws heavily from Hindu mythology, particularly the mythology surrounding the deity Shiva. The story takes inspiration from ancient Hindu scriptures and reimagines them in a fictional world set around 1900 BC. By infusing a contemporary viewpoint into classic stories and narratives, authors like Amish Tripathi offer a fresh perspective on familiar myths. They use these narratives as a platform to examine and reflect upon modern society, drawing parallels between the mythological world and our own. In doing so, they shed light on universal themes, such as environmental degradation, social inequality, or moral dilemmas, and invite readers to consider their relevance in the present context. The use of mythology as a mirror for today's social reality allows authors to engage readers in a thought-provoking manner. It enables them to explore timeless themes in a new light and encourages readers to critically analyze their own world through the lens of these mythological tales.

Key words: Myth, Environmental degradation, Social inequality.

Amish Tripathi is an Indian author known for his works in the genre of mythological fiction. Born on October 18, 1974, in Mumbai, India, Tripathi began his career as a banker and later turned to writing. Amish Tripathi received his education from the Indian Institute of Management in Calcutta. He has a deep love for mythology, history, and philosophy. Being a passionate lover of history, Amish Tripathi drew inspiration for his plot from various sources, including authors like Graham Hancock and Gregory Possehl, as well as the Indian comic book series Amar Chitra Katha. For the mythological passages in his book, Tripathi tapped into the tales and fables passed down within his own family. He holds the belief that all world religions and cultures possess beauty and significance.