4TH INTERNATIONAL CONFERENCE

ON

"Recent Trends in Science, Engineering & Technology"

ICRTSET-2024

(23rd- 24th February, 2024)

ORGANIZED BY

Govindrao Wanjari College of Engineering & Technology
Nagpur-441204

APPROVED BY

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ABOUT NAGPUR

Named after the Nag River, Nagpur is also the third-largest city in Maharashtra and is renowned as the "city of oranges." While en route to the town, we discover that one of India's smart cities is frequently referred to as the state's secondary capital, following Mumbai. Its creation is credited to India's medieval Bhonsle kingdom. It is a quaint location with lakes, gardens, temples, and a rich cultural. Oranges are a major export from the city. Nagpur is also known as India's "Tiger Capital." The reason for this is the abundance of tiger reserves found within and near the city. The rate of literacy in the city is 90%. The river Nag, which flows through Nagpur, is the source of its name. Nagpur is also home to the regional office of the Nagpur Tiger Conservation Authority. Nagpur institution, the second-oldest in the state of Maharashtra, and the ninth-oldest institution in India. Nagpur, also called the Deekshabhoomi, is a pilgrimage place. Within its lovely grounds is the largest hollow stupa in the world. The largest producer of snacks and sweets is also Nagpur. The city is home to Asia's second-largest air maintenance workshop. India's busiest air traffic control room is located in Nagpur as well. The history of the city dates back over 3,000 years. Nagpur is surrounded by an abundance of natural beauties. Nagpur is located at an elevation of 310.5 meters above sea level on the Deccan plateau.

ABOUT CONFERENCE

This International Conference on Recent Trends in Science, Engineering & Technology (ICRTSET-2024) aims to provide an technical platform across the globe to exchange innovative ideas and research findings on contemporary issues for researchers from both industry and academia to participate,discuss the latest advancements and explore future directions in emerging areas of engineering. The participants will get benefit by experiencing knowledge on technical advancements and recent innovations in the field of science & Technology. Conference Will be conducted in Offline Mode. The focus area of the conference is global in nature and the meet is expected to be a good platform for academicians and practitioners to exchange ideas.

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GOVINDRAO WANJARI COLLEGE OF ENGINEERING TECHNOLOGY

Govindrao Wanjari College of Engineering and Technology is affiliated to Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur & Dr Babasaheb Ambedkar Technological University, Lonere. It offers undergraduate programs in Engineering disciplines such as Computer Science & Engineering, Electronics & Communication Engineering, Electrical Engineering, Mechanical Engineering, Civil Engineering, Information Technology postgraduate programs in Management Studies and Diploma Programs in Civil, Electrical and Mechanical. GWCET has a strong focus on industry collaborations which helps the students gain practical knowledge through internships and projects with leading companies.

INSTITUTE VISION

"To emerge as a centre of excellence creating research, innovation and entrepreneurial attitude among the technocrats who in turn shall contribute to the development of society and mankind."

INSTITUTE MISSION

- To develop a culture of excellence in teaching and learning with accountability from all support activities.
- To promote new ideas leading to emergence of creators, innovators, leaders and entrepreneurs.
- To achieve excellence in application based research in technology to contribute to the development of the community.
- To imbibe the ethical values among the students to make them responsive citizens.

Any institute's faculty are its greatest asset, and the expansion of any institute is reliant on the faculty's growth. Keeping this in mind, the institute has put in place a number of programs that help faculty members meet the demands of contemporary society. The Soft Skills training classes for all branches and streams have begun at the institute. Exchange programs that give students the chance to connect with applicants from other prestigious universities are being implemented with great enthusiasm. Important clubs for language, oratory, and aptitude have been established to support students' total personality development.

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MESSAGE FROM THE PRESIDENT

The 4th International conference on "Recent Trends In Science, Engineering & Technology" being organized by Govindrao Wanjari College of Engineering & Technology, Nagpur from dated 23rd February 2024 to 24th February 2024 will mark several exciting milestones for our organization. The conference highlights are important to mention because they demonstrate our contribution in the field of Engineering, Science and Management. The supportive and collaborative nature of the conference also builds on our mission to support learners in contexts of higher education. The contributions by the authors of the following proceedings reflect their dedication to learners in various settings and contexts. The proceedings not only build a legacy of scholarly contribution for the authors, but also for ICRTSET-2024. I would like to appreciate the editors for their hard work for preparing the proceeding of this conference. I would like to congratulate all the authors who presented their research at the conference.

Dr. Suhasini G Wanjari
President
Amar Sewa Mandal, Nagpur.

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MESSAGE FROM THE SECRETARY

It is with great pleasure, I acknowledge the 4th International Conference on "Recent Trends in Science, Engineering & Technology" (ICRTSET-2024), organized by Govindrao Wanjari College of Engineering & Technology, Nagpur. I commend the organizing committee for their admirable efforts in ensuring the success of this conference and their commitment to presenting novel research findings and ideas. My best wishes to them for their ongoing efforts to disseminate the knowledge in their respective domain.

Adv. Abhijit Wanjarri
MLC, Nagpur Constituency and Secretary
Amar Sewa Mandal, Nagpur

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MESSAGE FROM THE TREASURER

Govindrao Wanjari College of Engineering & Technology, takes great pride in hosting the 4th International Conference on "Recent Trends in Science, Engineering and Technology (ICRTSET-2024). I would like to appreciate the entire team at GWCET for their unwavering efforts in bringing this significant event to fruition. This conference provides an excellent platform for students and young researchers to enhance their knowledge and gain a deeper understanding of the changing ideas and innovative methods in Technology. I am confident that this event will offer a valuable learning experience for all participants and provide an opportunity for them to share their expertise. I wish all the attendees a productive and fulfilling time ahead.

Dr. Smeetaa A. Wanjarri
Senate Member RTMNU and Treasurer
Amar Sewa Mandal, Nagpur

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MESSAGE FROM THE CONVENER

It gives me great pride to announce that Govindrao Wanjari College of Engineering & Technology, organised the AICTE, ISTE & IETE Approved 4th International Conference on "Recent Trends in Science, Engineering and Technology (ICRTSET-2024) from 23rd February 2024 to 24th February 2024. The conference will act as an excellent colloquium to develop a platform for the exchange of ideas towards scientific and technological innovations for the generations to come. I hope that the conference will deliberate on current issues of national and international relevance in the fields of Science and Technology, allowing academicians, researchers, and technocrats to share their thoughts and views on innovations in their respective fields. The conference will witness an unparalleled number of quality research articles being presented, paving the way for new paths to innovate in Science and Technology. I extend my heartfelt congratulations and appreciation to the entire team for their efforts in organizing this international conference and wish them great success in the successful conduct of the entire event.

Dr. Salim A. Chavan
Convener (ICRTSET-2024) and Principal
Govindrao Wanjari College of Engineering & Technology, Nagpur

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MESSAGE FROM KEYNOTE SPEAKER

It is a pleasure to note that Govindrao Wanjari College of Engineering & Technology is organizing the 4th International Conference. I would like to take this opportunity to thank you for your invitation and the excellent organized Conference. Conferences of this nature provide a platform to young researchers and faculty members to present their research and development work and get feedback and suggestions to improve their quality of work. The level of expertise and knowledge of the presenters are excellent. In addition, I appreciate their positive attitudes, willingness to explain concepts, clarity and opportunities to ask questions.

Dr. Mohan Kolhe
Professor,
Faculty of Engineering & Science,
University of Adger, Norway

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MESSAGE FROM KEYNOTE SPEAKER

I feel very honored to be associated with Govindrao Wanjari College of Engineering & Technology who have organized their 4th International Conference. This conference has surely provided a valuable platform to young researchers and faculty members to show their hidden potential. I would like to take this opportunity to thank you for your invitation and congratulate you all for the excellent Conference.

Dr. Vijaykumar D Nimbarte,
Postdoctoral Scientist,
Max Planck Institute for Medical Research,
Department of Chemical Biology,
Heidelberg, Germany.

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MESSAGE FROM CO-CONVENER

I sincerely thank the honorable management and principal of Institute for motivating us to organize AICTE, ISTE and IETE approved 4th International conference on "Recent Trends in Science, Engineering & Technology (ICRTSET-2024)" from 23rd February 2024 to 24th February 2024. I wish the organizing team best of luck for further achievements, and hope for continued cooperation. I want to thank in advance the conference committee for extending their valuable time in organizing the program and all the authors, reviewers, and other contributors for their sparkling efforts and their belief in the excellence of ICRTSET-2024.

Dr. Rakesh G Shriwastava,
Professor,
Electrical Engineering Department,
Co-Convener (ICRTSET-2024)
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Acknowledgement

We present to you the proceeding for the AICTE, ISTE and IETE approved 4th International Conference on **"RECENT TRNEDS IN SCIENCE, ENGINEERING & TECHNOLOGY"** which was held from 23rd February 2024 to 24th February 2024.

We express our sincere thanks to Hon'ble Founder of Amar Sewa Mandal and our well-wisher **Dr. Suhasini. G. Wanjari,** for being a source of inspiration for all of us.

We would like to express sincere thanks to Hon'ble MLC and Secretary Amar Seva Mandal **Adv. Abhijit. G. Wanjarri** for giving the opportunity to organise such international conference and providing us necessary facilities .

We are very thankful to our Hon'ble Treasurer Amar Seva Mandal and Senate Member RTMNU, Nagpur **Dr. Smeetaa. A. Wanjarri.** She guided us for this conference and gave us valuable suggestion whenever and whereever required.

We feel very much delighted in expressing sense of gratitude to our Principal and Convener for this conference **Dr. Salim Chavan,** for his timely help during the conference and for his constant encouragement and valuable guidance. The successful execution of this conference would not have been possible without the firm support of our convener.

We would also like to express our sincere gratitude to Dr. Karbhari Vishwanath Kale, Vice-Chancellor, DBATU, Dr S. R. Chaudhari, Vice-Chancellor, RTMNU, Dr Manoj B. Daigawane, Jt. Director, Technical Education, Dr Dinesh K. Agrawal, Add Director of Research, KIMSDU, Karad, Dr. Prashant Maheshwari, Dean, Science & Technology, RTMNU, Dr C C Handa and Dr Rajeshri Raut, National Executive Council Members ISTE, NEW DELHI for being involved in this international conference and sharing their views.

We wish to express our gratitude to all our faculty members who have helped us directly or indirectly in completing this conference

COORDINATOR
Mr. Avishkar Wanjari
Assistant Professor
EE Deptt, GWCET, Nagpur

INDEX

CIVIL ENGINEERING

TITLE	1.1 Parametric Optimization for Photo –catalytic Process
AUTHOR	Manish Patil[1], Mujahid Husain[2] and Farooq I Chavan[3]
COLLEGE AFFILIATION	SSBT's College of Engineering and Technology, Bambhori, Jalgaon, Maharashtra, India[1,2,3]

ABSTRACT Researchers have been exploring deeply the complexity of the slurry phase photo-catalysis process. The process has been understood at depth, yet it hasn't been optimized. Researchers have been unable to define a single performance parameter that can control the entire photo-catalysis process. In the present paper parameters of concern in a slurry phase photo-catalytic reactor have been reinvestigated. Based upon this a Universal Performance Parameter for the process has been defined. The literature exploration revealed that the parameters of concern of the photo-catalysis process are tightly interwoven and the whole process is very complex. Researchers have even suggested parameters that are reactor configuration dependent. in the present work an approach is proposed to generate universally applicable and reactor configuration independent parameters. This approach will make the process analysis simple and will be dependable for the researchers in future.

KEYWORDS Slurry phase Reactor, photo –catalysis process, Universal Process Performance Parameter.

TITLE 1.2 Latest developments in utilizing solar radiation in corrosion removal maintenance Techniques towards environment protection and enhanced life of steel structures

AUTHOR Varad Vispute[1], Pro. Dr. Farooq[2] Chanvan and viraj Dusane[3],
COLLEGE AFFILIATION Shrama Sadhna Bombay Trust's College of Engineering, Bambhori Jalgaon [MS] India & Government college of Engineering Jalgaon, India[1,2,3]

ABSTRACT Incremental demand in the maintenance and repair industry required economical solutions for corrosion removal. Due to various causes, damage within any structure occurred because of corrosion. This corrosion not only harmed the economy but also the lives of the people. Nowadays corrosion is the major important reason of the failure of the structure and this occurred due to because of not provide maintenance to the structure, because current method available in the market is very tedious and skilled labour is required for it. By considering this problem we developed an effective solution for removes the corrosion but also increases the life of the structure, the mechanism used to remove corrosion is known as Sanjivani, this method is based on the principle of V-Intensity and Concentration Light. various method available in the market is not economical and effective than Sanjivani method. Our motto is to develop such corrosion removal method which economical and easy to use because we connect the various harm occur due to the failure of structure is occur because of corrosion. To remove corrosion, we developed V-Intensity equation, with the help of V- Intensity equation we changed the intensity of light according different materials.

KEYWORDS V- Intensity, Sanjivani, Solar Radiations,

TITLE	1.3 Development Of Advanced Two-Way Automatic Sand Filteration.
AUTHOR	Viraj Dusane[1], Dr. Pro. Farooq Chanvan[2], Varad Vispute[3]
COLLEGE AFFILIATION	Government college of Engineering Jalgaon, India, & Shrama Sadhna Bombay Trust's College of Engineering, Bambhori Jalgaon [MS] India[1,2,3]
ABSTRACT	Sand is an important commodity for construction activity. It is available naturally in the river or ocean area. The sand we get from natural resources is not in the form to utilize for construction activities. Sand needs to filter from unwanted material and gravels, sieving process also converts sand into the required particle size. After achieving a specific size of sand, it gets helpful in construction activities. There are ways to filter sand, commonly used method is manual filtration through a filtration net, it is a labour-intensive technique hence the need to replace it with automated sand filtration for less requirement of manpower and speed production. We can see various automated sand filtration in the market. The automated sand Filtration available market is of different types but the most common is a one-way horizontal sand filtration machine. The horizontal sand filtration generally uses a slider-crank mechanism to translate mesh. So, we come up with up gradation in this machine by facilitating the user to add one more mesh to the existing setup for filtering more sand and to increase its better work transfer to the mesh by using the scotch yoke mechanism.
KEYWORDS	Sand, properties, Separation, Mechanism, Construction

TITLE	1.4 Sullage Treatment by Photo-catalysis
AUTHOR	Manish Patil[1], Pravin Shirule [2], Mujahid Husain[3]& Farooq Chavan[4]
COLLEGE AFFILIATION	SSBT's College of Engineering and Technology, Bambhori, Jalgaon[1,2,3]
ABSTRACT	Sullage, the wash water of bathrooms, is also known as grey wastewater1. Detergent is the main impurity in this. Considering the modern-day problem of water scarcity, there is a great need to purify this water and reuse it. However conventional technologies are not successful in treatment of detergent containing wastewaters. Photo –catalysis is a promising technology for these wastewaters. In the present work, sullage of SSBT's College of Engineering and Technology Bambhori, Jalgaon has been treated by photo – catalysis. The process parameters are first optimized. The optimization is done using artificial samples (dissolving detergent is the distilled water). An indigenous rector using UV lamps has been designed for reactions. Raw sullage is characterized. Then it is treated under optimum conditions of process parameters using solar energy. It is found to be effective and viable.
KEYWORDS	Sullage, photo catalysis, detergents, optimization.

TITLE	1.5 Experimental Study on Traditional Clay Bricks by Adding Bagasse Ash and Fly Ash
AUTHOR	Prof. Sudarshan P. Patil[1], Prof. Saurabh V. Pathare[2], Rahul S. Arghode[3], Ravindra Wakodikar[4]
COLLEGE AFFILIATION	Govindrao Wanjari College of Engineering & Technology, Nagpur[1,2,3,4]
ABSTRACT	The objective of this study is to produce sugarcane ash brick by adding one of the waste materials viz. fly ash India's population is increasing day by day, and many industries and agriculture generate large amounts of waste that pose health risks. Disposal of these wastes has become a major problem. Cane sugar is one of those produced by burning bagasse ash. To use the waste material effectively, we used bagash in various proportions, i.e. 5-30%, in the manufacture of bricks. The bricks are manufactured and the tests conducted are water absorption and compressive strength as per Indian standards. In this research, the possibilities of using bagasse ash in brick production are investigated. The result of this work indicates the maximum compressive strength achieved for the optimum mix percentage. From this we can conclude that adding waste material to the production of bricks can minimize the environmental burden, resulting in a cost-effective and green construction
KEYWORDS	Sugarcane bagasse ash, Fly ash bricks, green bricks.

TITLE	1.6 Foam Concrete as Green Concrete Material with Sustainable Construction"
AUTHOR	Prof. Saurabh V. Pathare[1], Prof. Sudarshan P. Patil[2], Ravindra Wakodikar[3], Prof. Rahul S. Arghode[4].
COLLEGE AFFILIATION	Govindrao Wanjari College of Engineering & Technology, Nagpur[1,2,3,4]
ABSTRACT	A green building a naturally feasible building, planned built and worked to play down the full natural impacts. The Green building record (GBI) is recognized green rating apparatus for development to advance feasible inn the built environment and raise the mindfulness among the different gather within the development industry and the open around the environment issue and our obligation long run era. Carbon dioxide (CO2) is the essential nursery gas radiated by the human action. It is claimed that 5% of the world 's CO2 emission is quality to cement industry, which is imperative constituent of concrete. Due to the noteworthy commitment to the natural contamination there's require of finding of ideal arrangement in conjunction with fulfilment gracious development require. Separated from the ordinary concrete bricks, froth concrete is unused inventive innovation for economical building and respectful development which fulfils the criteria of being a green fabric. Foam concrete has special characteristic that can be utilized in gracious designing works. It requires no compaction, but will stream promptly from an outlet to fill limited and unpredictable cavities, and it can be pumped over noteworthy remove and stature. In this way it might be instructed of free streaming, self-setting fill. This report gives a conspectus of shaped concrete its constituent, generation designing properties and use. Foamed concrete is basic to deliver but, at display, there's an ought to give near control amid its production and onsite supervision amid its arrangement and curing. The require for such uncommon requirement will decrease as industry gotten to be more commonplace with character and behaviour of fabric. This paper conclude that froth concrete can be viable feasible fabric for development.
KEYWORDS	Foam Concrete, Green building, green concrete.

TITLE 1.7 GIS Modelling of Groundwater of Jagantola Village of Bagh River Watershed (WGW-1/B)

AUTHOR Sandeepkumar C. Hanuwate[1], Sneha P. Malwe[2], Guneshwari S. Hanuwate[3], Kanak Parate[4]

COLLEGE AFFILIATION GWCET, Nagpur[1,2,3], MMS & Junior College, Kudwa and Gondia Junior Engineer (Civil) PCSD, Goa[4]

ABSTRACT Presently, Geographical Information System (GIS) is the greatest important mean for groundwater mapping and modelling. There was a task to define the pre-monsoon and post-monsoon analysis of groundwater level of Jagantola village, of Bagh River watershed of Gondia District, Maharashtra, India. There is a challenge in the study with the issue of suitability of groundwater within some previous years. GIS interpolation model techniques have been used to determine the suitability of groundwater level in this study. In water resources management, hydrology, and groundwater level monitoring use of GIS interpolation techniques are increasingly with geospatial techniques with greatest benefit. The climate of the district is characterized by a hot summer and general dryness throughout the year except during the south-west monsoon season, i.e., June to September. The mean minimum temperature is 6°C and mean maximum temperature is 47°C. The normal annual rainfall over the district ranges from 1300 mm to 1500 mm. The annual rainfall distribution in Gondia is very uneven. The Bagh is the tributary river of Wainganga River. Analysis of physicochemical parameters with statistical significance and GIS technique for groundwater modelling has been done to obtain the results. For actual analysis, prediction, and validation geospatial techniques of groundwater level monitoring is essential to collect data on water level potential position conditions in the study area. The objective of the study is to use GIS techniques to analyse groundwater modelling in Jagantola village of Bagh River Gondia District. The figures and numbers can be used in the future for studies on area monitoring, resource conservation, and restoration.

KEYWORDS Bagh River, Geographical Information system, Groundwater, Physicochemical parameters.

TITLE 1.8 Effect of fire on flexural strength of reinforced concrete beams

AUTHOR Pankaj Punase[1], P. R. Asutkar[2], Dr. M. Husain [3], Dr. F. I. Chavan[4]
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ABSTRACT Concrete is one the most extensively used construction material all over the world. Many scientists and researchers are in quest for developing alternate construction material that are environment friendly and contribute towards sustainable development. Huge amount of fly ash waste is generating day by day from thermal power stations which creates the disposal problem and has many environmental issues. Also, buildings are accidently subjected to fire hazards, during fire the temperature of concrete may go high. High temperature can cause the development of cracks in concrete. These cracks like any other cracks propagate & may eventually cause loss of structural integrity and shorting of service life. In this study fly ash is used as replacement of cement in concrete. Replacement is done up to 10 % with the increment of 5%. After curing of 28 days each Reinforced concrete beam specimens of fly ash-based concrete will be exposed to open fire at elevated temperature of (100° C, 200° C, 300° C, 400° C, 500° C, 600° C, and 700° C). After temperature regimes Flexural strength of fly ash-based concrete is determined and comparison of results is made with controlled specimens.

KEYWORDS Flexural Strength, Reinforced Concrete Beams.

TITLE	1.9 Innovative and Sustainable Techniques of COD Removal.
AUTHOR	Pro. Dr. Farooq Chavan[1], Varad Vispute[2,] Prof Hemant D Wagh[3], Dr Sonali Patil[4]
COLLEGE AFFILIATION	Shrama Sadhna Bombay Trust's College of Engineering, Bambhori Jalgaon [MS] India[1,2,4] Shri Jaykumar Rawal Institute of Technology, Dondaicha[3]
ABSTRACT	Today's world faces the problem of water scarcity and various solutions have been developed to solve this problem. The best way to solve this problem is to create an economical and cheaper way to provide publicly available and sustainable water. Water, one of the most important and valuable things in the world, is a source of great concern because changes in its content can endanger society and health. However, in today's ever-changing world, this ideal has changed surprisingly. Increasing world population, urbanization, industrialization and unbalanced human consumption are important priorities that will have an impact on the world's freshwater resources. Limited water resources have claimed millions of lives, especially children who need water to maintain their metabolism. The quality of life is directly related to and quality of water that consumed. In the market various method is available to remove COD but chemicals used in this method is harmful and expensive. The aim of our research is to remove COD without using harmful chemical and economically. In this research study the material is ubiquitously available in the nature. Currently, water scarcity affects 40% of the world's population, and this number is expected to increase in the future.
KEYWORDS	Adsorbents, Adsorbate, Wastewater, Pollution, Water, Neem Leaves, Coconut Husk, Jamun Leaves, Maize, Contaminants, COD.

TITLE 1.10 Evaluate the Water Quality Index (WQI) for the Tapi River Basin in the Northern Maharashtra Region, considering both physical and chemical parameters.

AUTHOR Pramod Sambhaji Patil[1], Pro. Dr. Pawar Sudhakar Bhika[2], Pro. Dr. Mujahid Husain[3], Pro. Dr. Farooq Chanvan[4]

COLLEGE AFFILIATION Shrama Sadhna Bombay Trust's College of Engineering, Bambhori Jalgaon [MS] India[1,2,3,4]

ABSTRACT Tapi is a major river in North Maharashtra that is primarily used for drinking water irrigation and industrial purposes. It flows through three major states, with Gujarat having the largest catchment area. In the middle of its session, there is an established relationship between one associated plant and the Tapi River, which is polluted by agricultural, domestic, and industrial waste. It has several small and medium sized cities located along the river's main stem and tributaries. Because of this, the river takes in a lot of organic waste from upstream. The amount of harmful industrial discharge is very lesser, but agricultural discharge is most commonly collected from its own catchment area; such activities are most common in the river's final 45 km stretch (Chopda to Shirpur) The primary objective of this research is to investigate the pollutant range at each intake point and the causes of Tapi Water contamination. Samples were collected from 9 multiple places, each 5 kilometres apart. Both steady and flowing test conditions were run for pH, turbidity, DO, COD, BOD, chloride, fluoride, coliform, and heavy metals. These boundaries were chosen dependent on drinking water quality norms for the country.

KEYWORDS Water quality, industrial discharge as well as agricultural practices.

COMPUTER & INFORMATION TECHNOLOGY

TITLE 2.1 E-Learning Management System

AUTHOR Prof. Sayema Kausar[1] , Sanober Tahseen[2] , Khushbu shah [3], Asfiya Sheikh[4] , Sofiya Sheikh[5] , Umair Ansari[6]

COLLEGE AFFILIATION Anjuman College of Engineering and TechnologyNagpur,India[1,2,3,4,5,6]

ABSTRACT E-learning stands as an endless fountain of knowledge, providing a dynamic online haven that satisfies the intellectual curiosity of learners across any age and place. In contrast to traditional learning, E-learning solutions empower individuals with swift access to precise information amidst the vast sea of knowledge. As information accelerates and time becomes scarce, the landscape of learning undergoes a revolutionary shift. This research paper introduces an avant-garde e-learning management system woven with a web services-oriented framework and Service-Oriented Architecture (SOA). Adapting seamlessly to various browsers, this system integrates fully with diverse databases. Highlighting key features such as Content Management, Content Protection, Learning Management, Delivery Management, Evaluation Management, Access Control, and more, the system emerges as a unified platform finely tuned for contemporary E-learning demands and efficient management.

KEYWORDS Online Education, Distance Learning, Web Services, service-oriented architectures, Integrated Platform

TITLE	2.2 Smart Trolley-Human Following Trolley
AUTHOR	Namrata Khade[1], Leena Bambal[2], Mitali Wairagade[3], Shruti Bhardwaj[4], Sumit Bhagat[5]
COLLEGE AFFILIATION	Priyadarshini College of Engineering, Nagpur, India[1,2,3,4,5]

ABSTRACT

This abstract provides an overview of a novel IoT-based system designed to enhance the shopping experience by introducing a "Human-Following Shopping Trolley" Traditional shopping trolleys have remained relatively unchanged for decades, but this innovation leverages IoT technology and a mobile app to bring convenience and efficiency to the shopping process. The system comprises a smart shopping trolley equipped with sensors and actuators, allowing it to autonomously follow a shopper as they navigate the store. This eliminates the need for physical pushing and pulling, making shopping more accessible, especially for the elderly and those with mobility issues. The trolley communicates with a mobile app installed on the shopper's smartphone or device.

KEYWORDS Internet of things, android application, Arduino UNO, smart trolley, travel partner, mobile app.

TITLE	2.3 An Intelligent System for extracting solution based on Multiple PDF's
AUTHOR	Dr. M.S Khatib[1], Harshal Nagpure[2], Ashhar Siddiqui[3], Anuj Thakur[4], Ayush Thakur[5]
COLLEGE AFFILIATION	Anjuman College Of Engineering, Nagpur, India[1,2,3,4,5]

ABSTRACT

In an era where the digital landscape is inundated with information, the extraction of meaningful insights from unstructured data formats such as PDFs and images poses a formidable challenge. This research seeks to surmount this obstacle by introducing an innovative system capable of intelligent engagement with diverse file types, revolutionizing the way we interact with information. The primary objective of this study is to develop an advanced AI-driven assistant that transcends the limitations of conventional data extraction methods. By synergizing cutting-edge technologies, this system endeavors to navigate the intricate layers of PDFs and image files, unlocking their latent knowledge potential. Beyond mere efficiency gains in data extraction, the research strives to foster a deeper comprehension of the content within these documents and images, thereby bridging the gap between the abundance of information available and our capacity to harness it effectively. This envisioned system is poised to redefine how professionals across various industries handle information, providing an intelligent and streamlined solution for data interpretation. By harnessing artificial intelligence, the assistant aims to adapt to the evolving complexities of unstructured data, ensuring versatility across different file types, structures, and content variations. The ultimate aspiration is to empower users with a versatile tool that not only simplifies information extraction but also contributes to the democratization of knowledge, making valuable insights more accessible to a broader audience.

KEYWORDS PDF, Image Files, Data Extraction, Alt, Contextual Understanding, Information Accessibility.

TITLE 2.4 Gesture surf : Effort less Web Exploration

AUTHOR HeenaPathan[1],Aditya Tapase[2],Sheikh Mohammad Faiyaz [3],Shreya Rajgire[4], Akansha Andey[5],Rabiya Siddiquee[6]

COLLEGE AFFILIATION Anjuman College of Engineering and Technology. Nagpur[1,2,3,4,5,6]

ABSTRACT

The Gesture-Enabled Browser Navigation System simplifies human-computer interaction by relying solely on hand gestures, eliminating the need for direct contact. This innovative system enables virtual control of all input and output operations using both static and dynamic hand gestures. Utilizing only a webcam and a robust processor for optimal performance, the system requires the webcam to possess tracking capabilities for the user's hand. Implemented in Python and leveraging the OpenCV library, the project utilizes the Media Pipe module from Google to calculate the precise position of the user's hand. Hand gestures, being the most effortless and natural form of communication, are then assigned specific functionalities such as creating a new tab. The system's output manifests as observable changes in the computer system following the execution of defined gestures. The Gesture-Controlled Virtual Mouse redefines human-computer interaction, seamlessly integrating hand gestures and voice commands to minimize the need for direct contact with the computer. This innovative system allows for the virtual control of all input and output operations, making use of both static and dynamic hand gestures in conjunction with voice assistants. Remarkably, this project employs cutting-edge machine learning and computer vision algorithms to recognize gestures and voice commands, ensuring a smooth and intuitive user experience without the need for additional hardware. Implemented through a state-of-the-art CNN-like model within Media Pipe, running in pybind11, the system comprises two modules.

KEYWORDS Touch-based exploration, Gesture-driven browsing, Interactive web experience, Effortless surfing

TITLE 2.5 CRM and Job Portal in the Education Domain

AUTHOR Imteyaz Shahzad[1], Abhay Zingre[2], Burhanuddin Khamgaonwala[3], Lokesh Yadav[4], Sheikh Sufiyan[5], Shoeb Khan[6]

COLLEGE AFFILIATION Anjuman College of Engineering and Technology. Nagpur[1,2,3,4,5,6]

ABSTRACT In the rapidly evolving landscape of education, integrating a Customer Relationship Management (CRM) and Job Portal system addresses the growing demand for streamlined career services and enhanced student engagement. This innovative solution aims to bridge the gap between the professional world and educational institutions by offering a centralized platform that connects alumni, academics, employers, and student institutions. The Job Portal component of the system provides students with a user-friendly interface to explore internships, career-related events, and job opportunities. It leverages advanced algorithms to match students with relevant job openings based on their qualifications, career preferences, and skills. Employers can also use the portal to post review resumes, and job vacancies connect with potential candidates. Simultaneously, the CRM system focuses on building and maintaining strong relationships between alumni, employers, educational institutions, and students. It tracks and analyzes interactions throughout the student lifecycle, providing valuable insights for personalized engagement strategies. The CRM component fosters proactive communication, allowing institutions to share updates on workshops, alumni success stories, and career fairs.

KEYWORDS Education Landscape, Student Engagement, Employer Interaction, Personalized Engagement Strategies.

TITLE	2.6 Smart Home Automation Appliance
AUTHOR	Kunal Gydhane[1], Tanmay Wani[2], Snehal Bopche[3], Trupti Khante[4], Prof. Aditi S. Sawarkar[5]
COLLEGE AFFILIATION	Govindrao Wanjari College of Engineering and Technology, Nagpur, Maharashtra, India[1,2,3,4,5]
ABSTRACT	In a smart home, various appliances and devices are interconnected, allowing occupants to monitor and control them remotely. Here are some key points: A smart home utilizes Io to monitor and control appliances using a home automation system. It enables seamless communication between devices and provides convenience for users. Smart home Systems consist of hardware interfaces (such as sensors and Wi-Fi technology) and software interfaces (application for controlling devices).Users can manage lighting, climate, entertainment systems, and more. Energy Management, Smart homes optimize energy usage by controlling appliances efficiently. Security, Sensors enhance home security by detecting intrusions or hazards. Convenience, Users can remotely control devices via smartphones, tablets, or computers. Challenges, Existing systems face limitations such as unfriendly user interfaces and high costs. However, ongoing research aims to address these challenges.
KEYWORDS	NodeMCU , Rely , Arduino IDE

TITLE	2.7 Smart Driver Alert System For Road Hypnosis
AUTHOR	Mr. Vivekanand Thakare[1] Mr. Harsh Taneja[2], Ms. Surbhi Dhurve[3], Ms. Shriya Karwade[4], Mr. Ameer Mandhu[5],
COLLEGE AFFILIATION	Govindrao Wanjari College of Engineering and Technology, Nagpur, Maharashtra, India[1,2,3,4,5]

ABSTRACT

Driver fatigue poses significant road safety risks, especially on long, monotonous drives. This paper presents an intelligent alert system to detect and mitigate driver drowsiness in real-time. The system uses a tilt sensor to monitor head orientation and a light sensor to detect eye closure indicative of declining vigilance. A microcontroller analyses the sensor data to activate audio and haptic warnings when drowsiness is detected. A prototype was developed and validated through simulated driving trials. Results showed the system accurately identified fatigue episodes by tracking posture and lighting changes. Timely alerts prompted drivers to regain alertness before accidents could occur. The affordable sensor-based approach demonstrates promising capability for vehicle integration to enhance safety by countering driver inattention arising from fatigue. With further refinements, the system has potential to considerably reduce fatigue-related accidents on hazardous monotonous routes. This research highlights the value of basic sensing and intelligent processing for life-saving driver assistive technologies.

KEYWORDS Road safety, Ambient light sensor, Microcontroller, Signal processing, Accident prevention.

TITLE 2.8 Holy Land Odyssey in the Domain Of web Development

AUTHOR Saima Ansari[1], Ashar Sheikh[2], Sahil Sheikh[3],Syed Muzzammil[4]

COLLEGE AFFILIATION Anjuman College of EngineeringandTechnology.Nagpur[1,2,3,4]

ABSTRACT Embark on a profound spiritual odyssey with [AL MIQAT TOURS], where faith and devotion converge in the sacred pilgrimages of Haj and Umrah to Mecca and Medina. As a trusted travel agency, we recognize the profound significance of these journeys, meticulously crafting Tours and Travels that offer a seamless and spiritually enriching experience. Our unwavering commitment is evident in facilitating countless pilgrimages, ensuring exceptional services and spiritual fulfilment. In a fast-paced world, we invite you to pause and embrace the tranquillity of a pilgrimage. Let us be your trusted partner, planning every detail from your first step on the path to Mecca to your return home. Our dedication to accessibility is reflected in diverse budget-friendly packages, believing that spiritual journeys should transcend financial constraints. Your trust is our foundation, shaping exceptional service and peace of mind. Join us on an unforgettable spiritual adventure, where [AL MIQAT TOURS] becomes your guiding light and companion, deepening your connection to the Divine in this transformative pilgrimage of a lifetime.

KEYWORDS Sacred Journeys, Mecca Pilgrimage, Spiritual Tours, Umrah Packages.

TITLE	2.9 River Level Detection System on Railway Bridge
AUTHOR	Ujwal Kore[1], Deepak Modi[2], Pranay Manapure[3], Pranav Nathe[4], Prof. Aditi s. Sawarkar[5]
COLLEGE AFFILIATION	Govindrao Wanjari College of Engineering and Technology, Nagpur, Maharashtra, India[1,2,3,4,5]
ABSTRACT	Railways prioritize safety with continuous efforts for safe train operations. A water level monitoring system, using ultrasonic waves, identifies regular, high flood, and danger levels at bridges. Automated precautionary measures, including train regulation or stoppage during critical water levels, enhance safety. The system records data every 5 minutes, providing timely information for forecasting and efficient preventive planning.
KEYWORDS	Ultrasonic sensor, cost effective, Microcontroller, Distance, water level

TITLE 2.10 Sudden Breaking Monitoring And Alert System

AUTHOR Mr. Nitin Thakre[1], Mr. Lokesh Tarare[2], Ms. Madhuri Sadula[3], Mr. Pavan Fupate[4], Mr. Maitreya Kadam[5], Mr. Yash Dhole[6]

COLLEGE AFFILIATION Govindrao Wanjari College of Engineering and Technology, Nagpur, Maharashtra, India[1,2,3,4,5,6]

ABSTRACT In an effort to minimize the occurrence and severity of rear-end collisions during emergency braking scenarios, the Sudden breaking monitoring system and alert system has been developed to serve as a crucial safety mechanism on modern vehicles. This system is designed to rapidly flash the brake lights when the driver engages in sudden and forceful braking, alerting following drivers of the immediate need to react and take necessary precautions. The system integrates a sensor within the brake pedal to monitor the speed of brake application, the ability to activate rapid flashing of the brake lights, and an accelerometer to detect abrupt deceleration. Studies evaluating the system's effectiveness have indicated a potential reduction in reaction time by approximately 0.5 seconds, leading to a subsequent decrease in overall braking distance. However, the ultimate success of the system in preventing accidents relies heavily on external factors, including road conditions and the responses of following drivers. While the system does not typically incur significant additional costs, its utility hinges on the awareness and understanding of following drivers regarding the implications of the flashing brake lights. This project emphasizes the critical role of effective communication between vehicles on the road, underscoring the importance of this system as a valuable tool in promoting road safety and mitigating rear-end collision risks.

KEYWORDS Rear-end collision, Brake pedal sensor, Brake light communication, Road safety enhancement, Collision risk mitigation, Vehicle safety mechanism.

TITLE	2.11 Density Based Traffic Control System Management With Priority of Emergency Vehicles
AUTHOR	Ms. Kalyani Kshirsagar[1], Ms. Bhagyashri Yenorkar[2], Ms. Shila Tembhare[3], Ms. Shruti Mate[4], Mr. Manoj Vairalkar[5]
COLLEGE AFFILIATION	Govindrao Wanjari College of Engineering and Technology, Nagpur, Maharashtra, India[1,2,3,4,5]

ABSTRACT

The Density Based Traffic Single System Management with Priority of Emergency Vehicles is a system designed to optimize traffic flow and prioritize emergency vehicles in congested traffic conditions. The system leverages Artificial Intelligence and Video Analytics to calculate vehicle count at traffic signals, which is continually updated. The system uses effective algorithms to adjust the timing of traffic signals based on real-time vehicle count, the distance of the vehicle from the signal, and the bearing angle made by the vehicle with the signal. It ensures that traffic congestion doesn't increase exponentially and that multiple emergency vehicles do not put the system in a deadlock. The system is designed to automatically control traffic light intervals based on vehicle density. This allows an emergency vehicle to reach its destination during emergencies, plying on the best possible route, in the most decongested traffic conditions. The main aim of the system is to save human life from accidents and unnecessary delays due to traffic congestion. This system represents a significant advancement in traffic management, providing a solution to the serious issue of emergency vehicles being delayed due to traffic congestion. It offers a cost-efficient and accurate solution to save lives.

KEYWORDS Traffic congestion, emergency vehicles, intelligent traffic control system, automated system, Ir sensor, Servo motor, Arduino Uno, LCD, I2C, Esp8266, microcontroller.

TITLE	2.12 Paper Cutting Machine
AUTHOR	Mr. Nitin Thakre [1], Mr. Kishan Pende[2], Mr. Deepesh Samaddar [3], Mr. Sanghapal Khobragade [4], Ms. Swati Suryavanshi [5]
COLLEGE AFFILIATION	Govindrao Wanjari College of Engineering and Technology, Nagpur, Maharashtra, India[1,2,3,4,5]

ABSTRACT

In the rapidly evolving landscape of the competitive market, there is a heightened demand for pioneering manufacturing processes, necessitating the creation of methods that align with the benchmarks of precision and productivity. Traditional paper cutting machines employed in industrial setups currently rely on time-consuming paper marking procedures to achieve meticulous dimensions. This proposed innovation presents a solution that is not only precise, efficient, and cost-effective but is specifically tailored for large-scale paper cutting operations, with a primary focus on meeting the demands of the paper manufacturing industry.

The core objective of this project is to optimize the paper cutting process, alleviating human fatigue and reducing operational time by eliminating the manual paper marking step. The envisioned Automatic Paper Cutting Machine integrates locally available materials, encompassing a motor, an Arduino board, plastic components, a cutting blade, and a belt system. The incorporation of a programmed code on the Arduino board enables dynamic adjustment of the cutting length, while the sliding mechanism executes a meticulously precise paper cutting process.

KEYWORDS Arduino board, Industrial automation, Sliding mechanism Quality control

TITLE	2.13 IOT Based Garden Watering & Water Consumption
AUTHOR	Prof. Aditi Sawarkar[1], Mr. Nitish Kumar[2], Mr. Ganesh Warkhade[3], Mohit Zod[4], Ms. Shweta Bamnhote[5]
COLLEGE AFFILIATION	Govindrao Wanjari College of Engineering and Technology, Nagpur, Maharashtra, India[1,2,3,4,5]
ABSTRACT	This project introduces an IoT-based garden watering system with integrated water consumption analysis, aimed at addressing the pressing need for sustainable water management in gardening. By combining advanced sensor technology, microcontrollers, and a user-friendly interface, the system offers an automated solution for monitoring and regulating the watering process based on real-time soil moisture data. The implementation of water flow sensors enables precise tracking of water consumption, facilitating data-driven insights into optimal watering practices.
KEYWORDS	IOT , data driven , conventional grading, Potential environment repercussions

TITLE	2.14 Bluetooth Controller Pesticides Sprinkler Robot
AUTHOR	Prof. Tejaswini Mankar[1], Devashri Bokade[2], Amit Sahu[3], Nandkishor Mandal[4], Kanishka Hatkar[5]
COLLEGE AFFILIATION	Govindrao Wanjari College of Engineering and Technology, Nagpur, Maharashtra, India[1,2,3,4,5]
ABSTRACT	To design a spraying robot based on IoT that uses less pesticide while posing fewer threats to humans and the environment. Methods: The proposed approach uses the ARM7 controller coupled with the robotic platform. Findings: A quantitative comparison with recently proposed spraying robots with our robot revealed that our robot is not only superior in range (50 m) of pesticide spreading, but it is also used less power (3.3 V only), could carry relatively huge weight (three litres), it has got optimal control navigation, and most importantly, it is economically feasible that it only needed less than USD 250 to fabricate. Novelty: Since Bluetooth controls the robot, pesticide treatments can be planned entirely through Bluetooth. In response to a precise command to the controller, the pump will turn on wherever the farmer wants to spray pesticides. The robot may be made to go forward, backward, right, left, or stop by giving it commands.
KEYWORDS	IoT; ARM 7 Controller; Bluetooth; Pesticides; Smart Farming.

TITLE	2.15 IOT Based Railway Crossing Gate Status Detection and Security Code Generation System Based on ESP32
AUTHOR	Ms. Sneha Dhande[1], Mr. Tushar Shinde[2], Mr. Gaurav Dupare[3], Mr. Tushar Maske[4], Mr. Shivam Shukla[5]
COLLEGE AFFILIATION	Govindrao Wanjari College of Engineering and Technology, Nagpur, Maharashtra, India[1,2,3,4,5]
ABSTRACT	This project is based on detecting the status of the crossing gate. Sometimes Gate man forget to close the gate and process the security Code (Written on Note book) to the Station Master, which may cause accidents. Hence in order to stop the false statement, we will design a device which will generate the Security code after detecting the status of the Railway gate. This technology will be based on Microcontroller, TFT and Proximity Sensor.
KEYWORDS	Microcontroller, TFT, Proximity Sensor, TFT Display, Microprocessor, ESP32, Sensor.

TITLE 2.16 Exploring the Landscape of Color-Based Object Sorting Systems: A Survey

AUTHOR Prof. Vivekanand Thakare[1], Sahilkumar G. Nasare[2], Jayshree D. Ade [3] Komal S. Wankhede[4] , Apeksha S. Borkar [5]

COLLEGE AFFILIATION Govindrao Wanjari College of Engineering and Technology, Nagpur, Maharashtra, India[1,2,3,4,5]

ABSTRACT A comprehensive review of automated sorting systems that categorize objects based on colour. The systems discussed utilize key technologies such as the Arduino Nano microcontroller, TCS3200 colour sensor, servo motors, and conveyor belts. The paper explores various methodologies including robotics, computer vision, and inverse kinematics in object sorting. It also dives deeper into the integration of Internet of Things (IoT) for enhancing connectivity and functionality. Additionally, the paper discusses the challenges faced by these systems, such as complex calculations, precise calibration, varying lighting conditions, and network security. The review underscores the potential of these systems in various industries and provides valuable insights for future research and development.

KEYWORDS Color based sorting, servo motors, Arduino nano, TCS3200 color sensor, conveyor belt, machine learning

TITLE	2.17 Potato Disease Classification Using CNN
AUTHOR	Prof. Saima Ansari[1], Mehlam Neemuchwala[2], Anupam Nimawat[3], Junaid Pathan[4], Md. Izhar Pathan[5], Qaem Raza[6]
COLLEGE AFFILIATION	Anjuman College of Engineering and Technology, Nagpur. [1,2,3,4,5,6]
ABSTRACT	The potato is one of the major crops. Potato cultivation has been very popular in for the last few decades. But potato production is being hampered due to some diseases which are increasing the cost of farmers in potato production. However, some potato diseases are hampering potato production that is increasing the cost of farmers. Which is disrupting the life of the farmer. An automated and rapid disease detection process to increase potato production and digitize the system. Our main goal is to diagnose potato disease using leaf pictures that we are going to do through advanced machine learning technology using the CNN (Convocational Neural Network). This project offers a picture that is processing, and machine learning based automated systems potato leaf diseases will be identified and classified. Image processing is the best solution for detecting and analysing these diseases.
KEYWORDS	Diagnose, Machine Learning, Convocational Neural Network.

TITLE 2.18 Online Temperature Monitoring System of Hot axle Box of Train for avoiding Accident

AUTHOR Mr. Nitin Thakre[1], Ms. Trupti Bopchi[2], Ms. Vaishnavi Baharupe[3], Ms. Vaishnavi Thakare[4], Mr. Nikhil Bawariya[5], Ms. Divya Moon[6]

COLLEGE AFFILIATION Govindrao Wanjari College of Engineering and Technology, Nagpur, Maharashtra, India. [1,2,3,4,5,6]

ABSTRACT

Online Temperature Monitoring System of Hot axle Box of Train for avoiding Accident Hot Axle Box Detection helps to prevent serious railway incidents, such as derailments and fires, caused by overheated bearings. The system helps to detect potential problems early on, allowing for timely corrective action to be taken. This can help to prevent costly repairs, improve the safety and reliability of railway operations, and enhance the overall customer experience. The consequence of axle-bearing failure in railway vehicles is regular derailment with huge material damage and often with human casualties. Because of the very serious consequences, railway aims to introduce appropriate techniques for early detection of overheating of axle bearings or more precisely axle-boxes. The commonly used technique is based on the application of stationary measurement stations or so-called checkpoints. There is also an innovative technique based on the use of systems for on-line monitoring of axle-boxes temperature.

KEYWORDS Accident Prevention, Hot Axle Box Detection, Railway Incidents, Derailments, Safety, Overheated Bearings, Detect Potential Problems, Timely Corrective Action, Reliability

TITLE	2.19 Auramatic- A Smart Street Light
AUTHOR	Prof. Ashwini Raut[1], Gaurav Rode[2], Pranali Hatewar[3], Lalit Dehriya[4], Sachin Lambhate[5] Rohan Gadhave[6]
COLLEGE AFFILIATION	Govindrao Wanjari College of Engineering and Technology, Nagpur, Maharashtra, India. [1,2,3,4,5,6]

ABSTRACT

Individuals in today's advanced world choose to live a modern existence that includes all offices. Science and mechanical breakthroughs are rapidly emerging to meet the above demands. With advanced advancements, Web of Things (IoT) plays a vital role in robotizing diverse zones such as wellbeing monitoring, activity administration, rural water system, road lights, course rooms, etc. Right now, we use a manual structure to operate the road lights, which results in massive energy waste around the world and should be altered. In this paper, we discussed how IoT is used to construct road lights in a smart method for our cutting-edge age. It is a critical actuality to understand the vitality emergencies and to produce the road lights to the The whole world. In addition to the focus on smart road lighting frameworks, we studied and depicted various sensors and components used in the IoT context. All of the components of this paper are as frequently as possible used and incredibly simple but appealing to construct the unwavering insights frameworks.

KEYWORDS Smart street light systems, Internet of Things, Temperature sensor, Weather sensor, Raspberry Pi, Arduino UNO.

TITLE 2.20 Design and Implementation of Shockproof Smart Water Heater Power Saver Using Detectors

AUTHOR Prof. Arvind M. Ganvir[1], Sejal P. Morghade[2], KhushiV.kalaskar[3], Ganesh N. Pachbhai[4], Janhavi B. Vaidya[5], Prachi Sonkusare[6]

COLLEGE AFFILIATION Govindrao Wanjari College of Engineering and Technology, Nagpur, Maharashtra, India. [1,2,3,4,5,6]

ABSTRACT Water heating is a basic task in daily life, and water geyser systems have become an efficient technology for thermodynamically heating water above its normal temperature. Traditional electric storehouse tank water heaters (ESTWHs) are known for their high energy consumption, leading to the development of renewable energy options like solar panels. A spring heater system, instead of a geyser, can maintain a moderate Frequently used in home appliances with a hot spring of boiling water. It can also be used rather of water heater, for ménage purposes (1). It works with nonstop inflow of water. Geysers toast and retain a volume of water inside an insulated cylinder to use at any time. They give hot water by delivering the whole stored volume incontinently when it's demanded, and give services to multiple outlets at the same time. When emptied, it requires time to reheat before it can be used again, and can be operated using cheaper off-peak electricity. Before electric water heating, there was gas water heating system. But it was hamstrung due to some specialized aspects. Similar as there was temperature and save energy by setting a specific temperature range. The system can be turned off if no water consumption is occurring, ensuring a safe and efficient water heating solution.

KEYWORDS geyser, water heating, temperature detectors, electronic bias.

TITLE	2.21 Review on Object Detection Technique with Deep Learning for Android Application
AUTHOR	Nitin Ravindra Thakare[1], Nihal Arun Kamble[2], Prof. Prashant S. Gumgaonkar[3], Prof. Ashwini S. Raut[4]
COLLEGE AFFILIATION	Govindrao Wanjari College of Engineering and Technology, Nagpur, Maharashtra, India. [1,2,3,4]
ABSTRACT	Object detection in Android is a field that uses deep learning models and computer vision techniques to identify objects in images or real-time video. This abstract discusses the challenges and adaptability of deep learning models, their integration with Android Applications, and the latest advancements in object detection frameworks, libraries, and tools. It highlights the transformative impact of object detection in Android and the need for continuous research and innovation
KEYWORDS	Ultrasonic sensor, cost effective, Microcontroller, Distance, water level

TITLE	2.22 Unreal Engine: A Comprehensive Review And Performance Analysis
AUTHOR	Aditya Narkhede[1], Yash Nagpure[2], Khushi Bambodkar[3], Priya Tiwari[4], Prof. Nitesh Ghodichor[5]
COLLEGE AFFILIATION	Priyadarshini College of Engineering, Nagpur[1,2,3,4,5]
ABSTRACT	This paper offers a detailed examination of Unreal Engine, a prominent player in the game development realm. Delving into its capabilities, performance, and user-friendliness, the review draws insights from diverse sources and methodologies. Through an in-depth analysis, we compare Unreal Engine with other game development platforms, exploring its applications across various domains. The findings not only provide valuable information for developers and enthusiasts keen on Unreal Engine's potential but also pinpoint areas for future research, contributing to the ongoing discourse in game development.
KEYWORDS	Unreal Engine, Videogame engine, Development, Video game, simulators.

TITLE	2.23 A Review On Object Identification With Shape And Colour
AUTHOR	Vivekanand Thakre[1], Rushi Sarang Sarate[2], Oshin Dongre[3], Damini Ambedare[4], Khushboo Thalal[5]
COLLEGE AFFILIATION	Govindrao Wanjari College of Engineering and Technology, Nagpur, Maharashtra, India. [1,2,3,4,5]

ABSTRACT

The project presents a pioneering fusion of robotics and computer vision. Its core objective is to equip a robotic arm with the ability to recognize and interact with objects based on their colour and shape attributes, akin to human vision. This endeavour commences with the careful selection or design of a robotic arm platform, enhanced by high-resolution cameras and advanced sensors. These elements empower the arm to capture detailed visual data from its surroundings. The heart of the project lies in image processing. State-of-the-art algorithms translate this visual data into actionable insights, allowing the robotic arm to perform real-time colour and shape detection. This newfound capability endows the arm with a form of intelligence that enables it to adapt and respond dynamically to changing scenarios. Control algorithms, meticulously crafted, bridge the gap between perception and action. They empower the robotic arm to execute precise tasks, from pick-and-place operations to quality control, guided by the information derived from image analysis. The potential applications of this technology span diverse industries, including manufacturing, logistics, agriculture, healthcare, and education. It represents a significant leap toward a future where robotics and computer vision converge, ushering in an era of intelligent automation and collaborative human-robot interaction.

KEYWORDS Adaptability, Intelligence, Image Processing, Human Robot Interaction.

TITLE 2.24 VISICONNECT: Connecting the Dots of The Digital World

AUTHOR Prof. Nazish Khan[1], Nikita Patil[2], Rihant Meshram[3], Shweta Gosetwar[4], Akash Manekar[5], Dushyant Bhambore[6]

COLLEGE AFFILIATION Anjuman College of Engineering, Nagpur, Maharashtra, India. [1,2,3,4,5,6]

ABSTRACT This study explores the transformation of business card exchange from a traditional physical practice to a dynamic digital platform, addressing challenges such as environmental impact and spatial constraints. The historical perspective emphasizes the evolution of business cards from 17th-century visiting cards to modern symbols of professional connections. The proposed system introduces a website and app, overcoming traditional limitations and prioritizing environmental consciousness. Optical Character Recognition (OCR) technology is at the core, offering personalization options, effortless sharing mechanisms, and robust security measures. The mission is to redefine business networking, making it efficient, sustainable, and tailored to the modern world. User support and training, along with a rigorous maintenance plan, ensure a seamless experience for users and ongoing platform improvements.

KEYWORDS

TITLE	2.25 An Analysis of E-Commerce Impact on India's Market: A Survey
AUTHOR	Mrs. Sneha Dhande [1], Mr. Nitin Thakre[2], Mr. Vivekananad Thakare[3], Dr. Hemant Bhagat Patil [4], Mrs Tejaswini Mankar[5]
COLLEGE AFFILIATION	Govindrao Wanjari College of Engineering and Technology, Nagpur, Maharashtra, India. [1,2,3,4,5]
ABSTRACT	E-commerce or electronic commerce, is the buying and selling of products or services via the Internet.E-commerce provides multiple benefits to the consumers in form of availability of goods at lower cost, wider choice and saves time. It is one of the highest growing businesses, with India having great market potential for investments. There has been huge surge in investment since last year and more is expected in coming years. India is expected to surpass the US to become second largest e-commerce market in the world by 2034 [1]. The rapid growth in use of mobile and internet users has facilitated ecommerce business in both urban and rural cities. Also, the digital literacy has led to an influx of investment in e-commerce firms, levelling the market for new-players to set up their base while churn out innovative patterns to disrupt old functioning. This paper is outcome of a review of various research studies carried out on Impact of E-commerce on Indian Commerce.
KEYWORDS	e-commerce, online, origin, growth, technology

TITLE	2.26 A New Approaches for Predictive Improvement of Cotton Quality Utilizing Machine Learning Algorithms
AUTHOR	Rais Abdul Hamid Khan[1], Omkar Pattnaik[2], Yogesh Kantilal Sharma[3], Pankaj Dasore[4], Manjushree Nayak[5]
COLLEGE AFFILIATION	Sandip University, Nashik, Maharashtra, India, [1,2,4]Vishwakarma Institute of Information Technology, Pune,[3] Nashik,[5] NIST Institute of Science and Technology (Autonomous), Berhampur[5]

ABSTRACT

Cotton, as one of the most crucial crops in the global textile industry, requires continuous enhancement of its quality to meet the rising demands of consumers and manufacturers. So far, many attempts are made to identify quality of cotton, but still there is scope of improvement and scope of advancement in the techniques which already exist. This study introduces an innovative approach, using machine learning algorithm, to predict and improve cotton quality. Conventional methods for assessing cotton quality are often time-consuming and lack precision, necessitating more efficient and accurate techniques. In this current research paper, we make an attempt to identify the quality of cotton by employing the Support Vector Machine (SVM) algorithm. This algorithm processes digital images of cotton, which reflect the quality of the cotton within them. This technique introduces a computer-based cotton quality prediction system capable of distinguishing between good-quality and poor-quality cotton separately. The results of our study demonstrate the effectiveness of machine learning in predicting cotton quality with a high degree of accuracy, offering substantial advantages over traditional methods. Furthermore, the models developed in this study offer insights into the crucial features and predictors that influence cotton quality, enabling targeted interventions in cotton cultivation and harvesting processes. This research contributes to the ongoing endeavour's within the agricultural sector to enhance cotton quality, reduce waste, and optimize resource allocation.

KEYWORDS

Support vector machine (SVM), digital image processing, computer-based prediction system, etc.

TITLE 2.27 Energy Conversion Based on Smart Lighting System

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COLLEGE AFFILIATION Govindrao Wanjari College of Engineering and Technology, Nagpur, Maharashtra, India. [1,2,3,4,5,6]

ABSTRACT In recent years, the integration of smart technologies in various sectors has revolutionized conventional systems, leading to more efficient and sustainable solutions. One such application is the implementation of smart lighting systems, which not only enhance user experience but also significantly contribute to energy conservation and environmental sustainability. This project focuses on exploring the principles and mechanisms of energy conversion within smart lighting systems, aiming to optimize energy utilization while maintaining lighting quality and functionality. The project begins with a comprehensive review of existing smart lighting technologies, including light-emitting diodes (LEDs), sensors, communication protocols, and control algorithms. Special attention is paid to the integration of renewable energy sources such as solar panels and kinetic energy harvesters to power smart lighting systems, thereby reducing reliance on conventional grid electricity and minimizing carbon footprint. The energy conversion process within the smart lighting system involves multiple stages, including energy generation, storage, distribution, and utilization. Various energy conversion techniques such as photovoltaic conversion, energy harvesting, power electronics, and efficient LED drivers are analysed and optimized to achieve maximum energy efficiency and reliability. Additionally, advanced control strategies and optimization algorithms are developed to dynamically adjust lighting parameters based on environmental conditions, user preferences, and energy availability. The project also emphasizes the importance of data analytics and monitoring systems in assessing energy consumption patterns, identifying potential energy-saving opportunities, and enhancing system performance over time. Real-time monitoring and feedback mechanisms enable continuous optimization and fine-tuning of energy conversion processes, ensuring optimal operation and resource utilization.

KEYWORDS LDR sensor, PIR sensor, power supply, LED bulb

TITLE	2.28 An Analysis of the Application for Lost and Found
AUTHOR	Lokesh Kachhi[1], Aman Dhole[2], Yash Tembhare[3], Shilpa Chindamwar[4] , Nikhil Kodarlikar[5] Rinku Padole[6]
COLLEGE AFFILIATION	Govindrao Wanjari College of Engineering and Technology, Nagpur, Maharashtra, India. [1,2,3,4,5,6]
ABSTRACT	The "Digital Lost and Found Item" initiative intends to meet the need for a more dependable and efficient way to deal with misplaced items. Traditional methods—like real lost-and-found boxes—are disjointed and don't follow a systematic process for verification. This project's primary objective is to simplify item reporting and claims while upholding thorough verification to ensure authenticity. It aims to give users a simple way to report lost stuff, check discovered property, and get their lost property back. The project includes user identification, object classification, location tagging, picture uploading, and a unique verification process. A badge-based incentives system is also included to encourage user interaction and community building. This program is a significant advancement for lost and found systems providing a useful digital tool. Even though the current solution has necessary functionalities like signup and login, there is need for improvement to increase efficiency and user experience.
KEYWORDS	Web development, user authentication, digital lost and found, item reporting, item retrieval, and user identification

TITLE	2.29 Research paper on IOT and AI Based Smart Agriculture Monitoring System
AUTHOR	Prof. Vandana Choubey[1], Swarup Mankar [2], Nishant Thete [3], Tejas Suryawanshi[4], Pooja Nagpure[5], Sakshi Polkamwar[6]
COLLEGE AFFILIATION	Govindrao Wanjari College of Engineering and Technology, Nagpur, Maharashtra, India. [1,2,3,4,5,6]

ABSTRACT

Internet of Things (IoT) is propagating and blooming technology, in the present years. IoT is the collection of the sensor data through embedded system and this embedded system uploads the data on internet. Fuelled by machine-to-machine (M2M) communications, the Internet of Things (IoT) is all about connecting a wide range of internet-enabled devices – from cars, lighting, smart meters and more – that generate actionable data. In the print industry, proactive maintenance and support is nothing new. Crop farming in India is labour intensive and obsolete. Farming is still development on techniques which were evolved hundreds of years ago and doesn't take care of conservation of resources. My project is to give cheap, reliable, cost efficient and easy to use technology which would help in conservation of resources such as water and also in automating farms. We proposed use of temperature, moisture, humidity and pH sensor at suitable locations for monitoring of crops. The sensing system is based on a feedback control mechanism with a centralized control unit which regulates the flow of water on to the field in the real time based on the instantaneous temperature, moisture, humidity and pH values. Thus by providing right amount of water we would increase the efficiency of the farm. As per the need of crop controller take the decision to make irrigation ON or OFF using Arduino Node MCU .

KEYWORDS Internet of Things (IoT), Artificial Intelligence (AI)Node MCU, Sensors, Thingspeak

TITLE

2.30 Design and implement smart water proof wrist band using variation vibrator alert to prevent blind and deaf person from obstacles

AUTHOR

Prof. Swapnil R. Sharma Dikshit[1], Miss Manisha Kanoje[2], Miss Manisha Kanoje[3], Miss Nandini Dhakate[4], Miss Ruchika M. Suryawanshi[5], Miss Trupti Dhage[6], Miss Vaidehi Bhimte[7]

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ABSTRACT

Blind and deaf people encounter many challenges in their mobility and navigation. Their daily activities are obstructed due to their inability to adapt or identify accurately their surroundings which becomes the main reason of accidents, falling off, and getting lost in unknown areas. In this paper, we the design, the implementation and the validation of smart band that would serve as an effective solution for more secured movements for blind and deaf people will be proposed. Using IOT we are proposing a device which will detect obstacles and guide the visually impaired person and deaf person to walk without constraint in close as well as open environment. We have used Ultrasonic Sensor to detect obstacles which will instantly signal the user through vibration feedback. The smart band also uses an Arduino is the microcontroller used with a receiver which makes the interfacing of components easier. Fire Sensor in the device is useful for blind and deaf people to detect fire or smoke which will protect them from future accidents. There in the circuit, a buzzer is used to alert when obstacles are detected. We have included many features in the band which is reduce cost and helps the blind and deaf person to smoothly do his day-to-day activities. We track and send notification to relative if person in dangerous situation on their registered mobile number.

KEYWORDS

Mobility, fire sensor, micro controller,

TITLE 2.31 Prediction Model using ARIMA for climatic dataset for Marathwada region of Maharashtra

AUTHOR Ms. Simran Chavan[1], Dr. S.A. Chavan[2], Dr. Hemant R. Bhagat Patil[3], Mr. Vivekanandan Thakare [4],Mr. Nitin Thakre[5]

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ABSTRACT Marathwada region has been always drought prone region due to its geographic location. There are 8 districts of Maharashtra's Marathwada region included in this study. Total yearly rainfall data for these districts is utilized in this study. Evaporation causes the relative humidity to increase when it rains. Rain water replenishes groundwater all year round, but particularly during the rainy season. It is possible that climate change will have an impact on soil infiltration, deeper percolation, and hence groundwater recharge. Increased evaporative demand from hotter days reduces groundwater recharge capacity as well. With this study, all 8 Marathwada districts humidity and groundwater levels are examined in depth, taking into consideration the dependency between rainfall, humidity, and groundwater. To predict future rainfall, humidity, and groundwater data using ARIMA (autoregressive integrated moving average), the dataset is first visualized in RStudio. Then, the dataset's accuracy is assessed.

KEYWORDS Rainfall, humidity, groundwater level, Marathwada region, Arima, RStudio

TITLE 2.32 A Review on Comparison Between 5G And 6G Wireless System

AUTHOR Prof. Shilpa D. Chindamwar[1], Prof. Ashwini S. Raut [2], Prof. Ankita S. Zode [3], Prof. Prashant Gomgaonkar[4]

COLLEGE AFFILIATION Assistant Professor, Govindrao Wanjari College of Engineering and Technology, Nagpur, Maharashtra, India. [1,2,3,4]

ABSTRACT This paper provides a comparative analysis of the fifth-generation (5G) and sixth-generation (6G) wireless technologies, exploring their key features, potential advancements, and envisioned capabilities. As 5G continues to evolve and gain. Widespread adoption, researchers and industry experts are already envisioning the future of wireless communication with 6G. This comparative analysis aims to highlight the advancements expected in 6G by comparing it to the current state-of-the-art 5G technology. The analysis covers several dimensions, including data transfer speeds, latency, coverage, intelligence, spectrum utilization, and sustainability. In terms of speeds, 5G already provides remarkable download and upload rates, but 6G is expected to push the boundaries even further, reaching terabit per second speeds. Similarly, while 5G significantly reduces latency, 6G aims to achieve near-instantaneous communication, enabling real-time applications. Coverage is another crucial aspect, and 6G aims to provide ubiquitous connectivity by integrating terrestrial and satellite networks, ensuring global coverage and seamless connectivity across various environments. The intelligence of 6G networks is anticipated to be highly adaptive and autonomous, leveraging advanced machine learning and artificial intelligence algorithms to optimize network resources and personalize services.

KEYWORDS Spectrum utilization, frequency, 5G network, 6G network, wireless.

TITLE 2.33 Review Paper on IoT Based Weather Monitoring System using IoT

AUTHOR Vipin Kale[1], Prof. Ankita S. Zode[2], Rupesh Songade[3], Sujan Haldar[4], Abdul Rahman[5], Vivek Shejole[6]

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ABSTRACT This scholarly article undertakes a comprehensive investigation into the domain of real-time weather surveillance using cutting-edge Internet of Things (IoT) devices, tailored specifically for the esteemed College of Engineering community. By seamlessly integrating IoT technologies, this study aims to overhaul conventional weather monitoring methodologies, ushering in an era of instantaneous access to precise and dependable meteorological data. Through a meticulous analysis encompassing the intricate facets of system architecture, hardware and software constituents, connectivity protocols, data warehousing mechanisms, and security protocols, this paper delineates the conceptualization and execution of an avant-garde weather monitoring framework. Additionally, it delves into the manifold applications, merits, demerits, and prospective avenues of IoT-facilitated weather monitoring systems, underscoring their pertinence and gravitas in the realm of engineering.

KEYWORDS

TITLE	2.34 ZIRKLE: Connecting Students and making college life fun
AUTHOR	Qudsiya Naaz[1], Aquib Darain[2], Sumaira Anjum[3], Saniya Quazi[4], Saif Rahman[5], Ismail Akbani[6], Sana Shaikh[7]
COLLEGE AFFILIATION	Assistant Professor, CSE Deptt, Anjuman College of Engineering, Nagpur[1], Students, CSE, Deptt, Anjuman College of Engineering, Nagpur[2,3,4,5,6,7]

ABSTRACT

Zirkle represents a revolutionary social media platform tailored specifically for college and university students, redefining how individuals connect and engage within the campus community. Unlike conventional social networks, Zirkle prioritizes the unique needs and dynamics of higher education, offering a comprehensive suite of features designed to enhance connectivity, collaboration, and personal growth. With a focus on fostering meaningful connections and facilitating shared experiences, Zirkle serves as a digital companion for every aspect of the college experience. By bridging the gap between virtual interactions and real-world relationships, Zirkle cultivates a vibrant ecosystem where students can explore their interests, engage with like-minded peers, and make lasting memories. Welcome to Zirkle - Where Campus Life Meets Connectivity, and where the possibilities for personal and academic growth are limitless.

KEYWORDS Social media platform, Connectivity, Collaboration, Meaningful Connections, Academic growth

TITLE	2.35 Leveraging Machine Learning for Stock Price Prediction
AUTHOR	Sadia Patka[1], Syed Savez Ali[2], Yash Dhabarde[3], saurabh lanjewar[4], Anush Indulkar[5]
COLLEGE AFFILIATION	Assistant Professor, CSE Deptt, Anjuman College of Engineering, Nagpur[1], Students, CSE, Deptt, Anjuman College of Engineering, Nagpur[2,3,4,5]
ABSTRACT	Predicting stock prices has long captivated investors and researchers alike, driven by the potential for substantial gains. This work delves into the exciting realm of machine learning (ML) as a tool for unlocking the future value of a company's financial stocks. We explore how ML algorithms, trained on historical data and current market indices, can provide valuable insights into future price movements. By delving into Long Short-Term Memory (LSTM) models, renowned for their ability to handle sequential data like stock prices, we aim to shed light on this complex and ever-evolving financial landscape
KEYWORDS	Stock Prediction, machine learning, LSTM model, price movement, sequential data

TITLE	2.36 Diagnosis of Heart Disease Patients Using New Feature Selection Methodology
AUTHOR	Vikash Kumar Singh[1] , Dr. Dinesh Kumar Sahu[2]
COLLEGE AFFILIATION	Research Scholar, SARVEPALLI RADHAKRISHNAN UNIVERSITY, BHOPAL[1] Associate Professor, SARVEPALLI RADHAKRISHNAN UNIVERSITY, BHOPAL[2]

ABSTRACT

Heart disease is one of the most complicated diseases, and it affects a large number of individuals throughout the world. In healthcare, particularly cardiology, early and accurate detection of cardiac disease is critical.

A crucial data preparation job for any data mining purpose is feature selection. Making the optimum feature selection decision for a given context is challenging and time-consuming. This problem can be solved by ensemble learning. The foundation of ensemble methods is the idea that, inmany cases, the combined knowledge of a group of experts with average expertise might be superior to that of a single expert with extensive knowledge. The goal of the current work is to provide a heterogeneous ensemble feature selection for categorizing heart disease. The findings of five univariate filter feature selection procedures were combined using many aggregation methods to create the proposed ensembles. Four classifiers and six heart disease datasets were used to evaluate the effectiveness of the suggested approaches. Empirical research revealed that implementing ensemble feature. In this study, imperialist competitive algorithm with meta-heuristic approach is suggested in order to select prominent features of the heart disease. This algorithm can provide a more optimal response for feature selection toward genetic in compare with other optimization algorithms. The suggested diagnosis system achieved better accuracy than previously proposed methods and can easily be implemented in healthcare to identify heart disease.

KEYWORDS Heart Disease, Classification, Feature Selection, Ensemble Learning, Ensemble Feature Selection, Univariate Filter

3. ELECTRICAL ENGINEERING

TITLE 3.1 Smart Safety with Password Based GSM Module Controlling Circuit Breaker-a review paper

AUTHOR Dr. Rakesh G. Shriwastava[1], Prof. Priti A. Bhange[2], Suraj G. Raut[3], Tushar B. Kawale[4], Darshan S. Raghorte[5], Rakesh A. Mahure[6], Pradip R. Harami[7]

COLLEGE AFFILIATION Professor, Electrical Engineering Department, Govindrao Wanjari College of Engineering & Technology, Nagpur[1]
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Student, Electrical Engineering Department, Govindrao Wanjari College of Engineering & Technology, Nagpur[3,4,5,6,7]

ABSTRACT This paper focus on Smart safety with password-based GSM module controlling circuit breaker. In our daily life, Safety is the major concern for all activities. Accidental death of a lineman is often read and proven in current scenario. In view, safety measures to protect operators are considered to be very necessary in current working. Using passwords for security, Electrical lineman security systems are used to control circuit breakers. Serious electrical accidents occur becoming increasingly, when repairing power lines. It happens due to lack of communication and coordination between maintenance and substation personnel. In the proposed system, the on and off line turning operation with the lineman to ensure the safety of linemen. For that, a secure password is required to operate the breaker operation and maintenance point of view. First request is registered and password is sent to the line operator's mobile phone and GSM module by AVR microcontroller. Entered password and password received by the GSM receiver are compare. If password is match, the operation of circuit breaker will be smoothly operated. The operator gave three chances for incorrect password otherwise message will appear on the LCD display for security purposed. It also sent the message control room regarding unauthorized access to the system.

KEYWORDS Lineman Safety, GSM, Password Security, ATmega328p Microcontroller, Circuit Breaker Controlling.

TITLE 3.2 Enhancing Microgrid Resilience: A Robust Protection Strategy Employing Differential & Overcurrent Relays

AUTHOR Devendra D. Mangre[1], Kunal Sawalakhe[2], Mohan P. Thakre[3]

COLLEGE AFFILIATION Tulsiramji Gaikwad Patil College of Engineering and Technology, Nagpur[1,2]
SVERI's College of Engineering, Pandharpur[3]

ABSTRACT This research paper introduces a novel approach to enhance the protection scheme for microgrid systems experiencing significant shifts between grid and islanded operational modes. The proposed hybrid adaptive protection system integrates both overcurrent and differential relays strategically to address the dynamic changes in short-circuit fault current characteristics. Adaptive overcurrent relays are employed to safeguard distributed generators (DGs) and individual load points (LPs), while differential relays are utilized to protect feeders, backbone lines, and buses. This innovative strategy aims to mitigate infrastructure upgrade requirements and reduce setting computation complexity.

Through extensive time-domain simulations, the efficiency of the proposed protection scheme is evaluated under various operating conditions, including grid-connected and islanded modes. The scheme proves instrumental in shielding the microgrid system from substantial three-phase short-circuit fault currents, such as LLL, LLLG, etc., enhancing reliability, efficiency, power quality, and overall stability.

The protection scheme operates adaptively, utilizing overcurrent relays for faults outside the protection zone and employing differential relays for faults within the designated zone. This approach ensures the safety of consumers and equipment connected within the microgrid system network. Validation of the proposed scheme is conducted through time-domain simulations using a typical microgrid test network in the MATLAB/Simulink software environment. This research contributes to advancing the resilience and effectiveness of microgrid systems in dynamic operational scenarios.

KEYWORDS Adaptive Overcurrent Relay, Short Circuit Fault Current, Islanded Mode, Distributed Generators, Reliability Enhancement, Efficiency Improvement, Stability, Protection Zone

TITLE	3.3 Empowering Microgrids Protection Through Adaptive Relays
AUTHOR	Devendra D. Mangre[1], Kunal Sawalakhe[2], Mohan P. Thakre[3]
COLLEGE AFFILIATION	Tulsiramji Gaikwad Patil College of Engineering and Technology, Nagpur[1, 2] SVERI's College of Engineering, Pandharpur[3]
ABSTRACT	This research introduces an innovative hybrid adaptive protection system for microgrid systems, enhancing resilience during transitions between grid and islanded modes. Integrating overcurrent and differential relays strategically, the system addresses dynamic variations in short-circuit fault current characteristics. Adaptive overcurrent relays protect distributed generators (DGs) and individual load points (LPs), while differential relays safeguard feeders, backbone lines, and buses, aiming to minimize infrastructure upgrades and simplify setting computations. Through rigorous simulations covering diverse operating conditions, the proposed scheme proves effective in shielding the microgrid from substantial three-phase short-circuit fault currents, enhancing reliability, efficiency, power quality, and stability. Operating adaptively, the scheme uses overcurrent relays for faults outside the protection zone and differential relays for faults within the specified zone, ensuring the safety of consumers and equipment in the microgrid network. Validation through simulations on a typical microgrid test network in MATLAB/Simulink significantly contributes to advancing microgrid system resilience and effectiveness in dynamic operational scenarios.
KEYWORDS	Differential Relay, Microgrid Operation, Grid-Connected Mode, Islanded Mode, Load Points, Reliability Enhancement, Power Quality Assurance, Stability Optimization

TITLE	3.4 A Review paper on Voice Control Wheelchair
AUTHOR	Prof. Nandkishor Dhapodkar[1] , Akshay Dudhkaware[2] , Raj Lohakare[3] , Harshal Wagare[4] , Ananad Raipurkar[5]
COLLEGE AFFILIATION	Assistant Professor, Electrical Engineering Department, Govindrao Wanjari College of Engineering & Technology, Nagpur[1] Student, Electrical Engineering Department, Govindrao Wanjari College of Engineering & Technology, Nagpur[2,3,4,5]
ABSTRACT	Physically challenged people who are unable to regulate their hand movements can use wheelchair simple by issuing commands. This is a blessing for those who are paralyzed. As a result, the patient can go wherever he or she wants by using this chair. This is both cost-effective and totally automated. As a result, physically disable people can easily use this wheelchair and live a happy life. A voice operated wheelchair. The propulsion of the motorized wheel chair is controlled by motors, and commands are sent by voice recognition. An Arduino, HM2007 Voice Recognition Module, and Motors make up the circuit. The speech recognition module recognizes the user's instruction and sends the coded data from the memory to the Arduino Microcontroller. The speed is controlled by the Arduino Microcontroller. For physically challenged people who can move their hands, the wheelchair additionally incorporates a remote controller. This study shows how voice recognition may be used to create an autonomous wheel chair.
KEYWORDS	Motors, Arduino, HM2007 Voice Recognition Module.

TITLE	3.5 IOT Based Orange Segregation System
AUTHOR	Prof. Nutan Moghe[1], Shubham Aswar[2], Bhushan Tayade[3] ,Madhur Satpute[4] ,Kunal Shirbhate[5]
COLLEGE AFFILIATION	Assistant Professor, Electrical Engineering Department, Govindrao Wanjari College of Engineering & Technology, Nagpur[1] Student, Electrical Engineering Department, Govindrao Wanjari College of Engineering & Technology, Nagpur[2,3,4,5]
ABSTRACT	The systematic patterns of separation within a particular context are the main focus of this study's investigation of the phenomenon of orange segregation. We examine several elements that affect orange segregation, such as size, color, and ripeness. We pinpoint important patterns and fundamental causes by using empirical analysis and data-driven insights. Additionally, this study emphasizes the significance of varied packaging, distribution, and marketing techniques as mitigating strategies to address orange segregation. The objective is to promote a more equitable distribution of oranges and improve inclusivity within the orange supply chain by comprehending and proactively addressing these patterns.
KEYWORDS	Orange Segregation, Arduino, Servo driver, color analysis, sensors, size, and Internet of things

TITLE 3.6 Enhancing Adaptive Protection for Parallel Transmission Lines through Impedance-Based Techniques

AUTHOR Mousam Sharma[1], Dr. Saurabh Mitra[2], Dr. Abhishek Verma[3]

COLLEGE AFFILIATION Dr. C.V. Raman University, Kota, Bilaspur, C.G, India[1]
Dr. C V Raman University, Kota, C.G., India[2]
Bhilai Institute of Technology, Durg, C.G., India[3]

ABSTRACT Ensuring the efficient safeguarding of the transmission network is a complex challenge, influenced by operational conditions, inter-circuit faults, and the intricate nature of transmission line connections. This study introduces a novel approach that integrates a state diagram with position data obtained from passing buses to address these complexities. The innovative strategy combines multiple separation techniques and employs impedance-based methods to enhance protection capabilities. Diverging from traditional classification methods, our approach excels at identifying internal faults by comparing phases in a 2D space, enabling the detection of regional errors. Furthermore, it employs impedance-based methods to effectively rectify any arising issues. This proposed solution seamlessly integrates impedance-based techniques with separation technology, ensuring robust protection across various operating conditions. Simulations conducted using PSCAD software affirms the efficacy of the method in providing dependable protection for duplicate circuit transfer lines.

KEYWORDS Digital relaying, Cross sectional technique, impedance based technique, mutual coupling effect, parallel transmission line, adaptive protection.

TITLE	3.7 Loss of Excitation Protection for Alternators in the Presence of STATCOM Controller: A Comprehensive Review
AUTHOR	Mousam Sharma[1], Dr. Saurabh Mitra[2], Dr. Abhishek Verma[3]
COLLEGE AFFILIATION	Dr. C.V. Raman University, Kota, Bilaspur, 495113, India[1] Dr. C V Raman University, Kota, C.G., India[2] Bhilai Institute of technology, Durg, C.G., India[3]

ABSTRACT

In modern use, the mho relaying is a very well Loss of Excitation (LOE) relaying system. LOE causes the impedance detected by the relay to violate the protective zones confide for the generator as well as the network. So, it sends out a trip signal to disconnect the faulty alternator. in the event the error remains after being removed from of the network. FACTS devices are used in modern Power Systems to cope with issues including voltage regulation, transient stability improvement, voltage instability prevention, and Power oscillation damping. Since this terminal voltage of the generator is kept from dropping thanks to the reactive power supplied by the shunt-FACTS devices, the LOE relay is delayed, as shown. In the presence of shunt-FACTS devices, such as during partial LOE or condensing-state operation of an alternator, under-reach of the relays is possible. Here we examine the effect that shunt FACTS devices have on LOE (LOE) protection for an alternator. Several LOE relay methods are simulated in the MATLAB/Simulink framework to investigate their performance in the event of excitation failures. The findings shed light on the pros and cons of various LOE protection strategies and provide a framework for choosing the best plan for any given system.

KEYWORDS

Potential transformers (P.T), Current transformers (C.T), Relaying technique, LOE Generator protection, FACTS controller

TITLE	3.8 Optimizing Hybrid Electric Vehicle Efficiency: Performance of a Bidirectional Converter-Based System
AUTHOR	Indrayani Phad[1], Shridhar Khule[2]
COLLEGE AFFILIATION	Matoshri Education Society's, Matoshri College of Engineering and Research Centre, Nashik[1,2]
ABSTRACT	With growing environmental concerns and the instability of oil supply, electric vehicles (EVs) are gaining popularity. Regenerative braking stands out as a crucial mechanism to enhance the range of EVs. This article introduces a non-isolated bidirectional converter employed for regenerative braking in electric cars. During motoring, the converter utilizes battery power, and during regenerative braking, it charges the battery with back electromotive force (emf). The stored energy in the battery is effectively recovered and reused, significantly contributing to the conservation of braking energy. The implementation of regenerative braking proves beneficial for the batteries, consequently extending the driving range of electric vehicles. The system is simulated using MATLAB/Simulink, and the outcomes of the simulation are presented. Further validation through a prototype can offer practical insights and validate the findings of the simulation.
KEYWORDS	Bidirectional Converter, H-bridge (class E-chopper), Regenerative Braking, Soft starting

TITLE 3.9 Advancing Hybrid Electric Vehicle Performance via Enhanced Converter-Based Systems

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ABSTRACT

In response to the escalating demand for sustainable transportation and heightened environmental consciousness, Hybrid Electric Vehicles (HEVs) have emerged as a focal point of interest. This paper investigates the optimization of HEV efficiency by introducing and evaluating an innovative technology—a bidirectional converter-based system tailored specifically for HEVs. Positioned to redefine operational dynamics, this system holds the potential to make substantial strides in energy utilization and overall performance. Traditional electric vehicles often suffer from kinetic energy dissipation as heat through friction in their braking systems, leading to energy wastage. The integration of regenerative braking, facilitated by bidirectional converters, presents a transformative solution. This technology not only captures and stores dissipated energy during braking but also enables its efficient reuse, contributing to an extended driving range and heightened overall efficiency. The bidirectional converter assumes a pivotal role in this system, facilitating both the charging and discharging of the vehicle's energy storage system. Its unique ability to alter power flow direction not only enables efficient regenerative braking but also enhances energy transfer, ultimately reducing the total cost, size, and weight of the system. Amidst the challenges of rising energy consumption and the environmental impacts of conventional fuel sources, this paper aims to explore, analyze, and optimize the performance of the bidirectional converter-based system in HEVs. Through this endeavor, the paper strives to contribute to the ongoing evolution of eco-friendly transportation solutions, fostering a more sustainable and energy-efficient future. Simultaneously, addressing environmental concerns and uncertainties surrounding oil sources, the vehicle industry is increasingly embracing electricity as an alternative energy source. Regenerative braking emerges as an effective strategy to extend the driving range of battery-powered electric vehicles (EVs). In this paper, regenerative braking for an electric vehicle is managed by a non-isolated

bidirectional converter.

KEYWORDS Bidirectional Converter, H-bridge (class E-chopper), Regenerative Braking, Soft starting

TITLE	3.10 Optimizing Water Resources: Advanced Water Management and Pump Control
AUTHOR	Abhishek K. Naik[1], Renuka A. Limbhare[2], Siddhi S. More[3], Dr. S. N. Thakur[4]
COLLEGE AFFILIATION	JSPM'S Bhivarabai Sawant Institute of Technology & Research, Wagholi, Pune[1,2,3,4]
ABSTRACT	Effective water management is crucial for sustainable resource utilization and environmental conservation. As the global water demand continues to rise, the integration of advanced technologies becomes essential for optimizing water distribution and consumption. This abstract presents an overview of a comprehensive system designed for water management, with a specific focus on water pump control. The proposed system incorporates a network of sensors, microcontrollers, and actuators to monitor and control various aspects of water distribution. Moisture sensors are strategically placed to assess soil conditions, providing real-time data on the moisture levels in different areas. This information is critical for irrigation processes, allowing the system to optimize water usage by activating or deactivating water pumps based on the specific needs of the soil. A central microcontroller, such as the ESP32, serves as the brain of the system. It processes data from the moisture sensors, analyses environmental conditions, and executes control commands to manage water pumps, valves, and other components. The system's intelligence is further enhanced by connectivity to Blink software, enabling remote monitoring and control via smartphones or computers. The water pump control mechanism involves servo motors, valves, and a relay system. The servo motors regulate the position of valves, adjusting the flow of water as needed. The relay controls the operation of water pumps, ensuring efficient water distribution across different zones. Power management is a critical aspect of the system, addressed through components such as transformers, rectifiers, capacitors, and voltage regulators. These elements contribute to a reliable and stable power supply for the entire water management system. The integrated approach to water management and pump control not only enhances efficiency but also promotes water conservation by preventing over-irrigation in areas with sufficient moisture levels.
KEYWORDS	ESP Board Moisture Sensor, Solar Panel, GSM Module, motor, driver jumper wires

TITLE 3.11 Hexapod Robot for Efficient And Precise Pipe Inspection

AUTHOR Dipak Shivaji Sutar[1], Vishal Vivekanand Khetre[2], Mahesh Umesh Asalkar[3],Dr. S. N. Thakur[4]

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ABSTRACT In today's fast-changing engineering environment, professionals are continuously confronted with the difficulty of translating revolutionary concepts and ideas into practical, practical solutions. One significant issue that shows this dilemma is the examination of large gas pipelines that vary in size and span huge distances. Researchers have made tremendous progress in tackling this difficult issue by building a revolutionary robot with active pipe-diameter adaption and autonomous traction force modification capabilities. This amazing robot has a creatively built exterior featuring three distinct sets of parallelogram wheels and foot motions precisely placed at arranged in a 120° interval. This clever design allows the robot to adapt to changing pipe widths while maintaining appropriate tractive pressure thresholds. The robot glides expertly through pipelines ranging in size between 15.748 inches to 23.62 inches, thanks to innovative mechanical designs and cutting-edge control algorithms. The cutting-edge robot, as a small carrier, has transformed pipeline inspection by simplifying visual examination and non-destructive evaluation of numerous aspects such as blockages, corrosion, fractures, flaws, and wall thicknesses; greatly increasing the inspecting range by more than 1000 meters. This revolutionary device is equipped with an array of advanced technology, such as a camera with a high-resolution module for continuous surveillance of pipeline conditions, an MQ-3 gas sensor to identify leaks, and the application of red-oxide sealing for improved performance. Field trials in genuine underground gas pipes demonstrate the robot's excellent pipe-size adaption and moving force adjustment capabilities, as well as the correctness of its theoretical analysis. Finally, this ground-breaking prototype promises to significantly improve security and productivity levels in underground environments, representing a significant step forward in developing engineering techniques across numerous industries.

KEYWORDS Pipe Inspection Robot, Active adaption of pipe diameter, Motion force, Gas pipelines, MQ gas sensor, Red Oxide Spraying system, and Metal Detector.

TITLE	3.12 Improving the Energy Efficiency of HVDC Grids by Implementing Approaches to Current Flow Control
AUTHOR	Mohan P. Thakre[1], Ranjana N. Khandebharad[2], Archana Pawar[3], Sagar Kawade[4]
COLLEGE AFFILIATION	SVERI' s College of Engineering, Pandharpur[1,2,4] K.K. Wagh Institute of Engineering Education and Research, Nashik[3]
ABSTRACT	The escalating global demand for energy and the widespread integration of RES have reshaped the requisites of modern electricity grids. The shift towards sustainable energy systems necessitates a transformation of existing grids. HVDC technology emerges as a key facilitator for this transformation, offering advantages over traditional AC systems. However, a critical challenge in implementing HVDC grids is the lack of robust and reliable protection systems for DC fault clearing. VSC-HVDC technology stands out as the most efficient and reliable method for electrical power transmission, especially in the implementation of HVDC grids over long distances. The primary challenge associated with the VSC-HVDC system is the vulnerability to SC faults, which can result in damage to both the converter valves and the line network. Additionally, the existing DC breakers suffer from prolonged fault-clearing times, rendering them insufficiently fast and reliable for providing adequate protection on multi-terminal networks. To overcome these challenges, the integration of CFCs with a hybrid DC circuit breaker proves essential. This innovative approach aims to enhance the overall performance and resilience of the HVDC system, ensuring effective management of power flows and robust protection against DC faults.
KEYWORDS	VSC, DC Circuit Breaker, Current Flow Controller, HVDC Grid

TITLE	3.13 Smart Wall Painting Robot
AUTHOR	Chetan.R.Bhale[1], Sanjana.Sonekar[2], Prachi.Nanhe[3] , Jai Kapile[4] , Lokesh Ishwarkar[5]
COLLEGE AFFILIATION	Assistant Professor, Electrical Engineering Department, Govindrao Wanjari College of Engineering & Technology, Nagpur[1] Student, Electrical Engineering Department, Govindrao Wanjari College of Engineering & Technology, Nagpur[2,3,4,5]
ABSTRACT	Because painting walls is a tedious, dangerous, and demanding task, automation is a perfect fit. In the automobile business, painting has been mechanized, but not in the building sector yet. A mobile robot with mobility is desperately needed to paint residential complexes' interior walls. This paper describes the conceptual design of an autonomous wall painting robot, which consists of an arm mounted on a mobile robot base to provide the lateral feed motion to cover the painting area and scans the walls vertically. The goal of design is to meet the requirements of simplicity, light weight, low cost, and quick painting. To modify the motion restrictions and move around the room, ultrasonic sensors are installed on the arm and the movable base. The mobile base motion and arm motion are planned and guided by a control system.
KEYWORDS	Wall painting robots, autonomous robots, and service robots.

TITLE	3.14 Advanced DC-DC Boost Converter: Enhancing Voltage Gain and Reducing Voltage Stress in PV and EV Applications
AUTHOR	Girish Jadhav[1], Somnath Hadpe[2]
COLLEGE AFFILIATION	Matoshri Education Society's Matoshri College of Engineering and Research Centre, Nashik[1, 2]
ABSTRACT	The primary focus of the research is on developing methods to increase the voltage output of solar cells for use in EVs and the grid. In order to accomplish this, block of high-gain DC-DC power boost converters are transformed into crucial transitional topologies. Because of their lightweight, efficient, and inexpensive construction, single-switched and transformer-less converter are the best option. This research presents a novel transformer-free DC-DC power increase converter. To improve DC voltage, gain and decrease power switch voltage stress, it employs a switched-capacitor architecture with a sliding mode controller (SMC). To accomplish this benefit, the preamplifier block uses an extra inductor on the input side. The main power switch and associated diodes are adequately protected from voltage shocks by the switched-capacitor block. The suggested converter stands out from the competition due to its ability to deliver high voltages with less duty cycles. Because of this, power switches can remain off for longer while operating in Continuous Current Mode (CCM), which increases efficiency and decreases dynamic losses. And unlike multi-switched structures, the suggested converter just requires a single power switch to operate across a wide range of input voltages, output powers, and loads, greatly simplifying the control process. The investigation offers thorough computations for effectiveness, voltage ripples, currents, and gain. The results of the tests on a 300 W power sample validate the predictions made in the theory.
KEYWORDS	Enhanced voltage gain, Robustness, Sustainable energy, Single-switched boost converter

TITLE	3.15 Synergizing Power Sources: An Innovative Approach to Electric Vehicle Energy Management
AUTHOR	Girish Jadhav[1], Somnath Hadpe[2]
COLLEGE AFFILIATION	Matoshri Education Society's Matoshri College of Engineering and Research Centre, Nashik[1,2]
ABSTRACT	This research focuses on improving energy management for electric vehicles by implementing a frequency-sharing technique. The FC system, which is essential for fulfilling the requirements of the traction/propulsion system, is enhanced by the use of lithium-ion batteries and SC. Battery and super capacitor (SC) connections are made easier by bidirectional Buck- Boost converters, which also smoothly incorporate the SC into the DC-Bus. In addition, the fuel cell (FC) stack and the DC-Bus are connected by an interleaved Boost DC-DC converter. A Permanent Magnet Synchronous Motor (PMSM) is coupled with a DC motor to simulate the load of the vehicle and meet energy requirements during its operating cycle. Through a bidirectional DC-AC converter, the PMSM receives power from the DC-Bus. The main contribution of this research is the optimization of the energy distribution across fuel cells, lithium-ion batteries, and super capacitors. Each energy source's electrical capabilities and dynamic responses are taken into account during this optimization. MATLAB software is utilized to obtain computational outputs that validate the efficiency of the chosen control technique.
KEYWORDS	DC-AC Converter, Buck-Boost Converter, Frequency Sharing Approach, FC

TITLE	3.16 Optimizing Automotive Performance: A Comprehensive Comparison of DC-DC Converters
AUTHOR	Vinayak Gaikwad[1], Dr. Prerna Goswami[2], Atharva Manurkar[2], Roshan Chaudhari[3], Mohan Thakre[4]
COLLEGE AFFILIATION	Institute of Chemical Technology, Mumbai[1, 2] Honeywell Automation Pvt. Ltd., Pune[3, 4] SVERI's CoE, Pandharpur[5]

ABSTRACT

To effectively manage power in line with energy Management controller recommendations, a bidirectional DC/DC converter must be meticulously chosen for use in battery/ultracapacitor (UC) electric vehicle (EV) applications. After thoroughly comparing three-level DC/DC converters with traditional two-level and interleaved bidirectional buck/boost designs, this study firmly supports their use. We cover all the bases in our review, including the size/weight of the magnetic components and their overall efficiency. This method brings a fresh viewpoint by utilizing power references from a wavelet-transform-based energy management technique, in contrast to previous comparison studies that rely on fixed input and output parameters. This allows for a more accurate evaluation of the converter's performance in dynamic operational settings by accounting for fluctuations in the voltages of the energy sources and the traction power. Thorough evaluations reveal that the three-level converter is the best, exhibiting not just improved overall efficiency but also a smaller inductor. A carefully engineered proof-of-concept 1-kW bidirectional three-level DC/DC converter is used to support these results; it achieves an impressive peak efficiency of 93.2% at a switching frequency of 200 kHz. The three-level converter is a viable and efficient option for power processing in battery/UC EV, thanks to its creative methodology and clear proof.

KEYWORDS EV, interleaved converter, non- isolated dc-dc converter, ultra-capacitor, three-level converter.

TITLE	3.17 Understanding the Soiling Effect in Solar Energy Conversion Systems: A Comprehensive Review
AUTHOR	Narendrakumar H. Adkine[1], Dr. Sachin S.Jolhe[2]
COLLEGE AFFILIATION	Government Polytechnic Sakoli 441802, India[1] Government College of Engineering Nagpur, 441108, India[2]
ABSTRACT	The soiling effect poses a significant challenge in solar energy conversion systems, reducing their efficiency and performance over time. This paper provides a comprehensive review of the history, background, research fields, modelling, forecasting, mitigation, cleaning techniques, and future perspectives regarding soiling in solar energy systems. Through a systematic exploration of existing literature, this review aims to provide insights into the complexity of soiling, its impacts, and the advancements made in addressing this critical issue.
KEYWORDS	Soiling, Solar Energy Conversion Systems, Modelling, Forecasting, Mitigation Techniques, Cleaning Methods, Future Perspectives.

TITLE	3.18 Modelling of a Grid-Connected Solar Photovoltaic (PV) System using MATLAB
AUTHOR	Mr. Avishkar Wanjari[1], Mr. Vipin Jais[2], Mrs. Priti.Bhange[3]
COLLEGE AFFILIATION	Assistant Professor, Electrical Engineering Department, Govindrao Wanjari College of Engineering & Technology, Nagpur[1,2,3]
ABSTRACT	The demand for power is growing daily, overloading distribution networks and having un-favourable effects on the quality of the power that lead to blackouts and device malfunctions. Solar photovoltaic (PV) power generation may be a useful strategy for raising power demand. One of the key uses of solar PV is the interface between the sun and the grid. This trend is growing as a result of government incentives supporting these initiatives. The simulation of a solar photovoltaic-based grid-connected system conducted in a Matlab using a Simpower system is presented in this study. The datasheet from the solar manufacturer is used for solar photovoltaic modeling, and a DC converter and inverter (VSI) are used for grid interface.
KEYWORDS	solar PV, Matlab, DC to DC converter, Grid

TITLE	3.19 Electro Cooler Air Conditioner: A Review Paper
AUTHOR	Prof. Vipin Jais[1], Hitesh Maidurkar[2], Ashish Khamankar[3], Puja Choukhande[4], Anjali Tiwari [5]
COLLEGE AFFILIATION	Assistant Professor, Electrical Engineering Department, Govindrao Wanjari College of Engineering & Technology, Nagpur[1] Student, Electrical Engineering Department, Govindrao Wanjari College of Engineering & Technology, Nagpur[2,3,4,5]

ABSTRACT

The main purpose of home air conditioner is move heat from inside home to the outside, thereby entire home. Air is cooled by blowing through a series of cooling tubes called evaporator coils. This work just like the cooling air conditioning system. In this project we used simple concept of Electrical cooling and fault detection of automatic with the help of beep sound and light to sense the fault and gives the signal to the operator, and we used also here to display to see the working of air conditioner we are also using atmospheric air conditioning . Here air compressor is used to compress atmospheric air, which is then use as per the requirement. High pressure liquid refrigerant is sent from the condenser to the metering device of the liquid line and to the filter dryer. The high-pressure side is separated from the low -pressure side using a thermostatic expansion valve (TEV). The TEV control the quantity of liquid refrigerant entering the evaporator. It causes the pressure of the refrigerant to the low side to be reduced. In reducing the low pressure, the refrigerant reaches its boiling point and begins to vaporize.The low-pressure, low-temperature refrigerant is transmitted through the evaporator coil, and heat flows through the tube wall into the refrigerator, continuing to boil up to the evaporator the refrigerant is superheated to ensure there is no liquid fed through the compressor. as the refrigerant vapor flows through the compressor. The amount of pulled atmospheric air is increased in the receiver or storage tank, volume is reduced and pressure is rise automatically. this compressed air passing through the copper tubes which wounded behind fan duct. fan provides extra amount of air with low temperature which impact on tube. During this process a compiled air of fan and copper tube will be produced cooled air.

KEYWORDS Refrigerant, compressor, Metal Duct etc.

TITLE 3.20 Boosting the performance of PV-based inverter systems adopting the Particle Swarm Optimization (PSO) approach.

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ABSTRACT The PV system's maximum power point (MPP) is nonlinear and depends on irradiance and temperature. Some situations allow many local maxima, but there is only one real MPP. This affects PV system power output, dependability, and complexity. Traditional approaches are slow and inaccurate for MPP determination. PSO is better for reducing steady-state oscillations in the inverter output current and voltage waveform. PSO is used to optimize inverter switching. In MATLAB, a PSO-based control algorithm and PI controller generate an error voltage, which is analysed by the PSO controller to enhance switching. The photovoltaic bridge inverter system to reduce Total Harmonic Distortion (THD) and enhance power quality includes the PV array, DC-DC converter coupled in series, inverter fed by PSO-based controller, filter circuit, voltage and current sensors, and load. This model predicts PV system performance better when irradiance varies slowly. Photovoltaic power systems use controlled DC/DC boost converters called Peak Power trackers. Controlling the DC/DC converter conversion ratio maximizes solar panel output power. DC-DC converters connect modules and loads. Boost mode DC/DC converters are the most significant switching regulators. The PSO-based technology iteratively improves inverter switching and constant current and voltage waveform over a set time interval. This article analyses PV systems without and with PSO. PSO improves current and voltage waveforms, reducing steady-state oscillations. FFT study reveals that THD (IEEE Std.519) with PSO-based controller meets IEEE standards. System dependability increases.

KEYWORDS Maximum power point (MPP), Total Harmonic Distortion (THD), Photovoltaic

TITLE	3.21 Solar Operated Mini Sanitary Pad Vending Machine Using RFID - A Review Paper
AUTHOR	Prof. Rajeshkumar Srivastava[1], Dr. R.G. Shriwastava[2], Sankalp Mamidwar[3], Rajiv Meshram, Sahil Lamsounge[4], Kiran Gadhave[5]
COLLEGE AFFILIATION	Govindrao Wanjari College of Engineering & Technology, Nagpur[1,2,3,4,5]
ABSTRACT	The "Sanitary Pad Vending Machine using RFID" project addresses the need for innovative solutions in the realm of women's hygiene. In contemporary times, technology plays a crucial role in enhancing accessibility and convenience. The proposed vending machine leverages Radio-Frequency Identification (RFID) technology to provide a seamless and secure means for women to access sanitary pads. This project aims to contribute to women's well-being by offering a user-friendly, automated, and discreet solution for obtaining essential hygiene products. This project embodies a pioneering initiative at the intersection of technology and women's health. In the contemporary landscape, where technological advancements are reshaping convenience, this project leverages Radio-Frequency Identification (RFID) technology to introduce a transformative solution for women's hygiene. Beyond mere accessibility, the vending machine seeks to enhance user experience by providing a secure, automated, and discreet means for women to obtain sanitary pads. This project contributes to the broader discourse on women's well-being, positioning itself as a user-centric solution that aligns with the evolving needs and expectations of modern society.
KEYWORDS	RFID, Sanitary Pad, Vending Machine, Women's Hygiene, Automation

TITLE	3.22 Electric Vehicles Batteries And Their Topologies
AUTHOR	Chetan. R. Bhale[1], Prasad. B. Joshi[2,] Nutan Moghe[3]
COLLEGE AFFILIATION	Assistant Professor, Electrical Engineering Department, Govindrao Wanjari College of Engineering & Technology, Nagpur[1,3] Assistant Professor, Electrical Engineering Department , YCCE, Nagpur[2]

ABSTRACT

This paper gives the insight of various battery charging topologies for E- vehicles. There are two main types of battery chargers: on-board and off-board, with choices for both unidirectional and bidirectional power transmission. The utilization of unidirectional and bidirectional depends on the operating environment. Compared to bidirectional chargers, the unidirectional charger's circuitry and control unit are simpler. When the vehicle is not in use and the network requires power, the bidirectional charger's construction facilitates the transfer of battery power to the network which helps. Bidirectional chargers have the ability to synchronize with the smart grid, which will eventually become unavoidable. This study compares the cost, efficiency, and other factors of battery charger topologies designed for plug-in electric vehicles in order to determine which is the most energy-efficient.

KEYWORDS E-vehicle, Battery charging topologies, converter.

TITLE	3.23 Using A Laser Security Application, An Automatic Gate System
AUTHOR	Sagar. S. Kawade[1], Mohan P. Thakre[2], Tejaswini A. Gaikwad[3], Ranjana N. Khandebharad[4]
COLLEGE AFFILIATION	SVERI's College of Engineering, Pandharpur[1,2,3,4]
ABSTRACT	This article use an Arduino UNO, a buzzer, a laser light, and straightforward software for forming a sequrity system. With this technology, we can set up a security alarm for unauthorized intruders anywhere. Safety is more and more important in all fields as technology develops and grows on a daily basis. Everyone wants their own private area which only they can access. Therefore, we need to protect our room, office, locker, etc. The "Password-based gate lock system by using Arduino" has been created in the suggested work. This item is a password- or pin-protected computerized gate lock. Which requires the user to enter the proper password or pin code in order to access the gate. In this paper, a basic IOT gateway implementation proposal for use in a home IOT environment is presented. It is based on the Arduino microcontroller. The author saves focused their study on the system's security and performance. Performance and capacity limits of the implemented gateway were examined through load experiments and denial-of-service attacks
KEYWORDS	Security system, Leaser, Arduino, Face detention, IOT.

TITLE	3.24 Assessing the Efficacy of Superconducting Fault Current Limiters: A Performance Analysis
AUTHOR	N. D. Dhapodkar[1], R.K.Srivastava[2], Dr. R. G. Shriwastava[3]
COLLEGE AFFILIATION	Assistant Professor, Govindrao Wanjari College of Engineering & Technology, Nagpur[1,2] Professor, Govindrao Wanjari College of Engineering & Technology, Nagpur[3]
ABSTRACT	This paper presents an assessment of the Superconducting Fault Current Limiter (SFCL) performance, highlighting its effective and rapid mitigation of severe fault currents. As the global population continues to grow, the demand for electrical power has risen significantly, leading to an increased likelihood of system faults. These faults result in the flow of high currents through the system, generating substantial mechanical forces that can adversely impact the mechanical integrity of power system hardware, transformers, and associated equipment, leading to overheating. Adapting parameters for each fault occurrence is not always feasible. The SFCL acts as a stabilizer, demonstrating enhanced efficiency compared to traditional methods. The utilized SFCL possesses the capability to swiftly reduce fault currents within the first cycle, thereby enhancing the transient stability of the power system. This paper delves into power system faults caused by over-currents, specifically L-G, L-L-G, and L-L-L-G scenarios, with a focus on continuous SFCL studies aimed at alleviating the power burden on circuit breakers.
KEYWORDS	Fault Current Limitation, Superconducting Fault Current Limiter (SFCL).

TITLE	3.25 Development of Sequencer Application to Control 5 DOF Robotic Arm
AUTHOR	Prof. Avishkar Wanjari[1], Dhiraj kumar Samrit[2], Pranjal Badge[3], Ankush Ghormade[4], Ankesh Mahaka[5], Sushmita Kukade[6]
COLLEGE AFFILIATION	Assistant Professor, Electrical Engineering Department, Govindrao Wanjari College of Engineering & Technology, Nagpur[1] Student, Electrical Engineering Department, Govindrao Wanjari College of Engineering & Technology, Nagpur[2,3,4,5,6]
ABSTRACT	This paper introduces an innovative approach for controlling a 5 degrees of freedom (DOF) robotic arm in computer applications. By integrating robot programming, data capture, and semantic manipulation, our framework enhances efficiency, precision, and intuitive control. Leveraging robot programming methodologies, our approach employs learning from demonstration, feedback, and transfer to extract high-level relational plans from low-level assembly task demonstrations. A graphical user interface (GUI) iteratively refines acquired knowledge, combining high-level plans with geometric details for enhanced precision. Transfer learning enables efficient reuse of task knowledge across similar tasks. Addressing the need for accurate data capture in manufacturing, we convert robot actions into event streams, facilitating the evaluation of Key Performance Indicators (KPIs) for data-driven decision-making. Visualizations aid in understanding manufacturing floor activities. Additionally, we introduce a semantic approach for the robotic arm to perceive and interact with its environment effectively within computer applications. This includes object detection, task definition, and trajectory planning considering environmental constraints. Our integrated methodology advances the capabilities of 5 DOF robotic arms in computer applications, providing a comprehensive framework for efficient control, data-driven decision-making, and precise task execution. This research aims to bridge the gap between theoretical advancements and practical applications in robotics.
KEYWORDS	Robot Programming, Key Performance Indicators, Semantic manipulation

TITLE	3.26 Energy Generation Using Foot Steps and Other Resources
AUTHOR	Miss. Kalyani R. Fulzele[1], Miss. Shweta Sheware[2], Miss. Trishna Nimghare[3] , Mr. Ganesh Ghagare[4]
COLLEGE AFFILIATION	Nagarjuina Institute of Engineering Technology and Management, Satnavri, Nagpur[1,2,3,4]
ABSTRACT	The energy is very important thing in every country for growth of the country. Coal is generally used to generate electricity in India, but due to increase of demand this is not sufficient to provide required power. So solar, windmills, and other resources are used to provide additional generation. But it requires more cost. So we are doing a project to generate electricity using footsteps at crowded places, it is useful and can generate electricity.
KEYWORDS	Arduino, Piezoelectric sensor, DC battery, Generator, mechanical foot paddle

TITLE	3.27 IOT based Smart Energy Meter Monitoring with Power Theft Detection
AUTHOR	Pranay Dhote[1], Yuvraj Dekate[2], Ramesh Pardhi[3], Prof Ashwini Walde[4]
COLLEGE AFFILIATION	Nagarjuina Institute of Engineering Technology and Management, Satnavri, Nagpur[1,2,3] Assistant Professor, Nagarjuina Institute of Engineering Technology and Management, Satnavri, Nagpur[4]
ABSTRACT	Now day consuming electricity is increasing as the evolution of new technology is emerging. The electrical power company measures the electrical power unit consumed by the users at the end of every month, but for this they need to visit each customer. It is getting difficult for the electricity board officials to take energy meter readings and calculate the bill of the consumed electricity. Also, they put extra bill amount even though if the electrical bills are paid. So to overcome this, it is necessary to make a monitoring system that can automatically detect the meter readings and can save human efforts of visiting every house and then there will be no fraud bill amount that consumers need to pay.
KEYWORDS	

TITLE	3.28 Design and Development of Wheelchair cum Bed Using Joystick Mechanism
AUTHOR	Ishika Kaur Sandhu[1], Raj B. Divate[2], Brijesh V.Kandharkar[3], Pallavi Kamble[4]
COLLEGE AFFILIATION	Dept of Electrical Engineering JSPM's BSIOTR, Wagholi, Pune, India[1,2,3,4]
ABSTRACT	The Design and Development of a Wheelchair cum Stretcher integrating a Joystick for wheelchair movement is a versatile solution for enhanced patient care in medical settings. This multifunctional apparatus combines the mobility features of a wheelchair with stretcher support, catering to diverse patient needs during transit. Incorporating a Wiper Motor ensures smooth movements, while the Heartbeat Sensor monitors health status. The IR Sensor and Buzzer enhance safety through obstacle detection and alerts. Additionally, the Joystick feature aids wheelchair navigation, especially beneficial for visually impaired individuals. This amalgamation of technologies prioritizes patient well-being and seamless transportation, reflecting a holistic approach to healthcare in medical facilities.
KEYWORDS	Wheelchair, Bed, Joystick, Heart beat sensor, Ir sensor & buzzer notification, GSM module

4. DEPARTMENT OF ELECTRONICS & TELECOMMUNICATION

TITLE 4.1 Design and Implementation of Retinal Eye Disease Detection Based on Machine Learning

AUTHOR Meenakshi Atalkar[1] Dr Sanjay Asutkar[2] Prof. Khushal Masarkar[3]

COLLEGE AFFILIATION Tulsiramji Gaikwad-Patil College of Engineering & Technology Nagpur, India[1,2,3]

ABSTRACT Hemorrhages are one of the diabetic retinopathy diseases which affect the retinal part. It Occurs in the deeper layers of the retina and are often called 'blot' hemorrhages because of their round shape. Abnormal new blood vessels form at the back of the eye as a part of Proliferative Diabetic Retinopathy (PDR). Hence the new blood vessels are weak that causes blur vision.

A retinal hemorrhage may be caused cardiovascular disease, retinal vein occlusion (a blockage of a retinal vein), or diabetes mellitus (which causes small fragile in blood vessels which are easily damaged). The presence of hemorrhages in the retina is the main symptom of diabetic retinopathy. The number and shape of hemorrhages is used to identify the severity of the disease. The objectives of this study are to detect blood vessel, identify hemorrhages and classify different stages of diabetic retinopathy into traditional, moderate and non-proliferative diabetic retinopathy (NPDR).

KEYWORDS Hemorrhage, Diabetic retinopathy, image processing

TITLE 4.2 Deep Learning-Based Leaf Disease Detection in Crop Using Images for Agricultural Application

AUTHOR Sameer Rajendra Nakhale[1]. Prof Rohini Pochhi[2]Sumedh jadhav[3]

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ABSTRACT The "Leaf Disease Detection" system addresses the critical challenge of plant diseases in agriculture through the implementation of an automated solution leveraging deep learning techniques. In this comprehensive endeavor, convolutional neural networks (CNNs), specifically DenseNet-121, ResNet-50, VGG-16, and Inception V4, are fine-tuned for efficient and accurate identification of plant diseases. The project utilizes the Plant Village dataset, encompassing 54,305 images across 38 plant disease classes, to conduct a comparative analysis of model performance. DenseNet-121 emerged as the top-performing model, achieving an exceptional 99.81% classification accuracy, surpassing other state-of-the-art models. The system's methodology strategically employs transfer learning to overcome computational challenges associated with training deep CNN layers. This approach, coupled with the multi-class classification strategy, proves robust in handling diverse plant species and diseases within each class. The results highlight the superior efficiency of transfer learning in comparison to building models from scratch, showcasing the potential for real-world applications in agriculture. The system's success is attributed to the careful optimization of hyperparameters and the adoption of advanced deep learning techniques, offering a promising avenue for automated and accurate plant disease detection, with implications for improving agricultural practices, minimizing economic losses, and ensuring global food security.

KEYWORDS

TITLE	4.3 Design And Development Of An RTC Based Relay Board For Precision Control Of Industrial Motors
AUTHOR	Dr. Pravin Tajane[1]Prof.Amol Dhenge[2]Mr.Shashank P. Wankar[3]
COLLEGE AFFILIATION	Tulsiramji Gaikwad-Patil College of Engineering & Technology Nagpur, India[1,2,3]
ABSTRACT	An Arduino-based time-operated electrical appliance control system takes over the task of turning on and off the electric equipment according to a schedule. This study offers an alternative to manual switching by enhancing technology in a way that is safer and more user-effective. It features an integrated real-time clock that updates in real time. The associated gadget is turned on or off at the designated ON time or OFF time when this real time matches the programmed time. The keypad allows you to change the switching time at any time. The seven-segment display shows the current time
KEYWORDS	Arduino, LCD, Real time clock, Relay module, control inputs.

TITLE	4.4 Design and Implementation of an Embedded Edge-Processing Water Quality Monitoring System based on Internet Of Things
AUTHOR	Prof. Rahul Dhuture[1] Prof. Mayuri Harde[2]Ms. Rani Anand Jibhekar[3]
COLLEGE AFFILIATION	Tulsiramji Gaikwad-Patil College of Engineering & Technology Nagpur, India[1,2,3]
ABSTRACT	The system is focus on design for specifically Underground water. Water pollution is one of the biggest fears for the green globalization. In order to ensure the safe supply of the drinking water the quality needs to be monitor in real time. In this paper we present a design and development of a low cost system for real time monitoring of the water quality in IOT(internet of things).The system consist of several sensors is used to measuring physical and chemical parameters of the water. The major problem among the people is that they are lacking in the awareness of the underground water usage. Thus, they are in the process of designing the "Application" which gives the data about the underground water consumption of the consumers and monitor the ground water usage of the consumers. Also, alarming when the maximum usage of water or wastage of water
KEYWORDS	Arduino, IoT, Groundwater, TDS, Sensors

TITLE	4.5 Development of Android based online monitoring and control system for Renewable Energy Sources
AUTHOR	Ms. Samiksha Gedam[1]. Prof Rohini Pochhi[2]. Prof. Pallavi Rokde[3]
COLLEGE AFFILIATION	Tulsiramji Gaikwad-Patil College of Engineering & Technology Nagpur, India[1,2,3]
ABSTRACT	This project presents the development of an Android-based online monitoring and control system tailored for Renewable Energy Sources (RES). The system aims to enhance the efficiency and management of renewable energy installations by providing real-time data monitoring and remote-control capabilities through a user-friendly mobile application. The system architecture integrates various sensors deployed in renewable energy systems, such as solar panels and wind turbines, to collect essential data. This data is transmitted to a cloud-based platform for real-time processing and storage. The Android application serves as the user interface, offering comprehensive insights into energy production, consumption, and system status.
KEYWORDS	Renewable Energy Sources (RES), Real time data monitoring, Sensors, Solar Panels, Wind Turbines, Data Transmission, Cloud-based Platform, Android application, Data Processing

TITLE	4.6 Performance analysis of routine protocols for an efficient data transmission in 5G WSN communication
AUTHOR	Prof Rohini Pochhi[1]. Prof Pravin Tajane[2]. Miss Sushmita .V. Kamble[3]
COLLEGE AFFILIATION	Tulsiramji Gaikwad-Patil College of Engineering & Technology Nagpur, India[1,2,3]
ABSTRACT	In WSN structures the routing scheme the usage of the sensor nodes are carried out in between group of specific clusters. The nodes are working for information aggregation from these supply nodes they also performs statistics dissemination and community management and activities sensing and records gathering in the neighbourhood. Many clustering topology are proposed in recent years to localize the route inside the cluster. In this paper we have reviewed and in contrast these topologies to locate out the network mechanism which are less difficult to control and scalable for getting excessive satisfactory response with recognize to dynamics of the environment.
KEYWORDS	WSN, Routing, Clustering.

TITLE	4.7 Design and Implementation of Fire Security Alarm With Voice Interaction Using IOT
AUTHOR	Ms. Varsha Chaudhari [1]. Prof Pravin Tajane [2]. Miss Sushmita .V. Kamble[3]
COLLEGE AFFILIATION	Tulsiramji Gaikwad-Patil College of Engineering & Technology Nagpur, India[1,2,3]
ABSTRACT	In WSN structures the routing scheme the usage of the sensor nodes are carried out in between group of specific clusters. The nodes are working for information aggregation from these supply nodes they also performs statistics dissemination and community management and activities sensing and records gathering in the neighbourhood. Many clustering topology are proposed in recent years to localize the route inside the cluster. In this paper we have reviewed and in contrast these topologies to locate out the network mechanism which are less difficult to control and scalable for getting excessive satisfactory response with recognize to dynamics of the environment.
KEYWORDS	WSN, Routing, Clustering.

TITLE	4.8 Developing Wireless Electronic Vehicle Charging System
AUTHOR	Mrunal Dilip Rinait[1]. Nikhil Chore[2]. Prajwal Dilip Wadibhasme[3]. Harshal J Fasate[4,] Prof. Dipak B. Bhongade[5]
COLLEGE AFFILIATION	Govindrao Wanjari College Of Engineering and Technology, Nagpur, Maharashtra, India[1,2,3,4,5]
ABSTRACT	In today world, there is growing trend towards electric in order to reduce pollution caused by fossil fuel vehicles and provide a-effective alternative to expensive for transportation. Now, you can simply park your vehicle in a designated spot or your garage and it will be charged automatically, or even while you are driving. We are already familiar with the wireless transmission of data, sound, and video signals, so it is not a stretch to transfer power wirelessly as well. We owe gratitude to the brilliant scientist Nikola Tesla for his remarkable inventions, including wireless power transfer. Tesla began his experiments on wireless power transmission in 1891 and developed the Tesla coil. In 1901, to create a new wireless power transmission system, Tesla started the construction of the Wardenclyffe Tower, a large high-voltage wireless energy transmission station..
KEYWORDS	

TITLE	4.9 Monitoring and Controlling Robotic Arms Using IoT
AUTHOR	Prof. S.B.Ashtekar[1], Sneha Gatlewar[2], Disha Akotkar[3] Sonal Gajbhiye[4], Ashwini Ninawe[5], Nishant Gode[6]
COLLEGE AFFILIATION	Govindrao Wanjari College Of Engineering and Technology, Nagpur, Maharashtra, India[1,2,3,4,5,6]
ABSTRACT	Integrating the Internet of Things (IoT) with robotics has transformed automation, introducing "Monitoring and Controlling Robotic Systems Using IoT" as a pivotal innovation. This synergy offers real-time monitoring, remote control, and seamless automation. IoT-enabled robotic systems utilize sensors, connectivity, and cloud computing for data collection, transmission, and command execution. Real-time monitoring and remote control have broad implications across manufacturing, healthcare, agriculture, and logistics. Emphasizing sensors, data transmission, and user interfaces, IoT in robotics brings improved efficiency, reduced downtime, and remote operation, enhancing productivity and cost savings. Evolving IoT propels innovation in robotics, promising an efficient, accessible future integrated into daily life—a paradigm shift recognized for its transformative potential.
KEYWORDS	IoRT, Raspberry Pi Robotics, Remote Control, IoT Integration, UI (User Interface), Cloud Computing.

TITLE	4.10 Library Management IN-OUT Monitoring System
AUTHOR	Prof. Hemant Kadamdhad[1], Soniya Chakunde[2], Payal Atkare[3], Suraj Rajbhar[4],Akash Mate[5], Ankit Kose[6]
COLLEGE AFFILIATION	Govindrao Wanjari College Of Engineering and Technology, Nagpur, Maharashtra, India[1,2,3,4,5,6]
ABSTRACT	This paper presents the design and construction of a IN-OUT bidirectional library visitor counter. The digital visitor counter is a reliable circuit that takes over the task of counting number of persons / visitors in the library room very accurately and beeps a warning alarm when the number of visitors exceeds the capacity limit of the auditorium/hall. When somebody enters the library room then the counter is incremented by one (+1) and when any one leaves the library room then the counter is decremented by one (-1). The total number of persons inside the library room is also displayed on theP10 LED Display as well as stored the data into the data of web server. ESP32 board will be the heart of the system.
KEYWORDS	bidirectional counter, P10 LED, ESP32, Webserver.

TITLE	4.11 IoT Applications in Healthcare: A Comprehensive Evaluation of E-health Monitoring Systems in Real-world Applications
AUTHOR	Ms. Mamta Kumari [1] Dr. Mahendra Gaikwad [2]. Dr. Salim A. Chavan [3]
COLLEGE AFFILIATION	G. H. Raisoni University, Saikheda, India[1] G. H. Raisoni College of Engineering Nagpur, India[2] Govindrao Wanjari College of Engineering & Technology Nagpur, India[3]
ABSTRACT	E-health monitoring systems are thoroughly evaluated in this study to explore the revolutionary implications of IoT technology on healthcare. The study recognizes the relevance of personalized and continuous health monitoring by focusing on the fusion of Arduino microcontrollers with cardiac sensors. It investigates the ability of Arduino-based systems to go beyond cardiovascular activity, with the goal of gaining a more detailed picture of individual health. The study presents insights through actual implementations represented in Block diagrams A and B, addressing major research needs such as scalability concerns, user interface refinement, and security considerations related to Arduino-driven E-health monitoring. The findings highlight the potential of Internet of Things (IoT) technologies to alter healthcare by offering precise and timely monitoring for enhanced patient care and healthcare services.
KEYWORDS	IoT, E-health monitoring, Arduino microcontrollers, Heartbeat sensors, Real-time monitoring

TITLE	4.12 Design and Analysis of Deep Learning Framework for Early Detection of Cancer Disease
AUTHOR	Ravina Dable [1]Prof. Rahul Dhuture[2]. Prof. Sandeep Thakre[3]
COLLEGE AFFILIATION	Tulsiramji Gaikwad-Patil College of Engineering & Technology Nagpur, India[1,2,3]
ABSTRACT	Cancer, notably brain and lung cancers, is a leading global cause of death, challenging to detect early. Traditional diagnostic methods struggle due to their complexity and lack of specific symptoms. Deep learning models show promise but need improvement, especially for early-stage brain and lung cancers. Challenges include limited data, complex features, and interpretability issues. This research aims to enhance deep learning methodologies by incorporating advanced techniques like transfer learning and attention mechanisms. The goal is to accurately detect and classify early-stage cancers, addressing existing challenges, gaining insights into biological mechanisms, and ultimately improving patient outcomes through earlier detection and treatment.
KEYWORDS	Transfer learning, attention mechanisms, cancer detection, machine learning, deep learning

TITLE 4.13 Monitoring and Controlling Robotic Arm using IOT

AUTHOR Prof.AshwiniWaghale[1] Mr. Pranay Neware[2]. Mr. Yash Chandel[3], Mr. Premkumar Chauragde[4], Mr. Akash Gawai[5], Mr. Gaurav Wankar[6]

COLLEGE AFFILIATION Govindrao Wanjari College of Engineering and Technology, Nagpur, Maharashtra, India[1,2,3,4,5,6]

ABSTRACT

Efficient technology management is crucial to prevent waste, and acknowledging that technology, particularly the Internet of Things (IoT), is shaping our future is imperative. This project sets out to craft a sophisticated smart robotic arm, seamlessly controlled and monitored via IoT. The brains behind the robotic arm lie in the Arduino UNO board, utilizing a Wi-Fi module for internet connectivity. The inclusion of various sensors contributes to a comprehensive system. The Blynk application takes the centre stage as the IoT platform, providing a user-friendly interface to visualize sensor data and manipulate the robotic arm's movements. Rigorous testing against a precision measurement device ensures the accuracy and reliability of the IoT platform. This venture capitalizes on the transformative fusion of IoT and robotics, targeting enhanced efficiency, flexibility, and remote accessibility in diverse applications. The robotic arm, armed with sensors and actuators, establishes a wireless link to the IoT platform. Real-time data exchange empowers users to monitor the robotic arm's status, track performance metrics, and assess environmental conditions promptly. The system goes a step further, offering a secure and streamlined channel for remote control, allowing users to execute commands and fine-tune parameters from a centralized interface In essence, this innovative project marries cutting-edge technology with real-world applications, optimizing the future of interconnected systems. The fusion of IoT . information, and environmental data. Interestingly, users can delegate tasks remotely through networks connected to the robot internet implies that the user does not need to be on site as the work can be done entirely by the robot. As a result, it opens up a new horizon. To enable IoT-based monitoring and control of a robotic arm, the integration of sensors, actuators, and communication devices is

essential. Sensors embedded on the robotic arm continuously gather real-time data on factors like position, orientation, and operational status.

KEYWORDS

Internet of Things (IoT), a real-time, Microcontroller, the robotic arm, sensors embedded

TITLE 4.14 Internet of Things and Cloud Based Intelligent City Data Analytics System

AUTHOR Sameer Ashtekar[1], Dr. Hemant Bhagat Patil[2], Dipak Bhongade[3]

COLLEGE AFFILIATION Govindrao Wanjari College of Engineering and Technology, Nagpur, Maharashtra, India[1,2,3]

ABSTRACT This work is an attempt to muse on prospective results, problems, and degrees of future study. Concerning the development of intelligent cities in India, the internet of things and how it may soon alter people's daily lives are of paramount importance. To put it simply, the Internet of Things (IoT) is a network of physical and digital objects, services, and infrastructure that allows them to communicate with one another and share data in real time, regardless of physical location or connectivity conditions. Things may be found and managed remotely with the help of IoT by using the current system architecture. Thanks to the success of India's 100 Smart Urban Communities Data Analytics Project, the Internet of Things (IoT) seems to be a very promising concept. With the help of the Internet of Things, objects can be monitored and managed from anywhere using the existing web infrastructure. This paves the way for easier integration of the real physical world with virtual frameworks hosted on computers and the cloud, which in turn increases efficiency, accuracy, and financial gain. Everything would be uniquely recognisable because it could work together using an embedded computing architecture already present in the Internet infrastructure.

KEYWORDS Internet of Things (IoT), virtual frameworks, sensors, Data analytics, Smart urban, cloud

TITLE	4.15 Tweet Fragmentation Technique: An Automatic Detection Of Malicious User On Social Networking Sites
AUTHOR	Prof. A. V. Waghale, Prof. M. A. Gholpe[2]
COLLEGE AFFILIATION	Govindrao Wanjari College of Engineering and Technology, Nagpur, Maharashtra, India[1,2,]

ABSTRACT

Online social and news media generate rich and timely information about real world events of all kinds because of that the huge amount of data available. Twitter has attracted many users to share and disseminate most up-to date information, leading to large volumes of knowledge produced a day. In the tweet segmentation the number user are tweets and that tweets are stored in segments. Data mining may be a powerful tool which will be used effectively for analysing large databases and deriving important analytical results. Experiments on two tweet data sets show that tweet segmentation quality is significantly improved by learning both global and native contexts compared with using global context alone. Using analysis and comparison, we show that local linguistic features are more reliable for learning local context compared with term dependency. As an application, we show that prime accuracy is achieved in named entity recognition by applying segment- based part- of speech (POS) tagging. Social networks are recently employed as a source of data for event detection, with particular regard to road traffic jam and car accidents. We create the logical protocol which helps to detect the malicious user as well as providing the security to the social networking media as like tweeter. Achieved in named entity recognition by applying segment-based part- of Speech (POS) tagging. Social networks are recently employed as a source of data for event detection, with particular regard to road traffic jam and car accidents. We create the logical protocol which helps to detect the malicious user as well as providing the security to the social networking media as like tweeter.

KEYWORDS Twitter, Fragmentation, Segments.

TITLE	4.16 Smart Healthcare using Block-chain
AUTHOR	Prof. Hemant Kadamdhad
COLLEGE AFFILIATION	Govindrao Wanjari College of Engineering and Technology, Nagpur, Maharashtra, India

ABSTRACT

Over the past ten years, block-chain technology has gained prominence and caught the attention of a number of sectors, including banking, government, energy, and health. The last ten years have seen the development of block-chain technology, which has attracted significant attention from a number of industries, including banking, government, energy, and health. Block-chain technologies have shown to be effective in the healthcare industry for managing and supplying secure data. Additionally, block-chain is improving conventional medical procedures in ways including improving issue diagnosis and treatment through secure data exchange. Due to Covid-19, healthcare professionals and the government are having trouble preserving and recording private information about individuals. The spread of false information has increased throughout the epidemic, and the inability of current platforms to verify information has alarmed the public. Block-chain-based tracking solutions must be applied in order for citizens and the government to share accurate and reliable information. By combining patient medical information and distributing it in a secure and up-to-date manner, block-chain will without a doubt play a part in customized, genuine, and secure healthcare in the future. In the current world, SARS-CoV2 or COVID-19 is spreading quickly, with an increasing number of deaths and transmissions, and inadequate data management and information exchange. The restrictions of a centralized control system apply to the existing conventional database storage system. And data manipulation, especially when data is shared with others. The innovative technology The distributed ledger technology, also referred to as & Block-chain functions as a shared database, storing all copies synchronized and confirmed. This article goal is to examine the idea of a block-chain. Mechanism for managing pandemic data that would guarantee centralized patient data preservation and dependable data management to locate the corona-virus

KEYWORDS

and fight against current and next pandemics.
Block-chain, Distributed Ledger, Healthcare, COVID-19 Blockchain Pandemic Novel corona-virus Database Epidemic.

TITLE	4.17 Cloud Technologies for Basics of Artificial Intelligence Study in Colleges
AUTHOR	Sachin Ade[1], Hemant Dhargave[2], Minakshi Sarode[3], Prof. Minal A. Gholpe[4]
COLLEGE AFFILIATION	Govindrao Wanjari College of Engineering and Technology, Nagpur, Maharashtra, India[1,2,3,4]
ABSTRACT	Changes in society related to the development of science, technology, computing power, cloud services, artificial intelligence, increasing general access to huge amounts of open data, lead to increased global investment in technology and services. Appropriate training is required by specialists to create a workforce to work with artificial intelligence. On the one hand, it puts forward new requirements for the training of young people, and educational content, on the other hand, provides opportunities for the use of cloud technologies during the educational process. Widespread use of AI in various fields and everyday life poses the task of understanding the basic terms related to Artificial intelligence (AI), such as Machine learning (ML), Neural network (NN), Artificial neural networks (ANN), Deep Learning, Data Science, Big Data, mastering the basic skills of using and understanding the AI principles, which is possible during the study in the collage course of computer science. Cloud technologies allow you to use the power of a remote server (open information systems, digital resources, software, etc.) regardless of the location of the consumer and provide ample opportunities for the study of artificial intelligence. In this paper we reveal the possibilities of cloud technologies as a means of studying artificial intelligence at collage, consider the need for three stages of training and provide development of tasks and own experience of using cloud technologies to study artificial intelligence on the example of DALL-E, Google QuickDraw, cloud technologies Makeblock, PictoBlox, Teachable Machine at different stages of AI study.
KEYWORDS	artificial intelligence, cloud technologies, collage, education, education applications, informational computer technologies

TITLE	4.18 Design and Implementation of Clusters of Microcontroller for various sensors data on real time using Embedded System
AUTHOR	Prof. Rahul Dhuture[1], Prof. Amol Dhenge [2], Priyanka Gaherwar[3]
COLLEGE AFFILIATION	Assistant Professor, Tulsiramji Gaikwad-Patil College of Engineering & Technology Nagpur, India[1,2] PG Student, Tulsiramji Gaikwad-Patil College of Engineering & Technology Nagpur, India[3]
ABSTRACT	The need for an efficient and scalable system for real-time collection, processing, and management of data from various sensors using embedded systems. The proposed solution involves the design and implementation of clusters of microcontrollers, providing a distributed architecture capable of handling diverse sensor types in a seamless and energy-efficient manner. The Key parameters for development of embedded systems optimized for low power consumption, the establishment of real-time communication protocols for data exchange within clusters, and the integration of fault-tolerant mechanisms to ensure the robustness of the system. Clusters are dynamically formed, allowing for the addition of new sensors and microcontrollers to accommodate evolving requirements. The microcontrollers within the clusters are tasked with real-time processing of sensor data, including computations, filtering, and aggregation. Customizable sensor data fusion algorithms are implemented to enhance the accuracy and reliability of the collected data. Energy efficiency is a focal point, ensuring that the system is well-suited for deployment in resource-constrained environments, such as remote or inaccessible locations.
KEYWORDS	Arduino, Clustering, Master Slave, Realtime

5. MECHANICAL ENGINEERING

TITLE	5.1 Review on Fabrication of Solar Powered Multifunction Grass Cutter Robot
AUTHOR	Prof. Bhagat Patil[1], Anuket Badole[2], Sagar Marotkar[3], Vaibhav Yelkar[4], Chaudhary Devendra[5]
COLLEGE AFFILIATION	Associate Professor, Mechanical Engineering Department, GWCET[1] Student, Mechanical Engineering Department, GWCET[2,3,4,5]
ABSTRACT	Now a days we are facing the problem like pollution power cut problem etc., in order to avoid or overcome this problem we have plane to make a device which does not face such problem so we have thought about the device which can be performing its function without causing any problem so we have decided to making the project on crop cutting this project uses the renewable energy sources because of power storage for its operation here using solar energy the aim of our project to develop portable fully automated solar based crop cutter. The design objective is to come up with a mower that is portable, durable, easy to operate and maintain. It also aims to design a self-powered mower of electrical source; a cordless electric lawn mower. The heart of the machine is a battery-powered dc electric motor. It comprises of a system of speed multiplication pulleys which drive the cutting blades and the charging unit comprising of a 12V alternator and a lift mechanism meant to alter the height of cut. The use of collapsible blades and incorporation of an alternator for recharging the battery make the design unique such that no engine is involved. Performance test gave a cutting efficiency of 89.55% with 0.24kN human effort. Thus, the machine is considered highly efficient and is readily adaptable to different cutting conditions
KEYWORDS	Remote operating features, Solar panel, Grass Cutter, water etc

TITLE	5.2 EPQ Model with Inventory Dependent Rate Parameter
AUTHOR	Pankaj Ardak[1]
COLLEGE AFFILIATION	Associate Professor, Department of Mechanical Engineering College of Engineering and Technology, Akola[1]
ABSTRACT	This work presents Economic production quantity model for items which deteriorates with respect to time. The demand pattern used is mix type. Here inventory dependent demand rate is used when production is in process and assumes demand to be constant after maximum inventory level reaches. The optimum solution of the model is derived by using simple differential calculus method. The effect of rate at which inventory get consumed is discussed in this model. In this model the total cost function shows the convexity. Mathematical Model gets verified by using numerical example. Sensitivity analysis had been carried out.
KEYWORDS	EPQ, Inventory dependent.

TITLE 5.3 Tri-Wheel Trailblazers: A Critical Review of Innovative Design and Fabrication Strategies for Staircase Climbing Hand Trolleys

AUTHOR Prof. Nitesh chahande[1], Mr. Ravindra Gaidhane[2], Mr. Ashish shende[3], Mr. Ritesh Mahajan[4,] Mr. Vishal Raut[5]

COLLEGE AFFILIATION Assistant Professor, Mechanical Engineering, GWCET, Nagpur, India[1]
Students, Mechanical Engineering, GWCET, Nagpur, India,[2,3,4,5]

ABSTRACT - The main goal of our project is to create a manually driven trolley that can climb stairs with ease. The trolley has a sturdy yet lightweight frame, intuitive controls, and clever wheel systems for a smooth ascent and descent. With their strong fastening and anti-slip features, safety comes first. This adaptable and affordable solution improves productivity and lessens physical strain on operators by addressing issues with manual material handling on staircases in a variety of environments. The talk will focus on this stair climbing manual trolley's design, construction, salient characteristics, and possible uses. The potential uses of staircase climbing trolleys in a variety of industries, especially material handling and logistics, has drawn a lot of attention in recent years. The design and construction of a unique staircase climbing trolley are presented in this research paper with the goal of increasing productivity and decreasing labour-intensive work when moving cargo between levels of buildings. The suggested trolley has cutting-edge features that make stair navigation effortless and guarantee dependable and safe transportation

KEYWORDS EPQ, Inventory dependent.

TITLE	5.4 Design Development and Performance Evaluation of Domestic Refrigerator by Using LPG as Refrigerant
AUTHOR	Prof. N.H. Chahande[1], Prof. D.K. Parwe[2], Prof. M. D Karambe[3], Prof. S.B. Khorgade[4], Prof. S.V. Gulhane[5], Prof. A.S. Yawalkar[6]
COLLEGE AFFILIATION	Assistant Professor, Department of Mechanical Engineering Govindrao Wanjari college of Engineering & Technology Nagpur, India[1,2,3,4,5,6]
ABSTRACT	This experimental investigation delves into the practical implications of utilizing a propane butane mixture, categorized as liquefied petroleum gas (LPG), as the refrigerant in domestic refrigerators. Comprising 24.4% propane, 56.4% butane, and 17.2% isobutene, the specific composition may vary among suppliers. Notably, LPG is locally abundant and economically viable, offering an environmentally friendly alternative with no ozone depletion potential (ODP). Widely employed for cooking purposes globally, LPG's versatility extends to refrigeration in this study. The research centres on a medium-sized refrigerator boasting a gross capacity of 125 litters, engineered specifically to operate optimally on LPG. In-depth discussions encompass various refrigeration methods based on conventional refrigerants, providing a context for the development of this modified refrigerator. The design process is detailed, highlighting key modifications to ensure compatibility and efficiency with LPG. Performance assessments, including measures of cooling efficiency, energy consumption, and environmental impact, provide a comprehensive evaluation of the refrigerator's functionality on LPG. This study not only explores the technical aspects of adapting refrigeration systems to LPG but also addresses the broader implications of integrating an environmentally conscious refrigerant in domestic cooling applications.
KEYWORDS	Domestic refrigerator, LPG refrigerant, COP, Cooling efficiency, Refrigeration, Propane butane mixture, Ozone depletion potential

TITLE	5.5 Development and Fabrication of Solar powered Smart Waste Segregation Machine
AUTHOR	Prof. M. D Karambe[1], Mr. Sahil Nagwanshi[2], Mr.Dhawal M khandait[3] Mr. Shadab Shah[4], Mr. Vibhanshu Varambe[5]
COLLEGE AFFILIATION	Assistant Professor, Department of Mechanical Engineering GWCET[1] Students, Department of Mechanical Engineering, GWCET[2345]
ABSTRACT	India demands an effective system for handling waste due to rapid urbanization and an ever-increasing population. Only one-fifth of the rubbish produced gets processed, with the rest dumped in landfills. Householdwaste segregation contributes to the decrease of complexity in waste management plants. Workers who collect home waste typically classify it into dry and moist categories. So the purpose of this research is to create an automatic trash segregation system for families and small communities that uses a conveyer belt. The projects major result is to minimize the amount of individual effort and time required for waste segregation. To accomplish so, we need a robotic trash segregator. This approach for categorizing garbage into three distinct groups: dry waste and moist waste by automation is easy and straightforward, thanks to the Arduino Uno. The automated method saves time and effort for waste management plants, increasing their efficiency. We have a trash system of classification that we use for all types of waste. An electronic sensor is employed for detection, while shorter mechanical arms are employed for separation. This study will benefit society in a variety of ways. garbage management aims to recycle as much garbage as feasible.
KEYWORDS	Environment, Waste Segregation, Sensors, Arduino Uno, Conveyer belt etc.

TITLE 5.6 Sensitivity Analysis of Independent and Dependent π terms in performance of Cupola furnace.

AUTHOR Dr. Hemant R. Bhagat Patil[1], Dr. V. G. Arajpure[2], Dr. Rakesh G. Shriwastava[3], Dr. Salim A. Chavan[4]

COLLEGE AFFILIATION Associate Professor, Department of Mechanical Engineering, Govindrao Wanjari college of Engineering, Nagpur[1]
Principal, Suryodaya college of Engineering, Nagpur[2]
Associate Professor, Department of Electrical Engineering Govindrao Wanjari college of Engineering, Nagpur[3]
Principal, Govindrao Wanjari college of Engineering, Nagpur[4]

ABSTRACT We can analyse the indices of the various π terms in the model to find the influence of the various independent πterms. In sensitivity analysis technique, the change in the value of a dependent π term caused due to an introduced change in the value of individual π term is evaluated. In this case, of change of ± 10 % is introduced in the individual independent π term independently (one at a time). Thus, it introduces total range of the change as 20 %. Thus, the effect of this introduced change on the changing value of the dependent π term is evaluated. The average values of the change in the dependent π term is due to the introduced change of 20 % in each independent π term. This defines the sensitivity. The total % changes in output for ±10% change in input. are shown in tables, (a) & (b) shows response variables nature of variation is due to increase in the values of independent pi terms. Table (c) shows sequence of influence of independent pi terms on dependent pi terms. Figure shows graphs of sensitivity analysis for dependent pi terms

KEYWORDS Sensitivity, cupola furnace, Dependent and Independent pi terms.

TITLE	5.7 Design & Fabrication of Automatic Pneumatic Ramming Machine
AUTHOR	Mr. D. K. Parve[1], Mr. Ankit U. Mishra[2], Mr. Kunal Patle[3], Mr. Karan Khodake[4], Mr. Kanha Jaiswal[5]
COLLEGE AFFILIATION	Assistant Professor, Dept. of Mechanical Engineering, Govindrao Wanjari College of Engineering & Technology[1] Students, Dept. of Mechanical Engineering, Govindrao Wanjari College of Engineering & Technology[2345]
ABSTRACT	This paper described that moulding is one of the important metals forming process in manufacturing components for various applications in industry. Casting of any size and shape can be made accurately. Automation in this field helps to improve the foundry environment and accuracy of the cast parts. Efficiency of moulding is affected by various parameters like permeability, collapsibility, adhesiveness etc. So, it is a must to avoid defects in casting. The defects occur in sand castings post a great problem in foundry. On account of defects more than 10% castings are rejected. Even though skilled labour is employed for ramming operation, the packing of moulding sand will not be even throughout the moulding box. So, we have selected the idea of fabricating pneumatic rammer. This rammer is operated pneumatically. By using this rammer moulding sand will be packed evenly throughout the box. The pneumatic ramming machine is a new innovative concept. This machine has been mainly developed for foundry-based industries. This machine is very useful in foundry for ramming the green sand to make the core used inside the pattern cavities. In this machine, we have used the pneumatic cylinder for ramming the core. Pneumatic machine is very powerful and used for heavy loads. By doing the manual process it consumes more time and large amount of man power required. By using this machine, we can save the time and man power requirement in industries. The project consisted of MS Frame, Air Pipe, Air Nipple, Air Compressor, Solenoid valve, Timer Control unit, Pneumatic cylinder, Ramming tool and Pressure Gauge. Efficiency of moulding is affected by various parameters permeability, collapsibility, adhesiveness etc. So, it is a must to avoid defects in casting. The defects occur in sand castings post a great problem in foundry. On account of defects more than 10% castings are rejected. Due to improper ramming the following defects may occur in castings. The project is a study about the design and fabrication of automatic pneumatic ramming machine,

which shows the capability to design a concept using variety of components.

KEYWORDS Pneumatic System, Actuators, Control Valves.

TITLE	5.8 Innovative Product Development Practices in Small and Medium sized Enterprises: A Study in Indian context
AUTHOR	Prof. Dinesh K. Parve[1], Dr. Hemant R. Bhagat- Patil[2], Prof. Atul S. Yawalakar[3], Prof. S. B. Khorgade[4],
COLLEGE AFFILIATION	Assistant Professor, Department of Mechanical Engineering, Govindrao Wanjari college of Engineering, Nagpur[134] Associate Professor, Department of Mechanical Engineering, Govindrao Wanjari college of Engineering, Nagpur[2]
ABSTRACT	The Small and medium enterprises of India is an important driving factor for the growth of Indian Economy. These SMEs not only provide the employment opportunities but helps in the process of industrialization in rural areas simultaneously reducing the unequal income distribution among the residents. The SMEs contribute significantly in the development of Indian economy through export production, domestic production, low investment requirements, operational flexibility, technology oriented enterprises etc. In India, after agriculture, small business is the second largest employer of human resources. SMEs constitute more than 80 percent of the total number of industrial enterprises and support industrial development, 40 per cent of industrial output, 80 per cent of employment in the industrial sector, 45 per cent of value added by the manufacturing sector and 40 per cent of total exports. In this we made to know the growth and contribution made by Small and Medium Enterprises in India and to understand the role of SMEs in providing employment opportunities in India. The innovation in New Product Development (NPD) process to achieve success in the market but majority of the research have considered innovation as an element within the NPD process. Most of the manufacturing organizations strongly believe that more emphasis on NPD is required to keep pace with rapidly growing technology and increased global competition. But our research shows that fundamental issues related to innovative NPD are not yet properly researched keeping in mind the unique needs of the developing world, more so particularly in the SMEs. Further, in order to verify whether QFD constitutes innovative product development process or not, QFD articles were benchmarked to identify the different best practices of QFD model. However, the best practices model only enhances the customer involvement into the NPD

process but there exists no evidence that it can be used as innovative product development model.

KEYWORDS Small and Medium Sized Enterprises (SMEs), New Product Development (NPD), innovative product development (IPD), Quality Function Deployment (QFD), Employment, Growth, Challenges of SMEs, MSME (Micro, Small and Medium Enterprises)

TITLE	5.9 Design and Development In Hydraulic Bending Machine
AUTHOR	Prof. N. H. Chahande[1], Mr. Aniket Sorte[2], Mr. Shivam Kulkarni[3], Mr. Sachin Rahangdale[4], Mr. Harshal Dange[5]
COLLEGE AFFILIATION	Assistant Professor, Department of Mechanical Engineering, Govindrao Wanjari college of Engineering, Nagpur[1] Students-Dept. of Mechanical Engineering, Govindrao Wanjari College of Engineering & Technology[2,3,4,5]
ABSTRACT	Now a days for construction works bending of rods is necessary for constructing the pillars. Bending of such rods is done manually by setting angle plates. This wastes lot of labour power and time. It is proposed to replace the manual work and reduce time taken for bending by designing an alternative machine to replace the manual work which works by the principle of hydraulic system and indexing mechanism. This will reduce the time taken for bending operation and more than one rod can be bent at a same time. Bending can be done with required dimensions and accuracy is maintained during the entire operation. "By" changing the dimensions of the die required bents are made on the rods. Along with the ease of operation use of hydraulics also makes it more precise, economical and compact. The entire machine is easily portable and having nice aesthetics as well.
KEYWORDS	Hydraulic System, Manually bender, Bending operation.

TITLE	5.10 Design and construction of Solar Powered Dustbin
AUTHOR	Prof. Shubham B Khorgade[1], Ms. Tanu A. Usare[2], Ms. Tineshwari Shivankar[3], Mr. Mahesh Balpande[4], Mr. Nikhil Murde[5], Mr. Mayank Dhume[6]
COLLEGE AFFILIATION	Assistant Professor, Department of Mechanical Engineering, Govindrao Wanjari college of Engineering, Nagpur[1] Students, Department of Mechanical Engineering Govindrao Wanjari College Of Engineering & Technology[2,3,4,5,6]
ABSTRACT	This paper represents the study of smart dustbin for efficient waste management. Nowadays, Urbanization has increased tremendously, at the same time there is an increase in waste production. Waste management is a crucial issue to be considered. So we are developing a Smart Dustbin which will sense the position of humans and automatically open the lid of the dustbin to throw garbage. It will monitor the garbage and inform about the levels of garbage collected in the dustbin via sending SMS to the cleaning staff or the supervisor. Once the garbage reaches the threshold level, the ultrasonic sensor will trigger the GSM modem which will continuously alert the cleaning staff and supervisor until the garbage in the dustbin is squashed. Foul smell from the rotten wastes that remain untreated for a long time, due to the negligence of authorities and carelessness of the public may lead to long-term problems. So once these smart bins are implemented on a large scale, waste can be managed efficiently as it avoids unnecessary lumping of wastes on the roadside and keeps the city clean and restricts the spread of diseases through this.
KEYWORDS	Dustbin, GSM modem, Garbage, SMS

TITLE 5.11 Fabrication of Smart phone Operated Sprayer Machine used for Agriculture Purpose

AUTHOR Prof. Atul S. Yawalkar[1], Prof. Nitesh H. Chahande[2], Prof. Dinesh K. Parve[3], Prof. Shubham B. Khorgade[4]
Assistant Professor, Department of Mechanical Engineering, Govindrao Wanjari College of Engineering And Technology, Nagpur, Maharashtra[1,2,3,4].

ABSTRACT Mechanical syringes represent purpose-built tools Designed for the efficient and rapid injection of Liquids and they come in various types. This research focuses on solar-powered mechanical arrow sprinklers, which offer the capability to cover expansive areas, including large lawns, swiftly and effortlessly. In India, where agriculture plays a vital role and 70% of the nation food is locally produced, land is often subdivided among family members due to population growth. As a result, the average Indian farmer typically owns just two acres of land, making it financially challenging for them to invest in expensive farming equipment. This project introduces a mobile device that operates a wheeled insecticide sprayer, enabling the swift and efficient coverage of vast areas, including lawns. Such sprayers prove to be the most cost-effective solution for areas requiring extensive spraying. Additionally, the integration of a smartphone app allows for the wireless control of all sprayer functionalities,

KEYWORDS Battery, pesticide sprayer, DC pump, portable, Smartphone features, Application etc.

TITLE	5.12 Live Project on Robotics Arm
AUTHOR	Prof. Nitesh H. Chahande[1],Prof. Shashank V. Gulhane[2],Mr. Aniket P. Bhandekar[3],Mr. Abhinay G. Sambhare[4],Mr. Gaurav S. Kashyap[5] Mr. Jay M. Pullewar[6] Mr. Suchit A. Rahulkar[7]
COLLEGE AFFILIATION	Assistant Professor, Department of Mechanical Engineering, Govindrao Wanjari College of Engineering And Technology, Nagpur, Maharashtra[1,2]. Students, Department of Mechanical Engineering Govindrao Wanjari College of Engineering & Technology[3,4,5,6,7]
ABSTRACT	The main concentration of the work was to make a cost efficient autonomous robotic arm in terms of industrial automation. It is a type of mechanical arm, usually programmable, with similar functions to a human arm; the arm may be a unit mechanism or may be a part of a more complex robotic process. The end effector or robotic hand can be designed to perform any desired task such as welding, gripping, spinning etc., depending on the application. For detective investigations and bomb disposal it can be used as an essential machine. In industry any kind of work which should be accurate and works continuously, normal programming algorithms and mechanical function can do the job perfectly. It can sense the coordinate of any object from conveyer and detect it. Its claw will grab the object and take it to a desire destination. Today, technology is developing in the same direction in line with rapidly increasing of human needs. The work done to meet these needs makes life easier every day, and these studies are concentrated in robotics studies. Actually in recent year's scientists use the word & Robot to mean any man-made machine that can perform work or other action normally performed by humans, either automatically or by remote control because of this robot pervasive machine because of it is accuracy of work and doing thing that people can't do in addition robot can work in dangerous regions that human can't work in it because of all these reason robot became one of the most popular thing that scientists still persevere to make it better by finding new controllers and designs that make robot more efficient and more reliable and in our project we have built a robot arm with 5 DOF (degree of freedom). In fact, there are several methods were implemented to make a 5- DOF manipulator capable of performing pick-and-place operations. but the problem is that all the controller is relentless that mean if we need to change the program of the arm we have to reboot and write or designs another one and upload

it to arm robot this way apparently is not efficient, on balance we choose a different and unconventional method to control the robot arm by using image processor device that called (Kinect).

KEYWORDS Keywords—Robotic arm, Automation, Control, Program

TITLE	5.13 Design and Fabrication of Automatic Fire Extinguisher
AUTHOR	Prof. A. S. Yawalkar[1], Mr. Bhupesh Mohankar[2] ,Mr. Badal Rahangdale[3], Mr. Shubham Rinayat[4] , Mr. Kamlesh Matale[5]
COLLEGE AFFILIATION	Assistant Professor, Department Of Mechanical Engineering, Govindrao Wanjari College Of Engineering And Technology, Nagpur, Maharashtra[1] Students, Department Of Mechanical Engineering, Govindrao Wanjari College Of Engineering And Technology, Nagpur, Maharashtra[2,3,4,5].
ABSTRACT	Fire is a complicated chemical reaction, but is described as a triangle (fuel, oxygen, heat). If one is absent, fire cannot start; if one is removed, fire collapses. Three core components are the reaction (fire), reaction produced ionized gases (flame), and airborne byproducts (smoke). Each affects life and property; facilities managers must understand fire protection systems to control them. Design techniques and construction materials greatly reduce risk of injury or death from fires. Facilities managers must consider both possible (catastrophic) loss of life and the cost of replacement, repairs, restoration, lost revenue due to outage, and damage to reputation (collectively, severity of fire risk).Fire prevention and protection also can be automatic
KEYWORDS	Fire extinguisher, Detectors, Controller, Fault tolerance, Sensitivity.

6. ENGINEERING SCIENCES

TITLE	6.1 Static magnetic properties and morphological behaviour of Mn and Zn substituted Ca-hexaferrite by ceramic technic
AUTHOR	Dr Chandrakant. L. Khobaragade[1], Ramlal S. Goyate[2]
COLLEGE AFFILIATION	Assistant Professor, Govindrao Wanjari College of Engineering & Tech., Nagpur, India [1,2]
ABSTRACT	Synthesis of M-type hexagonal ferrite compounds, $Ca(CoTi)_{0.5}(MnZn)_{x/2}Fe_{11-x}O_{19}$ (x = 0.0, 0.2, 0.4, 0.6, 0.8, 1.0, 1.2) done by conventional ceramic technic. Magnetic characterization have been studied by substitution of Mn and Zn ions at magnetic field of 10 kOe. Hexagonal structure observed by XRD and SEM studies of these compounds. Substitution of Mn and Zn ions increase in saturation magnetization and rapid decrease in magneto crystalline anisotropy. The magnetic parameters variation has been observed by occupancy of sublattice sites distribution. Curie temperature decreases by the substitute dions of weakening of super exchange interaction. From the study of hysteresis parameters it can be observed that these materials can be used for various applications such as permanent magnetic material, magnetic recording media, ferrofluids, sensors, microwave absorbing materials, ceramic magnets in loud speakers and rotors in small DC motors.
KEYWORDS	XRD, SEM, Magnetic properties, Hexaferrite

TITLE	6.2 Synthesis, Structural Parameter and PL Characterization of Sm^{3+} doped BaB8O13 Phosphor
AUTHOR	Ramlal S. Goyte[1], Vandana R. Kharabe[2], Amol D. Ghode[3] & Dr Chandrakant L. Khobaragade[4]
COLLEGE AFFILIATION	Department of Physics, Govindrao Wanjari College of Engineering & Technology, Nagpur (Maharashtra), India[1,3,4] Department of Physics, Kamla Nehru Mahavidyalaya, Nagpur (Maharashtra) India[2]
ABSTRACT	A polycrystalline material, barium octaborate (BaB8O13) powder phosphors doped with Sm3+, was prepared using the solid-state diffusion method. The sample was characterized using X-ray diffraction (XRD) and photoluminescence (PL) techniques. The XRD patterns confirmed that the material had a crystalline structure and was formed homogeneously. The average particle size of the sample was found to be 34.57 nm, indicating that the sample was a nanomaterial. The XRD pattern of BaB8O13:Sm3+ phosphors showed that the final product had a crystalline nature. The BaB8O13:Sm3+ phosphors proved to be efficient orange-red emitting phosphors, emitting light at 605nm under excitation at 401nm. These phosphors can be used as a source of white light in various types of light emitting devices, including UV LEDs.
KEYWORDS	barium octaborate, photoluminescence, barium octaborate doped with Sm3+, solid state diffusion method.

TITLE	6.3 A Study of Hardness in Under Ground Water in Selected Areas in Nagpur District, Maharashtra, India
AUTHOR	Sharada A. Ishwarkar[1], Dr Pravin K. Gaidhane[2], Prachi S. Aayade[3]& Dr Mahesh K. Gaidhane[4]
COLLEGE AFFILIATION	Department of Chemistry, Govindrao Wanjari College of Engineering & Technology, Nagpur (Maharashtra), India[1,2,3] Department of Chemistry, Shri Lemdeo Patil Mahavidyalaya, Mandal, (Nagpur District-Maharashtra) India[4]
ABSTRACT	The water which contain high concentration of bicarbonates, chlorides, sulphates and nitrates of calcium and magnesium is hard water. Water is the essence of life but water with high degree of hardness is of no use for domestic and industrial applications. The present study aware to public to know about the degrees of hardness in ground water and its effects. In present work, five samples of ground water have been collected from selected area-five villages from Nagpur district, Maharashtra, India. The hardness of water is determined by EDTA titrimetric method. It was found that all the tested samples are very hard water. The present Study did not revealed any soft water.
KEYWORDS	Titrimetric method, Ground water, EDTA, Hardness.

TITLE	6.4 Study of Biological Activities of Carbohydrates-Derived Spiro Triones
AUTHOR	Dr Pravin K. Gaidhane[1], Dr Mahesh K. Gaidhane[2], Sharada A. Ishwarkar[3] , Prachi S. Aayade[4]
COLLEGE AFFILIATION	Department of Chemistry, Govindrao Wanjari College of Engineering & Technology, Nagpur (Maharashtra), India[1, 3, 4] Department of Chemistry, Shri Lemdeo Patil Mahavidyalaya, Mandal, (Nagpur District-Maharashtra) India[2]
ABSTRACT	By using Biltz and Wittek method, the Malonic acid condensed readily with ureas 1 to yield barbituric acids 2 which on bromination give 5,5-dibromobarbituric acids 3. On the reaction of compound 3 with α-D-galactose (sheme-1) and α-D-galactose (scheme-2) afforded 2,3-α-D-glucopyrano-1,4-dioxo-7,9-diaza-spiro[4, 5]deca-6,8,10-triones 4 and 2, 3-α-D-galactopyrano-1, 4-dioxo-7, 9-diaza-spiro[4, 5]deca-6, 8, 10-triones 4 respectively. The structures of the products have been assigned on the basis of ^{1}H NMR, ^{13}C NMR, FAB-MS, optical activity and elemental analysis. The title compounds are found to have antibacterial and antifungal activities.
KEYWORDS	Barbituric acid, α-D-glucose, α-D-galactose, dioxolane, spiro triones.

TITLE	6.5 Detail Study Dream 11 fantasy games by using Mathematical expectations
AUTHOR	Pramod A. Humane[1], Nitin J. Wange[2], Jayshri A. Mahendra[3], Bharti S. Gathe[4]
COLLEGE AFFILIATION	Assistant Professor, Department of Mathematics, Govindrao Wanjari College of Engineering, Nagpur[1,3,4] Assistant Professor, Department of Applied Mathematics & Humanities, Yashwantrao Chavan College of Engineering, Nagpur[2]
ABSTRACT	In recent years, Dream 11, a fantasy sports platform, has taken the Indian gaming scene by storm by raking in a USD 1 million valuation. One of the important aspects of participating in the Dream 11 competition is entry fees in mega contest and team selection. In addition to registration fees, we must pay an entry fee to participate in the game. The amount of the entry fee determines the size of the prize pool. A percentage of this fee goes to Dream11 as its income and the remaining money is awarded to the winners. In this article we study the difference between actual entry fees and mathematically calculated fees by taking one example of contest. Although Dream 11 hosts Fantasy Cricket, Kabaddi, Football and Basketball on its platform, Fantasy Cricket has gained more users due to its popularity in India. Moreover, cricket is one such sport that generates large volumes of data and therefore provides many opportunities for data analysis. Dream 11 user has to select the right combination of players to maximize their points and thereby get some cash rewards.
KEYWORDS	Dream 11, Fantasy sports, Cricket, Kabaddi.

TITLE	6.6 Conception and Production of a Semi-Automatic Multipurpose Floor Cleaning Device
AUTHOR	Dr. Manoj Motghare[1], Prof. Nitin L. Kumhare[2] & Prof. Roshan L. Likhar[3]
COLLEGE AFFILIATION	Assistance Professor, Department of Mechanical Engineering, Govindrao Wanjari College of Engineering and Technology, Nagpur[1,2] Assistance Professor, Department of Civil Engineering, Govindrao Wanjari College of Engineering and Technology, Nagpur[3]
ABSTRACT	Conventional floor cleaners are most commonly used in hospitals, bus shelters, shopping centers, and many other business locations. These devices are useless because they require electricity to operate. The majority of floor cleaners in India are not used effectively because of the country's power crisis, which is worse in the summer. This is especially true near bus stops. It is therefore imperative to develop a floor cleaner that is easily accessible and user-friendly. The purpose of this project was to design a manual floor washer as a substitute for the ones that are currently in use. In this work, a floor cleaner's modeling and analysis were done using the appropriate commercial software. When designing the floor cleaning machine, consideration was given to the use of materials that are commonly used.
KEYWORDS	Vacuuming, mopping, drying floors, and multipurpose.

7. MANAGEMENT STUDIES

TITLE 7.1 A Study On Benefits & Challenges Of Corporate Social Responsibility In India

AUTHOR Dr. Samrudhi Churad[1], Gaurav Patte[2,] Kshitij Bahisare[3], Chetna Gharjale[4],

COLLEGE AFFILIATION Govindrao Wanjari College of Engineering & Technology[1 2 3 4]

ABSTRACT Corporate Social Obligation is an idea which has become predominant in business era. Each organization has a strategy concerning CSR and produces a report every year itemizing its action. What's more, obviously every one of the cases to have the option to perceive corporate movement which is socially capable and action which isn't socially mindful. Regarding this, there are two intriguing points: First, they may not always agree on what constitutes social responsibility; furthermore, the case to perceive what it is or alternately isn't the point at which we are approached to characterize it then the business view this as unthinkably troublesome. The papers discuss the challenges and benefits of Corporate Social Responsibility. The paper examine about the different issues and difficulties looked by the Indian firms in India. Scarcely any healing means are likewise examined for the difficulties confronted.

KEYWORDS Corporate social obligation, issues, challenges, remedial measures

TITLE	7.2 A Study On Environment Management As A Tool For Sustainable Development
AUTHOR	Dr. Deepa Choudhari[1], Ajit Fule[2], Sakshi Gharjale[3], Ashik Rangari[4]
COLLEGE AFFILIATION	Govindrao Wanjari College of Engineering & Technology[1 2 3 4]

ABSTRACT

Environment is a broad term that includes all the different environments in which a person experiences and reacts to events and changes. This includes land, water, vegetation, air, and the full range of social order. This also includes the physical and ecological environment. It is about the human ability to adapt both physically and mentally to constant changes in the environment. Solving the major environmental and sustainability challenges facing the world's developing and industrialized regions requires a coordinated approach. Therefore, there is a need for a deeper understanding of the interdisciplinary relationships between sustainable development, human health, and the environment. Particular emphasis was placed on globalization and sustainable growth, bioethics and poverty, organizational performance and sustainability, environmental management and personal advancement, human and ecosystem health, and water resources and recycling. Achieving sustainability in all human activities aimed at development, interactions between society, development and the environment and their impact on sustainable development. Technical, economic, ethical and philosophical aspects of sustainable development. Sustainable use of land, water, energy and biological resources in development. The impact of agricultural and forestry activities on soil, aquatic ecosystems, and even biodiversity must be considered.

KEYWORDS Environment management, sustainable development, ecosystem, biodiversity.

TITLE	7.3 A Study On Human Resource Development & Innovations
AUTHOR	Dr. Samrudhi Churad[1], Kajal Nandgaonkar[2], Chetna Chavan[3], Shubham Meshram[4]
COLLEGE AFFILIATION	Govindrao Wanjari College of Engineering & Technology[1 2 3 4]

ABSTRACT

HRM could be an administration range concerned with the arranging, organizing, and administration capacities of acquiring, developing, holding, and utilizing human assets to attain organizational and person objectives. " HRM is the method of securing, preparing, assessing, and fulfilling representatives. This increments their inspiration to attain both organizational and individual objectives. HR is more than fair an authoritative back work and plays an increasingly key part in each company. Viable human assets offices use the most recent innovation to draw in, enlist, and hold the most excellent ability for their company. By dependably managing and measuring execution, supervisors can guarantee that representatives are working at crest productivity. All of this must be drained a cost-effective way. To succeed, HR divisions got to use imaginative thoughts. Arranged organizational alter regularly points to make strides productivity at one or more of four diverse levels: human assets, useful resources, technical capabilities, and organizational capabilities. Moreover, since self-managing groups have taken over numerous capacities customarily performed by administration, bosses and centre supervisors inside their claim positions are utilizing team-building approaches to create their parts Conceptualized. Human assets data framework "HRIS" could be a framework for collecting, putting away, handling, analyzing, recovering, and conveying information related to human assets of an organization.

KEYWORDS Human Resource Information System (HRIS), Management Information System (MIS), Return On Investment (ROI)

TITLE	7.4 A Study On Woman Empowerment In Rural Areas Of India
AUTHOR	Dr. Payal Pashine[1], Naina Gedam[2], Pratiksha Alone[3], Prerna Moundekar[4]
COLLEGE AFFILIATION	Govindrao Wanjari College of Engineering & Technology[1 2 3 4]

ABSTRACT

The topic of this study is 21st-century women's empowerment. This study attempts to investigate women's education in pre-colonial, colonial, and modern India; women's empowerment; violence against women; women's rights; the Indian Constitution's legal protection of women; and the role of non-governmental organizations in women's lives empowerment, the government's initiatives and plans for it, the role that education has played in empowering women, and how, in the twenty-first century, women's empowerment is transforming Indian society. Consequently, it is noted that women's education in Indian society has a strong historical foundation dating back to the Vedic era. This study also demonstrates that enhancing women's social, economic, political, and legal power is referred to as women's empowerment.

Through education, the women will become more politically, socially, and economically aware. Overall, this study demonstrates how women's empowerment has advanced and transformed Indian society in the twenty-first century.

KEYWORDS Women empowerment, Social & economic development, NGO's

TITLE	7.5 A Study On The Logistic Management Towards The Efficiency Of Business
AUTHOR	Dr. Deepa Choudhari[1], Diksha Bansod[2], Khusboo Paunikar[3], Satish Pandawala[4]
COLLEGE AFFILIATION	Govindrao Wanjari College of Engineering & Technology[1 2 3 4]

ABSTRACT

The management of a product's capacity and development is known as logistics. Association additionally screens the organized segment of material and data goes through the affiliation. The motivation behind coordinated factors organization is to deal with the affirmation of undertaking life cycles, supply fastens and working out as expected efficiencies.

The motivation behind planned operations organization is to deal with the affirmation of undertaking life cycles, supply binds and happening as expected efficiencies. Strategies organization is a point of convergence of the creation orchestrates which consolidates plans, get to activity and contrails the skilled, strong development and opposite stream and getting of items, organizations and data between the motivation behind start and the reason for utilization with a saying to meet clients' necessities.

In this paper the researcher has made sense of the targets and the parts of strategic administration which would assist the business with driving effectiveness by upgrading stock, reducing expenses and above, and conveying further developed client support and benefits.

KEYWORDS Coordinated factors, Association, client support

TITLE	7.6 A Study On Benefits Of Social Media Marketing
AUTHOR	Dr. Payal Pashine[1], Pratiksha Mate[2], Hrushali Gharjale[3], Vidhi Nandgaonkar[4]
COLLEGE AFFILIATION	Govindrao Wanjari College of Engineering & Technology[1 2 3 4]
ABSTRACT	Informal communication promoting is the most recent mantra for some brands after early last year. Advertisers are seeing the various potential outcomes in person-to-person communication and are beginning to present creative social missions more rapidly than any time in recent memory. Companies that use social networking ads have become more sophisticated. Global corporations have also recognized social media marketing as a potential marketing tool and used it to fuel their promotional strategy with inventions. This paper examines about the ideas of social promoting and web-based entertainment showcasing and Parts of social Advertising's'4ps', Online Entertainment Advertising in India, Ideas in Friendly Promoting Hypothesis, and Significant Elements of Social Promoting Hypothesis, Types of social promoting, Utilization of Virtual Entertainment Showcasing.
KEYWORDS	Social media, Impact, Social Marketing

TITLE 7.7 Impact Of Globalization On Talent Acquisition And Talent Retention With Special Reference To Public Sector Banks.

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ABSTRACT

In today's highly competitive world, where change is the only constant factor, it is important for an organization to develop the most important resource of all - the Human Resource. It is only the Human Resource, in this globalize world, which can provide the competitive edge to an organization as under the new trade agreements, technology can be easily transferred from one country to another and there is no shortage for sources of cheap finance. But it is the talented workforce that is very hard to find. Thus Talent acquisition and Talent retention which are part of Talent management have become very important function for the Organization in the present scenario. With the world becoming a global market the role of money transactions has increased to a great extent due to which the responsibility of banks has increased many folds and in the era of consumer as the king its very essential to have talented workforce in the banks. Thus Talent Acquisition and Talent retention plays an important role in Public Sector Banks (PSBs) [banks where a majority stake (i.e. more than 50%) is held by a government]. People are required to acquire and manage the business. It is therefore important for the talent acquirers in the banks to align themselves with the business planning and development strategy of the bank. The large scale expansion of the network of the branches should be kept in view for talent acquisition. Similarly the business models, growth strategy and new areas of business need to be in synchronisation with the talent acquisition exercise. It is also pertinent to have realistic measures in place to evaluate performance in terms of quality of employees, the cost effectiveness and timeliness. The present system of performance assessment in PSBs must undergo change and the subjective elements must be minimised while assessing the performance of the employees. Thus, in this global environment Talent management has become the most significant function in the Public Sector Banks.

KEYWORDS Talent Acquisition, talent retention, public sector banks

TITLE	7.8 A Tool For Poverty Eradication – Empowering Women Through Self Help Groups In Bhandara District
AUTHOR	Prof. Rohan Singh[1],Prof. Rajkamal[2] , Prof. Minakshi Shendre[3]
COLLEGE AFFILIATION	Swaminarayan Siddhant Institute of Technology, Nagpur[1,2,3]
ABSTRACT	The Self help groups have been formed to empower the rural women below poverty line. The important concept of SHGs is for the Economic and Social empowerment of the women. A common definition of microfinance is financial assistance for clients who are poor or have low incomes. The self help group movement is an innovative initiative which connects group members, who did not, had a bank account or who had no access to financial services in a sustainable and accessible manner to become a member of SHG and avail the facilities. In this paper the researcher had covered the study on socio-economic conditions of members of SHGs in Bhandara District. The study is based on both primary and secondary data and the data analysis is done by the statistical methods. The researcher had used the T-test paired sample for the hypothesis testing.
KEYWORDS	SHGs, Socio-economic, Income, Savings, Microfinance.

TITLE	7.9 A Study On Impact Of Stress Management On Employees Performance
AUTHOR	Dr. Gauri Nimje[1], Shantanu Zade[2], Twinkle Potbhare[3], Rohit Walmiki[4], Anushka Dhote[5]
COLLEGE AFFILIATION	Govindrao Wanjari College of Engineering & Technology[1 2 3 4 5]
ABSTRACT	The purpose of this study is to investigate the effect of pressure control on work performance. This study uses surveys to gather facts from key re-assets that can answer the research questions. This is a cross-sectional study where facts are collected to answer a research question. The study is dedicated to investigating the impact of stress management on employee performance with particular reference to Mahindra and Mahindra. Therefore, the use of questionnaires has come into question. The collected data was then analysed and responses and policies were determined with the help of staff. They found that pressure affects every area of an employee's life, especially the workplace and that its impact on employees has a direct impact on the organization as a whole. Stress comes from internal and external factors. Stress within the painting area creates an unsightly painting environment. Approaches that can be used to treat it are promoting pressure control techniques and policies. It is important for companies to ensure a comfortable ecosystem for the greater good.
KEYWORDS	Stress management, work place, Work performance.

TITLE	7.10 A Study On Impact Of Various Risk Associated With Real Estate Projects
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ABSTRACT	The construction industry is now one of the developing industries. Today's industry has an important impact on the country's economy with a large amount of investment. This was gained as part of infrastructure development activities. many projects. The measures implemented involve significant time and cost overruns. Construction projects increase overall delays budget. Projects must be planned and organized To be properly and carefully executed to complete within the allotted time Appropriate quality time. The theme is activities in the construction industry. against various uncertainties and risks that can lead to negative outcomes. Implementation of various activities during the project life cycle. Construction projects can be harmful Consequences of uncertainty or risk. Risk is always associated with the future and when it occurs. It can have a constructive or destructive impact on your project. Project management methods related to projects Risk management is an essential element to managing risks at various levels of a project, Reduce time and cost as well as quality and safety issues.
KEYWORDS	Real estate projects, risk management, destructive effect.

TITLE	7.11 The Impact of AI and Machine Learning on Marketing: A Business Analyst's Perspective
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ABSTRACT

The world of marketing is rapidly evolving thanks to the development of Machine Learning (ML) and Artificial Intelligence (AI). The advent of AI and ML technologies has changed the business environment, offering opportunities and challenges to enterprises in every industry. These modern technologies have completely changed how companies engage with their client and run their advertising efforts. This paper explores the effects of machine learning (ML) and artificial intelligence (AI) on company marketing tactics. However, there needs to be a smooth integration of technical implementation with marketing strategy for AI and ML to pay off. This is where business analysts' (BAs') function becomes even more important. This study investigates the benefits of using AI-ML in marketing initiatives, emphasizing how it may improve customer experiences, optimize marketing tactics, and increase productivity. It does this by carefully examining news, literature, and industry data. It specifically looks at how BAs can use their special set of abilities to: -

- Transform marketing requirements into concrete technical specifications for AI/ML models
- Promote data governance and make sure that marketing campaigns incorporate morally and responsibly developed AI techniques.

KEYWORDS Machine Learning, Artificial Intelligence, Advertising.

TITLE	7.12 Disruptive Innovations: Managing the Employees Effortlessly During Covid-19
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ABSTRACT	The Covid-19 pandemic has prompted severe social and economic disruption around the world, including the largest global recession since the Great Depression. Wide spread supply shortages, including food shortages, were caused by supply chain disruptions. The pandemic has raised issues of racial and geographic discrimination, health equity, and the balance between public health imperatives and individual rights. People are known as the primary asset and the backbone of any organization that helps achieve their goals. Accordingly, to manage these human resources sustainably, the Human Resource manager of the organization makes strategy regarding the policies & practices so that the organization can run smoothly. The purpose of this comprehensive review study is to identify the number of HR practices & policies due to which many challenges, strategies, and the decisions related to human resource management was effected during the COVID-19 pandemic, which responds to the Disruptive Innovations. This study is based on organizations' human resource management strategies with reference to Practices & Policies to combat the COVID-19 impacts. Our study is based on the primary data which will get collected from the employees of the organizations who were not user friendly but after the disruptive innovations in the Human Resource Management they become user – friendly. For analysis of this data the researcher will be using Chi-square test as a statistical method for acceptance of the Null hypothesis.
KEYWORDS	Racial and geographic discrimination, Disruptive Innovations, combat