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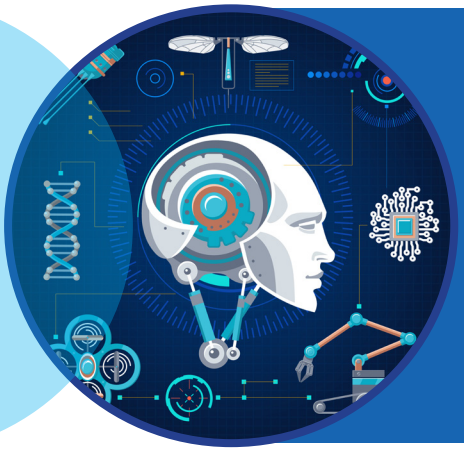
ICRATESM

# International conference on

# RECENT ADVANCES IN TECHNOLOGY, ENGINEERING, SCIENCE AND MANAGEMENT

*"Translating The Latest Findings From Pioneering Multidisciplinary Research Studies From A Retrospective Perspective"*



# ICRATESM 2023

**2023**
16th-17th,March

Dilkap Research Institute of Engineering and Management Studies, Mumbai

*Organized by*
**Dilkap Research Institute of Engineering and Management Studies, Mumbai**
*In Association with*
**Institute For Engineering Research and Publication (IFERP)**

Publisher: IFERP Explore

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# PREFACE

The **International conference on Recent Advances in Technology, Engineering, Science and Management (ICRATESM 2023)** is being organized by **Dilkap Research Institute of Engineering and Management Studies, Mumbai** In Association with **Institute For Engineering Research and Publication (IFERP)** on the 16th - 17th March 2023.

The **"International conference on Recent Advances in Technology, Engineering, Science and Management"** was a notable event which brings Academia, Researchers, Engineers, Industry experts and Students together.

The purpose of this conference is to discuss applications and development in area of "**Engineering, Applied Science & Management**" which were given International values by **DRIEMS & IFERP** .

The International Conference attracted over 225 submissions. Through rigorous peer reviews 135 high quality papers were recommended by the Committee. The Conference aptly focuses on the tools and techniques for the developments on current technology.

We are indebted to the efforts of all the reviewers who undoubtedly have raised the quality of the proceedings. We are earnestly thankful to all the authors who have contributed their research works to the conference. We thank our Management for their wholehearted support and encouragement. We thank our Principal for his continuous guidance. We are also thankful for the cooperative advice from our advisory Chairs and Co-Chairs. We thank all the members of our DRIEMS organizing Committee, National and International Advisory Committees.

**ICRATESM 2023**

# "Translating The Latest Findings From Pioneering Multidisciplinary Research Studies From A Retrospective Perspective"

**THEME**

# MANAGING DIRECTOR

**Mr. A. Siddth Kumar Chhajer**
*Managing Director & Founder*
*Institute For Engineering Research and Publication (IFERP)*

On behalf of IFERP & Dilkap Research Institute of Engineering and Management Studies, Mumbai, the organizing Committee, I express my hearty gratitude to the Participants, Keynote Speakers, Delegates, Reviewers and Researchers.

The goal of the ICRATESM is to provide knowledge enrichment and innovative technical exchange between international researchers or scholars and practitioners from academia and industries in various fields of academics. This conference creates solutions in different ways and shares innovative ideas in the field of Engineering, Education & Technology. ICRATESM provides a world class stage for the Researchers, Professionals, Scientists, Academicians, and students to engage in very challenging conversations, assess the current body of research and determine knowledge and capability gaps.

# CEO CHIEF EXECUTIVE OFFICER

**Mr. Rudra Bhanu Satpathy**
*Chief Executive Officer (CEO) & Founder*
*Institute For Engineering Research and Publication (IFERP)*

IFERP & Dilkap Research Institute of Engineering and Management Studies, Mumbai is hosting the International conference on Recent Advances in Technology, Engineering, Science and Management (ICRATESM 2023) this year in the month of March. The main objective of ICRATESM is to grant the amazing opportunity to learn about groundbreaking developments in modern industry, talk through difficult workplace scenarios with peers who experience the same pain points, and experience enormous growth and development as a professional. There will be no shortage of continuous networking opportunities and informational sessions. The sessions serve as an excellent opportunity to soak up information from widely respected experts. Connecting with fellow professionals and sharing the success stories of your firm is an excellent way to build relations and become known as a thought leader.

I express my hearty gratitude to all my Colleagues, Staff, Professors, Reviewers and Members of the organizing committee for their hearty and dedicated support to make this conference successful. I am also thankful to all our delegates for their painstaking effort to make this conference successful

# PRINCIPAL

**Dr. Shashank Divgi**
*Principal*
*Dilkap Research Institute of Engineering and Management Studies*

It gives me great pleasure to share that the Dilkap Research Institute of Engineering and Management Studies is organizing the International Conference (ICRATESM'23) on the theme: "International Conference on Recent Advance Technology, Engineering, Science and Management" from 16th to 17th of March, 2023. The theme efficiently encapsulates the notion of shared recent technology and a sense of advance engineering, science and management. ICRATESM'23 seeks to present a worldwide viewpoint through a space where the young assume the responsibility to rise from the myriad of issues and find a solution, constructing harmonious relations for security, social advancement, best expectations of the world and common liberties.

ICRATESM brings together diverse members in an increasingly interdependent world to discuss, deliberate and end up with collective decisions, ensuring the opportunity for the amelioration of all. These discussions and deliberations amongst the leaders of tomorrow pose to be the foundation stone towards edifying their contemporary minds and honing their already notable outlooks on diverse adversities. The international sphere has faced and overcome unprecedented arduous situations in this new normal.

ICRATESM holds onto its belief in perseverance as it hosts varied university participants worldwide. I extend my best wishes to the delegates and wish them a great learning experience. At ICRATESM'23, we proudly present the hybrid mode conference incorporating the essence of virtual and in-person experience.

Unequivocally, the hard work and marvelous commitment of the Convenor, Co-Convenor, and all other staff members will create a ripple effect, making ICRATESM'23 a spectacular success!

# KEYNOTE SPEAKER

**Professor Dr. DP Sharma**
*Computer Scientist &*
*Digital Diplomacy Expert*
*AMUIT, MOEFDRE under UNDP and IGF*
*(UN initiative for Digital Cooperation),*
*National Brand Ambassador, Swachh Bharat*
*Mission Rajasthan, India*

As a keynote speaker,

It's an immense pleasure for me to be part of the "International Conference on Recent Advances in Technology, Engineering, Science, and Management (ICRATESM 2023)", which is scheduled to take place on 16th and 17th March 2023 organized by Dilkap Research Institute of Engineering and Management Studies, Mumbai in association with Institute for Engineering Research and Publication (IFERP).

We are in the tech world where emerging technologies like the Internet, IoTs, and Artificial Intelligence are trying to converge in Science, Technology, Management, and Education. The true essence of this convergence is to create new paradigms and to make our life smart and convenient.

This conference is truly a multidisciplinary, interdisciplinary, cross-disciplinary, or transdisciplinary event and I am sure that this conference will be an iconic platform for researchers and scholars to showcase and present their theoretical and practical research outcomes.

I wholeheartedly appeal to all participants to actively participate in making the event a mega success.

My sincere thanks to the organizers for their great efforts in making this scientific event remarkable, stimulating, and special. Wishing you all the best. See you on board.

# KEYNOTE SPEAKER

**Dr. Suresh Kaswan**
*Professor & Associate Dean*
*Faculty of Engineering and Technology*
*Sharda University, Uzbekistan*

Its my pleasure and fortune to participate in the "International Conference on Recent Advances in Technology, Engineering, Science and Management (ICRATESM 2023)" , which is scheduled to take place on 16th and 17th March, 2023 organized by Dilkap Research Institute of Engineering and Management Studies, Mumbai in association with Institute for Engineering Research and Publication (IFERP), as Keynote speaker (Virtual).

its main objectives to promote novel developments in stages of resolving conventional obstacles encountered in daily multidisciplinary settings. Technology is developing at a very rapid rate, which is now severely reducing our available supply and causing severe ecological degradation. The design of weather modification makes up for the harm caused by this massive, large-scale augmentation in all aspects of daily life.
I wholeheartedly appeal to all students, researchers, academic participants to come forward and contribute.

My special thanks to the organizers for their great efforts in making this research event remarkable, contributory, and successful. My thanks also go to all the participants.

Wishing you all the best for future endeavors.

# KEYNOTE SPEAKER

**Dr. Nagendra Narayan**
*Chairman – IIA Kapurthala & Hoshiarpur Sub-Centre*
*Associate Professor & HOD*
*Lovely School of Architecture & Design, and School of Civil Engineering*
*Lovely Professional University, Punjab, India*

Dear Colleagues,

Warm Greetings from Lovely Professional University, Phagwara, Punjab, India.

As a Keynote Speaker, it is my great honour and pleasure to invite all to participate in the International Conference on Recent Advances in Technology, Engineering, Science and Management – 2023 which is scheduled to take place on the 16th and 17th of March, 2023 organized by Dilkap Research Institute of Engineering and Management Studies, Mumbai, in association with Institute for Engineering Research and Publication (IFERP), the Academic Partner Lovely Professional University, Phagwara, Punjab, India.

The purpose of this conference is to provide a stage for researchers and practitioners from academia and industry to deal with state-of-the-art advancement in their respective fields. I welcome all the keynote speakers, eminent dignitaries, session chairs, presenters and delegates to this conference. At this juncture, I add my best wishes to organizers for a successful and fruitful conference. I thank the organizers for giving me an honour and opportunity to be part of this distinguished gathering and wish for a grand success of the event. I am pretty sure that this conference will be interesting and fruitful and I hope that you will very much enjoy it and benefit.

# SESSION SPEAKER

**Prof. Er. Jimmy Gupta**
*Assistant Professor and Structural Engineer*
*Lovely School of Architecture & Design, and*
*School of Civil Engineering*
*Lovely Professional University, Punjab, India*

Dear Colleagues and Participants,
Warm Greetings from Lovely Professional University, Phagwara, Punjab, India.
It is my great pleasure to welcome you all to the International Conference on Recent Advances in Technology, Engineering, Science and Management – 2023, going to be held on 16th & 17th March, 2023, organized by Dilkap Research Institute of Engineering and Management Studies, Mumbai, in association with Institute for Engineering Research and Publication (IFERP), the Academic Partner Lovely Professional University, Phagwara, Punjab, India. I'm enormously delighted to participate in the same and feel really honored and privileged to serve as the Session Speaker of the conference.

This conference provides a platform to bring together not only national/international researchers, academicians, research scholars, graduate or postgraduate students but also industrial people from several fields. This endeavor will embark on a whole process of making new dimensions in the field of education and research.

The conference would not have been possible without the enthusiastic participation and hard work of the organizers and IFERP team and there is the great contribution of the team members of academic partner, Lovely Professional University. I'm grateful to all the authors who trusted the conference with their work, and thank them for sharing their views on current research topics. Special appreciation to team members for reviewing a number of articles/papers and offering advice to upkeep and enhance the quality of work for this conference.

I would like to express my huge appreciation to all the participants and listeners for their valuable contribution in this conference. I once again thank the organizers for giving me an honor and opportunity to be part of this distinguished gathering and wish for a grand success of the event.

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# SESSION SPEAKER

**Dr. Mahendra Joshi**
*Professor*
*Lovely School of Architecture & Design*
*Lovely Professional University, Punjab, India*

I am enormously delighted to participate in "International Conference on Recent Advances in Technology, Engineering, Science and Management – 2023" Hybrid Conference, which is organized by Dilkap Research Institute of Engineering and Management Studies, Mumbai, In association with Institute For Engineering Research and Publication (IFERP). By and large, in this era, the Internet, the Internet of Things, advanced and smart technologies, and other advancements in sustainable technologies have become the most indispensable parts of our life. I am certain that this conference will provide researchers and scholars with in-depth insight into theoretical and practical backgrounds related to sustainable technologies.

I wholeheartedly appeal to all participants to move forward to conduct further advanced research in Sustainable Technology. My special thanks to the organizers for their great efforts in making this scientific event remarkable, stimulating, and successful. My thanks also go to all the participants

.

# SESSION CHAIR

**Prof. Dr. Ambuj Kumar**
*Professor*
*Lovely School of Architecture & Design*
*Lovely Professional University, Punjab, India*

Dear Colleagues and Participants

It's my pleasure to be a part of "International Conference on Recent Advances in Technology, Engineering, Science and Management – 2023" as a Session Chair. First, I feel very happy to welcome all of you to this august gathering to share feelings, ideas, and expertise of various fields of subjects' knowledge and obviously the recent advances in these fields of knowledge.

As we know there is no end of 'knowledge and its applications'- so the very purpose of this conference is to explore more and more through exchanging our domain with others. Research and innovations are two basic elements of a positive thought process as research converts knowledge to societal wealth whereas innovation turns the knowledge to societal benefits, so, we must create a 'Eco- System' which generates and accelerates these two elements of thought process whereas Conference is the foundation of this Eco-system. So, dear participants please use this conference to its fullest potentials to make it further novelty workforce.

Wholeheartedly I appeal all participants to go ahead with this novel process of conference. I thank to the organizers for their great effort to make this event stimulating and successful. I also thank to all participants and wish you all the best for this Endeavor.

Thanking you all once again

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# Table of Contents

# ABSTRACTS

International conference on
Recent Advances in Technology, Engineering, Science and Management
Institute For Engineering Research and Publication (IFERP)
16th & 17th March 2023|Mumbai

# To Study the Volatility of Global Capital Markets Under Economic Shocks

**Ms. Ariba Atique Sayed**
Research Scholar, M.Sc. Economics, Dr. Vishwanath Karad MIT-WPU, Pune
**Dr. Jayaraj Rajaiah**
HoS, School of Economics, Dr. Vishwanath Karad MIT-WPU Pune

## Abstract
The volatility and resilience of a capital market remains unpredictable till date with a bare minimum to the technical analysis and bullish and bearish trend in the market pertaining to the unsystematic risk of the market which depends on the performance of the companies and policy changes. The systematic risk arising due to unknown factors goes untapped for mitigation of risk which leaves the market vulnerable. Other than this risk the market boils down to systemic risk which is an ensue of market failures due to unforeseen exogenous shocks converging to negative economic shocks. Considering the NASDAQ, NSE, London Stock Exchange, Shanghai Composite Stock Exchange and MOEX Russia for the study, it is aimed to analyse the volatility in the stock market under a negative economic shock. The negative economic shock to be taken into account for this meticulous study are Global Financial Crisis (2007-08), Russia-Ukraine War and Covid-19 Pandemic. The objective of the paper defines to take into account financial downturn, socio-political unrest and a situation of pandemic which brought the world to a lockdown and hence affected the GDP, aggregate demand and financial working of the economies. The capital market across globe came into an unrest and the motive is to tap the integrated and consolidated change in the capital market due to such negative economic shocks. Hence, this paper will complete the cycle of estimating the volatility in the capital market due to negative economic shocks with Garch and E-Garch Models.

## Key words
Capital Market, Negative Economic Shocks, NASDAQ, NSE, London Stock Exchange, Shanghai Composite Stock Exchange, MOEX Russia, are Global Financial Crisis (2007-08), Russia-Ukraine War, Covid-19 Pandemic, Unit Root Tests, Garch and E-Garch.


ISBN : 978-93-92105-56-2

International conference on
Recent Advances in Technology, Engineering, Science and Management
Dilkap Research Institute of Engineering and Management Studies, Mumbai
16th & 17th March 2023|Mumbai

# Smart IoT Based Early Flood Monitoring System using Raspberry Pi

**Sharmasth Vali Y**
School of Computer Science and Engineering & Information Sciences, Presidency University, Bangalore, Karnataka
**Shakkeera L**
School of Computer Science and Engineering & Information Sciences, Presidency University, Bangalore, Karnataka

## Abstract
The human are still not able to battle the natural calamities besides huge development in technologies. The fact is that the natural calamities can neither be abolished nor be prevented. But the technology has been developed gigantically in order to prevent loss of life. This work is based on informing the civilians about the upcoming flood so that they can evacuate the danger area before the flood hits. The early flood detection and avoidance system has the early information and gives real time temperature and humidity data. This will help to detect the rise in the water level using sensors. The main objective the work it to detect and monitor early prediction flood situation using IoT sensors that in turn helps many lives to save from major destroyment.

## Key words
Raspberry Pi; Float sensor; Raindrop sensor; Ultrasonic sensor; Water level sensor;

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ISBN : 978-93-92105-56-2

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Recent Advances in Technology, Engineering, Science and Management
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# Role of Technology in Analysis of Bioenergy and Facilitating a New Dimension in Holistic Healing

**Priyanka Mishra**
Assistant Professor and Ph.D. Scholar, Kalinga Institute of Industrial Technology (KIIT) Deemed to be University, Bhubaneswar, Odisha, India
**Indu Bora**
Professor, Lakshmibai National Institute of Physical Education Gwalior (MP), India

## Abstract
Human beings are constantly vibrating in unique electromagnetic waves. Our body system is a network of chakras that nourish the body's 37.2 trillion cells and the brain's billions of neurons. These chakras are linked to the chemical messengers or the neurotransmitters in the body to control various physical, mental and emotional processes. These affect the energy field or aura which in turn affects the behaviour, memory focus and concentration, sleep, heart rate, blood flow, movement, growth and development, reproduction, etc. The energetic disruptions in the energy bodies appear as diseases that manifest as ailments in the body. These blockages when cleansed, energized and balanced by the energy healing techniques, accelerates the healing process of the body, restoring harmony between the body, mind and soul. There are various complementary biofield energy therapies that help to strengthen the body's ability to heal using the cosmic energy or the pranic energy. Several researches have shown that the bioenergy field changes prior to any physical changes in the body which may be analysed to predict the ailments developing in the physical body for an apt initiation of prevention or treatment. This study attempts to understand a few approaches for measurement of biofield energy and recognize the use to improve the holistic health.

## Key words
Bioenergy field, healing, aura, neurotransmitters


ISBN : 978-93-92105-56-2

International conference on
Recent Advances in Technology, Engineering, Science and Management
Dilkap Research Institute of Engineering and Management Studies, Mumbai
16th & 17th March 2023|Mumbai

# Stress Analysis of Projectile 155mm ERFB BT by Analytical Method

**Rajesh B. Ohol**
DRDO- Department of Mechanical Engineering, Defence Institute of Advanced Technology, Deemed University, Pune, Maharashtra, India.
**Tekram Parshuramkar**
DRDO- Department of Mechanical Engineering, Defence Institute of Advanced Technology, Deemed University, Pune, Maharashtra, India.
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**Dineshsingh G. Thakur**
DRDO- Department of Mechanical Engineering, Defence Institute of Advanced Technology, Deemed University, Pune, Maharashtra, India.

## Abstract
Gun bore safety of artillery projectile 155mm High Explosive Extended Range Full Bore Boat Tail is of paramount importance. To ascertain the gun bore safety of this artillery ammunition subjected to maximum propellant pressure inside the gun barrel, it is essential to determine the stress levels induced in the shell body of the projectile. The stress calculation by analytical method is a complex exercise owing to the varying wall thickness and external profile of the shell body along with the length. The shell body is assumed to be a thick wall cylinder, and Lamè's theory is applied to study the tangential, radial, and longitudinal stresses induced in the shell body. The study is intended to check if the shell body filled with the high explosive deforms against maximum propelling charge pressure inside the gun barrel. The results of the analytical analysis are validated with the numerical simulation carried out in FE code ABAQUS. The study reveals the nature of stress distribution in the shell body. The equivalent stress induced in the shell body is within the limit of the yield strength. The results obtained reveal that the stress state of the projectile is in good agreement with the yield criterion.

## Keywords
Gun bore safety, 155mm HE ERFB BT, Lamè theory, Equivalent stress, Yield criterion.


ISBN : 978-93-92105-56-2

International conference on
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16th & 17th March 2023|Mumbai

# Smart Battery Enclosure Design for Li-Ion Battery Cells Through Anlytical Methods of Simulation and Experiments

**Deepak Singh**
Bhartiya Skill Development University Jaipur
**Sunil Anand**
Bhartiya Skill Development University Jaipur

## Abstract
Battery technology is an emerging technology. Several reports of electric scooters catching fire have surfaced. Fires can occur as a result of poor-quality cells that are exposed to high temperatures. The majority of researchers have studied heating at the cell level, but no significant work has been done on battery pack surrounding temperature rise. This paper presents a novel surrounding thermal management solution for composite material enclosures. Thermal management achieved through the use of paraffin phase change material for cost-effective heat regulation. The results of laboratory experiments and simulations on Li-ion battery enclosures are analyzed for their thermal profiles in electric vehicle applications. Battery pack composed of 1.5 kWh modules with cells connected in series and parallel circuits. The amount of series and parallel circuits depends on the voltage and current required in the module. Li-ion battery is considered to be the best in energy storage capacity. Control of surrounding temperature is essential for the effective functioning of this battery. Without a thermal control system, battery life is adversely affected, and there is a fire risk. The temperature between 10 °C and 40 °C must be maintained for the Li-ion battery to function efficiently. The battery's internal resistance must be balanced to protect and maintain battery life. The operating temperature setting of the battery is maintained at 40 to 15 °C. Maintaining the temperature of the battery pack also helps to reduce loss of life and protect against thermal runaway which increases when the temperature rises above 175 °C due to the diffusion of the battery's sudden flow of energy. This temperature rise due to energy flow depends on the rate of discharge; the flow of energy rate higher than the rated increases the heat. The performance of the battery modules was tested under constant current discharge rates of 2C, 3C and overload conditions of 4C, and 6C. It was found that Composite material enclosure integrated with phase change material is low cost-effective solution for better thermal management solution.

## Keywords:
Lithium-ion battery, Temperature distribution, paraffin phase change material, Heat generation


ISBN : 978-93-92105-56-2

International conference on
Recent Advances in Technology, Engineering, Science and Management
Dilkap Research Institute of Engineering and Management Studies, Mumbai
16th & 17th March 2023|Mumbai

# Medical Value Tourism: A Revival for Post Covid Tourism Industry in India.

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## Abstract
Medical value tourism refers to the practice of traveling to another country for medical treatment, often due to the lower cost or greater availability of certain procedures. India has become a popular destination for medical value tourism, due to its reputation for high-quality healthcare services at relatively low prices compared to developed countries. Additionally, India has a well-developed healthcare infrastructure, with a large number of highly-skilled medical professionals, modern hospitals, and cutting-edge technology. Tourism being one of the largest income generators, with a multiplier effect on various other sectors. The Union Budget 2023 is set to promote the Tourism sector on 'mission mode'. This paper analyses the economic potential and the advantage of the cost savings and high-quality health care and growing medical value tourism in India. India has been seeking to attract more foreign direct investment in recent years, in order to spur economic growth and create jobs. The healthcare sector, including medical value tourism, has been identified as a key area for foreign investment in India. Present study found that, tourism sector catered to revenue generation up until the pandemic. The highest was 20.342 trillion in 2018. With the pandemic revenue dropped to 15.731 trillion and further to 10.024 trillion by 2020 and combined average growth rate was -2% from 2015 to 2019. The sector is slowly making a comeback, with an average growth rate of 39% in 2020-2021 with an estimated forecast of 15.9 trillion in 2022.

## Keywords
Tourism, Medical Value Tourism, Economic Impact, Revenue & Foreign Exchange Earnings, Employment.


ISBN : 978-93-92105-56-2

International conference on
Recent Advances in Technology, Engineering, Science and Management
Institute For Engineering Research and Publication (IFERP)
16th & 17th March 2023|Mumbai

# U-Slotted Wideband Microstrip Patch Antenna for Ka- Band and mmW 5G Applications

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## Abstract
5G stands for 5th generation network. It allows us to connect people, machines, objects, etc. this paper will be talking about the design of a simple rectangular microstrip patch antenna for Ka bands and mmW applications at 35 GHz as an operating frequency with dimensions 4.4 x 3.05 $mm^2$ and we got after simulation some parameters such as bandwidth equals to 4 GHz, 5.3 dB as Gain, 6.5 dB as Directivity, 1.9 as VSWR (Voltage Standing Wave Ratio). Then, we tried to improve those parameters by doing another design known as a U slot antenna and we achieved, bandwidth equal to 3 GHz, 6.08 dB as Gain, 7.16 dB as Directivity, 1.3 as VSWR. The proposed antenna has been made using FR4 material for substrate and has successfully improved the values of parameters because efficiency is 85% and is suitable for 5G applications.

## Keywords
Ka bands, 5G applications, U-slot, Microstrip patch antenna

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ISBN : 978-93-92105-56-2

International conference on
Recent Advances in Technology, Engineering, Science and Management
Dilkap Research Institute of Engineering and Management Studies, Mumbai
16th & 17th March 2023|Mumbai

# Effects of Radiation Absorption, Soret and Dufour on Unsteady MHD Mixed Convective Flow past a Vertical Permeable Plate with Slip Condition and Viscous Dissipation

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## Abstract
**Objective:** The objective of current study is to discuss the effects of the Soret and Dufour with radiation absorption, applied heat source and viscous dissipation on an unsteady MHD mixed convective flow with velocity slip condition across a semi-infinite vertical permeable plate in porous medium.
**Method:** A similarity transformation is used to turn the governing partial differential equations with proper boundary conditions into coupled, non-linear ordinary differential equations with variable coefficients. The inbuilt MATLAB solver bvp4c is used to generate numerical solutions.
**Findings:** The effects on momentum, thermal and solutal boundary layers for various parametric values are graphically depicted. Skin friction, Nusselt number and Sherwood number are all tabulated and discussed in detail. An improvement in radiation absorption corresponds to enhancement of the heat transfer rate up to 59% while leading to a decline in mass transfer rate around 20%. The momentum, thermal and solutal boundary layers are all found to be boosted when the Soret effect is higher. For higher estimation of slip effect, the skin friction is found to decay around 23%. Also as more time goes by the thermal and concentration boundary layers are enhanced.
**Novelty:** Results obtained in this studied has also been compared and verified with available scientific literature and is found to be in good agreement, which establishes assurance in the numerical results reported in the study.

## Keywords
Radiation absorption; porous medium; Slip flow; Soret; Dufour; Viscous Dissipation


ISBN : 978-93-92105-56-2

International conference on
Recent Advances in Technology, Engineering, Science and Management
Institute For Engineering Research and Publication (IFERP)
16th & 17th March 2023|Mumbai

# Sustainable Development Goals: A Developmental Agenda for the Sustainable Development of Scheduled Tribes in India

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## Abstract
The Sustainable Development Goals (SDGs) are a set of 17 globally accepted goals adopted by the United Nations General Assembly in 2015 as part of the 2030 Agenda for Sustainable Development. They aim to end poverty, protect the planet, and ensure peace and prosperity for all. The Sustainable Development Goals (SDGs) are applicable to all countries, including those with significant populations of tribal and indigenous peoples. Development for these groups must align with the SDGs to ensure their inclusion and protection of their rights. Present study focused on the physical, social and cultural development of tribal population in India. There are several hindrances to the development of tribal groups in India. Lack of Education, many tribal communities have low levels of education and limited access to educational opportunities, which undermines their ability to participate in the broader development process. Development for these groups must align with the SDGs to ensure their inclusion and protection of their rights. This study focuses on the sustainability development among the tribal people in India based on the secondary data drawn from the official website of Ministry of Tribal Affairs and other published sources of various survey agencies, journals, books and other periodicals. Census survey 2011 and its reported information are analyzed more to understand about the development of tribal people in the perspective of sustainability factors. Study found that, there are several hindrances to the development of tribal groups in India. Lack of Education, many tribal communities have low levels of education and limited access to educational opportunities, which undermines their ability to participate in the broader development process. Poverty is a major challenge for tribal communities in India, with high levels of unemployment and limited access to basic services such as healthcare, clean water, and sanitation. Tribal communities in India face threats to their land rights, including the loss of traditional lands to large-scale development projects, and the displacement of communities without adequate compensation or alternatives. Tribal communities are often underrepresented in political and decision-making processes, and their voices are often excluded from discussions and decisions that affect their lives and well-being. Tribal communities in India often face significant health disparities, including high rates of malnutrition, infectious diseases, and other health problems. The cultural heritage and traditions of tribal communities are often threatened by the forces of globalization, including the loss of traditional languages, knowledge systems, and cultural practices. Addressing these hindrances is crucial for ensuring the sustainable development and well-being of tribal communities in India. This study suggests a multi-faceted approach that recognizes the complexity of these challenges, and involves the active participation and leadership of tribal communities themselves.

**Key word:**
Sustainable Development, Scheduled Tribes, Community Development, Welfare Measures, Quality of Life.


ISBN : 978-93-92105-56-2

International conference on
Recent Advances in Technology, Engineering, Science and Management
Dilkap Research Institute of Engineering and Management Studies, Mumbai
16th & 17th March 2023|Mumbai

# Eco-friendly Smart Ticket Collector using Raspberry Pi

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## Abstract
In day to day life, to provide a comfort and stress free situation in public and private transport facility, the IoT based smart ticket collector mechanism is used to collect the tickets from the passengers. In this paper, we would like to propose "digital system" for ticket collecting. This work digitalizes the ticking system which would reduce time and as well as paper consumption. This work would help passenger and transport system by saving time and not just humans but also to the forest. RFID tag is used by the user for entering and leaving the bus. Ticket collector would punch the ticket number in the passengers mobile and verify ticket along with passenger's identity card. As ticket are made up of paper, since the system is digitized which would reduce use of paper, leading to reduce in deforestation. The proposed work is not just beneficiary to humans but also to nature.

## Keywords
Microcontroller; Raspberry Pi; Reed sensor; RFID;

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ISBN : 978-93-92105-56-2

International conference on
Recent Advances in Technology, Engineering, Science and Management
Institute For Engineering Research and Publication (IFERP)
16th & 17th March 2023|Mumbai

# A Machince Learning Agriculture Crop Recommendation System Using Soil Composition and Weather Properties

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## Abstract
Without a question, the main source of income in rural India is provided by agriculture and its affiliated industries. The country's Gross Domestic Product is also significantly influenced by the agriculture industry (GDP). The country is fortunate to have such a huge agriculture sector. So, yield prediction is a very important issue in agriculture. Any farmer would be beneficial in knowing how much yield he is about to expect. With the use of machine learning techniques, we can make predictions and create a clear model from the data. It is possible to resolve agricultural problems such as crop rotation, crop prediction, water and fertilizer needs, and crop protection. The need for an effective technique to simplify crop cultivation and aid farmers in their production and management arises from the environment's changeable climatic elements. This might enable aspiring farmers to practice better agriculture.
This project recommends the crop that suitably grows on that particular land. The prediction is done using various machine learning algorithms like Nave Bayes, Random Forest, Decision Tree, SVM and Logistic Regression by the usage of parameters like State, district, soil composition which includes soil nutrients like Nitrogen, Potassium, phosphorous, rainfall, PH level, state and city. With these parameters the prediction system will recommends a crop and fertilizers to be used to increase the yield of the crop in prior.

## Keywords
Machine Learning, Naive Bayes, Random Forest, Decision Tree, SVM and Logistic Regression.


ISBN : 978-93-92105-56-2

International conference on
Recent Advances in Technology, Engineering, Science and Management
Dilkap Research Institute of Engineering and Management Studies, Mumbai
16th & 17th March 2023|Mumbai

# Effectiveness of E-Assessment Tools in Teaching-Learning Process of Higher Education System

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## Abstract
In the present scenario of blended learning, it is most needed to have E-Assessment approach to evaluate the teaching learning process among learners of higher education. Innovative tools have been evolving with emerging needs of education.
During the pandemic with physical distancing, no contact and restricted movement, people were left with no other option but to accept the process of undertaking learning and evaluating online. With this E-Learning gained momentum, but the Teaching-Learning process had flaws. With technology growing by manifolds, the flaws were also doubling up. To counter this, E-Assessment ensures to reduce the flaws and thus, make the online Teaching-Learning process more efficient and effective.
E-Assessment through online tools like quiz, assignment, surveys from LMS and a few of online platforms like KAHOOT, Google forms etc., are the most preferred ones. This research paper is focussed on studying the effectiveness of E-Assessment techniques like MCQ, QUIZ etc., from LMS, proctored examinations and other online platforms along with their advantages and difficulties. It is concluded that E-Assessment is the need of the hour and is successful only if all required criteria are satisfied by both examiner and examinee.

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## Key words
E-Assessment, innovative tools, effectiveness, Higher education



ISBN : 978-93-92105-56-2

International conference on
Recent Advances in Technology, Engineering, Science and Management
Institute For Engineering Research and Publication (IFERP)
16th & 17th March 2023|Mumbai

# Psychological Well-Being of Menopausal Women

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**Abstract:**
Menopause is a crucial period in a woman's life as it brings about many endocrinal and physiological changes such as hot flashes, low libido, mood swings, day and night sweats, trouble in sleeping, joint and muscular aches and so on, that put women at a higher risk of psychological symptoms. Therefore, psychological well-being needs to be monitored and watched upon. The present study was aimed to understand the psychological well-being of menopausal aged women. The study comprised of 409 women in the age group of 45 to 55 years, selected through simple random sampling. The tools used for the study were Menopausal Rating Scale (MRS) developed by Klaas Heinemaan and Psychological Well-Being Scale developed by Dr. Devender Singh Sisodia and Pooja Choudhary (2012). The results of the study revealed a strongly significant inverse relationship between menopausal symptoms and psychological well-being indicating that, as menopausal symptoms increase, the psychological well-being of women decreases.

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ISBN : 978-93-92105-56-2

International conference on
Recent Advances in Technology, Engineering, Science and Management
Dilkap Research Institute of Engineering and Management Studies, Mumbai
16th & 17th March 2023|Mumbai

# Image-based Detetction of Crop Disease and Comparative Analysis Machine

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## Abstract
The productivity of agriculture is most heavily influenced by the Indian economy. Because of the aforementioned factor, plant diseases are more prevalent in agricultural fields and are easier to identify. Presently, agricultural surveillance in wide and diverse areas has increased vigilance for the identification of plant diseases. This study presented an image-based method for the Detection of Black gram Crop Disease (DBCD). The Black gram plant, often referred to as "urad" in India and officially recognized as "Vigna mungo". This work considered four diseases, namely, anthracnose, leaf crinkle, powdery mildew, and yellow mosaic diseases, which have had a considerable negative influence on the output of black gram. The black gram crop disease was classified in this study using the BPLD dataset. For a comparative classification analysis, this work took into account three machine learning algorithms and two deep learning approaches. The k-nearest neighbor, decision tree, and random forest algorithms of machine learning and the artificial neural network and convolutional neural network of deep learning are used for this classification analysis for the detection of Black gram Crop Disease. Accuracy, precision, and recall were measured as part of this investigation to compare the performance of the categorization models. When compared to previous classification models in this study, the deep convolutional neural network approach produced better results.

## Keywords
Crop disease detection, black gram crop disease detection, image-based crop disease, deep learning.


ISBN : 978-93-92105-56-2

International conference on
Recent Advances in Technology, Engineering, Science and Management
Institute For Engineering Research and Publication (IFERP)
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# Flight Price Prediction Using Machine Learning

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## Abstract
People that take flights frequently will be more knowledgeable about the greatest deals and ideal times to purchase tickets. Many airline companies adjust their fares based on the seasons or time of year for commercial reasons. When more people go, the cost will rise. Our genuine concept for the flight prediction system is that we will forecast flight costs by comparing today's prices to those from the previous day. We will create a model to predict flight prices using different machine learning methods on a huge dataset, and the performance of the models will be compared.

## Keywords
Machine Learning, Prediction Model, Pricing Models, Training & Testing, Indian Airlines


ISBN : 978-93-92105-56-2

International conference on
Recent Advances in Technology, Engineering, Science and Management
Dilkap Research Institute of Engineering and Management Studies, Mumbai
16th & 17th March 2023|Mumbai

# An Extensive Survey of Blockchain Simulators for validating consensus mechanisms

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**Abstract:**
Blockchain technology is a boon to current world. Blockchain consist of chain of blocks that contains digitally encrypted information in a decentralized environment. Its prominent characteristics like immutability, transparency, decentralization led to tamper proof and secure transactions. Blockchain technology can be used in different applications like financial management, Risk analysis and management, technology-based applications like IOT, cloud etc. Consensus is an indispensable part of Blockchain. Consensus is a common agreement achieved by all the participating entities in Blockchain network. Lots of simulators are available to work upon blockchain like metamask, Ethereum, BlockSim etc. But still simulators on which we can apply our own consensus protocol needs to be analyzed.

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**Keywords:**
Blockchain, Consensus, Simulator, Decentralization


ISBN : 978-93-92105-56-2

International conference on
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16th & 17th March 2023|Mumbai

# Design, Analysis and Optimization of Composite Leaf Spring for Light Vehicles.

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**Abstract:**
Leaf Spring Is The Most Widely Used Suspension System In Automobiles Which Is Subjected To Various Types Of Stresses And Deflection. Generally, Steel Is Used As A Material For The Leaf Spring But Steel Is Having High Density Due To Which Its Weight Is Also More. There Is A Lot Of Scopes To Replace The Steel With Other Material To Reduce The Total Weight Of The Vehicle. The Advancement In Plastic-Reinforced Fibre Is Useful For Decreasing The Weight Of The Component The Composite Materials Are Having High Strength And Low Weight As Compared To Steel. In This Proposed Work Composite Material Is Used In Place Of Conventional Steel. The Composite Material Is Made Up Of Glass And Fibre Called Epoxy Resin. Various test Is Performed To Carry Out The Properties Of The Composite Material. Ant Colony Optimization Approach Is Used To Design And Optimization Of Composite Leaf Springs. A Geometric Model Of The Leaf Spring Is Prepared In The CATIA V5 Software And Analysis Is Done. It Is Found That Composite Springs Can Sustain The Load The Same As That Of The Steel Leaf Spring, And Less Deflection Is Observed In Composite Springs Than In Steel Leaf Springs. The Density Of The Composite Material Is Low So Eventually, Weight Is Also Reduced By 70 % To 80%.


ISBN : 978-93-92105-56-2

International conference on
Recent Advances in Technology, Engineering, Science and Management
Dilkap Research Institute of Engineering and Management Studies, Mumbai
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# Controlling and Accessing Remote Desktop using Raspberry Pi

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## Abstract
In real world scenario, when using multimedia PC we can perform volume control stop, play/pause type of different operations using TV remote from the distance. A PC remote reader software is used to read and analyze the remote input command in the PC. We can operate PC using TV remote. Here, Raspberry Pi board as a medium between the TV Remote and the system. A PC remote reader softwares used to read the remote input command in the PC. It is used to recognize the input command and perform desired action. Here we use the keypad numbers on TV remote actions like right, left, up and down movements. The device mouse clicks such a left / right clicks can also be performed through the remote.The main objective of the proposed work to control all function of PC by TV remote.

## Keywords
PC Mouse; TV Remote; IR Receiver; RC5 Protocol;

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ISBN : 978-93-92105-56-2

International conference on
Recent Advances in Technology, Engineering, Science and Management
Institute For Engineering Research and Publication (IFERP)
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# Potential Benefits and Evaluation of Adaptive Radiation Therapy to Improve Plan for Lung and Head & Neck Cancer Patients

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## Abstract

**Objective:** The purpose of my study is to provide an overview of anatomical changes (mainly tumor shrinkage) happening in Lung and HNC patients over the course of radiation therapy, various adaptive approaches developed to account for those changes, criteria to implement these approaches and also to see how adaptive radiotherapy affects clinical, dosimetric, and toxicity outcomes in patients with Lung and Head & Neck Cancer undergoing radiation therapy so that the best clinical care can be provided to the patients and their quality of life remain unaffected. The dose delivered to the organs at risk (OARs) during adaptive radiotherapy plan (ART) was also observed and compared with the initial IGRT treatment plan to confirm the potential benefits of Adaptive radiation therapy (ART). The reduced Gross Tumor Volume (GTV) at the end of the treatment was also observed for all ART patients.

**Material and Methods:** Fifteen patients were diagnosed with Lung and Head & Neck Cancer (HNC) that underwent Image Guided Radiotherapy (IGRT) treatment with a definite prescribed dose. All these patients were observed during their course of radiation treatment and Cone Beam Computed Tomography (CBCT) images were also taken at various fractions depending upon different factors including type of treatment, patient response to the tumor, site of the tumor, workload etc. The changes were observed in all 15 patients but out of these, Adaptive Radiotherapy (ART) treatment was performed in only 11 patients by comparing the dosimetric and clinical effects of the Adaptive Radiotherapy plan with the original treatment plan. The dose delivered to the organs at risk (OARs) was also observed for all patients and compared with the initial treatment plan. The Gross Tumor Volume (GTV) reduction rate was also observed for all 11 patients.

**Result:** With Adaptive Radiotherapy (ART) treatment planning, the maximum dose to the OARs was observed and compared with the original plan. It was found that the dose delivered to the healthy tissues or OARs in the case of Adaptive Radiotherapy (ART) is less as compare to the original radiation treatment plan. Therefore, it was observed that the Adaptive Radiotherapy plan provides better tumor coverage. But it was also observed that in some cases, the Adaptive Radiotherapy planning does not show clinical as well as potential benefits and Adaptive Radiotherapy (ART) is not necessary to perform to all patients.

**Conclusion:** Adaptive Radiotherapy use, in cases of Lung and Head & Neck Cancer (HNC) offers advantages, including increased tumor coverage and reduced dose to organs at risk (OARs). It was also concluded that the rate of tumor volume reduction during treatment was related to disease-free and overall survival in a significant way, so that the patient's quality of life may remain unaffected.

## Keywords:

Adaptive radiotherapy (ART), Anatomical changes, Clinical and Dosimetric Benefits, Cone Beam Computed Tomography (CBCT), Clinical Care, Gross Tumor Volume (GTV), Organ at risk (OAR), Plan Adaptation, Radiation therapy, Patient Tumor, Treatment plan.



ISBN : 978-93-92105-56-2

International conference on
Recent Advances in Technology, Engineering, Science and Management
Dilkap Research Institute of Engineering and Management Studies, Mumbai
16th & 17th March 2023|Mumbai

# The Ability of Multi-Layered Roof Covering Construction from Waste Tires to Withstand Rainwater

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## Abstract
The amount of waste tires on a global scale will continue to grow as the number of population and vehicles increases. Conventional disposal of waste tires has negative impacts on the environment, health, and economy. Waste tires have the potential to be used as a building material, including roof covering. This study aims to design a roof covering that is suitable for a humid tropical climate that utilizes waste tires. Three construction of multi-layered roof covering models from waste tires in the form of ropes are proposed. The first roof covering model is arranged in two layers, the second model has three layers, and the third model has four layers. Each model was built using simple technology on a real-scale prototype and tested for rainwater leakage through outdoor experiments. Then direct observations were made to identify which parts of the model had rainwater leaks and which did not. The experimental results show that all models are waterproof. Rainwater does not penetrate to the inner layer of the roof coverings. Although there is a little water seepage in the two-layer model. The density level of the waste tire rope arrangement and the number of layers of roof covering constructions have an influence on their ability to resist rainwater.

## Keywords:
waste tire, multi-layered, roof covering, construction, experiment


ISBN : 978-93-92105-56-2

International conference on
Recent Advances in Technology, Engineering, Science and Management
Institute For Engineering Research and Publication (IFERP)
16th & 17th March 2023|Mumbai

# Corpus generation for Intent Analysis in Gujarati code-mix text

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## Abstract
Generally a lack of dataset is widely discussed topic by every researchers. Especially dataset in local languages are not widely available apart from English language. These local languages also known as a resource poor languages. In this research article we have focused on Intent analysis corpus generation. Intent analysis gives users intention based on written text. It is a one of the text classification technique. We have tagged code-mix Gujarati dataset with four types of intent. We have verified the tagging with two independent annotators who are proficient in Gujarati language. We have also preformed Cohen's Kappa Inter-Annotator agreement and received 72% inter annotator agreement score. This makes our corpus as a gold standard dataset. We believe that this dataset will be used for further research purpose in intent analysis as well as other text classification.

## Index Terms
Gujarati code-mix, intentanalysis, dataset, corpus, inter-annotator agreement

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ISBN : 978-93-92105-56-2

International conference on
Recent Advances in Technology, Engineering, Science and Management
Dilkap Research Institute of Engineering and Management Studies, Mumbai
16th & 17th March 2023|Mumbai

# Soret and Dufour Effects on an Unsteady MHD Flow from a Permeable Rotating Vertical Cone with Variable Fluid Properties

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## Abstract
**Objective:**The Soret and Dufour effects on unsteady flow, heat and mass transfer about a permeable vertical rotating cone in an ambient fluid in the presence of variable viscosity, thermal conductivity and viscous dissipation is the subject of this research. Viscosity and thermal conductivity of the fluid are considered as inversely proportional and directly proportional to temperature respectively.
**Method:** The governing equations are converted into solvable form using suitable similarity transformations which are then solved numerically by the MATLAB built in bvp4c solver. Novelty: Thee results obtained in this study are in excellent correlations with previously conducted studies, thus giving confidence to the conclusions made in the study.
Findings: Tabular data of tangential and azimuthal skin friction, the Nusselt and Sherwood numbers are also discussed in detail. The results obtained demonstrate that for more viscous fluids both tangential and azimuthal skin frictions can be augmented up to 17% and 16% each and so does its heat transfer rate improve up to 1.3%, furthermore thermal conductivity can be improved to lower the heat transfer rate around 1.4%. Higher viscous dissipation causes heat transfer rate to be augmented around 0.5%. Also fluid with higher Soret and Dufour number is found to increment the tangential velocity at a point away from the conical surface.

## Index Terms
Rotating cone; Soret and Dufour; thermal conductivity; viscosity


ISBN : 978-93-92105-56-2

International conference on
Recent Advances in Technology, Engineering, Science and Management
Institute For Engineering Research and Publication (IFERP)
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# A Review Towards Identificcation Of Various Challenges Observed To Locate Diseased Tissues In The Patients Infected With Covid-19 By Using Neural Network

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**Abstract:**
The COVID-19 pandemic has had a significant impact on global health, with millions of people infected & numerous deaths. The rapid identification of infected individuals and accurate diagnosis are critical to prevent the spread of the virus and provide appropriate treatment. The use of neural networks to identify disease tissues in people infected with COVID-19 has emerged as a promising approach. Neural networks can be trained to detect patterns in medical images, including those from computed tomography (CT) scans of COVID-19 patients. However, utilizing neural networks for COVID-19 diagnosis poses some significant challenges. Firstly, training data availability is limited, and acquiring labelled data requires expertise and time. Secondly, the high level of variability in COVID-19 imaging and clinical presentations can affect the neural network's accuracy. Thirdly, the neural network's interpretability and explain ability can be a challenge, making it difficult to understand how the algorithm reaches its decisions. Despite these challenges, neural networks have shown promise in identifying disease tissues in people infected with COVID-19. Neural networks have achieved high levels of accuracy in COVID-19 diagnosis, potentially reducing the need for radiologists and allowing for faster and more accurate diagnoses. As more data becomes available and neural network algorithms improve, they could play a significant role in improving COVID-19 diagnosis and treatment.

**Keywords:**
Neural Networks, Disease tissue, Covid19



ISBN : 978-93-92105-56-2

International conference on
Recent Advances in Technology, Engineering, Science and Management
Dilkap Research Institute of Engineering and Management Studies, Mumbai
16th & 17th March 2023|Mumbai

# IIR Filter Order and Cut-Off Frequency Influences on EMG Signal Smoothing

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**Abstract:**
Infinite Impulse Response (IIR) filters are the fundamental signal processing technique to analyze the surface Electromyography (sEMG). These filters are defined by their particular orders (e.g., first, second or third-order) and the frequency they passed through. For system identification challenges, a novel population-based technique known as Elitist teacher learner-based optimization (ETLBO) is used to calculate the best coefficients of unknown infinite impulse response (IIR) systems. Although, EMG signals from human skeletal muscles are important to realize the muscle features, but there is no consistency found in the literature regarding the influence of different orders of the filter and cut-off frequency when processing and filtering EMG signal during lower limb (Biceps Femoris) muscle contraction. It is therefore important to know the response of muscle EMG signal after changing the order of filters and cut-off frequencies. Thus, this paper addresses the behavior of the signal patterns after varying the filter order and cut-off frequency of the filter. To record the EMG signal, one healthy male participated in this study after obtaining his informed consent and the electrodes were placed on the lower limb Biceps Femoris muscle during sit-to-stand task at a normal speed. During the signal processing, the cut-off frequency of the filter was fixed with the variation of the order of the filter. Later, the order of the filter was fixed while the cut-off frequency was varied. Finally, the results show that varying the order of filter (while frequency fixed) does not distort the EMG signal significantly, whereas varying the frequency changes the shape of the signal considerably. For approximating the same-order and reduced-order IIR systems, four benchmark functions are examined utilizing GA, PSO, CSO, and BA. To demonstrate the improvements, the approach is evaluated on three conventional IIR systems of 2nd, 3rd, and 4th order models. On the basis of computing the mean square error (MSE) and fitness function, the suggested ETLBO approach for system identification is proven to be the best among others.

**Keywords:**
Butterworth Filter, Cut-Off Frequency, Filter Order, Smoothed Signal, sEMG



ISBN : 978-93-92105-56-2

International conference on
Recent Advances in Technology, Engineering, Science and Management
Institute For Engineering Research and Publication (IFERP)
16th & 17th March 2023|Mumbai

# Deep Learning Approach for Intelligent Intrusion Detection System

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## Abstract
The negative effects of tourism on environment, overcrowding in tourism sites and the COVID pandemic has given rise to virtual reality tourism. Virtual reality tourism is economically viable and has the potential to build sustainable tourism by reducing greenhouse gas emissions and international overcrowding. The aim of the study is to know the perception and attitude of the tourists about virtual reality tourism as an environmentally sustainable alternative. The review study was conducted to find the pro-environmental behaviour of tourists towards virtual reality tourism. The papers available on Scopus and Web of Science databases on the subject of "virtual reality tourism" and "sustainability" were used for the review of literature. BibExcel and VOSviewer tools were used for the analysis of the research papers. It was found that virtual reality tourism grabbed the attention of the tourists during COVID pandemic because of pandemic travel anxiety and tech savviness. It was also found that tourists who are sensitive about environmental preservation have positive perception and motivation to use virtual reality tourism alternatives. They are willing to use virtual reality tourism even after the pandemic. The study implies that virtual reality tourism in the long run has an ability to achieve sustainable tourism but awareness about climate change and virtual reality tourism has to be raised among tourists for achievement of this sustainable digital transformation in tourism.

## Keywords
virtual reality tourism; sustainability; sustainable tourism; tourism


ISBN : 978-93-92105-56-2

International conference on
Recent Advances in Technology, Engineering, Science and Management
Dilkap Research Institute of Engineering and Management Studies, Mumbai
16th & 17th March 2023|Mumbai

# Implement of Deep Learning Based Model For Prediction of Successive Words In Sentence: A Review

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## Abstract
Learning is a subcategory of computer science that replicates the way a human brains analyses and generates patterns in data for decision-making. Natural-language processing (NLP) is an important component of AI Technology, that combines AI, that assists to identifying effective ways to communicate with and benefit from humans. It really is essentially any AI functionality with nets that can learn saggy, unstructured input. The following phrase prediction is conducted using a text-based database. Upcoming Concept Refers is an NLP-based programmer. Also referred to it as Word Embedding's. It consists mostly on anticipating the following syllable in a phrase. It has diverse uses that are utilized by the majority us who, including such vehicle, which is frequently utilized in emails and texts; it also includes implementations in Word Documents and Google Search, in which it predicts a next command of English on our online activity or the recent scour we conducted. This Classifier has had the disadvantage for tendency toward consolidate.

## Keywords
Computer network; Management of information security; Influence factors and comprehensive measures.


ISBN : 978-93-92105-56-2

International conference on
Recent Advances in Technology, Engineering, Science and Management
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# Wi-Fi Intercom System Using Linux

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## Abstract
Voice over Internet Protocol(VOIP) allows a telephone conversation to be carried out via a data network. Comp ed to proprietary systems, VoIP solutions are less expensive, more adaptable, and deliver better voice quality. They also offer integrated services for data and communications. This research report discusses smartphone Calling through an IP-PBX, or Internet Protocol Private Branch Exchange IP-PBX is a full-featured telephone system that is wireless and makes calls simless. The IP-PBX connection is built using CentOS which is a Linux-based operating system and the Asterisk open-source software. Wireless communication in the WIFI range may be accomplished by establishing an IP-PBX server.

## Keywords
IP-PBX, Linux (CentOS), VOIP , Asterisk


ISBN : 978-93-92105-56-2

International conference on
Recent Advances in Technology, Engineering, Science and Management
Dilkap Research Institute of Engineering and Management Studies, Mumbai
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# Modelling and Simulation of Cumene Process in Aspen Plus

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## Abstract
This paper deals with the process of cumene synthesis in a small-scale process plant utilizing the commonly used addition reaction of benzene with propylene to form cumene which is exothermic in nature. This process is accompanied by an undesired side reaction involving the formation of p-diisopropyl benzene (C12H18) from cumene reacting with the unreacted benzene in the reactor. The simulation is carried out on Aspen Plus simulation software. The objective of this study is to optimize the product flow rate (flow rate of cumene) and the reboiler heat duty of both the distillation columns (BENCOL and CUMENCOL), maintaining the desired product quality and the environmental norms alongside. This study investigates six parametric analysis which includes the change in reflux, reboiler heat duty, pressure of flash tank and reactor temperature. Based on the variation of reflux and heat duty, product flowrate is enhanced by 1.8% and reboiler load is reduced by 44.25% taking into account cumene purity to be 99.99% in the top section. The results revealed that outlet flowrate of propane is near to the inlet flowrate on changing the pressure of flash tank to 1.3 bar which signifies minimal loss of inert gas. Moreover, the propylene flow rate dropped significantly to 99.99% on increasing the reactor temperature which predicts maximum conversion of propylene into desired yield.

## Index Terms
Cumene, propane, reboiler load, reflux.


ISBN : 978-93-92105-56-2

International conference on
Recent Advances in Technology, Engineering, Science and Management
Institute For Engineering Research and Publication (IFERP)
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# Smart Refrigerator

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## Abstract
The refrigerator is an important part of preserving food in modular kitchens and shops. In the case of a commercial, having the necessary quantity to improve business is critical. The goal of this project is to transform a standard refrigerator into an Intelligent refrigerator by allowing it to prevent the spoilage of food resources, manage and utilise the food items most efficiently, help place orders for food items, create a database of recipes, recommend recipes and to create a virtual interactive environment between refrigerator system and the user, which is particularly significant. The proposed Internet of Things (IoT) system can detect food shortages by transmitting the number of available food items via mobile application. If the weight falls below a certain threshold, it notifies users to place an order or if the resources rot, the user gets notified to utilise the resources beforehand. The proposed system also employs classification and regression (prediction algorithms) to recommend seasonal fruits and vegetables to users.

## Keywords
Smart refrigerator, IoT system.


ISBN : 978-93-92105-56-2

International conference on
Recent Advances in Technology, Engineering, Science and Management
Dilkap Research Institute of Engineering and Management Studies, Mumbai
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# Deploying Spring Boot Application Using AWS

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## Abstract
The Coinage of Computer Technologies had led to the web Applications in easing the supremacy for users. It led to a major demand for rapid development of a web Applications which consume time and scale for their deployment. Thus, the Automation of this process may provide a solution. There are many benefits to automating deployment, including quicker delivery of new versions and reduced error rates. We employed a number of technologies like Docker, Git, AWS Services and others which will aid during the whole process. We are storing the code in git repositories transferred using Git Bash. The entire application is then been Containerized into an image of Docker. The containerized Image is then switched to the public image so that the entire application can be included in AWS. Then, we can deploy the entire application with the aid of AWS services. Elastic Container service is been used as a customized cost optimized server. For storage purpose, Arora database has been used after observing several advantages of it over MYSQL Database service such as throughput optimization and database recovery.

## Keywords
GitHub, Docker, Deployment


ISBN : 978-93-92105-56-2

International conference on
Recent Advances in Technology, Engineering, Science and Management
Institute For Engineering Research and Publication (IFERP)
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# Mathematical Model to Compute the Quantity of 10cm Diameter Vertical Eucalyptus Posts Used for Formwork Preparation in the Case of Semi-Spherical and Parabolic Domes

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**Abstract:**
Construction formwork is a temporary structure that requires high cost and time, and its role is significant in terms of providing the desired shape and supporting fresh filling concrete. In the areas where this study was conducted, it was realized that eucalyptus posts are the main inputs to prepare formwork in concrete dome construction. Due to the complexity of the shape of the dome, AutoCAD application is being used to determine the quantity and heights of vertical eucalyptus posts, and it has been realized that it requires lengthy time. The main objective of this study was to develop a time saving mathematical model that helps determine the quantity and heights of vertical eucalyptus posts used for formwork preparation in the case of semi-spherical and parabolic domes. And the result realized that the developed model is helpful in determining the quantity and heights of vertical eucalyptus posts.

**Keywords:**
Eucalyptus; Dome; Mathematical-Model, Quantity, Semi-Spherical, Parabolic


ISBN : 978-93-92105-56-2

International conference on
Recent Advances in Technology, Engineering, Science and Management
Dilkap Research Institute of Engineering and Management Studies, Mumbai
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# Effectiveness of The Regulatory Framework for Money Laundering in India

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## Abstract
India, also referred to as the Republic of India, is the seventh-largest country in terms of the territory and the second most populous country of the world with a population of 141 crore , and the largest democracy. India has witnessed a sharp increase in its population over the past few decades and it is believed that by the year 2026, it is expected to surpass China's population. According to the World Bank, the India's GDP stands at 2.62 lakh crores USD (2020). In the recent past, India has emerged as the fifth-largest economy leaving the UK much behind. The Bloomberg report mentions the size of the Indian economy to be $854.7 billion, whereas UK was at $816 billion."
With a steady and powerful democracy, along with concrete alliances, India has evolved as one of the major economies in the world with the highest growth rate. It is believed that over the next decade or so, India will be among the top three economies of the world.
Inspite of a rapidly developing economy, India has witnessed a constant increase in the cases of money laundering since the past few years, which is ultimately hampering the Indian economy by encouraging crime, unlawful activities and corruption.
The aim of the researcher is to study as to what are the challenges that are engulfed in preventing the unlawful act of money laundering in India. While doing so, the researcher aims to use both doctrinal methods as well as use secondary data. The doctrinal method will be used to understand and conceptualise the meanings and issues involved with Money Laundering. The secondary data will help in analysing the effectiveness of the legislative frameworks that have been over the years enacted to curb, prevent and combat this issue of unlawful use and transfer of capital.


ISBN : 978-93-92105-56-2

International conference on
Recent Advances in Technology, Engineering, Science and Management
Institute For Engineering Research and Publication (IFERP)
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# Estimating the Application of Red Algae Situated Along the Gujarat Coastline.

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**Abstract :**
Marine environment is the largest habitat in terms of area occupied on the planet, still most untapped resource found till today compared to terrestrial environment; less research work done on marine microorganisms evident the previous statement. Marine environmental resource contains vast content to study and put to commercial use for the wellness of human as well as environment. In the previous studies marine environment successfully gave many novel compounds produced by microorganisms in terms of microbial enzymes, hormones, metabolites and so on. Algae with omnipresence in virtually every terrestrial ecosystem are one of the most characteristic species on Earth with possible use in food supplements, as biofertilizers in agriculture and sodium soil improvement, in waste water treatment, and as biofuel source. Multiple sites of the coast of Gujarat have been visited to find the fresh specimen. Different coastal sites were visited during low tide time like Vijali Baru, Mahuva (Lat. 21° 2' 24.0036''N; Long. 71° 47' 53.5092''E), Nishkalank Mahadev Tample, Bhavnagar
(21.5974125, 72.2924844), and Kodinar (20.7568750, 70.6589300). Among them red seaweed was freshly collected from Kodinar (20.7568750, 70.6589300). The red algal sample was identified on the basis of their morphology. Fresh red seaweeds were collected by cutting near hold fast without disturbing the algal bed from the collection spots mentioned earlier with the help of a small knife by following the method as described by Dawson (1956). Seaweed have been found in intertidal zone of the marine coast, sample must be collected during low tide period and for that reason, Tides timing from the local tide tables along with weather forecasts were kept analyzed for the sample collection site visit. HPLC analysis will be carried out in order to ensure after processing. Stability of the inside content can be examined further by checking effects of different relative factors. Here the objective of the presentation is to highlight the benefits of algae along with the challenges and solutions achieved as Different types of algal species perform different work as their capability to produce different metabolites.

**Keywords:**
Marine ecosystem, Algae, Algae-based estimated benefits, Algal biomass.


ISBN : 978-93-92105-56-2

International conference on
Recent Advances in Technology, Engineering, Science and Management
Dilkap Research Institute of Engineering and Management Studies, Mumbai
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# Isolation and characterization of Cariogenic microorganisms causing dental problems

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## Abstract
The oral cavity is a complex ecosystem that is home to a wide variety of bacteria, viruses, and fungi. The gingival and subgingival parts of the mouth are colonized by dental biofilms, which are the most common cause of oral illnesses. Cariogenic microorganisms are thought to be the dominant cause of dental caries. Cariogenic bacteria are pathogenic agents that cause the oral environment to become more acidic, which is associated with the beginning and development of caries. Some of these microbes are responsible for a number of infections. Due to its connection to the outer environment, oral flora is always changing. Individual bacteria create bacteriocin to compete with one another for nutrition in this little ecosystem. By isolating and characterizing all the isolated bacteria using biochemical tests, the current study aims to investigate and compare the bacterial fauna of both healthy and unhealthy dental samples. Five swab samples were collected from both healthy and unwell participants during the trial. Samples were taken in sterile Eppendorf tubes with 1 ml of nutrient broth and incubated in a shaking incubator at 370 C for an overnight. Spread on a Nutrient Agar Plate after that. Gram staining, microscopy, and biochemical tests were performed after isolating the bacteria. The IMViC test and the sugar fermentation test were used to biochemically characterize the isolates. In total, eight bacterial strains and one actinomycetes strain were identified throughout the investigation, seven of the bacterial strains and the actinomycetes strain being gram positive and one being gram negative. Of the nine identified strains, four produced acids. Out of Nine isolated strains, 6 can utilized complex sugar i.e. Lactose, Sorbitol, Mannitol, and Rhamnose. Except for one, all the isolates are capable of using sucrose and glucose. The findings also point to the need for more research on the management of dental caries and the eradication of harmful bacteria in order to comprehend the relative contributions of these organisms to disease aetiology with the help of some plant extracts.

## Key Words
Cariogenic bacteria, Dental Caries, Bacteriocin, IMViC test, Dental Biofilms.


ISBN : 978-93-92105-56-2

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Recent Advances in Technology, Engineering, Science and Management
Institute For Engineering Research and Publication (IFERP)
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# Evaluation of ion recombination correction of indigenously developed farmer ion chamber for flattening filter free x-rays.

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**Abstract:**
Flattening filter-free (FFF) x-rays produce a significantly higher dose rate at the isocenter of a medical linear accelerator (linac) than x-rays with a flattening filter (WFF). The significant increase in dose rate for FFF beams may have an effect on the ion recombination correction factor (Ks) of the ionization chamber (IC). This factor is necessary for the proper measurement of the absorbed dose at a point in water as per the TRS 398 dosimetry protocol. The objective of this study was to evaluate the Ks of the indigenously developed FAR 65-GB IC and compare the result with the reference dosimeter PTW 30013 IC. The study was performed on a TrueBeam STx linac having 6 MV WFF, 6 MV FFF, 10 MV WFF, and 10 MV FFF X-ray energies. Ks was measured in a solid water phantom at a depth of 10 cm using the two-voltage technique for both IC at 100 cm source-to-chamber distances (SCD) for a 10 cm x 10 cm field size (FS). Ks values for the FAR 65-GB and PTW 30013 were 1.0055 (1.0113) and 1.0051 (1.071) for the 6 MV WFF (FFF) beams, respectively. For the identical setup, the Ks values for 10MV WFF and 10MV FFF beams were 1.0066 (1.0228) and 1.0061 (1.137), respectively. From the results, it is concluded that the performance of the indigenous FAR 65-GB IC was as good as PTW IC for the FFF beams.

**Keywords:**
flattening filter free x-ray, TRS-398; ion recombination; two voltage technique, Jaffe's plot


ISBN : 978-93-92105-56-2

International conference on
Recent Advances in Technology, Engineering, Science and Management
Dilkap Research Institute of Engineering and Management Studies, Mumbai
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# Role of Cloud computing environments for scientific workflow Applications

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## Abstract
The primary computing paradigm for today's businesses is cloud computing, which can provide virtualized, elastic, and on-demand computer system resources for supporting complex distributed applications. In the meantime, the performance of cloud applications is getting more and more attention. Quality-critical applications, on the other hand, have critical requirements for Quality of Service (QoS) or Quality of Experience (QoE), respectively. This is due to the fact that if the performance of the application is guaranteed, they can only deliver on their anticipated value and social impact. Scientific workflows break down complicated scientific applications into smaller, interdependent tasks that can be done in parallel or serial. Numerous scientific fields, including biology, physics, medicine, and astronomy, have benefited from their use. However, a scheduling algorithm's outcome can be significantly influenced by the complexity and variety of scientific workflows' structures and characteristics. To assign workflow tasks to computing infrastructure resources, schedule a workflow. The use of cloud computing environments for scientific workflow applications is currently the IT trend of the moment. This paper provides an overview of various cloud scheduling mechanisms and will be utilized by researchers.


ISBN : 978-93-92105-56-2

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Recent Advances in Technology, Engineering, Science and Management
Institute For Engineering Research and Publication (IFERP)
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# Burnout and Organizational Commitment as Predictors of Turnover Intention among Millennials

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**Abstract :**
Employee turnover is increasing with millennials accounting for the majority of the increase. Millennials have reportedly higher levels of burnout and burnout was found to have a positive correlation with turnover intention. Further, millennials have reported lower levels of organizational commitment, which is yet another potential predictor of turnover intention. The present study aims to investigate the impact of burnout and organizational commitment on the turnover intentions of 154 millennial employees with 3 or more years of experience in the hospitality industry. The impact of the study was evaluated using correlation and regression matrix. Burnout was found to have a moderate level positive correlation with turnover intention while there was a weak positive correlation between commitment and turnover intention.
Regression analysis suggests that burnout is a significant predictor of turnover intention and organizational commitment is a significant yet weak predictor of turnover intention. Therefore, on disentangling, it was revealed that burnout is a more significant predictor of turnover intention. Due to a lack of literature and evidence as well as inconsistent findings, it was critical to conduct this research to outline the dominant predictor of TI amongst millennial employees.

**Keywords:**
turnover intention, burnout, organizational commitment, millennials, hospitality industry


ISBN : 978-93-92105-56-2

International conference on
Recent Advances in Technology, Engineering, Science and Management
Dilkap Research Institute of Engineering and Management Studies, Mumbai
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# Design and Analysis of Experiments in Inter – City Bus Transport System

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## Abstract
Over the years, Design of Experiments (DOE) has been predominantly used as a problem-solving and analytical tool in manufacturing. Though many prominent researchers in recent times have studied the application and the challenges involved in using DOE in the service sector, only some studies have explored its use in the Bus Transportation Domain in India. This study analyzes the inter-city Bus Transportation (both private and public-owned) system in Maharashtra state using DOE and suggests a model for the system that can help to understand and improve the service. Customer satisfaction is one of the most critical factors driving any service organization and, thus, was considered the 'Key Performance Indicator' and the response variable to model the system. A comprehensive literature review was conducted to identify seven prominent factors affecting satisfaction. Subsequently, a survey was conducted, and the acquired data was analyzed using quality tools like House of Quality (QFD) to prioritize three factors that affect satisfaction the most statistically. Finally, Experimental Design and analysis were done through a customer survey using the prioritized factors as inputs variables and satisfaction as the output, and a model (equation) for the system was constructed. It was found that out of all the possible factors that can affect customer satisfaction, Safety, Comfort, and Pricing of the bus service are the most influential. Out of these three, safety affects satisfaction to the greatest extent, whereas pricing affects the least. In addition to the individual effects, satisfaction is greatly influenced by the interactions of Pricing-Safety, Pricing-Comfort, and Comfort-Pricing. Moreover, it suggests that a customer's perception of satisfaction is a complex phenomenon resulting from various effects and interactions, and the highest satisfaction can be achieved by the optimum setting of the most influential input factors. This way, the study successfully demonstrates the application and utility of DOE in the Bus Transportation system. Additionally, it suggests a service quality model for the system that helps understand customer satisfaction and thereby improve service quality. The study also demonstrates the use and practical application of the model to specific service scenarios. Finally, it opens up an array of study in service quality of bus transportation that can be further explored by building on the shortcomings of the model presented in this study.

## Index Terms
Customer behavior, Design Of Experiments (DOE) in service sector, Modelling, Public Transportation


ISBN : 978-93-92105-56-2

International conference on
Recent Advances in Technology, Engineering, Science and Management
Institute For Engineering Research and Publication (IFERP)
16th & 17th March 2023|Mumbai

# Influence of Demographic Variable on Perceived Home Environment Among Adolescents

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## Abstract
Home environment plays influential role in Adolescent life as it influences the personality, mental health, and overall development of adolescent. Due to globalization which lead to change in cultural values, gender roles , education system adolescent's perception of home environment is changing and parents and teachers find difficult to understand the behaviour of Adolescents . Therefore, the current research aims to study the influence of demographic variables on Perceived home environment among Adolescents. Home Environment Inventory developed by Dr KS Mishra (2020) was used to collect data. Simple Random Sampling Technique was used to Select the sample of 306 Adolescents including 151 males and 155 females. The collected data was analysed using descriptive and inferential statistics. The result of the study revealed that demographic variables such as gender, class, type of family, occupation of father and mother, educational qualification of mother has a significant influence on perceived home environment of adolescents . This study will help Parents to understand the factors that influences Perceived Home environment of adolescents and will allow them to create a positive home environment which will in turn lead to Positive Family Relationship.

## Key Words
Adolescents , Home Environment , School


ISBN : 978-93-92105-56-2

International conference on
Recent Advances in Technology, Engineering, Science and Management
Dilkap Research Institute of Engineering and Management Studies, Mumbai
16th & 17th March 2023|Mumbai

# Radar Based Air Defense System

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## Abstract
Air defence systems are created for a nation to effectively lessen threats. Every nation needs an air defence system because it ensures national security. Radar systems are used to apply radio detection and ranging in a variety of settings, including military installations and commercial applications. Radar systems use electromagnetic waves to detect various physical components, including distance, speed, position, range, direction, size, etc. that can be either fixed or in motion. This paper describes the construction of an air defence system (ADS) that uses search radar and a laser turret to detect aerial threats (such as drones) and target them manually. High power laser weapon operational ramifications are constantly expanding in nations with superior military technical levels. This paper discusses the development and implementation of operational concepts into the Armed Forces, which should target orientation in the improvement process of the appropriate warfare material, i.e. the laser, as well as remodelling the current combat's doctrine, in addition to progress in integration with air, land, and naval platforms. Finally, we discuss some advantages and disadvantages of laser technology, as well as various applications in attack and defence operations made possible by the use of laser weapons.

## Keywords
(ADS)Air Defense Systems, Radar System , Laser, Turret


ISBN : 978-93-92105-56-2

International conference on
Recent Advances in Technology, Engineering, Science and Management
Institute For Engineering Research and Publication (IFERP)
16th & 17th March 2023|Mumbai

# Text Based Sentiment Analysis Using Long Short Term Memory

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## Abstract
Breaking down the enormous printed data physically is harder and tedious. Feeling investigation is a computerized process which utilizations registering (man-made intelligence) to recognize good and gloomy sentiments from the directives. Sentiment investigation is broadly utilized for getting bits of knowledge from web-based entertainment remarks, review reactions, also, stock audits to make information driven choices. Opinion examination frameworks are familiar with amount to the unorganised text via robotizing business cycles and saving long periods of manual handling. As of late, Profound learning (DL) has gathered expanding consideration inside the business and scholastic world for its superior presentation in different spaces. Today, Recurrent Neural Network (RNN) and Convolutional Neural Network (CNN) are the premier well known kinds of DL designs utilized. We do Opinion Investigation on text surveys by utilizing Long Momentary Memory (LSTM). As of late, on account of their capacity to deal with a lot of information, brain networks have made a decent progress on feeling order. Particularly lengthy STM organizations.

## Index Terms
sentiment analysis, LSTM, Profound learning


ISBN : 978-93-92105-56-2

International conference on
Recent Advances in Technology, Engineering, Science and Management
Dilkap Research Institute of Engineering and Management Studies, Mumbai
16th & 17th March 2023|Mumbai

# Schiff Base Metal Complexes and Their Application

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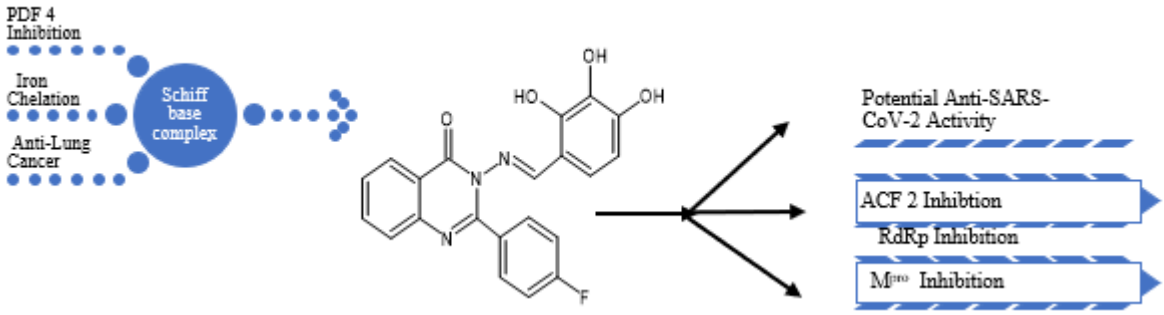
**Abstract:**
The adaptability of Schiff bases as ligands is advantageous for a wide range of biological systems, homogeneous and heterogeneous catalysis, oligomerization, photochemical degradation of polymers as an initiator in emulsion polymerization, dyes as colourants with properties like antitumor and cytotoxicity, antifertility, and enzymatic antimicrobial, among others. They are also used as oxygen carriers in the respiratory system, food packaging, contraceptive devices, sensors, nonlinear optical devices, efficient emitting layers, and photosynthesis. They are essential to the pharmaceutical industry because of the wide variety of biological activity they possess. The utilisation of transition metal-based structures and Schiff-base ligands in chemo-sensors for the detection of Schiff bases, as well as their antifungal and anticancer properties, have generated a great deal of attention.




Different Biological Activity of Quinazoline Schiff Base Complex

**Keywords:**
Schiff base, ligands, oligomerization, chromogenic, cyto-toxicity.


ISBN : 978-93-92105-56-2

International conference on
Recent Advances in Technology, Engineering, Science and Management
Institute For Engineering Research and Publication (IFERP)
16th & 17th March 2023|Mumbai

# Automated Investment Portfolio Recommendation

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## Abstract
In today's world, financial planning has become a necessity. With everything becoming expensive, saving costs has become a major priority. To make the most of your earnings and savings, you must become financially prudent. People that have a financial background know about financial planning but there is a large amount of the population that is unaware of the concept of investments and portfolio management. Learning the concept of investments and portfolio management requires some starting points. With the idea of addressing the "Where to begin?" question, we have proposed this system that recommends an initial investment portfolio, which can be used by people who have little to no knowledge of the types of returns and risks involved in this process, but nonetheless are willing to start planning their personal investment portfolios. Our portfolio recommendation system offers various investment options based on the level of risk the user is willing to accept. We have investments ranging from zero to high risk, and from short to long-term investments.

## Index Terms
Automated Investment Portfolio, Personal Finance, Stock portfolio optimization


ISBN : 978-93-92105-56-2

International conference on
Recent Advances in Technology, Engineering, Science and Management
Dilkap Research Institute of Engineering and Management Studies, Mumbai
16th & 17th March 2023|Mumbai

# Development Control Regulation Strategies for Disaster Management – Case Study Gopalpur

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## Abstract
Nation's Economic development is influenced by Disasters mainly due to natural Calamities like Tsunami, Cyclone, Floods, etc. There will be loss not only to people, habitat, Livestock, property but also infrastructure facilities which is a great damage. Present study focuses mainly on assessment of Development control regulations with respect to disaster management with objectives involving study of different policies, Acts related to CRZ, assessment of land use regulation with respect to disaster management policies, acts and giving recommendations to mitigate disasters. For this study a case study of Hud-Hud cyclone is taken which affected east coast of India. Recommendations were given differently for Residential and Commercial areas considering Building height and abutting road width Restrictions which reduces wind tunnel effect of cyclone in those areas.

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ISBN : 978-93-92105-56-2

International conference on
Recent Advances in Technology, Engineering, Science and Management
Institute For Engineering Research and Publication (IFERP)
16th & 17th March 2023|Mumbai

# Special Learning Disability Prediction Using Machin Learning Approach: Knn, Support Vector Machine

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## Abstract
Learning disability affect about 15% of all children enrolled in schools. Indeed, almost half of all special education students have a learning handicap. For some years, parents and teachers have been concerned about the issues that children with specific learning impairments face. The main aim of the proposed research work is to design a tool (algorithm)based on machine learning techniques for accurate prediction of learning disability in individual's and to effectively measure the percentage of learning disability present in the child, according to the knowledge obtained from the clinical information. In this we are identify the problems related to the classification accuracy and develop a algorithm with the help of existing classifier for overcoming the identified problem using machine learning.

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## Keywords
Learning Disability, Decision Tress, Support Vector Machine, KNN Algorithm


ISBN : 978-93-92105-56-2

International conference on
Recent Advances in Technology, Engineering, Science and Management
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16th & 17th March 2023|Mumbai

# Effect of Tourism on Development of Socio-Cultural and Economic Aspects ; A Case Study of Tirupati City

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## Abstract
Religious tourism in Tirupati is a significant aspect of the tourism industry in India. To plan and manage religious tourism in Tirupati effectively, several strategies can be employed. This research paper explores the various strategies that can be implemented to enhance the quality of religious tourism in Tirupati. The paper discusses the importance of infrastructure development, crowd management, preservation of heritage sites, organizing cultural and religious activities, training and development of the tourism workforce, and promoting responsible tourism. By employing these strategies, Tirupati can create a sustainable tourism industry that conserves the natural environment and cultural heritage of the region while providing visitors with an immersive and satisfying experience. The research paper emphasizes the need for collaboration between the government, private entities, and the local community to implement these strategies successfully. The study contributes to the existing literature on tourism management and provides insights for policymakers and tourism industry stakeholders to develop effective strategies for managing religious tourism in Tirupati. Ultimately, this paper seeks to contribute to the academic discourse on the planning and management of religious tourism in Tirupati and provide valuable insights for policymakers and stakeholders in the tourism industry.


ISBN : 978-93-92105-56-2

International conference on
Recent Advances in Technology, Engineering, Science and Management
Institute For Engineering Research and Publication (IFERP)
16th & 17th March 2023|Mumbai

# Easy/Simple Comprehension of chat application

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## Abstract
Technology can be used to link people with ideas that transcend geographic borders through conversation. One of the most often used tools for user communication is instant messaging on mobile devices. The programmes start delivering messages through the internet, which is free for users. Any type of message can be sent, including text messages and voice calls. But most of the apps may consume a lot of data which cause our phone to slow down or decrease our battery life. Most popular apps like Messenger, What's App, Viber etc. consume significant amount of data and battery power. This survey paper seriously analyzes current contributions in chat applications.

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ISBN : 978-93-92105-56-2

International conference on
Recent Advances in Technology, Engineering, Science and Management
Dilkap Research Institute of Engineering and Management Studies, Mumbai
16th & 17th March 2023|Mumbai

# A study of Eco Tourism as a possible model for sustainable tourism growth: East Khasi Hills.

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**Abstract:**
Eco-Tourism is a responsible travel to natural areas that conserves the environment and improves the well-being of local people. Ecotourism has a strong correlation with sustainable tourism as it considers conservation and development of natural beauty. It is basically a natural-based tourism development. Meghalaya is endowed with splendid natural beauty. The state, an abode of rich floral and faunal biodiversity, treasure of plants, shrubs and herbs of medicinal value, unique ecosystems, wet lands, there grandeur and awe inspiring beauty are the sources of perennial attraction.
This paper aims to study the potentials and develop eco-tourist industry in East Khasi Hills District of Meghalaya based on its natural beauty. For this purpose the major eco-tourist spots need to be surveyed to find out the main attractions and analysis of their issues and gaps. Official record shows that in the year 2019, the tourist footfall in the State stood at about 12.7 lakhs (including 25,000 foreigners). And it has been estimated that the sector contributes about 4.1%* to the State's GSDP. Therefore it is the right time to take more initiatives to develop tourist industry in general and eco-tourist industry in particular which will contribute more economy to the state, generate employment and thus improve the socio-economic status of the people.

**Key Words:**
Eco-tourism, sustainable tourism, natural resource, tourists, socio-economic development.


ISBN : 978-93-92105-56-2

International conference on
Recent Advances in Technology, Engineering, Science and Management
Institute For Engineering Research and Publication (IFERP)
16th & 17th March 2023|Mumbai

# Using XGBOOST To Classify Humans and Bots on Twitter

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## Abstract
A Twitter bot is a software that has been developed to perform activities automatically such as tweeting on twitter with the help of scheduling programmed. Some bots are designed to circulate useful information, such as earthquake and weather data. Nonetheless, some bots have a detrimental impact, such as promoting hoaxes, spamming, or becoming a follower to boost the popularity of an account. It has the potential to alter public perception of an issue, reduce user confidence, and even alter social order. As a result, a programed software is required to differentiate amongst bot and non-bot accounts. Social media platforms are unfit to impose more rigorous account creation conditions for a variety of reasons, including the ability to keep some obscurity for protestors under harsh administrations, and the possibility of causing annoyance to genuine users (CAPTCHAs are an effective barrier against bots, but they annoy humans.). As an alternative, machine learning algorithms were utilized to detect such malicious bots. This research focuses on comparative study of multiple algorithms such as logistic regression, decision tree, naïve bayes, and XGBOOST algorithms and proposed an effective algorithm to improve the sensitivity of detection.

## Index Terms
Twitter Bot , XGBOOST , Random Forest , Machine Learning


ISBN : 978-93-92105-56-2

International conference on
Recent Advances in Technology, Engineering, Science and Management
Dilkap Research Institute of Engineering and Management Studies, Mumbai
16th & 17th March 2023|Mumbai

# Optimizing Supply Chain Performance with Snowflake Data Warehouse

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**Abstract:**
Supply chain performance plays a critical role in the success of businesses across industries. In recent years, the rise of cloud-based data warehousing platforms has introduced new opportunities for organizations to improve supply chain operations through better data management and analysis. This current dissertation work examines the use of Snowflake Data Warehouse for optimizing supply chain performance. Through a review of literature and analysis of case studies, the paper presents the key features and benefits of Snowflake including cloud technologies, and discusses how it can be integrated with other systems and technologies to support supply chain decision-making and drive performance improvements. The results of the study suggest that Snowflake can be a valuable tool for improving supply chain performance, and offer insights, recommendations and prediction for organizations/business looking to implement and can be visualize in the form of graphs and charts to support quick decision making to the business users.

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**Keywords:**
Machine learning techniques, Cloud storage, Snowflake data warehouse, Visualizations, Data lake.


ISBN : 978-93-92105-56-2

International conference on
Recent Advances in Technology, Engineering, Science and Management
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16th & 17th March 2023|Mumbai

# Transit-Oriented Development Feasibility: A study for Regional Rapid Transit System, Delhi NCR

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## Abstract
Technological advancement is a worldwide need but the context and pace for every nation vary. The present research discusses the urban development of developing countries. Transportation and land use planning go hand in hand to achieve successful growth and thus Transit-Oriented and Transit-Adjacent Development of developing countries like India is being addressed. Sustainability achieved through Transit-Oriented Development brings a fast pace in planning and somehow prevents urban sprawl issues as well as controls urban areas. The growing national capital region is the most prominent example where implementation and positive results have been witnessed at various locations. Developed countries have set examples that are studied but the strategies are made as per the conditions of the developing nation, India. Engineering advancements have thus taken transportation development to another level.
The scale of Transit-Oriented Development ranges from the neighborhood level to the regional level. Thus, every scale has a different definition and adoption of the concept as it serves and influences flexible areas. The regional corridor, suburban, city-level, and neighborhood parameters are individually complex and need unique construction, technology as well as planning solutions but assure sustainability via transit improvisation. In building and using the latest technologies, developing countries, and their population individually struggle with economic challenges in every parameter. Public transportation stands out here and then affordability enters the picture. That's when the mass or paratransit options play an important role in redirecting us towards Transit-Oriented Development and its unavoidable role in complete development. The new Regional Rapid Transit System is ahead of the metro systems, promoting mixed-use development, connecting regions kilometers away, and ensuring hassle-free movement of people. The importance and utilization of such strategies in the Indian context are what we need to understand so that we can review them better for our future plans and implementation. Urban planning and other allied fields need to accept Transit-Oriented Development as a basic requirement rather than an exclusive entity.

## Keywords
Technological Advancement, Transit-Oriented Development, Developing countries, Delhi NCR, Public Transport, RRTS, MRTS, Urban Planning, mixed-use development


ISBN : 978-93-92105-56-2

International conference on
Recent Advances in Technology, Engineering, Science and Management
Dilkap Research Institute of Engineering and Management Studies, Mumbai
16th & 17th March 2023|Mumbai

# Socio-economic impact assessment on road projects case study of Srinagar ring road

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## Abstract
Road projects have become an essential element of national development initiatives, providing access to basic services such as education, health care, and markets. However, these projects also have significant socio-economic impacts on local communities, including changes in land use, employment, and the environment. This paper examines the socio-economic impacts of road projects and their implications for sustainable development. The paper provides an overview of the socio-economic impacts of road projects, the methodologies used to assess these impacts, and the policy implications of these assessments.
The construction of the Srinagar Ring Road is expected to have a significant impact on the socio- economic landscape of the region. The paper uses a mixed-methods approach, combining quantitative data analysis with qualitative interviews and focus group discussions with stakeholders. The results suggest that the project has the potential to generate significant economic benefits, but also raises concerns about potential environmental impacts and the need to ensure equitable access to services for all communities.


ISBN : 978-93-92105-56-2

International conference on
Recent Advances in Technology, Engineering, Science and Management
Institute For Engineering Research and Publication (IFERP)
16th & 17th March 2023|Mumbai

# To study the impact of learning styles measured in terms of Representational systems & Pedagogies used on the level of understanding, attention, satisfaction, motivation & performance of students.

**Dr Rakhi Mehta**
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**Abstract:**
Auditory, visual, kinaesthetic representational systems are preferred learning styles used by students which need to be inculcated in pedagogies for greater effectiveness. The present research on basis of a survey of 100 undergraduate students in their final year found out the most preferred learning style of students in terms of representational systems, the type of pedagogies used by faculty and the impact of pedagogy & preferred learning styles on level of satisfaction, motivation, interest, attention and understanding of students. Out of 100 students 97.1% of the students stated that they learnt best when material was presented in a visual format. 64.7% of the faculty used visual aids, 29.4% used auditory aids and only 5.9% used the kinaesthetic aids while teaching. When it came to level of understanding 52.9% students understood best when material was presented visually and an equal number i.e. 23.5% understood best when material was presented in auditory and kinaesthetic form. Attention was maximum for 67.6% students when visual aid was used,17.6% and 14.7% students were able to pay maximum attention when material was presented in the kinesthetic and auditory format respectively.67.65 Students were the most satisfied with teaching when visual aid was used ,17.6% when auditory material was used and 14.7% when kinaesthetic material was used. Motivation to learn was maximum for visual aid 55.9%, followed by kinaesthetic aid 29.4% and lowest was for auditory aid 14.7%. The grades were highest when pedagogy was visual 55.9%, followed by kinaesthetic 23.5% and lowest being for auditory 20.6%. Lastly the most favourite learning aid was visual as endorsed by 52.9% of students,kinesthetic by 26.5% and auditory by 20.6% of students. Thus to conclude visual aids seem to be the most effective forms of teaching though kinaesthetic also seems to be endorsed by students as a learning aid. Thus to conclude a large number of faculty use visual aid but only few 5.9% used kinaesthetic aid which needs to be enhanced as to enable students to learn better.
Representational system, auditory, visual, kinesthetic, pedagogy


ISBN : 978-93-92105-56-2

International conference on
Recent Advances in Technology, Engineering, Science and Management
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16th & 17th March 2023|Mumbai

# Resilience of Highways in the State of Punjab – A Case Of Amritsar-Pathankot Stretch Of Nh-54

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## Abstract
India signed the Brasilia Declaration in November 2015, pledging to cut road accidents and fatalities by half by 2020 as part of the United Nations Sustainable Development Goals, which were established in September 2015. Indian government also strengthens and enhances special provisions related to road safety by amending the old motor vehicle act 1988 to new motor vehicle act 2019. India is land having various modes of transports which are used for economic and developmental activities throughout the country. It helps in promoting fair and easy movement of goods. But the lives that are lost on the highways are a blot on their contribution. Despite the fact that the number of "traffic accidents" in the country has dropped from 4,74,638 in 2018 to 4,67,171 in 2019 (MoRTH 2019) , but the economic contributions of 4.67 lakh souls cannot be ignored. Road traffic injuries are also accounted as major health and development issue having considerable socio-economic objectives. Government has taken the highways on its top priority so that the black spots can be corrected. The present paper aims to examine the effectiveness of the policies and identifying the main parameter which results in maximum number of road accidents through significance value. Based on the critical analysis of the existing conditions the recommendations are made to improve the safety on the national highways of Punjab state in particular and country in general.


ISBN : 978-93-92105-56-2

International conference on
Recent Advances in Technology, Engineering, Science and Management
Institute For Engineering Research and Publication (IFERP)
16th & 17th March 2023|Mumbai

# Assessing the Impact and Response to the Disaster in Mananthavady Town: A Case Study

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## Abstract
The study aims to assess the impact of a disaster on Mananthavady town, Kerala, and the response taken by the authorities to mitigate the effects of the disaster. The disaster in occurred in Waynad was a severe flood that occurred in may 2018, which affected several regions of Kerala. The study uses a case study approach to examine the disaster's impact on Mananthavady town, including the damage to infrastructure, loss of life and livelihoods, and the community's resilience. Additionally, the study helps the government and local organizations to support the affected community and promote their recovery. The findings of the study contribute to the understanding of disaster management practices and their effectiveness in addressing the challenges posed by natural disasters.

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## Index Terms
Disaster, flood, Community resilience, disaster management practice.



ISBN : 978-93-92105-56-2

International conference on
Recent Advances in Technology, Engineering, Science and Management
Dilkap Research Institute of Engineering and Management Studies, Mumbai
16th & 17th March 2023|Mumbai

# Growing Socioeconomic Disparities that act as a barrier in Nation Development

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## Abstract
Socio-economic differences are one of the leading issues that are focused on this article to identify the impact of the nation's development barrier. Looking at the basic socioeconomic disparities it has been observed that differences and leading causes for this gap are developing from wealth, health and economical sense of world infrastructure. Increasing socioeconomic gaps present a significant obstacle to the growth of the country. Identified those intangible distinctions frequently lead to economic and social injustices, which deny some groups of society equal access to resources. Because of the unequal distribution of wealth caused by inequality, there is an imbalance between the population's wealthy and poorer portions. From the used secondary data analysis, it has been getting that as a result, these differences hinder the country's ability to advance generally because of its reliance on declining capital income from individuals with limited financial resources, which worsens the economic cycle within it.

## Keyword
Socio-economic disparities, nation development, inequality.

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ISBN : 978-93-92105-56-2

International conference on
Recent Advances in Technology, Engineering, Science and Management
Institute For Engineering Research and Publication (IFERP)
16th & 17th March 2023|Mumbai

# Planning framework for Smart Village concept.

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## Abstract
This India is one of the countries that is quickly urbanising, the majority of Indians (61%) still live in rural regions, making rural development crucial for the efficient growth of the nation. Rural areas also make up 46% of the country's total income. The vast majority of India's rural areas are plagued by a variety of issues that are preventing them from developing. A smart village could offer a remedy for rural issues. The services offered to residents and businesses in the Smart Village will be functional and efficient. "Smart Village," with improved energy availability serves as a catalyst for advancements in security, economic prosperity, and other societal pillars like education and health, establishing a Smart Village through the use of intelligent technologies and services and develop from grassroot level without effecting its natural fabric essence and quality of Village. This paper formulates the detailed consolidated framework from various research papers and suggest, recommendation for planning smart village in the context of India.

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## Index Terms
Attributes and phases,Designing dimensions, Framework, Smart Village.


ISBN : 978-93-92105-56-2

International conference on
Recent Advances in Technology, Engineering, Science and Management
Dilkap Research Institute of Engineering and Management Studies, Mumbai
16th & 17th March 2023|Mumbai

# Fall Detection and Avoidance of Wandering For Elderly Using IoT

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## Abstract
Fall is one of the major health complications for elderly. Every year, Around one third of the elderly people fall and they are aged more than 65. One must be needed to assist properly before any complication occurs. Due to Alzheimer and other dementia most of the elderly will get confused about their location and wander around other Cities. The System Uses fall detection algorithm where OpenCV library in python is applied for image processing, To make it as real time working Raspberry pi is used. Parameters are compared in every frame to detect fall. When the above parameters change abnormally, a fall is confirmed, and the attender in the hospital is notified until they respond.. The System also uses face detection where OpenCV library in python is applied. If the particular face of the elderly people is not there for 20 frames then it will be notified to attender and family or friends until they respond.

## Index Terms
Fall detection, Face detection, Open Source Computer Vision, Simple Mail Transfer Protocol (SMTP).


ISBN : 978-93-92105-56-2

International conference on
Recent Advances in Technology, Engineering, Science and Management
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16th & 17th March 2023|Mumbai

# Study on Effect of Alkali and Acid Concentration on Reducing Sugar Yield

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**Abstract:**
Our planet Earth has all resources for sustainable growth of organism living on it. Due exploitation of available resources is causing global warming, pollution and diseases. The carbon emissions in 2022 have reached all time high i.e. 27.5 GtCO2, from total emissions road transport accounts 10.6% of net carbon emissions. Reducing the global cause is not possible in less time but small efforts like development of eco-friendly fuels can do it. The fuel source which are part of carbon cycle and renewable energy sources can serve better option. Earth has rich biomass, consisting mainly of plants and cellulose is abundant part of it, using lignocellulose for bioethanol production makes lesser dependence on non- renewable sources. To obtain better condition for production of fermentable sugar, 4 samples of 50 g sugarcane bagasse each are treated with combinations of 2%, 5% (w/v) NaOH with 4%, 7% (w/v) H2SO4. Concentration are kept ranging from low concentrations of NaOH and H2SO4 to higher concentrations of NaOH and H2SO4. Importance of concentration of regents in their respective process can be seen distinctly. Effect of concentration on production of reducing sugar is studied through keeping all other parameters constant.

**Keywords:**
Sugarcane Bagasse, Pretreatment, Hydrolysis, Reducing Sugar, Bio-Ethanol.


ISBN : 978-93-92105-56-2

International conference on
Recent Advances in Technology, Engineering, Science and Management
Dilkap Research Institute of Engineering and Management Studies, Mumbai
16th & 17th March 2023|Mumbai

# Phrase pair injection for the low resource English to Manipuri NMT

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## Abstract
Our work reports a neural machine translation (NMT) model with feedback from statistical machine translation (SMT) as an attempt to compensate for the limited resources in English to Manipuri translation. It is common knowledge that NMT devours vast amounts of data. As a consequence, NMT causes low-resource languages to have a comparatively poor performance. In this experiment, we first train vanilla models of phrase-based SMT and NMT and evaluate them using automatic metrics. For both models, the training and evaluation data are identical. Our empirical research uses the BLEU (Bilingual Evaluation Understudy), Meteor, and F1 as the automatic evaluation metrics. In the case of vanilla models, we find that PBSMT yields significantly better results than NMT. To compensate for the limited resources, we enrich the already-present training data using a data augmentation technique termed phrasal pair injection. The phrase pair injection process entails extracting phrase pairs from the phrase-based SMT, which are then added as additional data to the NMT's previously presented training data. The model's automatic metrics evaluation showed an improvement of 66% in BLEU, 50% in Meteor, and 75% in F1 compared to the vanilla NMT model.

## Index Terms
automatic evaluation, English-Manipuri, low-resource, NMT, phrasal injection


ISBN : 978-93-92105-56-2

International conference on
Recent Advances in Technology, Engineering, Science and Management
Institute For Engineering Research and Publication (IFERP)
16th & 17th March 2023|Mumbai

# Loss of agriculture land along flood prone Panchganga River

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**Abstract:**
Flood is an undeniable reality in Kolhapur city as part of District. It is affected by the presence of Panchganga River, which crosses in the area. It is certainly going to be one of the factors inhibiting the development and economic growth in the region, given the agricultural sector is one of the backbones of the economy which has the potential to be disturbed by the flood. The information about the flood and its impacts specifically related to agriculture are needed to determine the precise policies. The research will focus on flood mapping, agricultural production loss assessment, and farmer resilience Farmer, Climate change, Agriculture, Panchganga rivernce expressed in their ability to continue the next cropping after hit by every year during rainfall season. Historically, floods have become a common phenomenon in Kolhapur due to its low-lying landscape. Almost every year, a major part of the western region in Maharashtra is flooded. Including the other damages, the farmers are generally identified as the most affected group due to the weak alarming system of flood and post-flood management strategies. This research paper will identifies and analyses the historical perspective of the Panchganga river flood and its impacts mainly on the livelihood of farmers. It also emphasizes on the current remedies as well as what can be done to save the small-scale farmers from the devastating floods. This synthesis was based on the information published in different grey literature, research articles, government and nongovernment reports, media sources, and so on.

**Keywords:**
Farmer, Climate change, Agriculture, Panchganga river


ISBN : 978-93-92105-56-2

International conference on
Recent Advances in Technology, Engineering, Science and Management
Dilkap Research Institute of Engineering and Management Studies, Mumbai
16th & 17th March 2023|Mumbai

# Preparing Resilient Cities for A Post Pandamic World

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## Abstract:
With unprecedented urbanization in the 21st century, world nations have been consistently working on addressing climatic challenges and improving urban life. The Covid19 outbreak has exposed the consequences of our negligent approach to urbanization and planning. The Covid-19 pandemic has affected each of us globally and has left us questioning the way we lead our lives. Severe repercussions of Covid-19 are felt across every aspect of the society. However, though pandemics have devastated mankind, a look into history proves that, they have been critical in modifying the condition of the built environment. This paper primarily focuses on the impact Covid-19 has on urban spatial planning, with an understanding of the relationship between pandemics and various spatial planning aspects. There is a critical assessment of the long- term impacts Covid-19 has on urban life across the world. The various challenges caused by the pandemic, with focus on urban planning context and the changes that has happened in the planning field, during the pandemic have been discussed. Covid-19 crisis could fundamentally change spatial planning and the current way of life. This necessitates the need to understand the challenges posed, the failures, the potentials hidden; and thereby facilitate building pandemic resilient cities for a better tomorrow. The current innovations and trends in urban planning as coerced by Covid-19 is researched and developed upon keeping in my mind the past lessons and issues to usher a new sustainable-resilient urban planning. But not just that there is also:
The dramatic workplace transformation created by the pandemic caused by the novel Corona virus forced millions of employees to work from home. It has an enormous impact on work and family culture. Work from home, physical distancing, online education and virtual meetings becomes the “New Normal” of life. For many multinational companies work from home is not new and they are promoting the same to increase productivity and save cost. However, there is a dire need to consistently engage, monitor and promote an inclusive, collaborative growth culture for employees supported by robust digital infrastructure to enable work from anywhere.
In this paper we are going to create a concept, which is flexible, independent and it can also regenerate it’s economy etc; after a disaster.

## Keywords
Covid-19, pandemic, urban planning, resilient cities ,Organisational Culture, Work from Home, Covid-19, Socio-cultural Change


ISBN : 978-93-92105-56-2

International conference on
Recent Advances in Technology, Engineering, Science and Management
Institute For Engineering Research and Publication (IFERP)
16th & 17th March 2023|Mumbai

# Assessment of Meghalaya's Logistic Corridor and Warehouses for Essential Goods

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**Abstract:**
With the advent of globalization and internationalization of products, the world of logistics has grown far and beyond. The logistic sector in the state of Meghalaya is as demanding as it is all over the country. Meghalaya as a state, imports, and exports most of its products from other states and countries. Its imports accounts for 50% of the total commodities of the state. Meghalaya is an importer of livestock, oil, and gas from other states of India. Livestock and vegetables come from states like West Bengal and Jammu and Kashmir. Additionally, it also an exporter of processed minerals, coal, coke, briquettes, and limestone, Lakadong ginger and turmeric powder to the UK, Bangladesh, and the Netherlands. Most of these goods are perishable in nature, and hence require special care and attention. Also, the state has been challenged with the duality of natural occurrences which causes major bottlenecks in the way of smooth transportation. These cause a lot of constriction to the timely delivery of the goods and supplies. The state also acts as a gateway to other north- eastern states for goods and supplies to be reached. An intensive study has been taken up in order to analyze the present situation. The study would be focusing solely on road traffic of all the modes available.

**Keywords:**
Supply chain/ Logistics, procurement, management, warehouse, transportation


ISBN : 978-93-92105-56-2

International conference on
Recent Advances in Technology, Engineering, Science and Management
Dilkap Research Institute of Engineering and Management Studies, Mumbai
16th & 17th March 2023|Mumbai

# Prediction of Solar Energy Production and Energy Consumption for Optimal Scheduling

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## Abstract
Decarbonization of energy production by using renewable energy sources like solar and wind energy is a major challenge for tackling the ongoing climate change. Renewable energy is highly fluctuating and cannot be produced on demand. Storing energy is costly and there is gradual loss of energy. Thus, it becomes crucial to understand and forecast both the energy demand and the energy production from renewable sources of energy which in-turn enables us to produce power from the likes of gas plants, which is an example of an on-demand-source, if needed. This power is utilized to optimally schedule energy storage solutions such as batteries and to reduce costs of power trading. Overproduction of solar energy can be used to charge the battery and the power from the battery can be used instead of power from the grid when energy prices are exorbitant or when the availability of solar power is reasonably low. Neural networks are
found best for this type of predictive analysis. This project is aimed at helping elevate and optimize the current usage of renewable energy, making it more reliable and affordable for the general public, thus playing our part to combat climate change by providing optimal solutions to technical challenges faced while implementing them.

## Index Terms
Energy Consumption, , Prediction ,Renewable Energy, Solar Energy, Optimization, Scheduling.


ISBN : 978-93-92105-56-2

International conference on
Recent Advances in Technology, Engineering, Science and Management
Institute For Engineering Research and Publication (IFERP)
16th & 17th March 2023|Mumbai

# Rejuvenation of Bazars- A Content Analysis in Middle Eastern Cities

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## Abstract
Due to urbanization and Industrialization, there is a speedy growth in migration from rural area to urban area, because of this reason urban centers are unable to employ all workforces, and because of this they have to find other opportunities for employment. This study will include the concepts of Transportation planning, Infrastructure (Physical/Social) planning of urban areas, Economy, and Environment by using various norms planning strategies will be given for improving the current situation of the city.
Since the dawn of civilization, places of selling and buying are existing in different forms from time to time. In the pre-historic age, the system of exchange was known as a barter system. Exchange in this context has taken in the commercial areas and it has acted as a centre with all its facilities constitution the heart of the urban organism. The main aim is to understand the various components of the bazar in traditional cities and its uses.

## Keywords
History, Transportation Planning, Infrastructure planning, Content Analysis, Commercial places.

ICRATESM



ISBN : 978-93-92105-56-2

International conference on
Recent Advances in Technology, Engineering, Science and Management
Dilkap Research Institute of Engineering and Management Studies, Mumbai
16th & 17th March 2023|Mumbai

# Weed Detection in Soybean Crop

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## Abstract
By enhancing the efficiency of agricultural fields, we can address the problem of inadequate food resources for the growing world population. In the fields, there are several challenges, such as weeds and plant diseases that need to be identified and eliminated. However, due to the shortage of manpower, this is becoming increasingly difficult. Recently, the use of machine learning techniques, particularly Convolutional Neural Network (CNN), in agriculture has gained considerable attention. CNN is being utilized to classify plants. Automatic identification of plant types can be of great help in optimizing the use of pesticides, fertilizers, and timely treatment and harvesting of different species, thereby improving the food and medical industries. This could also result in reduced labor costs. After the preprocessing step, the CNN architecture is employed to extract the image features.
The aim of this study was to utilize Convolutional Neural Network (CNN) for identifying weeds in images of soybean crops, and to distinguish between grass and broadleaf weeds. The ultimate goal of this work was to identify specific herbicide forthe detected weeds.

## Keywords
Convolutional Neural Network (CNN), RELU layer, Image Processing, Weed, Dataset, Matlab, RGB, Preprocessing.


ISBN : 978-93-92105-56-2

International conference on
Recent Advances in Technology, Engineering, Science and Management
Institute For Engineering Research and Publication (IFERP)
16th & 17th March 2023|Mumbai

# Detection and Prevention of SQL Injection Attack using Naive Bayes and ADA BOOST based Deep Forest model in Distributed Cloud

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**Abstract:**
SQL Injection poses a significant security risk to the different dynamic web applications running on the internet. Several crucial operations are carried out by these web applications in numerous online-based enterprises. The security risks associated with the internet are growing as more people utilise it for a variety of online services. All dynamic web applications have a common requirement, and that requirement is the need to save, retrieve, or alter data from a database. It is a technique that is frequently used to attack the database server. Bypassing the database server's validation and authorization processes, injection attacks allow the attacker to access the database. The technique for detecting and preventing SQL injection attacks utilising the tokenization notion is discussed in this work. The paper describes a programme that checks user queries for the presence of a number of predetermined tokens, blocking access to web pages in those instances when the user query contains any of the tokens. We present a deep forest model based on the AdaBoost algorithm in which the error rate is used to update the weights of the features on each layer. A system that can recognise attack patterns and can learn to detect new patterns from different attack patterns that have happened is necessary to stop SQL injection assaults from being executed by the database. The goal of this study is to develop a system that serves as a proxy to guard against SQL injection attacks using the Hybrid Method, which combines the Naive Bayes and SQL Injection Free Secure approaches.


ISBN : 978-93-92105-56-2

International conference on
Recent Advances in Technology, Engineering, Science and Management
Dilkap Research Institute of Engineering and Management Studies, Mumbai
16th & 17th March 2023|Mumbai

# Walking towards a Better Future: A Review of Theories and Applications of Walkability for Promoting Health, Equity, and Sustainability in Urban Environments

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## Abstract:
This review paper explores the concept of walkability and its components, as well as six theories of walkability and their applications in practice. The paper also discusses the strengths and limitations of these theories and proposes future directions for research and practice in promoting walkability. The concept of walkability refers to the degree to which an environment is conducive to walking as a mode of transportation. This paper identifies four main components of walkability: safety, comfort, convenience, and accessibility. The six theories of walkability discussed in this paper are the Ecological Model, Health Belief Model, Social Ecological Model, Environmental Psychology Model, Walkability Index Model, and New Urbanism Model. Each theory offers a unique perspective on the determinants and outcomes of walkability, ranging from individual beliefs and attitudes to neighborhood and city-level factors.
The paper provides examples of how these theories have been applied in practice, such as walkability assessments and audits, neighborhood and street design interventions, community engagement and advocacy, transportation policies and programs, and public health campaigns and initiatives. While each theory has its strengths in explaining and predicting walking behavior and informing policy and planning decisions, they also have limitations in terms of their scope and focus. To address these limitations, the paper proposes future directions for research and practice in promoting walkability. These include developing more comprehensive and integrated models of walkability, enhancing the use of technology and data analytics in walkability assessment and planning, and strengthening collaboration between public health, transportation, and urban planning sectors. The paper also identifies gaps and challenges in current walkability research and practice, such as the lack of standardization in walkability assessment and measurement and insufficient attention to equity and social justice issues in walkability planning and design.
Overall, this review paper highlights the significance of walkability for promoting public health, transportation, and urban planning goals. It provides a comprehensive overview of six theories of walkability and their applications in practice, as well as identifying opportunities for further research and practice in promoting walkability.

## Keywords:
Walkability, Pedestrian-friendly, Urban planning, Health promotion, Environmental sustainability, social justice, Active transportation, Neighbourhood design, public health interventions, Community engagement


ISBN : 978-93-92105-56-2

International conference on
Recent Advances in Technology, Engineering, Science and Management
Institute For Engineering Research and Publication (IFERP)
16th & 17th March 2023|Mumbai

# Sustainable Planning Strategies for "Community-Based Ecotourism Development" A Ooty Case Based Study

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## Abstract
Tourism is a currently focused sector at the national and international level in generating an Economy that comes with the Comprising of the environment in general due to the tourist activities which can be balanced through Eco-Tourism. In this study, the Eco destination of the area and sensitive areas are spatially analyzed according to the Environment Regulations and the Activities are Regulated Tourism capacity is planned for the future in terms of infrastructure facilities to ensure the growth of tourism in an eco-friendly process. The Study includes a literature review and best practices of eco-tourism and Delineating the Study area around Ooty Town based on Environmental Zones. To study the strategies and to develop eco-tourism with regard to the Indian context. To Identify the Eco Sensitive zones and regulate the negative impact. To Involve the Community in planning strategies to promote their Community well-being and Generate Economy. The outcome is the Conservation of ecologically (sensitive) areas by regulating the development and guidelines for eco-sensitive areas Strategies to promote eco-tourism places in a sustainable way and enhance the economy of the city.


ISBN : 978-93-92105-56-2

International conference on
Recent Advances in Technology, Engineering, Science and Management
Dilkap Research Institute of Engineering and Management Studies, Mumbai
16th & 17th March 2023|Mumbai

# Pothole Detection Using IOT To Help People

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**Abstract:**
Potholes are known from long ago and their solutions are also found from different angles. While doing the literature survey there were many researchers and solutions which can be applied with help of different hardware systems. Detection of potholes is not the one thing which can be used to avoid them. Displaying potholes is also important which can make drivers aware of them. System consists of a GPS module which will be collecting coordinates and an ultrasonic sensor will sense the distance which will be then taken to find the average distance from the road after every few cycles. Getting these two data which will be coordinated and filtered out according to the limit suggested by the investigators of the UK which is more than 40mm will be sent to the Cloud and can further be displayed on an android App with the help of google maps. This system will not only help to detect potholes but also by locating them they can be avoided as well as soon repaired for the future scope.

**Keywords:**
GPS: Global Positioning System, UK: United Kingdom, App: Application, Cloud: Cloud storage is a cloud computing model that stores data on the Internet through a cloud computing provider who manages and operates data storage as a service


ISBN : 978-93-92105-56-2

International conference on
Recent Advances in Technology, Engineering, Science and Management
Institute For Engineering Research and Publication (IFERP)
16th & 17th March 2023|Mumbai

# A systematic survey on Artificial Intelligence in IIoT security Systems

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## Abstract
Today, the industrial development is booming in each country. This industrial development is mostly dependent on advanced technology. In today's industrial environment, devices, sensors and software's are connected to the Internet. Application security, cloud security, information security, network security has become an important topic in today's cyber world. It has become very important to make strong security systems to protect against phishing, ransomware, identity theft, hacking, malware, botnet, cryptocurrency. Artificial Intelligence is empowered with threat detection, intrusion prevention, malware detection, vulnerability assessment and predictive maintenance. Artificial Intelligence can be of great help in making different security system.AI is powerful and capable of mitigating such attacks, detecting threats, detecting anomalies. The rise of cyber threats has raised concerns among individuals, governments and organizations. We can use AI to reduce anxiety for individuals, governments and organizations. This paper tries to explain how we can create security systems in Industrial Internet of things with the help of Artificial Intelligence. Contribution of AI will certainly be evident in reducing cyber -attacks and improving the security posture of organizations.

## Keywords
Artificial Intelligence (AI), Cyber Security, Machine learning (ML), Cyber-attacks, Industrial Internet of Things (IIoT), Denial of Service (DoS), Cyber Physical Systems (CPS).


ISBN : 978-93-92105-56-2

International conference on
Recent Advances in Technology, Engineering, Science and Management
Dilkap Research Institute of Engineering and Management Studies, Mumbai
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# Car Damage Detection using Computer Vision: A Review

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## Abstract
Visual Image classification is a subdomain of computer vision dealing with categorizing and labeling groups of pixels or vectors within an image using a collection of predefined tags or categories that an algorithm has been trained on. In this paper we reviewed various techniques to study the car damage using Computer vision. Cars are a Such a niche in this pursuing and Pacy World. The ability to extemporaneously label the damages on the exterior structure of the car matter of scrutiny to Car indemnity Services. Everyday Car Indemnity services/stores deal with the hectic perusal companies deal with car inspections. Such inspections are manual, time-consuming, and occasionally faulty processes. These processes incur with cost and lot of vexation for the customer and inconveniences for both customers and insurance companies. Even if complete replacement of such manual inspection processes is still a long way off, developing systems to aid, accelerate, or improve the process may be possible Prospering systems to succor, advance, or improve the process may be plausible with contemporary technology. Various proposed system is trained on a large dataset of car images with different types of damages, including dents, scratches, and cracks. The results of the experiments show that our system can detect and classify car damages with high accuracy and can be used to support insurance companies, car repair shops, and car rental companies.

## Index Terms
computer vision, car damages, insurance, accuracy, repair


ISBN : 978-93-92105-56-2

International conference on
Recent Advances in Technology, Engineering, Science and Management
Institute For Engineering Research and Publication (IFERP)
16th & 17th March 2023|Mumbai

# Solid Waste Management Issues and Prospect: A Case Study of Motihari (Bihar)

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## Abstract
Solid waste is any unneeded, dangerous, or wasteful material that results from regular public activities. Regarding its impact on solid waste management, it is classified into two categories based on the level of industrialization development and the accessibility of financial resources. The new economic environment influences economic growth status more so than the current economic climate does (recession vs prosperity). The level of mechanization and use of technical tools serves as a measure of industrialization. Due to geographical variations in the rate of expansion within each region, it is challenging to impose a precise structural definition in terms of solid waste management. For instance, a large metropolitan center in our country is having population growth that is far higher than that of the rest of the nation. It's vital to keep in mind that while the information in this paper specifically applies to developing countries, some of it may also apply to nations that are undergoing change or even to the developed or advanced parts of the world. Environmental interactions between people and their surroundings are dynamic. The planet's capacity to support humans depends on a number of factors, including our use of resources, the amount of trash we produce, and the technology we use in different applications. We have in fact used more resources than the world can sustain due to population increase and a growing tendency in resource consumption.

## Index Terms
Solid waste, Industrialization, recession, metropolitan center, Environmental interactions


ISBN : 978-93-92105-56-2

International conference on
Recent Advances in Technology, Engineering, Science and Management
Dilkap Research Institute of Engineering and Management Studies, Mumbai
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# Analysis of the performance of a machine learning model for predicting floods

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## Abstract
Due to unusual rainfall and climatic change, floods have happened all over the world. Among all natural disasters, flooding is one of the most destructive. wreaking havoc on infrastructure, property, and, most importantly, human life. A machine learning model is being developed to forecast future floods in order to prevent such catastrophes. It is challenging to create a predictive model because of its complexity. The training dataset is split into two parts: Training set and Test set, in a 7:3 ratio, before the process. Rainfall data is fed into four different Machine Learning models in this system. Then, each model's accuracy is compared, and the confusion matrix's parameters are assessed and examined. Finally, by comparing the accuracy, the best model is determined.

## Index Terms
Floods, Rainfall, Natural disasters.


ISBN : 978-93-92105-56-2

International conference on
Recent Advances in Technology, Engineering, Science and Management
Institute For Engineering Research and Publication (IFERP)
16th & 17th March 2023|Mumbai

# Environmental Ethics' Evolution in Connection to Philosophy and Beliefs

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**Abstract:**
Environmental ethics inculcate an ethical code inside individuals and civilizations, allowing them to make decisions that are not destructive to their neighborhood, country, or humanity. Environmental ethics must focus on strengthening individual beliefs so that they do not jeopardize the well-being and security of other living species. Ethics prevents us from risking an individual's health or the well-being of a community; it encourages us to serve our communities proudly and honestly. This papers emphasis on the understanding the significance of environmental ethics and its benefits both people and the ecosystem.
Environmental ethics is an aspect of environmental philosophy that discusses extending the traditional bounds of ethics beyond people to include the non-human world and its components around us.

**Keywords:**
Nature, Environmental Ethics, Ecosystems, Philosophy.

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ISBN : 978-93-92105-56-2

International conference on
Recent Advances in Technology, Engineering, Science and Management
Dilkap Research Institute of Engineering and Management Studies, Mumbai
16th & 17th March 2023|Mumbai

# Fertilizer Recommendation System for Plant Disease Prediction

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## Abstract
Farmers deal with serious issues like crop management, anticipated crop yield, and crop productive output. Because so many young people today are interested in agriculture, farmers and cultivators require competent assistance with crop cultivation. Farmers spend a lot of time and money managing diseases, and they do so by using a penniless "naked eye" method that results in unhygienic farming practises. To guarantee good crop production, infection must be under control. In the sphere of agriculture, artificial intelligence and sensor technologies are essential. The project's goal is to describe how a deep learning algorithm can detect plant diseases. In this technique, fertiliser recommendations are made along with disease prediction for crops. In the current approaches, CNN-based architecture is suggested. The CNN algorithm performs well at classifying images. This system is used for detecting the plant disease and recommend suitable fertilizers to cure the disease.


ISBN : 978-93-92105-56-2

International conference on
Recent Advances in Technology, Engineering, Science and Management
Institute For Engineering Research and Publication (IFERP)
16th & 17th March 2023|Mumbai

# Critical Analysis of Urban Green Space (UGS) Standards in India

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## Abstract
Public spaces play a vital role in moulding social life. It can be in terms of interaction, leisure, recreation, Identity, freedom etc. Studies indicate that frequent usage of public spaces may benefit local economies by promoting tourist and leisure activities and thus raising real estate prices. This study, which uses a standards-based research, examines a large body of literature on the provision of UGS. This paper explores the significance of urban green spaces, different typologies and scale over different context, the global standard and quantitatively analyzing the UGS Standards in Indian Urban context. It focuses on whether Indian standards for UGS meet International standards.

## Index Terms
Hierarchy, Standards, Typology, Urban green space

ICRATESM



ISBN : 978-93-92105-56-2

International conference on
Recent Advances in Technology, Engineering, Science and Management
Dilkap Research Institute of Engineering and Management Studies, Mumbai
16th & 17th March 2023|Mumbai

# Grayscale Image Colorization: A Literature Survey

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## Abstract
Colorization is the process of converting grayscale images to visually acceptable color images. This image-to-image translation problem has been extensively researched since the advent of Computer Vision and Neural Networks. Over the years, several techniques have been developed, ranging from basic algorithms that require significant human intervention to complex automated methods. The current trend in colorizing grayscale images is the development of fully automatic image colorization techniques that use deep learning and art. One such technique is the U-net generator. The U-net generator is a type of convolutional neural network (CNN) that is capable of producing high-quality colorized images. It is named after its shape, which resembles a "U" due to its encoder-decoder architecture. Recently, GAN-based methods have been the most successful in colorizing grayscale images. GANs, or Generative Adversarial Networks, consists of two networks: a generator and a discriminator. The generator learns to generate images, while the discriminator learns to distinguish between real and generated images. By competing against each other, the generator and discriminator improve over time, resulting in highly realistic images.
It classifies the algorithms, explains their core principles, and highlights their advantages and disadvantages. Additionally, it summarizes the various strategies that have been tested for the process of image colorization, including historical methods, and discusses the current trend toward fully automatic image colorization solutions.

## Keywords
Generative Adversarial Networks, Convolutional Neural Networks, Grayscale, Automatic methods, Example-Based Methods, Image Quality Assessment, Scribble-Based Methods, User-Guided Methods, Colorization


ISBN : 978-93-92105-56-2