



Sant Dnyaneshwar Shikshan Sanstha's

# ANNASAHEB DANGE COLLEGE OF ENGINEERING AND TECHNOLOGY, ASHTA

(An Empowered Autonomous Institute)

Affiliated to Shivaji University, Kolhapur • Approved By AICTE, New Delhi & Govt. of Maharashtra

An ISO 9001 : 2015 Certified Institute



## Institution's Innovation Council (IIC)

# Newsletter



## About the Institute

Sant Dnyaneshwar Shikshan Sanstha's, Annasaheb Dange College of Engineering and Technology (ADCET), Ashta is one of the iconic public institutions of higher technical education in Western Maharashtra, distinguished by its compassion to produce engineers with competence for improving the human condition and building the nation. Established in 1999, ADCET, Ashta is an Autonomous institute affiliated to Shivaji University, Kolhapur, Maharashtra and approved by AICTE, New Delhi. The institute is accredited with "A++" grade by NAAC Bengaluru, ISO 9001:2015 certified and runs programmes accredited by NBA, New Delhi. The community and culture of ADCET, Ashta are enriched by active bright students, dedicated teachers, and commitment to impart quality education in Engineering.

ADCET's campus is spread over 25 acres in the heart of the town of Ashta, Sangli, where undergraduate students build their lifelong friendships and connections while enjoying their educational journey. The College is a leader in academic excellence, with a particular focus on outcome-based education by setting an unambiguous framework for curriculum planning along with clear standards for observable, measurable outcomes. We are continuously emphasizing on restructuring of curriculum, assessment and reporting practices in education to reflect the achievement of high-order learning and mastery rather than the accumulation of course credits. College is focusing on "Student Centric Learning" by fostering close working relationships between faculty and students.

## Institution's Innovation Council-AY 2023-24

S. No	Name of Member & Dept.	Key Role/ Position assigned in IIC
1	Prof. R A Kanai	President
2	Dr. Vikram S. Patil	Vice President
3	Dr. Yuvaraj S / Aero	Convener
4	Dr. S. Gopinath/ Elec	MOU with Higher Educational Institute
5	Dr. Amolkumar N. Jadhav/ CSE	KAPILA Coordinator
6	Mr. Shrihari D. Khatawkar/CSE	SIH Coordinator
7	Mr. Niyaj S. Nadaf / CSE	Social Media Coordinator
8	Dr. Anirudh G. Patil/ Food	IPR Coordinator
9	Mr. Reju R/Aero	Startup Activity Coordinator / Entrepreneurship Coordinator/ National Innovation & Startup Policy (NISP)
10	Prof. S V Nishandar / Mech	Internship Activity & MOU Coordinator for Industry
11	Carol Vincent Carvalho / Food	Innovation Activity Coordinator / Innovation Ambassador Activities / YUKIT
12	Dr L Y Wagmode / Mech	NIRF Coordinator
13	Dr. Manoj D. Patil / Elec	ARIIA Coordinator
14	Mr. Rajendra B. Madake / Elec	Member - Incubation
15	Mr. Pravin B. More /CSE	Member
16	Mr. Sandeep Gajanan Sutar / CSE	Member
17	Dr. Manoj Hirji Mota / Civil	Member
18	Mr. Krishna Kumar L/ AIDS	Member
19	Mrs. Prachi Pathak /IOT	Member
20	Dr. S. Sendhil Kumar/ Aero	Member
21	Dr. R. Arulmurugan /Elec	Member

## Institution's Innovation Council (IIC)

IIC aims to Increase research commercialization, Enhance collaboration, and build a stronger innovation pipeline.

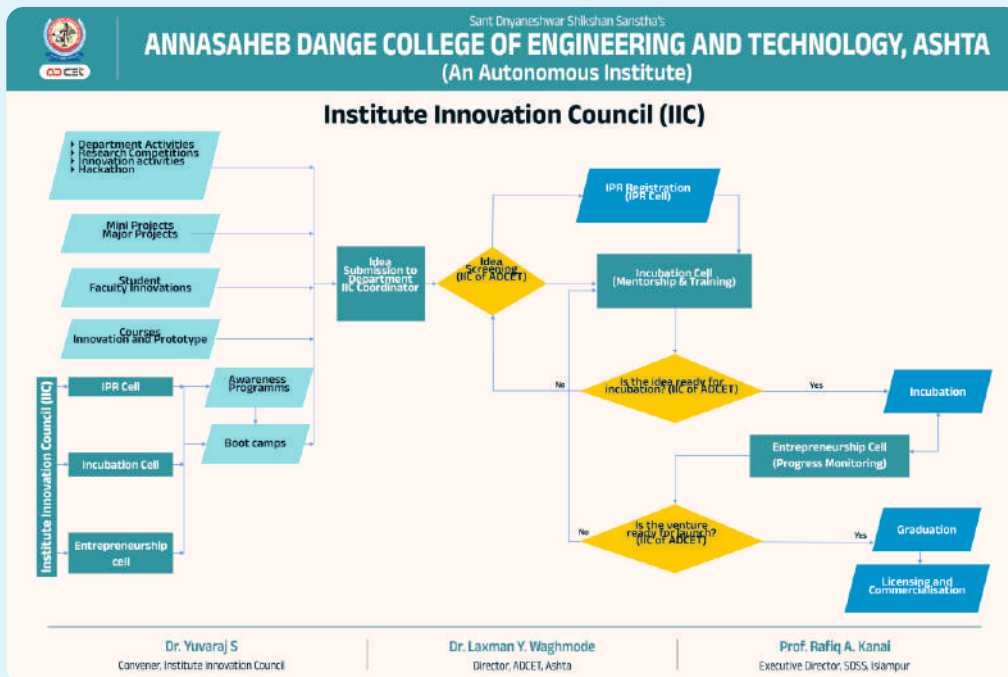


Fig.1: Operational Flow chart of IIC-ADCET

The IIC becomes a central hub for promoting innovation and encouraging researchers to think beyond traditional academic pursuits. IIC has entrepreneurship, incubation, and IPR (Intellectual Property Rights) Cells functioning under its umbrella to build a strong and supportive ecosystem for research within the institute.

- Representing the institute at national and international innovation and entrepreneurship forums.
- Advocating for policy changes within the institute to support a more innovation-friendly environment.
- Foster collaboration and communication between the E-Cell, Incubation Cell, and IPR Cell to ensure a cohesive approach.
- Develop a comprehensive vision and strategic plan for fostering innovation, entrepreneurship, and intellectual property protection within the institute.
- Set performance goals and metrics to track the progress and impact of each cell's activities.
- Secure funding for the overall operations of the E-Cell, Incubation Cell, and IPR Cell.
- Allocate resources (budget, personnel, equipment) effectively across the three cells based on their needs and priorities.
- Oversee the development and implementation of programs and initiatives across the E-Cell, Incubation Cell, and IPR Cell. This might include workshops, seminars, competitions, mentorship programs, and industry connect events.
- Cultivate relationships with external stakeholders like mentors, investors, industry partners, and venture capitalists.
- Facilitate collaboration with other universities, research institutions, and government agencies to share best practices and leverage resources.
- Explore opportunities for attracting investment and funding for student ventures and research projects.
- Track the progress and impact of the E-Cell, Incubation Cell, and IPR Cell's activities and analyze data and metrics to identify areas for improvement and ensure the effectiveness of programs.
- Regularly review and update strategies based on the evolving needs of the institute and the innovation landscape.
- IIC believes that the improvement of project quality of the Departments will significantly improve the innovation at the institution and the Head of the Department and the concerned Project/activity coordinator are solely responsible for the same.

### **Entrepreneurship Cell**

- Awareness & Inspiration: Talks, workshops, conferences promoting entrepreneurship.
- Skill Development: Workshops on business planning, pitching, finance, legal aspects.
- Idea Cultivation & Support: Competitions, brainstorming sessions for ideadevelopment.
- Networking & Collaboration: connect students with investors, mentors.
- Track the progress of student ventures and measure the impact of E-Cell programs.

### **Incubation Cell**

- Manage the allocation and maintenance of incubation space.
- Screen and select startups for incubation based on set criteria.
- Facilitate mentorship programs and workshops for incubated startups.
- Assist startups in accessing funding opportunities and connecting with investors.
- Monitor the progress of incubated startups and provide ongoing support.

### **IPR Cell**

- Educate students and faculty on IPR and Organize workshops and seminars to raise awareness about IPR protection.
- Assist in identifying and assessing potential IP in projects.
- Provide guidance on the process of filing patents, copyrights, and trademarks.
- Maintain records of IPR owned by the college and manage licensing agreements.
- Stay updated on IPR laws and regulations and advise the college accordingly.

## Project Title Proposed 2023-24

- Eco Pen
- EEG Based Ball Balancing
- Innovative Paver Block
- Bakri Sandwich
- Polarised Window
- Automatic Plant Irrigation System
- Information extraction using computer vision
- Areaca nut husk cushion
- Gym Coin
- Helmet Inbuilt Cooling System
- Smart health care system in Blockchain
- Ecology - Environmental Application
- Rental Rooms Finder
- Recycled Clothed Produces
- Biodegradable Pot for Nursery
- Hospital Management System
- Campus Events hub
- Rapid Detection for Food Adulteration
- Health Monitoring Jacket
- Electricity Theft Detector
- Automatic Water Tank Filler
- Night time safety band for Farmers
- Revolutioning Dressing Ethics
- Reselling Used Cloths
- Portable water distilator
- Thermoelectricity from Bike exhaust
- GPS collage bus tracking system
- Movie Recommendation Application
- Plant Disease Monitoring
- College Predictor
- Disease Detection Approach on Potato Leaves
- Driver Drowsiness Detection System
- Fingerprint Door Lock System
- Electronic Health Record System
- RFID Door Unlocking System
- Course Nest
- Automatic Vehicle Number Plate Detection
- Smart Pet Monitoring
- Automated Bridge Gates
- Smart Parking
- Dry fruit soaking machine
- AI Assistant for Department
- Dry fruit soaking machine
- AI Assistant for Department
- Music recommendation based on facial expressions
- Music recommendation based on facial expressions
- AI virtual mouse
- Medical Healthcare
- Sun tracking solar panel
- GPS collage bus tracking system
- AI virtual mouse
- AI virtual mouse
- AI Assistant for Department
- Medical Healthcare
- Medical Healthcare
- GPS collage bus tracking system
- Mnuufacturing of Paver block using waste material
- Development of plaster using cow dung with natural & waste adetive
- Zero waste toilet
- Evaluation of evaporation equation using neural network
- Finale element analysis of square & rectengualr slender columns using high performanse concreete
- Seismic shield: revolutionizing high rise stability with innovative belt truss with bracing system
- Geospacial analysis for indusive village develoment
- Smart green roof system for urban sustainability
- Temp analysis of rolled steel I section with balast fiber reinforced polymer using FE method
- Desing of sustainable water supply system for pokharni village
- Pokharni village hygine initiative upgrading seveage system & healthier future
- Parametric study of influence of fluid viscous dampars & base isolation on the seismic performance of RCC building
- Sustainable precast concreete pannel
- Effective solid waste management to empowering community A case study of pokharni village
- Comeptulization & development of interlocking bricks for well construction, with manufasturing by waste material
- Landfill impact on groundwater & soil feartility

- Design & development of silver coated clay filter module for turbidity & pathogen removal
- Rigid pavement design & land survey using DGPS & photography drone survey for pokharni village
- kinetic Energy charging of Electric vehicle
- child labor
- Solar panel with sun tracking system
- AI disease detection
- piezoelectric shoes
- Groundnut Shelling Machine
- Exam preparation and Monitoring system
- Glaucoma Detection using Deep Learning
- Luminescent material as a reflector
- ADCET Canteen Network
- Automatic weeding machine
- Gesture to text
- AI based Market Intelligence system for agriculture commodities
- Animal Rescue Website
- Health Challenges : Risks of Self-Medication
- Introduction of virtual reality classroom
- Samrt classroom management system
- Daily Skincare App
- Wireless indicator for tractor-trolley
- software solution in providing awareness of available medical facilities
- Body building tutor aap
- Dynamic Parking System
- Cake House Business
- Rescue Drone Mission
- Extender plug
- Techno Farming Application
- GPS shoes for Special Person
- Smart Cane sensor
- Voter Verification System
- Pro interview app
- Smart invoice system
- Vidnyan Bot
- Automated Pothole detection system
- peer to peer car sharing app
- AI based student mentoring system
- GuardianGear: A Helmet-Activated Motorbike Ignition System
- resource shearing aap
- Travel Smart : your travelling companion.
- ASL Alphabet recognition using Machine Learning
- FinTrack Web accounting system
- Animal Rescue Website
- Face recognition attendance system
- Power Generation with Staircase
- Original voice detector
- Automatic gate opening
- Drone based leaf deseas detection system
- Automatic crop cutting application
- Handwritten character recognition on MODI script
- Knee osteoathritis detection using Deep Learning
- Student attendance management system
- Health Indicator Ring
- Your Gym Partner
- Career Navigator
- WILDGEAR -Trekking Essentials Rental Platform
- Try on Feature using AR
- Shopping cart with a smart scnner and calculator
- Reusable Filter Water Bottle
- Helmet inbuilt using sweat absorb foam
- Solar Hearing Aids
- Automated Attendance System
- EV charging station Finder App
- Small tracking device
- Trekk planning App
- Resource sharing app
- Sonic Analyzer
- PolyCraftHub: Industry's Digital Footprint
- Development of Speed montitoring and sefty system for vehicles
- Smart Medicine Dispenser
- Efficient ST search with Specialised Chip
- Classroom Assessment System
- Anti-Theft car security system
- Unified Ecosystem
- Hybrid Electric Bike
- Heat sensitive colour changing utnesils
- interview app
- Medical drone delivery
- career exploration path

- Digital Marketplace for farmers
- Addressing The Mental Health of Students
- Sustainable packaging for E-Commerce
- Nutrimate cloud organisation
- Viral Disease Prediction
- battery temperature detector
- online voting system using biometric
- AgroGaurd Sprayer PRO
- Modular phones
- phishing attack solution
- App for Blind Peoples
- Accident Detction
- Application for local business services
- Crop and Weed detection for Sugarcane, Grapes and Banana
- introduction to wind energy harnessing from railway
- Hospital Helper Bot
- Autonus Vehicle
- Air to water generator bottle
- smart light system
- Crash Detection Hardware
- Resume Shortlisting Web Using Ai
- Child Labour App
- Thrive, Transform, Triumph
- Robotic umpire in cricket
- Security App with Advanced permission security
- Smart Waste Management System
- Maid Hiring managment system
- Padeco Disposal
- Oxygen level indicator in car
- EcoReward: A Smart Waste Sorting and Incentive System
- Virtual Fitting Room
- Detection of PCB defects using Deep Learning
- Diet Plan Management
- Homemade food products App
- withdrawal cash without atm card.
- Automatic Emergency Call System for Car Accedent
- smart farming
- Eartquake Safety Bed
- Smart underground dustbin system
- Prediction of chronic Kidney disease - A machine learning approach
- Electricity Theft Detection & Electricity Management
- Empowering Computation Using Hand Gesture
- Wireless Charging Station For E-Vehicle Using Solar with IOT
- Realastic Scarcrow Using 3D Printer
- 3D Printed Horn Antenna For Estimating Adultration Of Petrol with Kerosene
- DBID Band
- Student Monitoring in Bus
- Computer Integrated Autonomous Robotic Arm
- Lawyer Appointment & Consultation App Based On Speech To Text Conversation
- Wi-Fi Based Attendance System
- Smart Vehicle Ignition Locking System
- Decentralised Voting System
- Licence Detection Through Fingerprint
- Smart Parking System
- Transforming Railway Platform Crossing with IOT Integration
- Face Recognition based Attendance System (Deep Learning)
- Evidence Protection System Using Blockchain Technology
- Air Quality 2.0 IOT Integrated Device for Enhanced Monitoring.
- A Comprehensive Blockchain Based Framework for Blood Bank
- IOT Enable Automatic Motor Control System
- Gyroscopic Robotic Hand
- New Version E-Vehicle Energy Supply System
- Smart Irrigation System
- Radar System using Arduino
- Automatic Door Controlling System
- Generation of Electricity from Treadmill
- Scientific calculator using Matlab
- wiper helmet
- Automatic blackboard cleaning machine
- Smart shopping trolley that follows customer
- Underground cable fault detctor
- Employee Location Tracking in an organization
- Emergency human dectective study table
- cell phone network modification in electrical dept of ADCET campus
- Nano purity revolutionizing water purification with microfiltration and electro dialysis fusion



- Smart bus ticket issuing system and crowd control
- Smart Parking System
- Automatic street light and air pollution detector
- Hill area accident avoider indicator
- Green grow advanced indoor food composter
- Wireless charger for electrical vehicle
- Wireless charging station
- Design and Development of Electric Scooter
- Machine Learning Integration with Battery Management system
- Design and Development of Bearing Fixing Machine by using PLC
- Design and Implementation of Solar Based Dryer System.
- IOT Based Green house Management System
- Design of Solar Powered Air Purifier with Air Quality Monitoring
- Simulation and Experimental implementation of fuzzy logic controller based DVR for power quality improvement in three phase distribution system.
- IOT Based Robot for Railway Track Crack Detection System.
- Prepaid EV Charging Station for Two Wheeler.
- Design and Development of Smart Shredder Controller for Plastic Bottle Crushing and Recycling.
- Design and Development of Smart Agriculture Spraying System
- Empowering Rural Communities- Designing Small-Scale PV Panels for Sustainable Energy.
- Biogradable bottles & items using bamboo
- Development of Ragi based healthier Khari
- Development of Ragi cake
- Development of nutritionally enriched multigrain bread fortified banana & finger millet flour
- Development of mouth fresher using mango seed kernels
- Electricity generation by pull up bar machine
- Automatic rain sensing motorized umbrella bag
- Folding helmet
- "Enhancing Tire Safety: Reducing Accidents by Controlling Temperature Increases"
- Anti sleep alarm while driving.
- Digital Notice board
- Rain water reservoirs for road maintenance
- Smart shopping cart
- Smart helmet
- Temperature sensing fan
- Intelligent car door system
- Monitor uses of water in the shower
- Safety Windows for school bus
- Automatic Birds scarecrow mechanism
- Produce electric energy from using leg-extension machine .
- Energy harvesting backpack using piezoelectric material
- Smart shoe rack
- Automatic blade swinging ceiling fan for easy cleaning
- Bi-directional Torch
- Convert pressure energy into electric energy with help of banch-press machine
- Automatic Emergency caller devic in Accident
- Air Conditioner Umbrella.
- Oxigen and carbon dioxide Sensing in car and automatically down the window of car.
- Automatically blackboard cleaning
- Bladeless Wind Turbine
- Pet detection system in cars
- Wireless indicator for tractor trolley
- Grain Cleaning Machine.
- Smart Plant Health Monitoring System
- Automatic window opening in event of fire
- Wheel chair convertible to crutches

## Short-listed Projects 2023-24

Sr. No	Project Title	Department
1	Eco Pen	Aeronautical Engineering
2	EEG Based Ball Balancing	"
3	Innovative Paver Block	"
4	Bhakri Sandwich	"
5	GPS collage bus tracking system	AI&DS
6	Movie Recommendation Application	"
7	Plant Disease Monitoring	"
8	Mnufacturing of Paver block using waste material	Civil Engineering
9	Development of plaster using cow dung with natural & waste adetive	"
10	Zero waste toilet	"
11	kinetic Energy charging of Electric vehicle	Computer Science & Engineering
12	child labor	"
13	Solar panel with sun tracking system	"
14	AI disease detection	"
15	piezoelectric shoes	"
16	Groundnut Shelling Machine	"
17	Exam preparation and Monitoring system	"
18	Electricity Theft Detection & Electricity Management	Computer Science & Engineering (IOTCSBT)
19	Empowering Computation Using Hand Gesture	"
20	Wireless Charging Station For E-Vehicle Using Solar with IOT	"
21	Realastic Scarcrow Using 3D Printer	"
22	Generation of Electricity from Treadmill	Electrical Engineering
23	Scientific calculator using Matlab	"
24	wiper helmet	"
25	Automatic blackboard cleaning machine	"
26	Biogradable bottles & items using bamboo	Food Technology
27	Development of Ragi based healthier Khari	"
28	Electricity generation by pull up bar machine	Mechanical Engineering
29	Automatic rain sensing motorized umbrella bag	"
30	Folding helmet	"
31	Enhancing Tire Safety: Reducing Accidents by Controlling Temperature Increases	"
32	Anti sleep alarm while driving.	"

## 1. Eco Pen

1. Narendrasing A. Patil 2. Shubham Dehadray

Dept. of Aeronautical Engineering

**Abstract :** The Eco Pen combines traditional writing with CO<sub>2</sub>-absorbing ink, which captures atmospheric carbon dioxide. This pen offers an accessible, everyday tool for reducing greenhouse gases, unlike expensive carbon capture systems. While it integrates easily into daily life, it has limitations: the ink's effectiveness may decrease when writing on paper, and there could be smudging and potential health risks if ingested. The Eco Pen provides a practical way for individuals to contribute to environmental protection.

It's not just about ink; it can be scaled up, is highly reactive with various applications, and the CO<sub>2</sub> can be extracted for other uses.



## 2. Bhakri Sandwich

1. Pradyumn M. Deshmukh 2. Bhavik B. Kale

Dept. of Aeronautical Engineering

**Abstract :** Introducing Bhakri Sandwich, a healthy and nutrient-rich alternative to traditional fast food, aimed at addressing the growing preference for convenient yet nutritious meals. Bhakri, a traditional Indian flatbread made from various grains, offers numerous health benefits compared to the commonly used maida-based bread. By utilizing grains like rice, jowar, bajra, and wheat, Bhakri Sandwich caters to diverse regional tastes while promoting a balanced diet. Its simplicity, affordability, and unique flavor profile make it an ideal choice for consumers seeking both convenience and healthiness. With the potential to revolutionize the fast food industry, Bhakri Sandwich presents an opportunity to bridge the gap between traditional Indian cuisine and modern dietary preferences, catering to the needs of metropolitan cities and beyond.

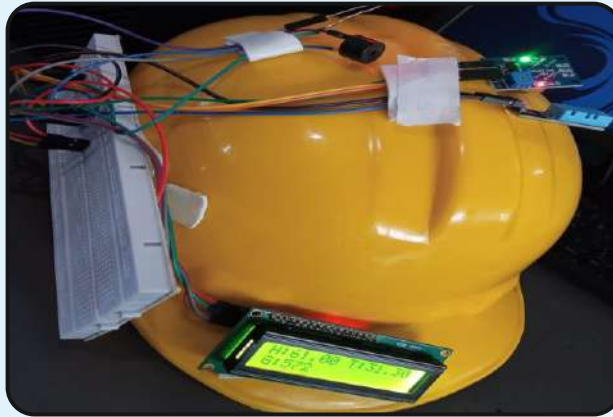


### 3. AI Based Smart Helmet

1. Sanika B. Tanawade 2. Riddhi E. Nalawade 3. Madhuri R. Koravi

Dept. of AI&DS

Abstract : AI-based smart helmets represent a groundbreaking advancement in wearable technology, offering enhanced safety and functionality for riders. By incorporating advanced sensors, artificial intelligence algorithms, and real-time data analysis, these helmets can monitor various parameters such as head impacts, rider behavior, and environmental conditions. This abstract explores the key features and benefits of AI-based smart helmets, including improved accident prevention, enhanced rider awareness, and potential integration with connected vehicle systems.



### 4. Kinetic Energy Charging of Electric Vehicles

Shivam M . Mule Dept. of Computer Sci. & Engineering

Abstract : Kinetic energy is captured during vehicle is in motion. Dynamo works as a generator to convert this energy into electricity. Stored in the vehicle's battery for later use. When a vehicle is in motion the dynamo converts kinetic energy of wheels into electricity. Output of a dynamo is given to the regulator to controls voltage output to ensure a consistent and stable supply.



## 5. Solar Panel with Sun Tracking System

**Shivani K. Patil** Dept. of Computer Sci. & Engineering

**Abstract :** A solar panel with a sun tracking system is a setup designed to maximize the efficiency of solar energy collection. The system uses sensors and motors to adjust the orientation of the solar panels throughout the day, ensuring they are always aligned with the sun's position. This allows the panels to capture more sunlight compared to fixed-position panels, leading to higher energy output. The system can be single-axis, tracking the sun's movement from east to west, or dual-axis, adjusting for both horizontal and vertical angles.



## 6. Kinetic Energy Charging of Electric Vehicles

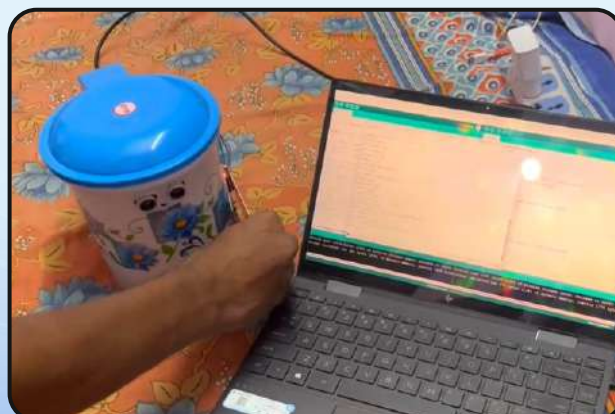
**Shivam M . Mule** Dept. of Computer Sci. & Engineering

**Abstract :** Kinetic Energy Charging (KEC) presents a promising approach to harnessing wasted energy and extending the range of electric vehicles (EVs). By recovering energy during braking or deceleration, KEC systems can convert kinetic energy into electrical energy, which can then be stored in the EV's battery. This technology offers several advantages, including reduced reliance on external charging infrastructure, improved energy efficiency, and extended driving range.

## 7. Smart Dustbin

**Omkar B. Malgunde** Dept. of AI&DS

**Abstract :** Smart dustbins, equipped with advanced sensors and IoT technology, are revolutionizing waste management practices. These intelligent bins can monitor waste levels, detect specific materials, and optimize collection routes, leading to more efficient and sustainable waste disposal. By incorporating features such as real-time data analytics, automated compactor systems, and integration with waste management infrastructure, smart dustbins contribute to cleaner cities, reduced environmental impact, and improved resource management.



## 8. AI Disease Detection

Swapnil S . Patil Dept. of Computer Sci. & Engineering

Abstract : Artificial Intelligence (AI) has emerged as a powerful tool in revolutionizing various fields, including healthcare. AI-driven disease detection systems offer significant potential to improve diagnostic accuracy, efficiency, and accessibility. By leveraging advanced algorithms and machine learning techniques, these systems can analyze vast amounts of medical data, such as images, genetic information, and electronic health records, to identify patterns and anomalies indicative of specific diseases.



## 9. Piezoelectric Shoes

Ms. Shweta Lengare Dept. of Computer Sci. & Engineering

Abstract : Piezoelectric shoes are footwear designed to harness the mechanical energy generated from walking or running. They incorporate piezoelectric materials—substances that produce electrical voltage when subjected to pressure. As you walk, these materials convert the kinetic energy of your steps into electrical energy, which can then be used to power small devices, such as LED lights or electronic sensors, or stored in batteries. This innovative technology offers potential benefits in energy harvesting, wearable electronics, and enhanced functionality in everyday footwear.



## 10. Groundnut Sheller Machine

1. Arundhati S. Patil 2. Radha B. Khatri 3. Swaleha S. Shikalgar 4. Asmita S. Sutar

Dept. of Computer Sci. & Engineering

Abstract : Farmers in rural areas produce large quantities of groundnuts but only for cracking them no user friendly technology has been developed This project is mainly about generating a new concept of groundnut cracking that would make easier to shell groundnuts



## 11. Innovative Paver Block

Avinash S. Ghatage Dept. of Aeronautical Engineering

Abstract : The product proposes an innovative approach of creating eco-friendly hollow paver blocks utilizing recycled materials – used LDP and foundry sand with some fixed amount of Additive. These pavers will incorporate a central hole to facilitate rainwater infiltration and promote groundwater recharge.

## 12. Exam Preparation and Monitoring System

Ms. Rajnandini S. Bobade Dept. of Computer Sci. & Engineering

Abstract : It is an innovative platform designed to streamline the process of monitoring and supporting students as they prepare for competitive exams. Our all-in-one solution integrates attendance management, test score tracking, diverse test creation, in-depth student performance analysis, and centralized student record maintenance. By leveraging advanced analytics and user-friendly interfaces, StudentWatch provides educators with the tools they need to identify student strengths and weaknesses, offer personalized support, and ensure data transparency and security. Empower your institute with StudentWatch and transform the way your students achieve exam excellence.

## 13. Enhancing Tire Safety: Reducing Accidents By Controlling Tyre Temperature

Sai R. Patil

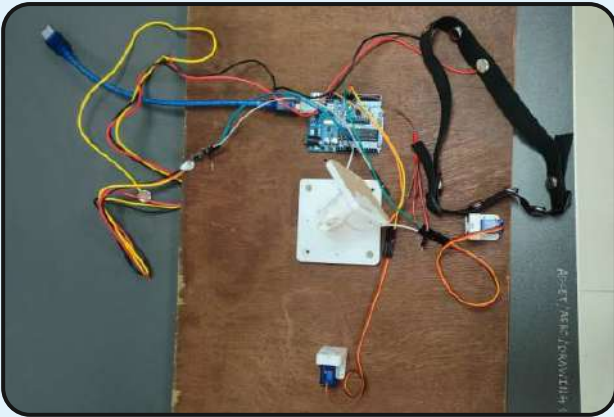
Dept. of Mechanical Engineering

Abstract: Tires, as critical components of vehicles, play a pivotal role in ensuring safe and efficient transportation. However, excessive tire temperatures can lead to various safety concerns, including tire blowouts, decreased traction, and increased fuel consumption. This paper explores the relationship between tire temperature and tire safety, highlighting the potential benefits of controlling tire temperature to mitigate accidents.

## 14. EEG Based Ball Balancing

**Atharva D. Koli** Dept. of Aeronautical Engineering

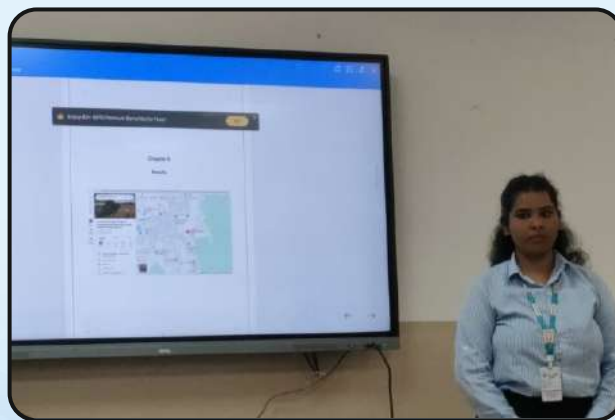
**Abstract :** This product presents the design and implementation of an EEG-based maze game, aimed at exploring the potential of brain-computer interface (BCI) technology for interactive gaming. Utilizing electroencephalography (EEG) to capture neural activity, the game translates brainwave patterns into control commands, enabling players to navigate through a virtual maze. The system employs advanced signal processing techniques to interpret EEG data in real-time, providing an intuitive and immersive user experience. Preliminary testing indicates promising results in terms of accuracy and responsiveness, suggesting significant potential for future applications in both gaming and therapeutic environments.



## 15. GPS Bus Tracking System

**Ms. Vaishnavi S. Dounde** Dept. of AI&DS

**Abstract:-** A bus tracking system project is designed to enhance the efficiency and reliability of public transportation by providing real-time information on bus locations. Utilizing GPS technology, this system enables transit authorities to monitor and manage bus fleets effectively, ensuring timely arrivals and departures. Passengers benefit from increased convenience and reduced waiting times through accessible updates. Additionally, the system can optimize routes, improve service planning, and reduce operational costs by minimizing fuel consumption and idle time. Overall, a bus tracking system represents a significant advancement in urban mobility, contributing to a more sustainable and user-friendly public transportation network.



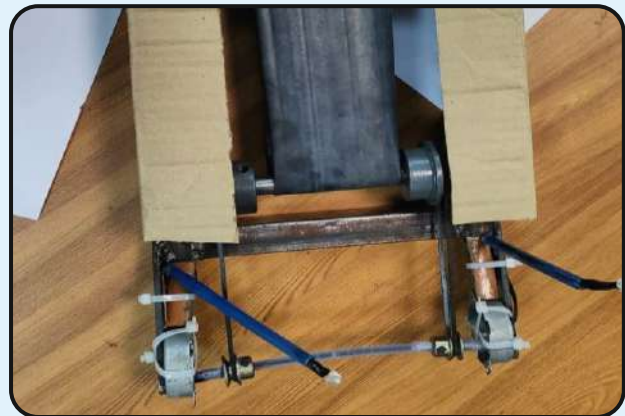


## 16. Generation of Electricity Using Treadmill

Nikhil R. Patil Dept. of Electrical Engineering

**Abstract:** The project "Electricity Generation from Treadmill" focuses on developing a sustainable method of harnessing human energy during exercise to generate electricity. As the global demand for clean energy increases, innovative solutions that integrate renewable energy into daily life are crucial. This project capitalizes on the mechanical energy produced by individuals using a treadmill, converting it into electrical energy through a system designed to maximize efficiency.

The treadmill is equipped with a generator that is mechanically linked to its belt mechanism. As a user exercises, their movement drives the belt, which in turn rotates the generator. This rotation converts kinetic energy into electrical energy, which can then be stored in batteries or used to power low-energy devices, such as lights or charging stations. The system is designed to be modular and scalable, allowing for potential integration into gym facilities, homes, or even public spaces where treadmills are commonly used.

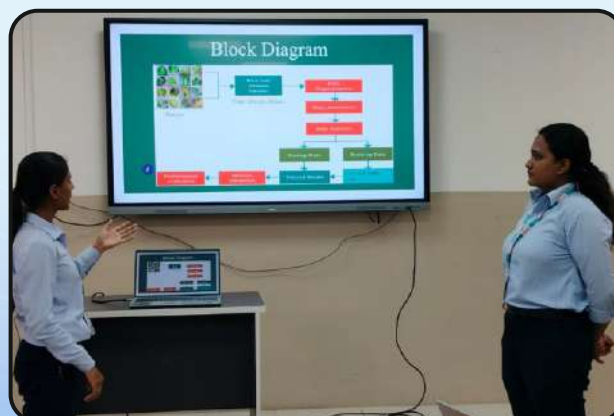


## 17. Plant Disease Monitoring

1.Vishwaja B. Patil 2.Omkar S. Gundre 3. Vaishnavi N. Zangaje

Dept. of AI&DS

**Abstract:-** A bus tracking system project is designed to enhance the efficiency and reliability of public transportation by providing real-time information on bus locations. Utilizing GPS technology, this system enables transit authorities to monitor and manage bus fleets effectively, ensuring timely arrivals and departures. Passengers benefit from increased convenience and reduced waiting times through accessible updates. Additionally, the system can optimize routes, improve service planning, and reduce operational costs by minimizing fuel consumption and idle time. Overall, a bus tracking system represents a significant advancement in urban mobility, contributing to a more sustainable and user-friendly public transportation network.



## 18. Scientific Calculator using Matlab

1.Varsha B. Aparadh 2.Rutuja S. Khandekar 3.Sayali V. Thorbole 4.Arati N. Gole

Dept. of Electrical Engineering

Abstract: This paper presents a MATLAB-based scientific calculator that provides a comprehensive suite of mathematical functions and operations. The calculator offers a user-friendly interface, allowing users to easily input numbers and select desired operations.



## 19. Wiper Helmet

1. Tanishka J. Shinde 2. Akanksha T. Edake 3. Sakshi N. Kasar 4. Shweta V. Mohite

Dept. of Electrical Engineering

Abstract: A wiper helmet is a specialized type of helmet designed to improve visibility in rainy conditions. Unlike traditional helmets, which rely on visor wipers or manual cleaning, a wiper helmet incorporates a built-in wiper system that automatically removes rain and other debris from the visor.



## 20. Development of Enriched Puff Pastry

1. Apoorva A. Vachakal 2. Aayushi S. Lakhanje 3. Leena V. Gohane 4. Karishma B. Sonawane  
Dept. of Food Technology

**Abstract :** The aim of this study is to develop a process for the development of enriched puff pastry using finger millet and refined wheat flour. Puff pastry is a popular No leavened pastry product with unique textural properties. Puff pastry is processed from laminated dough, comprising alternating and discrete layers of dough and fat. Puff pastry quality can vary substantially depending on the raw material quality and production processes. Traditionally puff pastry is prepared using refined flour which contain low nutritional value therefore an attempt to formulate a healthier version of puff pastry using finger millet flour. The prepared enriched puff pastry was analyzed for its sensory qualities by adopting 9 point Hedonic scale, Approximate analysis and sensory attributes of the formulated puff pastry will be carried out.



## 21. Electricity Generation By Pull Up Bar Machine

Adarsh V. Pawar  
Dept. of Electrical Engineering

**Abstract:** This project explores a novel approach to electricity generation using a pull-up bar machine integrated with a gear train and piezoelectric sensors. The design leverages the mechanical energy exerted during a pull-up exercise, converting it into electrical energy. The gear train amplifies the rotational motion generated by the user's movement, transferring this energy to the piezoelectric sensors. These sensors, known for their ability to convert mechanical stress into electrical charge, produce a voltage in response to the applied force. The generated electricity can then be stored or utilized in real-time. This system not only provides an innovative way to harvest energy from physical exercise but also promotes sustainable energy practices by utilizing human power in everyday activities. The study highlights the efficiency of this method and its potential applications in fitness centers, where regular workouts can contribute to energy generation.



## 20. Folding Helmet

Ms. Youmika Gharge

Dept. of Mechanical Engineering

Abstract : Folding helmets offer a practical solution for urban cyclists, combining safety and portability. These innovative designs allow riders to easily transport their helmets, making them a must-have for commuters and bike enthusiasts. And this folding helmet with new features like navigation system , speed indicator, back mirror.



## 22. Realistic Scarecrows Using 3D Printer

1. Nikhil Jankar 2. Anuradha Mogare 3. Sandhya Jadhav

Dept. of Computer Sci. & Engineering (IOT, CSBT)

Abstract : This project explain about designing a 3D printer and manufacturing of scarecrow which is used in the farm for scaring birds and pets from harming the farms .Traditional method of making scarecrows are not so effective in time. By 3D printed scare crow it is possible manufacture large number of products and for large scale secure farming.





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25	<b>Dr. S. Janaki</b>	External Expert (Patent)
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27	<b>Mr. Atharv Amol Deshmukh / Aero</b> URN: 21071018	Student Representative (B.Tech.)
28	<b>Ms. Tanvi Laxman Dhuri / Aero</b> URN: 2215003	Student Representative (T.Y.)

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