

TECHNICAL
MAGAZINE



MAIT

उद्यमेन हि सिध्यन्ति
कार्याणि न मनोरथैः

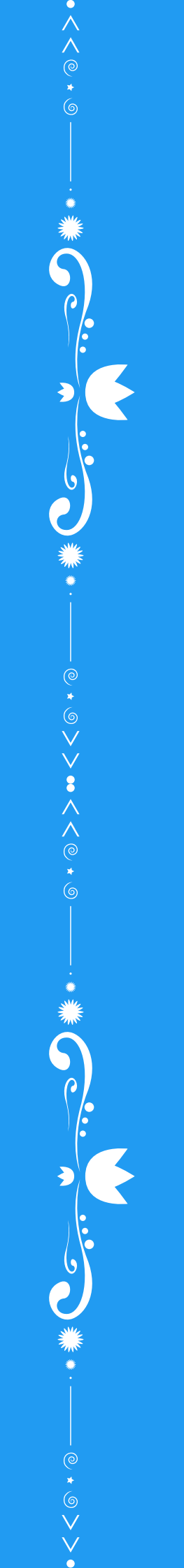
आविष्कार

Enlightening Inventions

Sept 2025



MAHARAJA AGRASEN INSTITUTE OF TECHNOLOGY
DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING



VISION

To produce technically competent human resource for electrical and electronics industry with high moral and ethical values.

MISSION

M1:

To impart quality education in the field to meet societal needs.

M2:

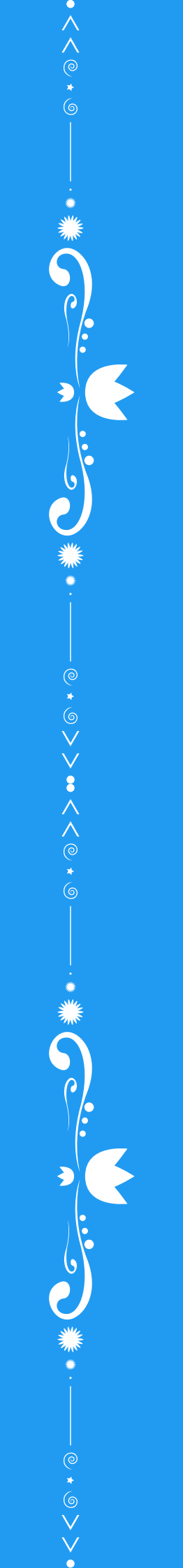
To inculcate competency in hardware and software for industrial applications.

M3:

To provide an environment for developing aptitude and skills towards research and innovation.

M4:

To create a platform for preparing entrepreneurs having ethical values and global insight.



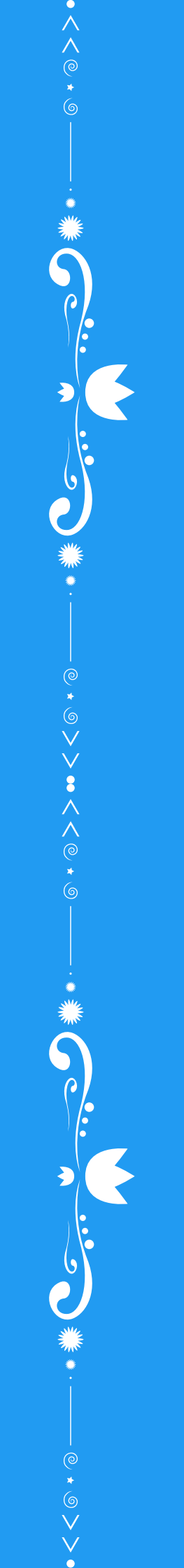
PROGRAM EDUCATIONAL OBJECTIVES (PEOs)

PEO1: The graduates shall apply their core competency in electrical and electronics engineering needed for industry, higher education, and research activities.

PEO2: The graduate shall have ability to analyze real life problems and design appropriate system to provide solutions that are economically feasible and socially acceptable.

PEO3: The graduate shall develop lifelong learning and ethical attitude for embracing global challenges.

PEO4: The graduate shall develop leadership qualities for a successful entrepreneur.

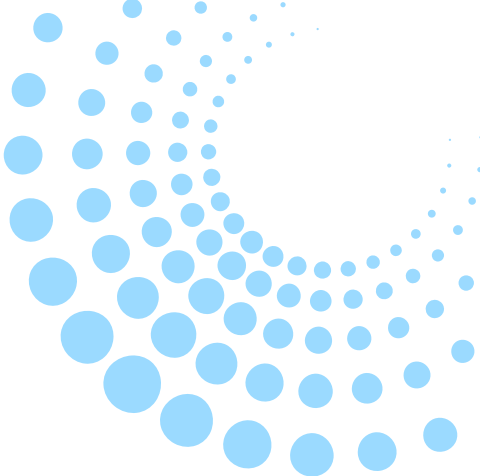


PROGRAM SPECIFIC OUTCOMES (PSOs)

PSO 01: Students will be able to simulate and develop models, circuits to provide solutions for multidisciplinary problems.

PSO 02: Students will be able to contribute for development of intelligent automation in various industrial and societal applications.

PSO 03: Students will be able to contribute towards the integration and applications of sustainable energy sources.



Technical Magazine Committee

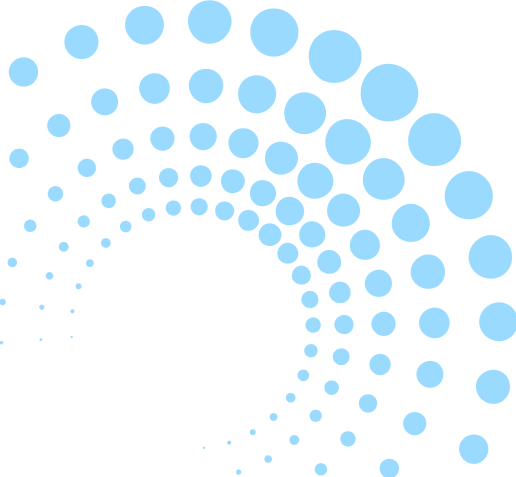
Chief-Editor:

Dr. Monika Gupta

Editor:

Dr. Poonam Juneja

Student-Coordinator:

- Manan Khattar
 - Harshdeep Singh
 - Raj Mahapatra
- 

Message From Founder and Chief Advisor's Desk



Dr. Nand Kishore Garg
Founder & Chief Advisor, MATES

" I am extremely happy to release the Technical Magazine of the Electrical and Electronics Engineering Department, MAIT for the session between August 2021- September 2022.

This magazine, I understand has been designed to provide a broad range of information that focuses on the application of current technologies, research, developments through the latest technology innovations through the existing students and faculty members, and their practical explanations through industry experts.

I acknowledge the efforts of Dr. Monika Gupta, Head of the Department, and his Editorial Board Members in getting the magazine published.

I wish all the faculty members success and zeal to continuously work for the betterment of society. "

Message From Chairman's Desk



Sh. Vineet Kumar Gupta
Chairman, MATES

" I am gratified to know that the Department of Electrical and Electronics Engineering, MAIT has taken an initiative to publish the Technical Magazine in the month of September 2021.

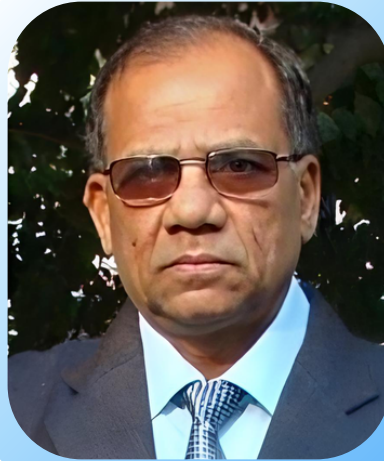
This is productive as well as a great platform for the students, researchers, faculty members and industry experts to disseminate achievements in research and developments in computer science and technology.

I acknowledge the efforts of Dr. Monika Gupta, HOD. EEE, the Editorial Team, faculty members and the students of the departments for their efforts in publishing the Technical Magazine.

I also applaud the coordination and efforts by the editorial team to bring up the issue.

I wish them all a great success."

Message From Vice Chairman's Desk



Prof. (Dr.) M.L. Goyal
Vice Chairman(Academics), MATES

" I am very happy that the Department of Electrical and Electronics Engineering, MAIT is releasing its Technical Magazine to commemorate technical publications and articles of faculties, Industry experts, alumni, and students for the academic year

2021-2022.

This Technical Magazine is a forum that could aptly be used to record the technical articles and research papers published by the students and faculty members. I am sure that this magazine will be informative and resourceful.

I owe my hearty appreciation to Dr. Monika Gupta, Head of the Department EEE, and her team for their sincere efforts to make the release of this magazine a reality. I wish them "The Very Best" in all their future endeavors. "

Message From Director's Desk



Prof. (Dr.) Neelam Sharma
Director, MAIT

" It gives me immense pleasure to know that a Magazine September 2024 is being published by the Department of Electrical and Electronics Engineering, MAIT. It is a platform to combine the efforts of Faculty, students and the editorial team to publish their technical work going on in the department.

Industrial and productive technical material forming the contents of the magazine will definitely be a developing a tool to the readers.

I applaud the efforts of Dr.Monika Gupta, Head of the Department EEE, Editorial team members and Co-ordinators of the team to publish this issue. I wish them success for future publications. "

Message From Head Of The Department



Dr Monika Gupta
Head of Department (EEE)

The Department of Electrical and Electronics Engineering has consistently remained at the forefront of innovation, research, and education within the electrical engineering domain. We take great pride in shaping young minds and offering them a platform to explore, innovate, and thrive in this ever-evolving field. Over the past few years, our department has continued to make commendable progress. Our students have achieved notable success—securing outstanding placements and pursuing higher education at renowned international institutions.

Our faculty members play a pivotal role, not only in imparting quality education but also in advancing cutting-edge research with the potential to revolutionize industries and enhance lives. As we face pressing global challenges related to energy efficiency and environmental sustainability, it becomes our duty as electrical engineers to develop innovative solutions that pave the way for a more sustainable future.

Looking ahead, let us carry forward the spirit of collaboration, innovation, and lifelong learning. The legacy of our department is a result of the collective contributions of each member, and together, we shall continue to reach greater heights. I urge all of you to fully embrace the opportunities available to you during your time at this esteemed institution.

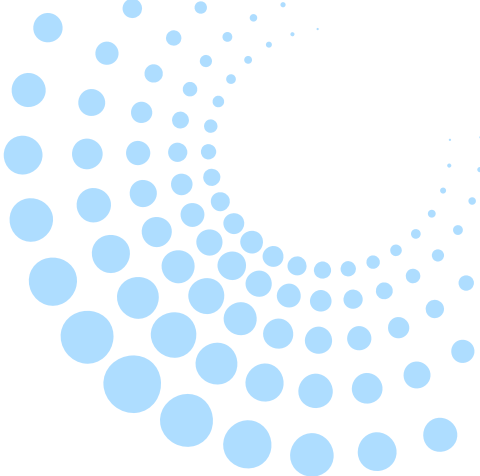
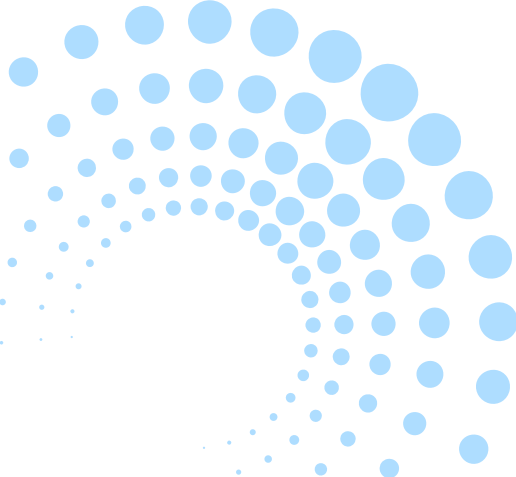


TABLE OF CONTENT

• FACULTY CORNER	I
• STUDENT CORNER	4
• PATENTS CORNER	10
• PROJECTS	15
• FACULTY ACTIVITY.....	23
• ALUMNI CORNER	36



FACULTY CORNER



High Voltage Direct Current (HVDC) Systems
Mr. Rahul Garg Asst. Professor,
EEE Department

With the rising global focus on clean energy and carbon neutrality, the need for efficient long-distance power transmission has become more urgent than ever. My current research explores the design, optimization, and grid integration of High Voltage Direct Current (HVDC) systems, especially in the context of renewable energy transmission in India.

Traditional AC systems suffer significant losses over long distances, particularly when transmitting energy from remote solar and wind farms to urban load centers. HVDC offers a transformative alternative, reducing transmission losses, improving stability, and enabling asynchronous interconnection between different power systems. My work focuses on optimizing HVDC converter topologies—specifically Modular Multilevel Converters (MMCs)—for grid-scale integration.

In collaboration with postgraduate students, we have developed a simulation model in MATLAB/Simulink to analyze fault behavior, harmonic distortion, and switching losses in multi-terminal HVDC systems. Additionally, we are evaluating hybrid protection schemes that combine traditional circuit breakers with fast-acting solid-state devices to minimize response time during DC faults—a major challenge in HVDC operation.

One of the most exciting aspects of this research is the integration of AI-driven predictive control in HVDC terminals. We are training neural networks on real-time data to anticipate grid imbalances, thereby enabling adaptive switching and load balancing. This smart control approach enhances the efficiency of renewables feeding into the HVDC line, especially under fluctuating conditions like cloud cover or wind variability.



Smart Insulation Monitoring System
Dr L P Singh Associate Proffesor
EEE Department

In high voltage systems, insulation failure is one of the leading causes of equipment breakdown and blackouts. My research focuses on developing a Smart Insulation Monitoring System (SIMS) capable of predicting and preventing insulation failures in transformers, GIS units, and high-voltage cables.

This system uses ultra-high frequency (UHF) sensors, partial discharge detectors, and real-time dielectric stress monitoring to evaluate insulation health. The innovation lies in the integration of AI-powered predictive analytics. We are currently training machine learning models to interpret complex signal patterns that precede insulation degradation, allowing maintenance teams to intervene well before a failure occurs.

The SIMS prototype includes a non-invasive sensor array, a signal conditioning circuit, and a cloud-based dashboard for condition visualization. We have successfully tested it under simulated aging conditions in our HV lab, achieving an accuracy of over 92% in early fault prediction.

This work aims to move insulation monitoring from scheduled to condition-based maintenance, significantly reducing the cost and downtime associated with high-voltage system failures. Collaborations with utilities and equipment manufacturers are underway to bring this system to field trials. This research not only contributes to equipment reliability but also advances India's move towards smart grid resilience.



Advancing Bidirectional EV Charging
Dr Poonam Juneja Asst. Professor,
EEE Department

As electric vehicles (EVs) become mainstream, they're evolving from energy consumers to dynamic storage units capable of feeding power back to the grid. My current research delves into Vehicle-to-Grid (V2G) systems, particularly bidirectional charging architecture and control strategies for grid interaction.

Our project develops a smart bidirectional inverter equipped with embedded control for real-time synchronization with microgrids. The inverter interfaces seamlessly with the EV battery and local distribution grid. Using MATLAB-Simulink and Simscape, we've modeled scenarios where EVs provide peak-shaving, load-balancing, and frequency regulation.

The control logic is designed using fuzzy logic and adaptive PI controllers, ensuring stable bidirectional flow without affecting battery health. Initial results show that a fleet of 20 EVs connected during peak hours can reduce local transformer load by 18%.

This research opens doors for decentralized energy trading, disaster recovery energy supply, and dynamic demand-side management. Future steps include incorporating blockchain for energy credit transactions and testing the model in collaboration with Delhi's local EV charging networks.

Student's Corners

Neural Networks in Power Systems

Durga Kumari (1814807822)

Student, Department of Electrical & Electronics Engineering

In the evolving landscape of modern engineering, the intersection of Electrical Engineering (EEE) and Artificial Intelligence (AI) is giving rise to a transformative domain—neural networks in power systems. Once a futuristic idea, this integration now lies at the core of intelligent decision-making in electrical grids, machines, and infrastructures. As we step into an era of digital energy, neural networks are enabling machines to "think" in terms of voltage, current, and power—reshaping how we generate, manage, and consume electricity.

At its heart, a neural network is inspired by the human brain—comprised of interconnected nodes (or "neurons") that can learn from data, recognize patterns, and make predictions. When applied to power systems, neural networks act as intelligent observers and controllers. Unlike traditional algorithms that follow fixed rules, neural networks adapt to changing environments, noise, and uncertainty—a perfect match for the dynamic nature of electrical systems.

One of the most impactful applications is load forecasting. Power demand fluctuates based on season, time of day, and human behavior. Neural networks trained on historical consumption data can predict future load with remarkable accuracy. This enables efficient scheduling of generation, prevents blackouts, and reduces operational costs.

Another crucial domain is fault detection and classification. Traditional protection systems rely on predefined thresholds to detect abnormalities in the grid. Neural networks, on the other hand, can learn the normal and faulty behavior of systems using real-time sensor data. They can distinguish between transient disturbances and genuine faults—ensuring faster and more accurate protection decisions.

Neural networks also play a vital role in voltage control, frequency stability, and grid reconfiguration. In smart grids, AI models continuously process input from thousands of nodes—substations, renewable generators, storage systems, and consumers. Neural networks help optimize power flow in real time, making the grid adaptive and self-correcting. They are instrumental in integrating renewable energy, which is often variable and intermittent, by learning generation patterns from solar or wind farms and adjusting grid parameters accordingly.

Moreover, neural networks are now being embedded in transformers, inverters, and motors, enabling predictive maintenance. These components “learn” their own wear-and-tear patterns and alert engineers before failure occurs, thus reducing downtime and extending the equipment’s lifespan.

The synergy of EEE and neural networks is not limited to utilities. It stretches across industries—EV charging networks, autonomous power systems, smart homes, and even aircraft electrical control systems.

The path forward lies in training the next generation of engineers to understand not only the physics of electricity but also the mathematics of learning systems. A neural network that once decoded spoken language or recognized faces now plays a central role in regulating the energy that powers our lives.

As we teach machines to think electrically, we’re not just optimizing systems—we’re creating a new paradigm where electricity itself becomes intelligent.

Autonomous Emergency Braking in EVs

Anisha(7814804921), Ankur(10614804921),

Bharti(1914807822)

In the race toward fully autonomous electric vehicles (EVs), safety remains the foundation upon which innovation must stand. One of the most critical advancements in this domain is Autonomous Emergency Braking (AEB) — a technology designed to detect potential collisions and automatically apply the brakes, even before the driver reacts.

Traditionally, braking has always been a manual, reflex-based action. But in modern EVs, AEB systems use a fusion of sensors, artificial intelligence, and control electronics to perceive the environment around the vehicle in real-time. It's a seamless interplay between electrical engineering, embedded systems, and machine learning — a perfect example of how EEE and AI converge in the world of smart mobility.

Here's how it works: the vehicle is equipped with radar, LiDAR, ultrasonic sensors, and cameras that continuously scan the road for obstacles, pedestrians, or vehicles. The data from these sensors is analyzed by AI-driven algorithms capable of identifying dangerous scenarios — such as a car abruptly stopping ahead or a pedestrian crossing unexpectedly.

If the system detects an imminent collision and the driver doesn't respond in time, the EV's electronic control unit (ECU) activates the brakes autonomously. Because EVs are already highly digitized, integrating AEB becomes more efficient, allowing faster response times and deeper integration with other safety systems.

Unlike conventional braking systems, the braking in EVs is electro-mechanical and supported by regenerative braking. AEB systems can intelligently decide whether to use mechanical brakes, regenerative deceleration, or a combination of both — optimizing not just safety but energy recovery as well.

Advanced AEB systems don't just work in straight lines. They are capable of identifying threats while turning, during night-time driving, or even in adverse weather conditions. Using deep learning models trained on real-world driving data, these systems improve over time, making the EV more capable with each update.

Furthermore, AEB is not just about braking. It can work in coordination with lane-keeping systems, adaptive cruise control, and driver alertness monitors, forming a broader safety net. This interconnectedness marks the transition from passive to active vehicle safety.

Smart Meters: The Digital Bridge Between Power and Intelligence

*Bhawna(1714804921), Amrit Kumar(4014807822),
Vivek Sharma(721804921)*

The traditional electric meter—a simple device that records energy consumption—has quietly powered the billing systems of homes and industries for decades. But as the world demands cleaner energy, better efficiency, and smarter infrastructure, the electrical meter has evolved into something far more powerful and intelligent: the smart meter.

A smart meter is an advanced electronic device that measures energy consumption in real-time and communicates this data to the utility provider through wireless or wired networks. It eliminates the need for manual meter readings, allows dynamic energy pricing, and empowers both consumers and power companies with accurate, real-time information.

At the heart of a smart meter is intelligent communication. Unlike analog meters that simply measure cumulative usage, smart meters can transmit detailed usage reports at intervals of minutes or even seconds. This constant stream of data enables utility companies to detect power outages instantly, monitor voltage fluctuations, and analyze load patterns—paving the way for smarter grid management.

From the consumer's side, smart meters promote energy awareness. Users can track their real-time electricity usage via mobile apps or in-home displays, understand peak hours, and adjust consumption habits. This not only helps reduce electricity bills but also encourages a sustainable energy lifestyle.

Smart meters play a crucial role in the modernization of electrical grids, also known as smart grids. These grids are equipped with sensors, automation, and AI systems that depend on real-time data from millions of smart meters. This helps in load balancing, demand forecasting, and renewable energy integration—essential features in a world moving toward net-zero emissions.

Moreover, smart meters are a core part of dynamic pricing models, where electricity rates vary based on demand. For instance, during peak hours, prices may be higher. Smart meters make it possible for consumers to shift usage to off-peak times, thereby reducing load on the grid and saving money.

Automated System for Water Quality Monitoring and Flow Regulation

Jasjot Singh(381404921), Lokesh Yadav(731804921)

In an era where sustainability and smart systems are no longer optional but essential, the fusion of Electrical Engineering, IoT, and AI has led to a new class of innovation — intelligent water management. One such breakthrough is AquaSense: an automated system for real-time water quality monitoring and flow regulation.

Water, though abundant, is often mismanaged, wasted, or contaminated — especially in urban and rural infrastructure that still relies on outdated manual systems. AquaSense aims to revolutionize this with a network of sensors, embedded systems, and intelligent algorithms, working together to monitor, analyze, and regulate water flow efficiently and safely.

At the heart of AquaSense are smart sensors embedded in water pipelines and reservoirs. These sensors measure key quality parameters such as pH, turbidity, temperature, conductivity, dissolved oxygen, and presence of heavy metals or pathogens. The collected data is continuously transmitted to a central processing unit or cloud server via low-power communication protocols like LoRa, Zigbee, or NB-IoT.

This is where the role of AI and machine learning algorithms becomes critical. The system can predict anomalies, detect contamination early, and automatically trigger alerts or regulatory actions. For instance, if a sensor detects an unusual pH drop indicating potential acid contamination, the system can shut off the valve, divert the water flow, and notify the concerned authority within seconds.

Flow regulation is equally intelligent. Using electromagnetic or solenoid valves, AquaSense adjusts water distribution in real time based on consumption patterns, pressure data, and supply-demand analysis. This prevents both overflow and wastage, while ensuring optimal delivery in agriculture, domestic use, and industrial applications.

One of AquaSense's key advantages is scalability and modularity. It can be deployed in remote villages for groundwater monitoring, in smart cities for municipal water supply, or even in large industries for wastewater management — all with minimal human intervention.

In agriculture, it supports precision irrigation, ensuring that crops receive the right amount of water at the right time. In urban settings, it helps prevent water loss due to leakage, which accounts for up to 30% of water wastage in many developing countries. In disaster-prone areas, AquaSense can act as an early warning system for water contamination during floods or industrial spills.

Cognitive Circuits

Vaibhavi Sharma(7041804921), Yash(311804921)

As we move deeper into the age of artificial intelligence and smart electronics, a new frontier is emerging in the realm of Electrical and Electronics Engineering (EEE): Cognitive Circuits. Inspired by the structure and function of the human brain, cognitive circuits are designed not just to compute, but to learn, adapt, and think.

Unlike conventional electrical circuits that follow predefined logic paths, cognitive circuits are neuromorphic in nature — meaning they are built to mimic the architecture of biological neurons and synapses. These circuits are capable of parallel processing, dynamic learning, and memory retention, making them ideal for edge computing applications where real-time decision-making is crucial.

At the core of this innovation is the memristor — a breakthrough electrical component that "remembers" the amount of charge that has passed through it. Memristors enable hardware to perform brain-like functions, such as pattern recognition and decision-making, without needing large amounts of data or cloud connectivity. They bring intelligence directly into the hardware, reducing latency and power consumption.

Cognitive circuits find applications in AI edge devices, such as smart sensors, robotics, drones, and autonomous vehicles. For example, a camera sensor equipped with cognitive circuitry can recognize faces or objects instantly, without needing to transmit data to a central processor. This is especially useful in security systems, healthcare diagnostics, and next-gen prosthetics, where fast and localized responses are essential.

In electric vehicles (EVs), cognitive circuits can enable onboard intelligence, helping the car "learn" the driver's habits, road patterns, and energy consumption behavior — adapting dynamically to deliver a smoother, more efficient experience. Similarly, in smart grids, cognitive hardware can detect abnormalities in power flow and autonomously reroute electricity to maintain system stability.

The fusion of AI and EEE in cognitive circuits also opens doors for low-power, high-performance electronics. Traditional AI models require extensive computational resources, often running on large GPUs. Cognitive hardware offers an energy-efficient alternative by embedding intelligence into the physical design itself.

GUI-Based Diabetes Prediction Using Pipeline

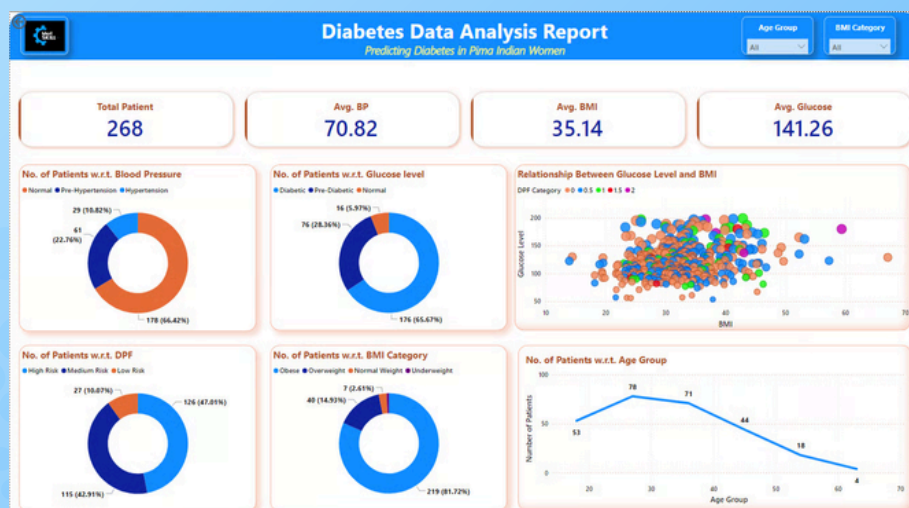
Yog Singh (I36I48049I9) Aryan Saxena (I3II48049I9) Riya Verma (I25I48049I9)

Mr. Lalit Agarwal

Diabetes has become one of the most prevalent chronic diseases worldwide, requiring early detection and continuous monitoring for effective management. This project presents a GUI-based system designed to predict the likelihood of diabetes in individuals using machine learning techniques integrated into a structured pipeline. The system begins by collecting patient data such as glucose levels, BMI, age, insulin levels, and blood pressure. It then preprocesses the data through cleaning, normalization, and feature selection to ensure accuracy and consistency.

A pipeline incorporating models like Logistic Regression, Random Forest, and Support Vector Machines is implemented to automate training and prediction processes. The best-performing model is selected based on accuracy, precision, recall, and F1 score. The user interface is built using Python's Tkinter library, providing a simple, intuitive platform for users to input data and receive instant diagnostic results.

This tool aims to assist healthcare professionals and patients in early-stage diabetes screening, especially in remote and underserved areas. The system ensures quick predictions with visual representation and risk classification, making it both efficient and user-friendly. Future work may include integrating real-time data acquisition via wearable devices for enhanced prediction and continuous monitoring.

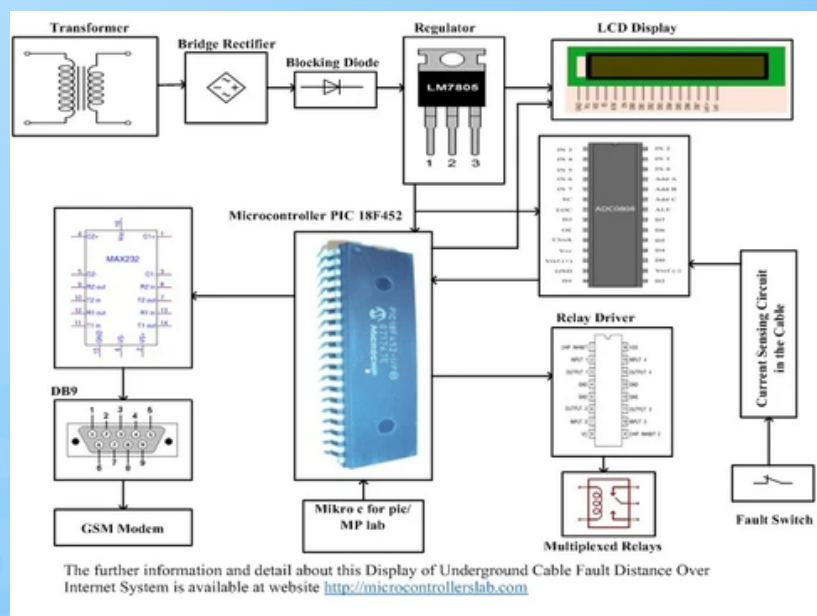


Classification and Location of Cable

Fault in Underground Cable

Nitesh Tiwari (09114804920), Rajnish Kumar (10214804920), Narender Singh Bisht (08714804920),
Dr. Neelu Nagpal, Dr. Neelam Kassarwani, Mr. Udayan Kumar Jha

This project introduces an intelligent system for classification and localization of faults in buried electrical cables. Using a microcontroller-based approach, it accurately identifies whether an open circuit, short circuit, or earth fault has occurred. The system measures voltage drops across segmented resistive cable models, leveraging Ohm's law to compute the precise distance to the fault. It employs an ADC to digitize sensor data and feeds it into logic that classifies the fault type and calculates its location. The result is displayed in kilometers on an LCD, while a connected GSM/GPS module enables remote fault reporting and geographical tagging. Unlike traditional trace-and-guess methods, this solution minimizes excavation, reduces downtime, and offers near-real-time monitoring. Field implementation demonstrates accurate fault detection within ± 100 m and classification accuracy above 95%. Designed for scalability, it can be deployed in urban power grids, telecommunications lines, or industrial underground cabling. By combining electrical engineering fundamentals with IoT communication protocols, this innovation significantly enhances safety, efficiency, and maintenance cost-effectiveness in cable infrastructure.



S.NO.	Applicant's Name	Inventors	Patent Application Number	Title	Status	Patent Date
1	Monika Bhardwaj	Pratul Arvind, Dhyanendra Jain, Monika Bhardwaj, Pallavi Tiwari, Gargi Mishra, Tushar Tathagat, Rajesh Yadav	435577-001	AI BASED ASTHMA DETECTION DEVICE	Granted	06/01/2025
2	Monika Bhardwaj	Pratul Arvind, Nupur Chugh, Rakhi, Monika Bhardwaj, Nilesh Kumar Sen, Pallavi Joshi, Daisy Bhat, Pratiksha Srivastava	452830-001	AI BASED MENTAL HEALTH CHECKING DEVICE	Granted	23/06/2025
3	Ravi Sharma	Arvind Goswami, Ravi Sharma, sheersh Kumar Garg, Laxya, Rahul Garg	450174-001	PORTABLE SOLAR POWERED CHARGER FOR ELECTRONIC DEVICE	Published	19/06/2025
4	Sheersh Kumar Garg	Arvind Goswami, Ravi Sharma, sheersh Kumar Garg, Laxya, Rahul Garg	450174-001	PORTABLE SOLAR POWERED CHARGER FOR ELECTRONIC DEVICE	Published	19/06/2025
5	Rahul Garg	Arvind Goswami, Ravi Sharma, sheersh Kumar Garg, Laxya, Rahul Garg	450174-001	PORTABLE SOLAR POWERED CHARGER FOR ELECTRONIC DEVICE	Published	19/06/2025
6	Neelu Nagpal	MAIT, Lalit Aggarwal, Anant Aggarwal, Harshit Sharma, Neelu Nagpal, Sachin Gupta, Neelam Kassarwani	201511040846	BLOCKCHAIN VERIFIED LAND REGISTRY SYSTEM AND METHOD THEREOF	Published	16/05/2025
7	Neelam Kassarwani	MAIT, Lalit Aggarwal, Anant Aggarwal, Harshit Sharma, Neelu Nagpal, Sachin Gupta, Neelam Kassarwani	201511040846	BLOCKCHAIN VERIFIED LAND REGISTRY SYSTEM AND METHOD THEREOF	Published	16/05/2025
8	Lalit Aggarwal	MAIT, Lalit Aggarwal, Anant Aggarwal, Harshit Sharma, Neelu Nagpal, Sachin Gupta, Neelam Kassarwani	201511040846	BLOCKCHAIN VERIFIED LAND REGISTRY SYSTEM AND METHOD THEREOF	Published	16/05/2025

Conference

S.No.	Student Name(s)	Faculty Name	Title	Conference	Indexing	Year
C.24.1	Krishi Jain, Keshav Goyal, Kislaya Gupta	Dr. Poonam Juneja	Design and development of Air quality monitoring system	ICAMC 2024	Springer Accepted	2024
C.24.2	Gautam Goyal, Dipansh Gupta, Darun Mehta	Ms. Shashibala Agarwal	Real time Data Acquisition of Solar Panel Data using Arduino	ICAMC 2024	Springer Accepted	2024
C.24.3	Bhupesh Vardhan Singh, Kajal, Rohan Kumar	Dr. Poonam Juneja	Solar Wireless Electric Vehicle charging	ICAMC 2024	Springer Accepted	2024
C.24.5	Hrishank, Narendra Deo, Milan Sood, Kinshuk Jha	Ms. Supriya Sharma	Smart Vending Machine	ICAMC 2024	Springer Accepted	2024
C.24.6	Sarang, Siddharth Jha	Ms. Monika Bhardwaj	Automatic Solar Panel Cleaning System for Dust and Dirt Removal	EPREC-2024	Springer Under Published	2024

S.No.	Student Name(s)	Faculty Name	Title	Conference	Indexing	Year
C.24.7	Kumar Lakshay	Dr. Neelu Nagpal, Prof. Satvir Singh Deswal	Initial Design Procedure for Electric Two-Wheeler Retrofitting	ICRP-2024	Scopus Under Published	2024
C.24.8	Kriti Singhal	Dr. Neelu Nagpal, Prof. Rajveer Mittal	Brief Information of Biogas Production Technologies	ICRP-2024	Scopus Under Published	2024
C.24.9	Nitesh Tiwari, Rajnish Kumar, Narender Singh Bisht	Dr. Neelu Nagpal, Dr. Neelam Kassarwani, Mr. Udayan Kumar Jha	Classification and Location of Cable Fault in Underground Cable	ICRP-2024	Scopus Under Published	2024
C.24.10	Aditya Mohan Vashistha	Dr. Neelam Kassarwani, Dr. Neelu Nagpal	A Detailed Study for Power System Analysis in Transmission Substation	ICRP-2024	Scopus Under Published	2024

Major Project

S.No.	Student Name(s)	Enrollment Number	Title	Mentor	POs	PSOs	SDGs
1	Sarwesh Darshan	11014804921	Super-Capacitor Powered Urban Transit Train Prototype	Dr. S.K. Pandey	PO1, PO2, PO3, PO5, PO6, PO7, PO8, PO9, PO10, PO12	PSO1, PSO2, PSO3	SDG3, SDG7, SDG8, SDG9, SDG11, SDG12
2	Ujjawal Sharma	2914807822	Electric Bike Retrofitting: A Sustainable Approach To Urban Mobility	Mr. Ravi Sharma	PO1, PO3, PO5, PO6, PO7, PO8, PO9, PO10, PO12	PSO2	SDG3, SDG8, SDG9, SDG11
	Shubham Singh	3014807822					
3	Saransh Kaushik	314804921	Training UNET Model for Linear Hepatocellular Carcinoma	Dr. Monika Gupta	PO1, PO2, PO3, PO4, PO5, PO6, PO8, PO9, PO10, PO12	PSO1, PSO2	SDG3, SDG8, SDG9, SDG11
	Vaibhavi Sharma	7014804921					
4	Adarsh Kr. Jha	8814804921	Smart Parking System using Arduino uno with fire extinguisher and IR Sensor	Mr. Rahul Garg	PO1, PO3, PO6, PO7, PO8, PO9, PO10, PO12	PSO2	SDG8, SDG9, SDG11
	Rutansh Tuteja	10114804921					
5	Vaibhavi Sharma	7014804921	Segmentation of Liver Hepatocellular Carcinoma using Cycle Generative Adversarial Network	Dr. Monika Gupta	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO12	PSO1	SDG3, SDG8, SDG9, SDG11

Minor Projects

MINOR PROJECT DETAILS EEE BATCH (2021-2025)

Group No.	Team Member	Roll No.	Title of Project	Mentor/s	POs	PSOs
1	Manoj Kandpal	514807822	Spot Welding and Inverter	Mr.Ravi Sharma	PO1, PO3, PO8, PO9, PO10,PO11, PO12	PSO2
	Nikhil Kumar	1014807822				
	Satyam Mishra	814807822				
	Sanyam	2814804921				
2	Dinesh Kumar	3514804921	Electric Bike Retrofitting	Mr.Ravi Sharma	PO1, PO2, PO3, PO6, PO7, PO8, PO9, PO10,PO11, PO12	PSO2
	Ujjwal Sharma	2914807822				
	Shubham Singh	3014807822				
3	Manish Saini	2314807822	EV charging infrastructure using solar panel	Ms.Neha Aggarwal	PO1, PO2, PO3, PO6, PO7, PO8, PO9, PO10,PO11, PO12	PSO1, PSO2
	Varun	1714807822				
	Vivek	2714807822				
4	Md Munazir Alam	914807822	Fire and Smoke Detection System with Alarm Using Arduino.	Mr. Rahul Garg	PO1, PO7, PO8, PO9, PO10,PO11, PO12	PSO2
	Rohit	1214807822				
	Anuj Kumar	1514807822				
5	Harit	614807822	RFID and automated billing system	Dr. Rajveer Mittal	PO1,PO5, PO7, PO8, PO9, PO10,PO11, PO12	PSO2
	Vivek Kumar Sah	3514807822				
6	Praful Shaswat	3214807822	Laser home security	Mr. Govind Gupta	PO1,PO5, PO7, PO8, PO9, PO10,PO11, PO12	PSO2
	Deepali	11614804921				
	Himanshi	11714804921				
	Yashasvi Poudel	14714804921				

7	Gaurav	35114807822	Automatic Solar tracker	Ms.Neha Aggarwal	PO1, PO2, PO3, PO6, PO7, PO8, PO9, PO10, PO11, PO12	PSO1
	Yash Kumar	50614804921				
	Sakshi Singh Tanwar	35414804921				
	Nikhil Chaudhary	2014804921				
8	Richa Mishra	10814804921	Design & Implementation of Electric Vehicle Charging System	Mr. U. K. Jha	PO1, PO2, PO3, PO4, PO6, PO7, PO8, PO9, PO10, PO11, PO12	PSO1, PSO2
	Madhav Tyagi	6514804921				
9	Gurutwa Kushwah	3914807822	GSM Based Smart Energy Meter	Prof(Dr.) Rajveer Mittal	PO1, PO2, PO3, PO8, PO9, PO10, PO11, PO12	PSO2
	Rishu Anand	2514807822				
	Abhishek	2814807822				
10	Aman Kumar	14614804921	Smartphone controlled Mini Electronic Skateboard	Mr. Sheersh Garg	PO1, PO8, PO9, PO10, PO11, PO12	PSO2
	Oorjit S Kumar	14514804921				
	Nikhil Raj	13114804921				
11	Aakansha	3414807822	BLDC Motor and Controller (4 WHEELER)	Mr. Govind Gupta	PO1, PO2, PO8, PO9, PO10, PO11, PO12	PSO2
	Gitika	3314807822				
	Aditya Sharma	1514804921				
12	Srishti	314807822	Design and Implementation of Battery Driven Suitcase	Mr U.K Jha sir	PO1, PO2, PO6, PO8, PO9, PO10, PO11, PO12	PSO2
	Vishal Singh	2014807822				
13	Kumar Gaurav	9814804921	Power Steering using Arduino (ATMEGA IC), Servomotor and potentiometer	Dr.Sunil Kr Pandey	PO1, PO2, PO6, PO8, PO9, PO10, PO11, PO12	PSO2
	Bharti	1914807822				
	Divya Meena	7614804921				

14	Ankur Mishra	10614804921	AI and Sensor Integration for Autonomous Emergency Braking in EV	Dr. Sunil Kumar Pandey	PO1, PO2, PO3, PO6, PO8, PO9, PO10, PO11, PO12	PSO2
	Sana Sarwar	4214807822				
	Anisha Kumari	7814804921				
15	Devender	3814807822	Electric Car Chassis Design	Mr. Lalit Agarwal	PO1, PO2, PO3, PO8, PO9, PO10, PO11, PO12	PSO2
	Vinit Rawat	2214807822				
16	Navin Kumar Bhardwaj	20314904921	Smart Stick for Blind People	Ms. Jyoti	PO1, PO2, PO3, PO6, PO8, PO9, PO10, PO11, PO12	PSO2
	Mohd Raza Khan	13514804921				
	Khushnawaj	13314804921				
	Prince Kumar	3601484921				
	Vishal Aggarwal	15014804921				
17	Sarwesh Darshan	11014804921	Function Generator	Dr. Sunil Kumar Pandey	PO1, PO2, PO8, PO9, PO10, PO11, PO12	PSO2
	Ayush Kumar	14314804921				
	Prabhat Tiwary	14914804921				
	Raj Vikram Pratap Singh	14814804921				
18	Gaurav Chaudhary	36614804921	HHO Generator	Ms. Supriya Sharma	PO1, PO3, PO6, PO7, PO8, PO9, PO10, PO11, PO12	PSO2
	Sarthak Dixit	36514804921				
	Ananay Bhatia	35814804921				
19	Rakesh Kumar	3614807822	Wireless EV Charging System	Ms. Shashibala Aggarwal	PO1, PO2, PO3, PO7, PO8, PO9, PO10, PO11, PO12	PSO2
	Amrit Kumar	4014807822				
	Bhawna	1714804921				
	Vivek Sharma	7214804921				

20	Akshat Kaushik	9514804921	A Thermophotovoltaic System Designed to Improve efficiency and range of EV	Dr. L P Singh	PO1, PO2, PO6, PO8, PO9, PO10, PO11, PO12	PSO2
	Tanuj Goel	35514804921				
21	Aditya Verma	36214804921	Harnessing solar power for electric vehicles: A study of EV charging ports	Mr. Govind Gupta	PO1, PO7, PO8, PO9, PO10, PO11, PO12	PSO1, PSO2
	Mohd. Aamaan	7714804921				
	Aniket Kumar	50814804921				
22	Kamal Kant	12814804921	Face Recognition Attendance Management System	Dr. Iaxya	PO1, PO5, PO8, PO9, PO10, PO11, PO12	PSO2
	Prince Patel	12414804921				
	Prem Bisht	11814804921				
23	Vikas	114807822	Blue Energy from Rain Drops System	Mr. Lalit Agarwal	PO1, PO6, PO7, PO8, PO9, PO10, PO11, PO12	PSO1, PSO2
	Harsh	124807822				
24	Rutosh Tuteja	10114804921	Home Protection System	Mr Rahul	PO1, PO8, PO9, PO10, PO11, PO12	PSO2
	Adarsh Kumar Jha	8814804921				
	Shikhar Rawat	9714804921				
	Jitender Kumar	3314804921				
25	Ansh Shakya	50714804921	Smart Garage Door Using AI	Dr. Neelu Nagpal	PO1, PO8, PO9, PO10, PO11, PO12	PSO2
	Aryan Rana	13014804921				
26	Arjit Kapoor	5814804921	Transformer Monitoring System Using Arduino	Dr. Neelam Kassarwani	PO1, PO2, PO6, PO8, PO9, PO10, PO11, PO12	PSO2
	Aniket Tyagi	3414804921				
	Satyam Soam	5014804921				
27	Saurah Kumar Tiwari	2514804921	Wireless Electric Vehicle charging system	Ms. Shashibala Aggarwal	PO1, PO2, PO3, PO7, PO8, PO9, PO10, PO11, PO12	PSO2
	Sahil Kumar	1314807822				
	Shivam Jha	1114807822				

28	Himanshu Rathore	9914804921	Autonomus Drone supply Medical Delivery System	Ms. Shashibala Aggarwal	PO1, PO2, PO3 PO5	PSO2
29	Bindesh Dubey	1414807822	Hand Gesture Control Robot	Mr. Ashok Goyal	PO1, PO2, PO3, PO5 PO9, PO10	PSO1, PSO2
	Sidharth Pal	714807822				
	Rohit	3714807822				
30	Oorjit S Kumar	14514804921	Smartphone Controlled Mini Electronic Skateboard Using Aurunio Uno	Mr. Sheersh Garg	PO1, PO2, PO3, PO5 PO9, PO10	PSO1, PSO2
	Aman Kumar	14614804921				
	Nikhil Raj	13114804921				
31	Khirabadhi Jena	107149000000	Multiple Disease Prediction System	Mr. Sheersh Garg	PO1, PO2, PO3, PO	PSO1, PSO2
	Shivani Jha	8614804921				
	Vivek Kumar	10914804921				
32	Amandep Singh	2214807821	Solar Powered Street Light With Motion Detection Sensors	Dr. Chandrakesh Shukla	PO1, PO2, PO3 PO5	PSO2 PSO3
	Ansh Gupta	214807821				
33	Havish Aggarwal	35614804921	IoT Based Smart Mirror	Ms. Monika Bhardwaj	PO1, PO2, PO3 PO5	PSO1, PSO2
	Priyanshi Dabas	36814804921				
	Shreya Singh	50514804921				
	Varun singh	51014804921				
34	Hardik Thakran	12114804921	Three Phase Line Fault Detection	Ms. Supriya Sharma	PO1, PO2, PO3 PO4	PSO1, PSO2
	Priyanshu Dabas	37614804921				
	Saksham Arya	35214804921				
35	Ishan Roy	2314804921	Military Health Monitoring System	Dr. Monika Gupta	PO1, PO2, PO3, PO5, PO6, PO9, PO10, PO12	PSO1, PSO2
	Yash Vashishtha	3114804921				
	Vaibhavi Sharma	7014804921				

36	Durga Kumari	1814807822	Smart Belt Obstacle Detection with Voice Output	Mr. Ashok Goyal	PO1, PO2, PO3, PO6 PO9, PO10	PSO1, PSO2
	Riya Gautam	3114807822				
	Pushkar Kumar	2614807822				
37	Abhishek Poddar	14114804921	Washing Machine Simulation Using PIC16F877A Microcontrolle r	Dr. Laxya Singla	PO1, PO2, PO3, PO5 PO6, PO9, PO10	PSO1, PSO2
	Rishabh Shakya	14214804921				
	Sakshi Singh	11314804921				
38	Adarsh Kumar	11414804921	Sleep Enviornment Optimization	Dr. L.P. Singh	, PO3, PO5, PO6 PO	PSO1, PSO2
	Aman Kumar	50114804921				
	Vivek Kumar	50214804921				
38	Utsav Mondal	1614807822	AI Based Desktop Assistant	Mr. U.K. Jha	PO1, PO2, PO3, PO5 PO6, PO9, PO10	PSO1, PSO2
	Shweta Yadav	2414807822				
	Dipesh Kumar	4114807822				
39	Anmol Mani Tripathy	20214804921	Deepfake Video Detection Using AI	Mr. Lalit Agarwal	PO1, PO2, PO3, PO5 PO6, PO9, PO10	PSO1, PSO2
	Siddharth Sangwan	20114804921				
	Somya Dhuriya	15114804921				
40	Vidyansh Sharma	414804921	Mental Health Tracking Prototype	Ms. Monika Bhardwaj	PO1, PO2, PO3, PO5 PO6, PO9, PO10, PO12	PSO1, PSO2
	Aditya Singh	1314804921				
	Saurav Anand	5514804921				
	Rahul Goel	4614804921				

41	Abhijeet Singh	7114804921	Amplify: Redefining learning	Dr. Poonam Juneja	PO1, PO2, PO3, PO5 PO6, PO9, PO10, PO12	PSO1, PSO2
	Anushka Dubey	814804921				
	Ankit	8014804921				
	Pratham Jain	9414804921				
	Pulkit Gupta	8914804921				
	Sarthak Sabharwal	6114804921				
42	Jasjot Singh Kalra	3814804921	Aquasense automated system for water quality monitoring and flow regulation	Dr. Neelam Kassarwani	PO1, PO2, PO3, PO4 PO5, PO6, PO7, PO9	PSO1, PSO2,
	Lokesh Yadav	7314804921				
	Daksh Rawt	5214804921				
43	Aakash Gandhi	6714804921	Automated Cheque processing system	Dr. L.P. singh	PO1, PO2, PO3, PO5 PO6, PO9, PO10	PSO1, PSO2
	Harsh Chauhan	8114804921				
	Himanshu Singh	8214804921				
44	Parth Bansal	1214804921	Design and implimentation of a wireless charging system and billing system	Dr. Chandrakesh shukla	PO1, PO2, PO3, PO5, PO6, PO7, PO9, PO10	PSO2, PSO3
	Harsh Aggarwal	5414804921				
	Priyanshu Prajapati	3914804921				
44	Isha Solanki	2614807821	Predictive maintenance for machine using ML	Mr. Jitender Lather	PO1, PO2, PO3, PO5, PO6, PO9, PO10	PSO1, PSO2
	Vishal	2914804921				
	Anurag	3014804921				
45	Vanshika Poojari	4914804921	Forest fire detection system	Dr. Neelu Nagpal	PO1, PO2, PO3, PO5, PO6, PO9, PO10	PSO1, PSO2
	Shaurya Gupta	4114804921				
	Yashasvi	3214804921				
46	Nitin Sagar	8414807822	IR Based Automatic Braking System	Ms. Aayushi	PO1, PO2, PO3, PO5, PO6, PO9	PSO1, PSO2
47	Nemish Sharma	6314804921	Practical Buddy: Your smart study partner for engineering success	Dr. Monika gupta	PO1, PO2, PO3, PO5 PO6, PO9, PO10, PO12	PSO1, PSO2
	Shahil Suman	2114807822				
	Sharansh Kaushik	314804921				
	Kartik Suri	13214804921				

Faculty Activity Summary

S.No.	Designation	Faculty Name	Books Chapter	International Journals	International Conference	Workshops	Seminars	Conferences	Other Activities	FDP Attended
1	Associate Professor	Dr. L P Singh	0	0	0	0	0	0	0	3
2	Associate Professor	Dr. Neelam Kassarwani	0	0	1	1	0	0	0	2
3	Associate Professor	Dr. Neelu Nagpal	2	2	3	1	1	3	0	2
4	Assistant Professor	Monika Bhardwaj	0	1	3	2	0	2	1	7
5	Assistant Professor	Ravi Sharma	0	0	1	1	0	0	1	2
6	Assistant Professor	Lalit Aggarwal	0	1	3	1	1	3	0	2
7	Assistant Professor	Dr Jitender Kumar	0	2	0	1	0	0	0	1
8	Assistant Professor	Supriya Sharma	0	0	1	2	0	1	0	3
9	Assistant Professor	Dr Poonam Juneja	0	0	1	2	0	1	0	3
10	Assistant Professor	Shashibala Agarwal	0	1	0	0	0	0	0	0
11	Assistant Professor	Sheersh Kumar Garg	0	0	1	1	0	0	0	4
12	Assistant Professor	Dr Neha Aggarwal	0	0	0	0	0	0	0	1
13	Assistant Professor	Dr Chandrakesh Shukla	0	0	1	0	0	0	0	0
14	Assistant Professor	Mr Govind Gupta	0	0	0	1	0	0	0	8
15	Assistant Professor	Mr. Rahul Garg	0	0	1	1	0	0	0	1
16	Assistant Professor	Mr. Ashok Goyal	0	0	0	1	0	0	0	3

Book Chapter Details

Faculty	Book Series Name	Chapter Name	Date of Publication	ISBN//ISSN	Indexing
Dr. Neelu Nagpal	IGI Global, Scientific Publishing, New York	Digital Innovations for Renewable Energy and Conservation/Cross-Sectoral Collaborations for Advancing Renewable Energy and Conservation Goals	Sept 2024	9798369365328	Scopus
Dr. Neelu Nagpal	CRC Press	Sustainable Materials: The Role of Artificial Intelligence/ Chapter 5: Computational Material Science for Cheminformatics Feature Descriptive Language	Oct 2024	9781003437369	Scopus

International Journals

S.No.	Faculty	Paper Title	Journal Name	Volume	Year	Indexing
1	Shashibala Agarwal	Deep Learning Based Classification and Combined Transform Based Feature Extraction Approach for Mental Stress Prediction of Human Beings Using EEG	Transactions on Emerging Telecommunications Technologies, Wiley	Vol. 36, issue 6	2025	SCI
2	Dr. Sunil Kumar Pandey	A Multifunctional VSC for Grid Synchronized SPV System with Mode Transfer Capability	Journal of Electrical Systems	20-11s	2024	Scopus
3	Dr. Sunil Kumar Pandey	Revolution on Wheels: The Past, Present, and Future of Electric Vehicles	International Journal of Advance Scientific research	9	2025	Scopus
4	Monika Bhardwaj	Grid-Connected PV Inverter System Control Optimization Using Grey Wolf Optimized PID Controller	Scientific Reports Springer Nature	—	2025	SCI
5	Dr Jitender Kumar	Implementation of Dual Metal Gate for improvement in Analog/RF and Linearity Performance of Cylindrical SOI Schottky-Barrier MOSFET for Low Power Applications	International journal of High Speed Electronics and systems	33	2024	Scopus
6	Dr Jitender Kumar	Analytical Modeling of Cylindrical Silicon-on-Insulator Schottky Barrier MOSFET and Impact of Insulator Pillar Radius on Analog/RF and Linearity Parameters for Low Power Circuit Application	Microelectronics Journal of Science Direct	156	2025	SCI
7	Dr. Neelu Nagpal	Noisy and non-stationary power quality disturbance classification based on adaptive segmentation empirical wavelet transform and support vector machine	Computers and Electrical Engineering, Elsevier	118	2024	SCI
8	Dr. Neelu Nagpal	Efficient design of tunable VFOD and VFOI for narrowband applications	Journal of Power Electronics, Springer Nature	25	2025	SCI
9	Lalit Aggarwal	Reducing overfitting in deep learning intrusion detection for power systems with CTGAN	Chaos, Solitons & Fractals, Elsevier	188	2024	SCI

Conference Paper

S.N o.	Faculty	Paper Title	Details of Conference	Date	Publisher	Indexing
1	Monika Bhardwaj	Integrated Cleaning and Sun Tracker for Solar Panels	International Conference on Advanced Materials for Sustainable Innovation (IC – AMSI 2024)	Aug 2024	Springer	Scopus
2	Monika Bhardwaj	Mental Health Monitoring Device	6th International Conference on Recent Advances in Information Technology (RAIT 2025) held at the Indian Institute of Technology (Indian School of Mines), Dhanbad, India	Mar 2025	IEEE Explorer	Scopus
3	Monika Bhardwaj	Transformative Effect of AI in Education	International Conference on Transforming Higher Education for Future: Education 4.0, Thapar Institute of Engineering and Technology	Jul 2025	—	Scopus
4	Ravi Sharma	Integrating Simulated Annealing with Binary Optimization Techniques for PMU Placement	THE 16th INTERNATIONAL IEEE CONFERENCE ON COMPUTING, COMMUNICATION AND NETWORKING TECHNOLOGIES (ICCCNT)	Jul 2025	IEEE Explorer	N/A
5	Sheersh Kumar Garg	Integrating Simulated Annealing with Binary Optimization Techniques for PMU Placement	THE 16th INTERNATIONAL IEEE CONFERENCE ON COMPUTING, COMMUNICATION AND NETWORKING TECHNOLOGIES (ICCCNT)	Jul 2025	IEEE Explorer	N/a
6	Rahul Garg	Integrating Simulated Annealing with Binary Optimization Techniques for PMU Placement	THE 16th INTERNATIONAL IEEE CONFERENCE ON COMPUTING, COMMUNICATION AND NETWORKING TECHNOLOGIES (ICCCNT)	Jul 2025	IEEE Explorer	N/A
7	Dr. Sunil Kumar Pandey	Three Phase Single Stage Grid Synchronized PV Generator with Seamless Mode Transfer	Third International Conference on Signals, Machines and Automation	Dec 2024	—	Scopus
8	Dr Neelam Kassarwani	Machine Learning Algorithms to Diagnose Parkinson's Disease Using Vocal Data	International Conference on Signal, Machines, Automation, and Algorithm, Advances in Intelligent Systems and Computing 1460	Dec 2024	Springer	Scopus

9	Lalit Aggarwal	Detection System Using Passive Techniques	International Conference on Signal, Machines, Automation, and Algorithm, Advances in Intelligent Systems and Computing 1460	Dec 2024	Springer	Scopus
10	Lalit Aggarwal	A Device to Develop Depth Map Using Principles of Stereoscopic Vision	International Conference on Signal, Machines, Automation, and Algorithm, Advances in Intelligent Systems and Computing 1460	Dec 2024	Springer	Scopus
11	Poonam Juneja	Real-Time Intelligent Vehicle Monitoring and License Plate Recognition System using YOLOv8 and Easy OCR with GUI- Based logging	International Conferences on Artificial Intelligences(ICAI)	May 2025	—	N/A
12	Supriya Sharma	Real-Time Intelligent Vehicle Monitoring and License Plate Recognition System using YOLOv8 and Easy OCR with GUI- Based logging	International Conferences on Artificial Intelligences(ICAI)	May 2025	—	N/A
13	Neelu Nagpal	Comparative Analysis of Short-Term Load Forecasting Techniques: Conventional Deep Learning Models Versus Proposed LSTM with Attention Layers.	5th International Conference on Recent Developments in Control, Automation and Power Engineering, Springer	Apr 2025	Springer	Scopus
14	Neelu Nagpal	Simultaneous Dynamic State Estimation and Fault Data Detection in Frequency Control Loop of Interconnected Multi-area Power Systems.	International Conference on Signal, Machines, Automation, Algorithm	Dec 2024	Springer	Scopus
15	Neelu Nagpal	Machine Learning Algorithms to Diagnose Parkinson's Disease Using Vocal Data	International Conference on Signal, Machines, Automation, Algorithm	Dec 2024	Springer	Scopus
16	Lalit Aggarwal	GUI-Based Diabetes Prediction Using Pipeline	International Conference on Signal, Machines, Automation, Algorithm	Dec 2024	Springer	Scopus

Activity Attended

S.No.	Faculty	Activity Name	Mode	Title	Year	Starting Date	Duration	Orgnaized By
1	Dr. LP Singh	FDP	Online	Sustainable development: Intersection of Green Energy and emobility	2024	16/10/2024	5	NIT Rourkela, Odisha
2	Dr. LP Singh	FDP	Offline	Emerging Trends in Control Systems and Sensor Technologies	2024	21 Oct 2024	6	AICTE Training and Learning (ATAL) Academy and Netaji Subhas University of Technology, New Delhi
3	Dr. LP Singh	FDP	Online	Data Analysis of Cyber Attacks through ML and Deep Learning	2024	25 Nov 2024	5	NITTTR, Chandigarh
4	Supriya Sharma	Workshop	Online	NEP 2020 Orientation & Sensitization Programme	2025	18 Mar 2025	9	Mahatma Hansraj Malaviya Mission Teacher Training Centre (MH-MMTTC), Hansraj College, University of Delhi
5	Supriya Sharma	Workshop	Online	NEP 2020 Orientation & Sensitization Programme	2025	18 Mar 2025	9	"UGC-Malaviya Mission Teacher Training Centre Himachal Pradesh University, Shimla -5"
6	Supriya Sharma	Workshop	Offline	Certified Advanced Technology Professional in Artificial Intelligence (CATPAI)	2025	25 Mar 2025	6	Maharaja Agrasen Technical Education Society
7	Supriya Sharma	FDP	Offline	Medical Imaging in the Third Dimension: Advanced Techniques and Clinical Applications	2024	16 Dec 2024	6	AICTE Training And Learning (ATAL) Academy Faculty Development Program at MAIT
8	Supriya Sharma	FDP	Online	Data Analysis of Cyber Attacks through ML and Deep Learning	2024	25 Nov 2024	5	NITTTR, Chandigarh
9	Supriya Sharma	FDP	Online	Sustainable development: Intersection of Green Energy and emobility	2024	16 Oct 2024	5	NIT Rourkela, Odisha
10	Supriya Sharma	FDP	Offline	Emerging Trends in Control Systems and Sensor Technologies	2024	16 Oct 2024	6	AICTE Training and Learning (ATAL) Academy and Netaji Subhas University of Technology, New Delhi

11	Dr. Poonam Juneja	Workshop	Online	NEP 2020 Orientation & Sensitization Programme	2025	18 Mar 2025	9	Mahatma Hansraj Malaviya Mission Teacher Training Centre (MH-MMTTC), Hansraj College, University of Delhi
12	Dr. Poonam Juneja	Workshop	Offline	Certified Advanced Technology Professional in Artificial Intelligence (CATPAI)	2025	25 Mar 2025	6	Maharaja Agrasen Technical Education Society
13	Dr. Poonam Juneja	Workshop	Online	NEP 2020 Orientation & Sensitization Programme	2025	1 Jul 2025	9	"UGC-Malaviya Mission Teacher Training Centre Himachal Pradesh University, Shimla -5"
14	Dr. Poonam Juneja	FDP	Offline	Medical Imaging in the Third Dimension: Advanced Techniques and Clinical Applications	2024	16 Dec 2024	6	AICTE Training And Learning (ATAL) Academy Faculty Development Program at MAIT
15	Dr. Poonam Juneja	FDP	Online	Data Analysis of Cyber Attacks through ML and Deep Learning	2024	25 Nov 2024	5	NITTTR, Chandigarh
16	Dr. Poonam Juneja	FDP	Online	Sustainable development: Intersection of Green Energy and emobility	2024	16 Oct 2024	5	NIT Rourkela, Odisha
17	Dr. Poonam Juneja	FDP	Offline	Emerging Trends in Control Systems and Sensor Technologies	2024	21 Oct 2024	6	AICTE Training and Learning (ATAL) Academy and Netaji Subhas University of Technology, New Delhi
18	Dr. Neha Aggarwal	FDP	Online	NEP 2020 Orientation & Sensitization Programme	2025	1 Jul 2025	9	"UGC-Malaviya Mission Teacher Training Centre Himachal Pradesh University, Shimla -5"
19	Sheersh Kumar Garg	Workshop	Online	NEP 2020 Orientation & Sensitization Programme	2025	1 Jul 2025	9	"UGC-Malaviya Mission Teacher Training Centre Himachal Pradesh University, Shimla -5"
20	Sheersh Kumar Garg	FDP	Online	NEP 2020 Orientation & Sensitization Programme	2024	25 Nov 2024	5	NITTTR, Chandigarh

21	Sheersh Kumar Garg	FDP	Offline	Artificial Intelligence, Machine Learning & Deep Learning	2024	2 Dec 2024	5	Intel Unnati Lab, Maharaja Agrasen Institute of Technology
22	Sheersh Kumar Garg	FDP	Online	Sustainable development: Intersection of Green Energy and emobility	2024	16 Oct 2024	5	NIT Rourkela, Odisha
23	Sheersh Kumar Garg	FDP	Offline	Emerging Trends in Control Systems and Sensor Technologies	2024	21 Oct 2024	6	AICTE Training and Learning (ATAL) Academy and Netaji Subhas University of Technology, New Delhi
24	Monika Bhardwaj	FDP	Online	NEP 2020 Orientation & Sensitization Programme	2025	1 Jul 2025	9	UGC–Malaviya Mission Teacher Training Centre Himachal Pradesh University, Shimla –5
25	Monika Bhardwaj	Short Term Course	Offline	Renewable Energy Control & Network Integration for Smart Grids (RE-CONNECT-2025)	2025	25 May 2025	5	Netaji Subhas University of Technology, New Delhi, India
26	Monika Bhardwaj	Workshop	Online	Certified Advanced Technology Professional in Artificial Intelligence (CATPAI)	2025	25 Mar 2025	6	Maharaja Agrasen Technical Education Society
27	Monika Bhardwaj	FDP	Online	IoT Applications with Sensors, Embedded Systems and Data Analytics	2025	17 Feb 2025	12	Electronics and ICT Academies at IIT Roorkee, MNIT Jaipur, NIT Patna, IIT Guwahati and IIITDM Jabalpur under the assistance of Ministry of Electronics and Information Technology (MeitY)
28	Monika Bhardwaj	FDP	Online	AI-ML Based Smart Grid	2025	30 Jan 2025	5	Department of Electrical Engineering, Basaveshwar Engineering College Bagalkote, Karnataka
29	Monika Bhardwaj	FDP	Offline	Medical Imaging in the Third Dimension: Advanced Techniques and Clinical Applications	2024	16 Dec 2024	6	AICTE Training and Learning (ATAL) Academy, FDP at Maharaja Agrasen Institute of Technology
30	Monika Bhardwaj	FDP	Offline	Artificial Intelligence, Machine Learning & Deep Learning	2024	2 Dec 2024	5	Intel Unnati Lab, Maharaja Agrasen Institute of Technology

31	Monika Bhardwaj	FDP	Offline	Data Analysis of Cyber Attacks through ML and Deep Learning	2024	25 Nov 2024	5	Information Management and Emerging Engineering Department, NITTTR Chandigarh with MAIT
32	Monika Bhardwaj	FDP	Offline	Emerging Trends in Control Systems and Sensor Technologies	2024	21 Nov 2024	6	AICTE Training and Learning (ATAL) Academy and Netaji Subhas University of Technology, New Delhi
33	Monika Bhardwaj	Workshop	Online	Sustainable Development: Intersection of Green Energy and e-Mobility (IGEEM 2024)	2024	16 Oct 2024	5	Department of Electrical Engineering, NIT Rourkela and sponsored by Science and Engineering Research Board (SERB)
34	Monika Bhardwaj	Conference	Offline	International Conference on Advanced Materials for Sustainable Innovation (IC – AMSI 2024)	2024	29 Aug 2024	2	VIPS-TC, School of Engineering and Technology
35	Monika Bhardwaj	Conference	Offline	6th International Conference on Recent Advances in Information Technology (RAIT 2025)	2025	6 Mar 2025	3	Indian Institute of Technology (Indian School of Mines), Dhanbad, India
36	Monika Bhardwaj	FDP	Online	IoT Applications with Sensors, Embedded Systems and Data Analytics	2025	17 Feb 2025	12	Electronics and ICT Academies at IIT Roorkee, MNIT Jaipur, NIT Patna, IIT Guwahati and IIITDM Jabalpur under the assistance of Ministry of Electronics and Information Technology (MeitY)
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45	Ashok Goyal	FDP	Offline	Emerging Trends in Control Systems and Sensor Technologies	2024	21 Oct 2024	6	AICTE Training and Learning (ATAL) Academy and Netaji Subhas University of Technology, New Delhi
46	Ashok Goyal	Workshop	Online	NEP 2020 Orientation & Sensitization Programme	2025	1 Jul 2025	9	"UGC–Malaviya Mission Teacher Training Centre Himachal Pradesh University, Shimla – 5"
47	Rahul Garg	Workshop	Online	NEP 2020 Orientation & Sensitization Programme	2025	1 Jul 2025	9	"UGC–Malaviya Mission Teacher Training Centre Himachal Pradesh University, Shimla – 5"
48	Rahuk Garg	FDP	Online	Sustainable development: Intersection of Green Energy and emobility	2024	16 Oct 2024	5	NIT Rourkela, Odisha

49	Govind Gupta	FDP	Online	Introduction to ML - NPTEL FDP	2024	15 Jul 2024	12 weeks	NPTEL-AICTE FDP Programme
50	Govind Gupta	FDP	Online	DEEP LEARNING FOR NLP	2025	15 Jan 2025	12 weeks	NPTEL-AICTE FDP Programme
51	Govind Gupta	FDP	Online	NATURAL LANGUAGE PROCESSING	2025	15 Jan 2025	12 weeks	NPTEL-AICTE FDP Programme
52	Govind Gupta	FDP	Offline	Medical Imaging in the Third Dimension: Advanced Techniques and Clinical Applications	2024	16 Dec 2024	6	AICTE Training And Learning (ATAL) Academy Faculty Development Program at MAIT
53	Govind Gupta	Workshop	Offline	Certified Advanced Technology Professional in Artificial Intelligence (CATPAI)	2025	25 Mar 2025	6	Maharaja Agrasen Technical Education Society
54	Govind Gupta	FDP	Online	Data Analysis of Cyber Attacks through ML and Deep Learning	2024	25 Nov 2024	5	NITTTR, Chandigarh
55	Govind Gupta	FDP	Offline	Emerging Trends in Control Systems and Sensor Technologies	2024	21 Dec 2024	6	AICTE Training and Learning (ATAL) Academy and Netaji Subhas University of Technology, New Delhi
56	Govind Gupta	FDP	Offline	Artificial Intelligence, Machine Learning & Deep Learning	2024	2 Dec 2024	6	Intel Unnati Lab, Maharaja Agrasen Institute of Technology
57	Govind Gupta	FDP	Online	Sustainable development: Intersection of Green Energy and emobility	2024	16 Oct 2024	5	NIT Rourkela, Odisha

58	Dr Neelam Kassarwani	FDP	Online	NEP 2020 Orientation & Sensitization Programme	2025	1 Jul 2024	9	"UGC-Malaviya Mission Teacher Training Centre Himachal Pradesh University, Shimla – 5"
59	Dr Neelam Kassarwani	FDP	Online	Data Analysis of Cyber Attacks through ML and Deep Learning	2024	25 Nov 2024	5	NITTTR, Chandigarh
60	Dr Neelam Kassarwani	Workshop	Offline	Certified Advanced Technology Professional in Artificial Intelligence (CATPAI)	2025	22 Jan 2025	5 weeks	Maharaja Agrasen Technical Education Society
61	Dr Neelu Nagpal	FDP	Online	Data Analysis of Cyber Attacks through ML and Deep Learning	2024	25 Nov 2024	5	NITTTR, Chandigarh
62	Dr Neelu Nagpal	FDP	Online	NEP 2020 Orientation & Sensitization Programme	2025	1 Jul 2025	9	"UGC-Malaviya Mission Teacher Training Centre Himachal Pradesh University, Shimla – 5"
63	Dr Neelu Nagpal	Workshop	Offline	Certified Advanced Technology Professional in Artificial Intelligence (CATPAI)	2025	22 Jan 2025	5 weeks	Maharaja Agrasen Technical Education Society
64	Ashok Goyal	FDP	Offline	Medical Imaging in the Third Dimension: Advanced Techniques and Clinical Applications.	2024	16 Dec 2024	6	AICTE Training and Learning (ATAL) Academy, FDP at Maharaja Agrasen Institute of Technology
65	Ashok Goyal	FDP	Offline	Cross Modality Innovation: Generative AI in Language, Image Intelligence and Medical Advancements	2024	9 Dec 2024	6	AICTE Training and Learning (ATAL) Academy and Bharati Vidyapeeth's College of Engineering, New Delhi

Activity Organised by Department

S.No.	Convener	Other organizer	Activity Name	Title	Collaborating Partner	Date		Duration
						From	To	
1	Dr Monika Gupta (HOD)	Ms Monika Bhardwaj	Summer Training Program	AI Security	CRAC Learning	23 Jun 2025	1 Aug 2025	6 Weeks
2	Dr Monika Gupta (HOD)	Ms Shashibala Agarwal	Seminar	Innovate and Elevate: Igniting Tech Minds	N/A	4 Apr 2025	6 Apr 2025	3 Days
3	Ms. Supriya Sharma	—	Workshop	Expert Lectures on Transformers in Power sectors and From Campus to corporate: mastering the art of Professionalism	Alumni	21 Mar 2025	21 Mar 2025	1 Day
4	Dr Poonam Juneja	—	Workshop	CAD & MEP Design Hands-on Workshop	CADD Centre	24 Mar 2025	24 Mar 2025	1 Day
5	Ms Monika Bhardwaj	—	Workshop	Applied Cybersecurity Hands On Workshop	CRAC Learning	21 Jan 2025	21 Jan 2025	1 Day

ALUMNI CORNER

CAD & MEP Design Hands-On Workshop

Team Electrotech, the official society of the EEE Department, successfully organized an enriching hands-on workshop on CAD & MEP Design conducted by CADD centre on March 24, 2025 in Room No. 631. The event was organised by ElectroTech under the guidances of Dr Ponam Juneja (faculty coordinator) and also graced by the presence of Dr. Monika Gupta (HOD, EEE Department) who presented certificates to participants, adding prestige to the occasion. The workshop was expertly conducted by Mr Harjeet Singh currently working as a Business Manager at CADD Centre Training Services, overseeing operations and revenue growth across 13 locations in Delhi NCR. With over four years of experience in project management and engineering, he expertise in spans automotive, mechanical design, and product development. He hold a Master's degree in Automotive Engineering from University of Hertfordshire, London and a Bachelor's in Mechanical Engineering from PES university, Bangalore , with a strong background in cross-functional team leadership, product lifecycle management, and strategic planning. His skill set includes risk management, process optimization, and continuous improvement initiatives. He is also PMP certified and proficient in CAD (SolidWorks, CATIA), FEA (ANSYS), and project management tools. CADD.

आविष्कार



FACULTY OF EEE DEPARTMENT

Vision

TO PRODUCE TECHNICALLY COMPETENT HUMAN RESOURCES FOR THE ELECTRICAL AND ELECTRONICS INDUSTRY WITH HIGH MORALS AND ETHICAL VALUES.

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING
MAHATMA GANDHI BLOCK , BLOCK NO. 6

MAHARAJA AGRASEN INSTITUTE OF TECHNOLOGY
PSP AREA , PLOT NO. 1 , SECTOR 22 , ROHINI , DELHI - 110086 PH. : 01165647741