

DIGITAL KALEIDOSCOPE

A Quarterly Newsletter

Department of Computer Application, Echelon Institute of Technology, Faridabad

VOLUME-XVI ISSUE-III

July-September-2025

This is the first issue of "THE DIGITAL KALEIDOSCOPE" of the academic year 2025-2026. Here, I would like to encourage all the students to participate in co-curricular activities.

Bhawna

(Trainer, DCA Department)

Highlights

- ❖ **Message from the Editor**
- ❖ **Vision and Mission**
- ❖ **Student Speaks**
- ❖ **Latest Trends in Computer Science**
- ❖ **Activities in the department**
 - **FDP on AI**
 - **Workshop by CISCO**
 - **Rhythms, Culture & Community:**
Dandiya Utsav 2025
- ❖ **Faculty Achievements**

Message from the Editor

We are delighted to bring you the freshest updates from the world of "Digital Kaleidoscope." Creativity is all about harnessing your imagination, and as the saying goes, "Ideas multiply like rabbits; you get a couple, learn to handle them, and soon you have a dozen." To ensure our readers' continued engagement and respect, this editorial remains committed to keeping you informed about the latest developments within the department.

Institute Vision and Mission

Vision:

The institute is committed to fulfilling its vision of "Technical and Management leaders engaged in the evolution of life, being at the frontiers of the continuous technological and administrative breakthroughs, inspired by ongoing exploration of self, society, and nature through self-

reflective consciousness by building a culture of inspiration, exploration and growth."

Mission:

M-1 Having a culture of inspiration, exploration and invention through effective, experiential teaching-learning giving rise to ever evolving knowledge and wisdom.

M-2 To have self-inspired students ever engaged in continually working upon and sharpening and deepening computational, creative, innovative and leadership consciousness.

M-3 Having students established in self-reflective consciousness, committed to personal, social & human integrity and engaged in deep inquiry and conversation, giving rise to shared, inter-subjective human values and consciousness.

Department Vision and Mission

Vision:

"To develop competent computer professionals who solve real-world problems through continuous learning and adaptive to rapid changes in computer science and engineering with ethical, social, and managerial capabilities."

Mission:

M-1 To cultivate a culture of innovation, exploration, and experiential learning in computer applications, fostering the growth of knowledge, skills, and wisdom.

M-2 To inspire students to continuously enhance their computational, creative, and leadership abilities, driving them toward excellence and innovation.

M-3 To nurture self-reflective professionals who uphold personal and societal integrity, engage in meaningful inquiry, and contribute to shared human values through technology and collaboration.

Student Speaks

"From the moment I set foot on Echelon's campus, I knew I was in a place that nurtured ambition and excellence. The state-of-the-art infrastructure, with its modern classrooms and smart technology, created an environment where learning felt dynamic and engaging. The library, a haven of wisdom, offered not just books but a quiet space for exploration and discovery.

Beyond academics, what truly set Echelon apart

was its vibrant community. Professors were more than teachers—they were mentors who invested in our growth. The campus buzzed with opportunities, from insightful seminars to thrilling competitions and diverse student clubs, each experience adding to a journey of self-discovery and lifelong friendships.

Echelon was more than just my college—it was the foundation of my future. A place where learning, growth, and memories intertwined, leaving an impact that will stay with me forever.”

- ANSH (23-BCA-DS-010)

Latest Trends in Computer Science

Quantum Computing Milestone

In December 2024, Google unveiled a groundbreaking quantum computer chip named Willow. This chip significantly reduces errors and outperforms existing benchmarks in quantum computing. Notably, it completed benchmark computations in under five minutes a task that would take the fastest supercomputers approximately 10 septillion years. This advancement addresses longstanding challenges in quantum computing and is seen as a crucial step toward practical applications in areas like drug discovery and battery design.



Artificial Intelligence

Artificial Intelligence (AI) and Machine Learning (ML) remain at the forefront of computer science. By 2025, these technologies are expected to be integrated into nearly every sector, from healthcare to finance. Students in computer science programs should prioritize coursework that focuses on AI and ML. Institutions like the best engineering colleges for computer science are already adapting their curricula to include these vital subjects.

Graduates will need to demonstrate not only theoretical knowledge but also practical experience with AI and ML technologies. Proficiency in programming languages like Python and familiarity with libraries such as TensorFlow or PyTorch will be beneficial

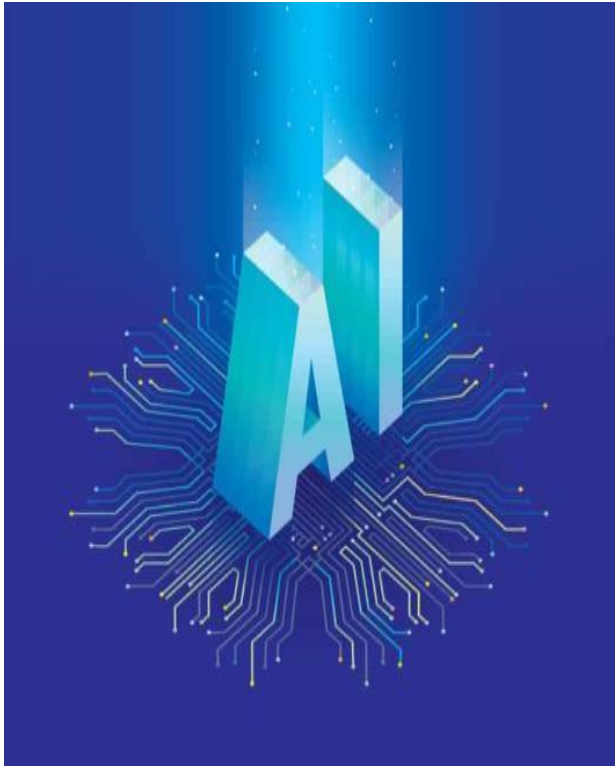


Fig1-Artificial Intelligence

Internet of Things (IoT)

The Internet of Things (IoT) landscape in 2026 has reached a major inflection point. Devices have transitioned from simple passive sensors to intelligent, autonomous systems that sense, process, and act in real time.

Key IoT Trends & Innovations in 2026

- **Artificial Intelligence of Things (AIoT) & Physical AI:** Machine learning models integrated directly into endpoints enable devices to execute autonomous, physical decisions rather than just sending raw data to the cloud.

- **Edge AI Acceleration:** Lightweight Neural Processing Units (NPUs) and RISC-V SoC architectures built into edge hardware allow real-time local inference, lowering latency, improving data privacy, and reducing bandwidth costs.
- **5G-Advanced Connectivity & LPWAN:** Ubiquitous 5G expansion and Low-Power Wide-Area Networks (LPWAN) provide ultra-low latency, supporting massive device density and reliable communications for industrial automation, smart tracking, and remote operations.
- **Granular Traceability & Smart Logistics:** Advanced low-cost trackers combine satellite connectivity with AI to provide granular lifecycle tracking down to individual cargo units and reusable packaging assets.
- **Digital Twins Expansion:** Industrial sectors utilize system and asset digital twins driven by real-time IoT feeds to run predictive maintenance, simulate operational workflows, and reduce unexpected equipment failures.
- **Zero-Trust & Blockchain Security:** As deployed connected devices hit tens of billions globally, automated zero-trust frameworks, decentralized identity, and firmware management are standard baseline requirements.



Activities in the department

- Campus Placement Drive For Intellus Prime
- Online Faculty Development Program on Recent Trends and Applications of Artificial Intelligence
- Strategic MoU Signing with CIPHERMATIC Consulting Pvt. Ltd.
- Early Campus Recruitment Drive with CIPHERMATIC Consulting
- Online Career Guidance and Self-Exploration Session with Sh. Prabhat Agarwal
- Faculty Development Program on Fundamentals of Indian Knowledge System (IKS)
- Campus Recruitment Drive with JoulesToWatts Business Solutions
- Specialized AWS Cloud Training via ICT and

Infosys

- Multi-Corporate Placement Drive with DeltaX
- Multi-Corporate Placement Drive with TimesPro
- Expert Session on VC Funding and Early-Stage Startups
- Interactive Session and Masterclass with Dr. R. D. Sharma
- ICT Academy Next Gen Edupreneur Award Win at BRIDGE '25
- Aptitude and Competitive Prep Seminar with Career Launcher
- Dandiya Utsav Cultural Celebration
- Gold Medal Victory at UDGHOSH-2025, IIT Kanpur
- Coden'Circuitz STEM Workshop for School Innovators.

60-Hour "Skill Up" Employability Program Launch

Date: July 14, 2025

Organized by: Echelon Institute of Technology in collaboration with Infosys CSR, Centum Foundation, and ICJ

60-Hour Professional Readiness Training Programme

Echelon Institute of Technology successfully organized a **60-hour Professional Readiness Training Programme** in collaboration with **Infosys CSR, Centum Foundation, and Innovation Comes Jointly (ICJ)** for final-year **B.Tech, BCA, and MCA** students. The initiative was designed to bridge the gap between academic learning and industry expectations by equipping students with the essential professional skills required to excel in today's competitive job market. Funded by **Infosys** under its **Corporate Social Responsibility (CSR)** initiative,

implemented by the **Centum Foundation**, and conducted in partnership with **Innovation Comes Jointly (ICJ)**, the programme reflected a shared commitment to enhancing student employability and career readiness.

The comprehensive training programme focused on developing both technical and non-technical competencies that are highly valued by employers. Throughout the sessions, students received extensive training in **soft skills, professional communication, corporate etiquette, personality development, teamwork, leadership, interview preparation, and workplace ethics**. Industry experts and experienced trainers conducted interactive sessions, practical exercises, and group activities that enabled participants to strengthen their communication abilities, improve interpersonal skills, and gain confidence in professional environments.

In addition to skill development, the programme provided valuable career guidance and mentorship to help students make informed decisions about their professional journeys. Participants gained insights into current industry expectations, workplace culture, and effective strategies for succeeding in recruitment processes. The interactive nature of the training encouraged active participation, allowing students to enhance their presentation skills, problem-solving abilities, and overall professional outlook through real-world scenarios and collaborative learning experiences.

The 60-hour training programme proved to be a significant step towards preparing students for successful careers in the corporate world. By partnering with leading organizations such as Infosys CSR, Centum Foundation, and ICJ, Echelon Institute of Technology continues to strengthen its commitment to holistic education and industry-oriented learning. Such initiatives ensure that

graduates are not only academically proficient but also professionally competent, confident, and well-equipped to meet the evolving demands of the global workforce, thereby contributing to improved placement opportunities and long-term career success.

**Five-Day Online Faculty
Development Program on AI
Applications**

Date: July 14 – 18, 2025

**Organized by: Department of Electronics
and Communication Engineering**

ECHELON INSTITUTE OF TECHNOLOGY, FARIDABAD
DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING
— ORGANIZING —
FIVE DAYS ONLINE
FACULTY DEVELOPMENT PROGRAM
— ON —
**RECENT TRENDS AND APPLICATIONS OF
ARTIFICIAL INTELLIGENCE**

Date
14th - 18th July 2025

Scan for Registration

Registration form Link:
<https://docs.google.com/forms/d/1eGIDt6JEhB2hgrQFX1ehqW4aRni-JbZOsqgYJae0/edit>

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			Dr. Kavita Singh Prof. ECE, EIT, Faridabad

Echelon Institute of Technology, through its **Department of Electronics and Communication Engineering (ECE)**, successfully organized a **Five-Day Online Faculty Development Program (FDP)** titled **"Recent Trends and Applications of Artificial Intelligence."** The programme was

conducted with the support of the **Institution's Innovation Council (IIC)** and **IEEE Student Branches** with the objective of enhancing the knowledge and research capabilities of faculty members in the rapidly evolving field of Artificial Intelligence (AI). The national-level initiative brought together academicians, research scholars, industry experts, and professionals from across the country, providing a valuable platform for knowledge sharing and academic collaboration.

The five-day programme featured a series of expert sessions delivered by distinguished speakers from premier institutions, including **IITs** and **NITs**, as well as experienced professionals from the industry. The sessions covered a wide range of emerging topics such as artificial intelligence, machine learning, neural networks, deep learning, data analytics, and their practical applications across various engineering and multidisciplinary domains. Participants also gained valuable insights into recent technological advancements, research opportunities, and the growing impact of AI in solving real-world challenges across industries.

The interactive sessions encouraged participants to engage in meaningful discussions, exchange research ideas, and explore innovative approaches to integrating Artificial Intelligence into teaching, research, and industrial applications. The programme provided faculty members with an opportunity to enhance their technical expertise, stay updated with the latest developments in AI, and strengthen their ability to deliver industry-relevant education to students. The exchange of knowledge among experts and participants created a collaborative learning environment that enriched the overall experience.

The Faculty Development Program concluded successfully with enthusiastic participation and positive feedback from attendees. The initiative reaffirmed Echelon Institute of Technology's commitment to promoting continuous professional development, academic excellence, and research-driven innovation among its faculty members. By

organizing such national-level programmes, the institute continues to foster a culture of lifelong learning, technological advancement, and academic collaboration, ensuring that educators remain well-equipped to prepare students for the rapidly changing landscape of modern engineering and emerging technologies.

Faculty Development Program on Indian Knowledge Systems

(IKS)

Date: July 21 – 25, 2025

Organized by: Echelon Institute of Technology (NITTTR Remote

Center)

FACULTY DEVELOPMENT PROGRAM ON FUNDAMENTALS OF INDIAN KNOWLEDGE SYSTEM (IKS)
[TAC: CP-25-264]
Five Day FDP from 21st to 25th July 2025
live streaming at **NITTTR** remote center
Echelon Institute of Technology, Faridabad

All participants must register online at
<https://fdp.nitttrchd.ac.in/backingup/>
on or before **11/07/2025**

Coordinator: Dr. Shital Prasad
Contact No.: +91 9871733760 | Email: shitalprasad@eitfaridabad.co.in

Coordinator: Dr. Poonam Rani
Contact No.: +91 8447557039 | Email: poonamrani@eitfaridabad.co.in

Echelon Institute of Technology successfully organized a **Five-Day Faculty Development Program (FDP)** on "Fundamentals of Indian Knowledge System (IKS)" in collaboration with **NITTTR Chandigarh** through its **NITTTR Remote Center**. The programme was conducted in alignment with the objectives of the **National Education Policy (NEP) 2020**, with the aim of enhancing faculty understanding of India's rich intellectual heritage and its relevance in contemporary education. The

initiative provided educators with an opportunity to explore the interdisciplinary dimensions of Indian Knowledge Systems and their integration into modern teaching and research practices.

The five-day programme featured a series of live-streamed expert sessions delivered by eminent academicians and subject specialists from NITTTR Chandigarh. The sessions covered a wide range of topics, including the historical evolution of Indian Knowledge Systems, contributions in science, mathematics, linguistics, philosophy, environmental sustainability, and traditional engineering practices. Participants gained valuable insights into how ancient Indian wisdom can complement modern scientific approaches and contribute to innovation, ethical decision-making, and sustainable development.

Orientation & Cybersecurity Workshop by

CISCO Date: August 20, 2025

Organized by: Skill Development Team in collaboration with CISCO NetAcad



Echelon Institute of Technology, through its **Skill Development Team** in collaboration with **CISCO Networking Academy (NetAcad)**, organized an **Orientation and Cybersecurity Workshop** to introduce students to the rapidly growing field of information security and cyber defense. The workshop was designed to create awareness about the increasing

importance of cybersecurity in today's digital world while equipping students with the knowledge and skills required to pursue rewarding careers in this high-demand domain. The initiative reflected the institute's commitment to preparing students for emerging technological challenges and industry opportunities.

The workshop was led by **Mr. Kartik Bharadwaj**, Senior Technical Consultant at **NIIT**, who delivered a series of engaging and informative sessions for students from multiple academic programmes. Through practical examples and real-world case studies, he explained the fundamentals of cybersecurity, network vulnerabilities, cyber threats, phishing attacks, malware protection, and strategies for securing digital systems. Participants also gained valuable insights into best practices for protecting personal and organizational data in an increasingly connected digital environment.

Rhythms, Culture & Community: Dandiya Utsav 2025

**Date: September 24, 2025 | Venue:
Echelon Square**



Echelon Institute of Technology organized Dandiya Utsav 2025 on September 24, 2025, at Echelon Square to mark the joyous occasion of Navratri. The event, conducted in

collaboration with the Drishya Media Club, aimed to promote cultural values, foster community bonding, and create a happy atmosphere for students to enjoy one of India's most cherished festivals. The festivity saw the enthusiastic participation of students, faculty members, and staff, bringing the institute campus together in a spectacular dance floor.

The venue was decorated with bright and beautiful decorations, adding to the festive cheer of the event. In addition, the event's organizers played energetic music that got everyone dancing and having fun throughout the festivity. The students arrived at the event in traditional ethnic attires to witness and participate in a night of pure joy and dance. As the rhythmic beats of Garba and Dandiya music played, the students joined the dance circle and danced exuberantly in celebration of Navratri. Moreover, cultural performances, music sessions, and food stalls added to the festivity of this special event.

The Dandiya Utsav 2025 was a great opportunity for students from different cultural and regional backgrounds to mingle with each other and share their unique traditions and customs. It also allowed the students to bond and cooperate with each other to have a fantastic time during their college life while promoting teamwork and friendship. What

makes this event even better is that it offered students a much-needed break from their studies and enabled them to enjoy the festivity with their faculty members and staff.

Faculty Achievements

Ms. Shallu Hassija
Assistant Professor

Participated in a one-week Faculty Development Program on "Fundamentals of Indian Knowledge System (IKS)" organized by NITTTR, Chandigarh through its Remote Center at Echelon Institute of Technology (21st–25th July 2025), enhancing knowledge in traditional Indian wisdom, interdisciplinary teaching methodologies, and NEP 2020 framework integration.

Participated in an online Faculty Development Program on "Introduction to Solar Energy: Principles and Potential" organized by Poornima University, Jaipur, Rajasthan (8th August 2025), enhancing knowledge in renewable energy principles and solar technology applications.

Ms. Sunita
Assistant Professor

Participated in a one-week Faculty Development Program on “Effective Teaching and Learning Through Active Pedagogies and Learning Taxonomies” jointly organized by NITTTR, Bhopal and IQAC, Echelon Institute of Technology, Faridabad (8th–12th September 2025), enhancing knowledge in active pedagogical strategies, assessment frameworks, and instructional design

Acknowledgement

For the publication of “THE TECHNOPEdia” I would like to thank the members of the faculty of the DCA department for their valuable contribution.

Bhawna
(Trainer, DCA Department)

EDITORIAL BOARD

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- Ms. Bhawna (Trainer, DCA)

Student coordinator

- Ritika (24-BCA-DS-048)

Publisher

Echelon Institute of Technology, Faridabad

For any queries and suggestions

Contact: bhawna@eitfaridabad.co.in

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Department of Computer Application, Echelon Institute of Technology, Faridabad

VOLUME-XVI ISSUE-IV

October-December-2025

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Ms. Shallu Hassija

(Assistant Professor, DCA Department)

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- ❖ **Message from the Editor**
- ❖ **Vision and Mission**
- ❖ **Student Speaks**
- ❖ **Latest Trends in Computer Science**
- ❖ **Activities in the department**
 - **Ideathon**
 - **Workshop on Drone Technology**
 - **Blood Donation Camp**
 - **Intra College Ideathon 2025**
- ❖ **Student’s Achievements**
- ❖ **Faculty Achievements**

Message from the Editor

Innovation is continuing to shape the future. This edition shows the ideas and technologies that are making that happen. From trends, to exciting discoveries we look at how imagination is changing the world of technology.

Our goal is to make sure you are informed, inspired and prepared to take on chances. We hope this issue gives you ideas and helps you stay in front in the constantly changing world of technology.

Institute Vision and Mission

Vision:

The institute is committed to fulfilling its vision of "Technical and Management leaders engaged in the evolution of life, being at the frontiers of the continuous technological and administrative breakthroughs, inspired by ongoing exploration of self, society, and nature through self-

reflective consciousness by building a culture of inspiration, exploration and growth."

Mission:

M-4 Having a culture of inspiration, exploration and invention through effective, experiential teaching-learning giving rise to ever evolving knowledge and wisdom.

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Student Speaks

“My journey at Echelon Institute of Technology has been truly transformative. The dedicated faculty and hands-on curriculum provided me with strong fundamental knowledge, while access to modern labs and continuous industry workshops kept us aligned with current trends. Beyond the classroom, participating in technical competitions, seminars, and campus events helped me build practical skills and confidence. I am deeply grateful to Echelon for shaping my technical abilities and preparing me for a successful career.”

- KULTAR (23-BCA-DS-028)

“Choosing Echelon Institute of Technology was one of the best decisions for my academic and personal development. The supportive environment fostered by our professors encouraged me to explore new ideas and participate in various co-curricular activities. The focus on real-world projects, along with career readiness programs, has given me the tools needed to navigate the corporate world. Echelon is not just an educational institute; it is a community that inspires continuous growth and excellence.”

-ANSH (23-BCA-DS-028)

Latest Trends in Computer Science

Agentic AI & Autonomous Multi-Agent Systems

Artificial Intelligence has evolved beyond static prompt-and-response interactions to fully autonomous, goal-directed digital agents. These systems utilize Advanced Reasoning and Acting (ReAct) frameworks, persistent memory architectures, and dynamic tool manipulation to break complex objectives into sub-tasks, write and debug code, and execute multi-step workflows with minimal human oversight.

Quantum-Classical Hybrid Computing & Post-Quantum Cryptography

The convergence of Quantum Processing Units (QPUs) with classical High-Performance Computing (HPC) environments is enabling practical quantum applications. Variational algorithms are accelerating molecular simulations, financial risk analysis, and complex optimization problems. Concurrently, with the threat of quantum decryption, institutions are transitioning to lattice-based Post-Quantum Cryptography (PQC) standards to protect sensitive data infrastructure.

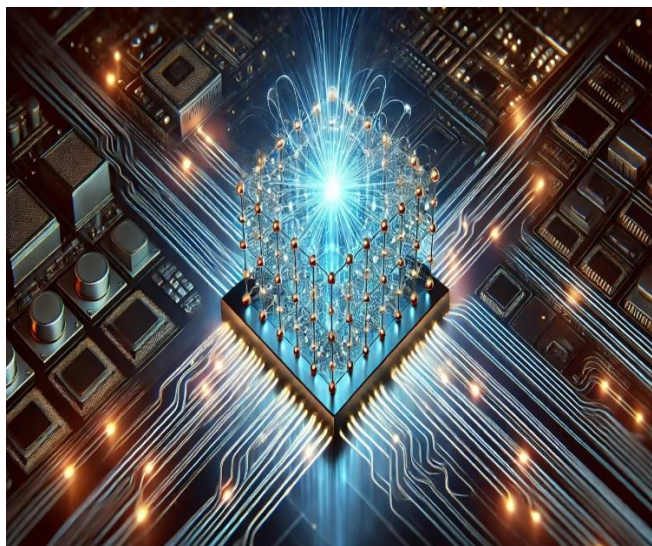


Fig1-Architecting Quantum-Classical Hybrid Systems: A Blueprint for Next-Generation Computing

Edge AI & On-Device Micro-Models

By executing neural network inference directly on edge hardware using specialized Neural Processing Units (NPUs) and RISC-V architectures, modern systems achieve sub-millisecond latency without reliance on cloud infrastructure. Advanced model compression techniques, such as 4-bit quantization and knowledge distillation, allow sophisticated AI capabilities to run securely on low-power IoT devices and smart infrastructure.

Activities in the department

- Ideathon
- Workshop on Drone Technology
- Blood Donation Camp
- Intra College Ideathon 2025

Blood Donation Camp

Date: November 6, 2025 | Time: 11:00 AM to 3:00 PM | Venue: Students Activity Room (Library Block)

Echelon Institute of Technology, Faridabad, in collaboration with the Rotary Club of Faridabad East, Rotary Club of Faridabad Sanskar, and the National Service Scheme (NSS), organized a drive for social welfare through a Blood Donation Camp.

The event witnessed active participation from students, faculty, and staff members

demonstrating civic responsibility and community service. Key dignitaries and organizers who coordinated the drive included representatives from the Rotary Clubs, such as Rtn. Dinesh Raghuvanshi (Charter President), Rtn. Brij Bhushan Goyal (President), Rtn. Manoj Gupta (Secretary), and Rtn. Rajesh Gupta (Treasurer), alongside Rtn. H.L. Bhutani (District Director, Blood Donation) and Rtn. Ashu Laul (President, RC Faridabad East). The initiative successfully reinforced the institute's commitment to social impact alongside academic growth.



Fig. – Blood Donation Camp Event Poster

Workshop on Drone Technology

Date: November 27, 2025

Time: 10:30 AM to 12:00 PM

Venue: G-29

Echelon Institute of Technology, Faridabad, organized an insightful workshop on "Drone Technology" tailored for B.Tech, BCA, and MCA students. The event was conducted in collaboration with the Institution's Innovation Council (IIC) and the IEEE Students Branch.

The session featured Mr. Rahul Sharma, Director of Hawk Devices Pvt. Ltd., as the keynote speaker. Mr. Sharma provided valuable industry insights into unmanned aerial vehicle (UAV) design, flight mechanics, autonomous navigation, and practical applications across sectors such as surveillance, agriculture, and logistics. The workshop equipped participants with a clearer understanding of emerging career pathways and technological advancements in the field of robotics and drone engineering.



Fig. – Workshop on Drone Technology Poster

Intra College Ideathon 2025

Date: October 8, 2025

Time: 12:55 PM to 3:30 PM

Venue: F-35

Echelon Institute of Technology, Faridabad, organized an Intra College Ideathon in collaboration with CircuitCrate (C2), the Institution's Innovation Council (IIC), and the IEEE Students Branch. The event provided a dynamic platform for creative student minds across various departments to present innovative ideas, technical solutions, and problem-solving concepts.

The competition saw enthusiastic participation, with teams pitching their projects to a panel of judges evaluating technical feasibility, innovation, and practical impact. As a major incentive, the top three teams secured direct entry into the prestigious Hackathon at Techiesta 2025. The event successfully fostered an atmosphere of entrepreneurship, technical inquiry, and collaborative innovation among students.



Fig. Intra College Ideathon Event Poster

Student's Achievement

National-Level Achievement at Zinnovation 3.0 Hackathon

Team Innervisions brought immense pride to Echelon Institute of Technology by demonstrating outstanding technical expertise at Zinnovation 3.0: Gen-Z Innovations Hackathon, hosted at Chandigarh University.

Competing against top engineering and technology institutions from across the country, the student team successfully reached the grand finals and secured the prestigious Best Hardware Award. The team was felicitated on stage by dignitaries and industry leaders for their innovative hardware prototype, receiving certificates of appreciation along with a specialized hardware development kit from ITSEMI (Precision Integration).

This achievement highlights the students' exceptional problem-solving abilities, technical ingenuity, and dedication to practical engineering excellence.



Faculty Achievements

Ms. Shallu Hassija

Assistant Professor

Participated in a 3-day Faculty Development Program on “Inculcating Universal Human Values in Technical Education” organized by the All India Council for Technical Education (AICTE) at Echelon Institute of Technology, Faridabad (4th–6th December 2025), enhancing knowledge in value-based education, professional ethics, and holistic humanistic perspectives.

Ms. Sunita

Assistant Professor

Participated in a 3-day Faculty Development Program on “Inculcating Universal Human Values in Technical Education” organized by the All India Council for Technical Education (AICTE) at Echelon Institute of Technology, Faridabad (4th–6th December 2025), enhancing knowledge in value-based education, professional ethics, and holistic humanistic perspectives.

Mr. Ranjeet Kumar Roy

Participated in a one-week Faculty Development Program on “Generative AI for All: Unlocking Creativity and Innovation” organized by DeepSkills in association with Digital Learning and Research Organization, India (14th–20th October 2025), enhancing knowledge in generative AI tools, prompt engineering, and creative AI applications for education and research.

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 - **Ranbhumi 2k26**
 - **HackIndia 2k26**
 - **Mega Job Fair**
 - **Career Workshop**
 - **Echiesta 2k26**
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Student Speaks

"Being a student at Echelon Institute of Technology has been a very good experience for me. The teachers are supportive and always ready to help. The course structure is clear and well-planned, which has helped me improve my knowledge and skills.

The college also provides opportunities to take part in seminars, workshops, and other activities. These experiences have helped me build confidence and learn practical things beyond the classroom.

I am proud to be a student of Echelon Institute of Technology and thankful for

the learning and growth I received here.

- ANSH (23-BCA-DS-010)

Latest Trends in Computer Science

Artificial Intelligence

Artificial Intelligence (AI) and Machine Learning (ML) remain at the forefront of computer science. By 2025, these technologies are expected to be integrated into nearly every sector, from healthcare to finance. Students in computer science programs should prioritize coursework that focuses on AI and ML. Institutions like the best engineering colleges for computer science are already adapting their curricula to include these vital subjects.

For those studying at the best BTech college in Noida, understanding AI and ML will be crucial for securing internships and job placements. Graduates will need to demonstrate not only theoretical knowledge but also practical experience with AI and ML technologies. Proficiency in programming languages like Python and familiarity with libraries such as TensorFlow or PyTorch will be beneficial

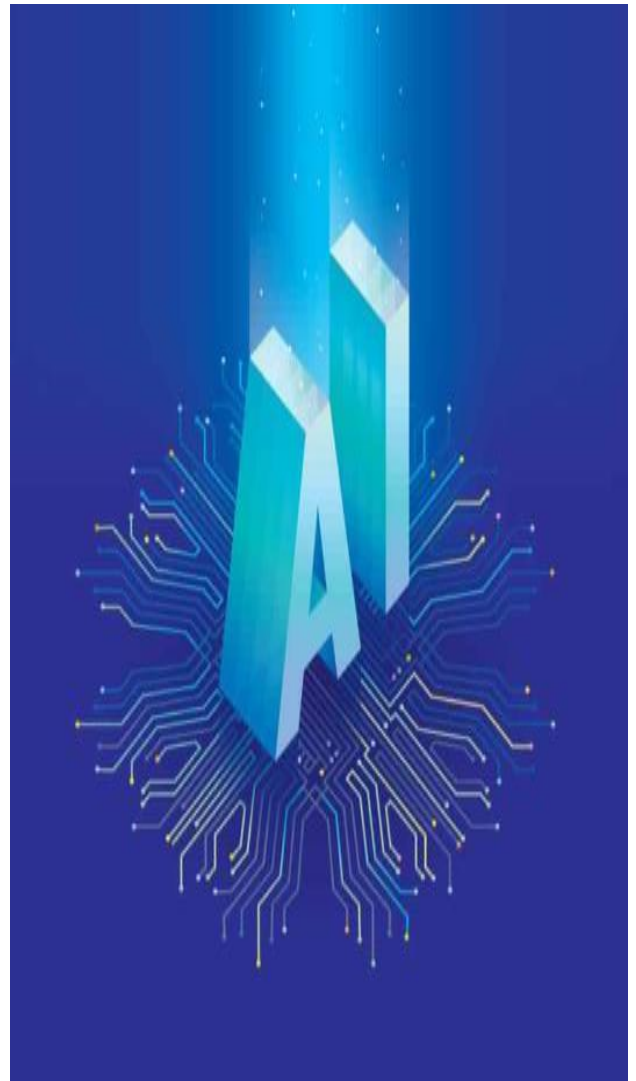


Fig1-Artificial Intelligence

Internet of Things (IoT)

The Internet of Things (IoT) is one of the fastest-growing technologies in the world today.

It refers to a network of physical devices connected to the internet. These devices collect, share, and exchange data in real time. IoT connects everyday objects like smart watches, home appliances, and vehicles.

By 2025, billions of devices are expected to be connected globally. IoT plays a major role in building smart homes and smart cities. In smart homes, devices like lights, fans, and security cameras can be controlled remotely.

IoT is widely used in healthcare for remote patient monitoring. Wearable devices track heart rate, temperature, and other health data. In agriculture, IoT helps monitor soil moisture and crop health. Farmers can improve productivity using smart irrigation systems. In industries, IoT supports automation and predictive maintenance. Sensors detect machine faults before serious damage occurs. This reduces downtime and increases efficiency.

IoT also improves supply chain and logistics management. GPS-enabled devices help track goods in real time. Data collected from IoT devices is analyzed using cloud computing. Artificial Intelligence further enhances IoT applications. Security and data privacy are important challenges in IoT systems. Strong encryption and secure networks are required to protect data. Students in computer science should learn about IoT architecture and protocols. Knowledge of sensors, microcontrollers, and networking is essential. Programming languages like Python and C are commonly used in IoT development.

IoT is creating new career opportunities in

multiple industries. Overall, IoT is transforming the way people live and work.



Activities in the department

Alumni Homecoming 2026 | A Valentine Beyond Romance

Some days don't just pass by they stay with us as beautiful memories. Alumni Homecoming 2026 at Echelon Institute of Technology was one such unforgettable

celebration, where love went far beyond romance.

This Valentine's Day, our esteemed alumni returned to their alma mater along with their spouses, filling the campus with joy, laughter and heartfelt connections. Familiar corridors, cherished classrooms and shared memories came alive once again as alumni reunited, reminisced and celebrated together.

The evening was filled with smiles, candid conversations and moments of pure nostalgia a perfect reminder that the bond between Echelon and its alumni only grows stronger with time.

More than just a reunion, the event was a celebration of relationships, lifelong friendships and the enduring connection to the campus that shaped countless journeys.

A heartfelt thank you to all our alumni for making this Valentine's Day truly special.

Once an Echelonian, Always an Echelonian.

Back to Campus, With Love.

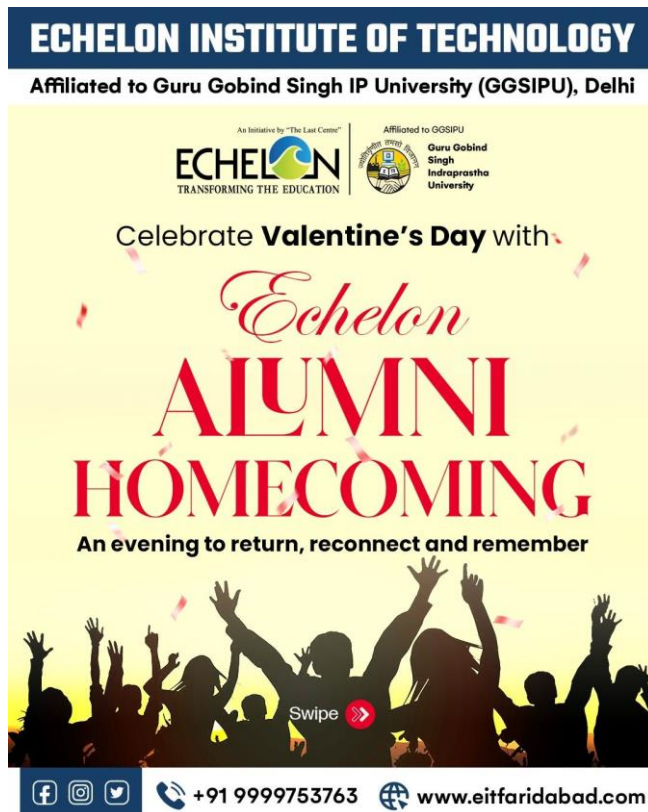


Fig. – Alumni Homecoming

Ranbhumi 2K26 – Sports Fest

Echelon Institute of Technology organized its annual Sports Fest, Ranbhumi 2K26, from February 26th to 28th, 2026. The three-day extravaganza celebrated the spirit of sports and teamwork with a thrilling cash prize of ₹1 Lakh. Students participated enthusiastically across a wide range of events. Track Events on Day 1 included 100M, 200M, and 400M individual races, as well as a 400M relay race. Field Events featured Tug of War, High Jump, and Long Jump. Team Games included Basketball, Volleyball, Kabaddi, and Football, while Individual Games included Carrom, Chess, and Table Tennis. All finals were held on Day 3. The event was held at the Echelon Institute of Technology campus, Kabulpur Patti,

Faridabad, and was a grand celebration of athletic talent and competitive spirit among students.



Fig. – Ranbhum 2K26 Sports Fest Poster

HackIndia 2026 – Web3 & AI Hackathon

Echelon Institute of Technology hosted HackIndia 2026 – India’s Biggest Web3 & AI Hackathon – on March 13th and 14th, 2026, in association with the IEEE Students Branch. The event brought together some of the brightest minds from across the country to innovate, collaborate, and build cutting-edge solutions. Participants competed across four exciting themes: Healthcare, Blockchain, Web3, and Artificial Intelligence (AI). The hackathon offered a total prize pool of over ₹60,000 in cash along with Sharp Tokens, with prizes

ranging from ₹30,000 for 1st place to Sharp Token rewards for 4th and 5th positions. The event was a remarkable platform for students to demonstrate their technical skills, creative thinking, and problem-solving abilities in next-generation technologies.



Fig. – HackIndia 2026 Event Poster

Mega Job Fair 2026

Echelon Institute of Technology, Faridabad, organized what was claimed to be the Biggest Mega Job Fair in the history of GGSIPU on March 14, 2026 (Saturday), from 9:30 AM to 4:00 PM on campus. The fair was organized in association with the Ministry of Labour & Employment, Government of India. It was open to students passing in 2026 as well as those who passed out in 2025 and 2024, across streams including BBA, BCA,

MBA, MCA, ITI, and Diploma. The event featured an impressive lineup of recruiters, including Tech Mahindra, RBL Bank, Unacademy, PlanetSpark, AICTE Internship, AAJ, Creative Upi, Spectrum, A. Paul, and many more. The Job Fair provided students a unique and valuable opportunity to interact directly with industry recruiters, attend on-the-spot interviews, and secure job offers, making it a landmark event in the institute's placement history.



Fig. – Mega Job Fair 2026 Poster

Unlock Your Career: How to Qualify Company Hiring Process

The Division of Professional Development organized an insightful seminar titled “Unlock Your Career: How to Qualify Company Hiring Process” on

March 17, 2026, from 10:35 AM to 12:15 PM in the Seminar Hall, Admin Block. The session was designed specifically for B.Tech 4th & 6th Semester Students and BCA 6th Semester Students. The resource person for the event was Mr. Santosh Kumar Mishra, Software Development Engineer at Microsoft and Founder of InterviewCafe. Mr. Mishra shared practical insights on how to crack company hiring processes, covering topics such as resume building, coding assessments, technical interviews, and soft skills. The session proved highly beneficial for students preparing for internships and campus placements, equipping them with the tools and mindset needed to succeed in today's competitive job market.

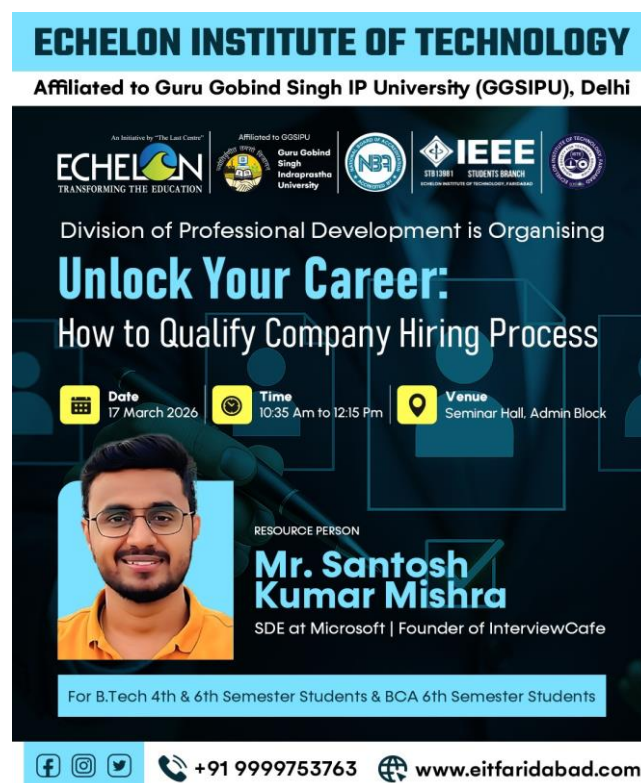


Fig. – Unlock Your Career Seminar

Echiesta 2K26 – A Grand Celebration of Talent and Culture

Echelon Institute of Technology, Faridabad, successfully hosted its much-awaited techno-cultural fest “**Echiesta 2K26**” on **27th–28th March 2026**. The event brought together a vibrant blend of technology, creativity, and cultural excellence, providing students with a dynamic platform to showcase their diverse talents.

The fest witnessed enthusiastic participation from students across various institutions, featuring a wide range of technical and cultural events, competitions, and performances. From innovative tech challenges to energetic dance and music performances, the campus was filled with excitement, creativity, and team spirit.

A major highlight of the event was the live performance by renowned Indian playback singer **Mohit Chauhan**, who mesmerized the audience with his soulful voice on **28th March 2026**, creating an unforgettable experience for all attendees. Echiesta 2K26 truly reflected the spirit of

the institute with its theme, “*An Institute of the Students, For the Students, By the Students.*” The event not only encouraged talent and innovation but also fostered collaboration, confidence, and cultural harmony among students.



Fig. – Echiesta 2K26

Faculty Achievements

Ms. Shallu Hassija
Assistant Professor

Participated in multiple one-week Faculty Development Programs organized by AICTE Training and Learning (ATAL) Academy, including “Emerging Trends in

AI-Powered Cybersecurity” at Banarsidas Chandiwalla Institute of Information Technology (5th–10th January 2026), “Artificial Intelligence and IT Applications” at Gyanmanjari Institute of Technology (19th–24th January 2026), and “Sustainable Energy Technologies for Climate Mitigation” at Echelon Institute of Technology (9th–14th February 2026), enhancing knowledge in AI, cybersecurity, and sustainable technologies.

Ms. Sunita

Assistant Professor

Participated in Faculty Development Programs including “Sustainable Energy Technologies for Climate Mitigation” organized by AICTE Training and Learning (ATAL) Academy at Echelon Institute of Technology (9th–14th February 2026) and a 3-day FDP on “Classroom Communication for Teaching & Mentoring” conducted by ICT Academy at Echelon Institute of Technology, Faridabad (5th–7th January 2026).

Mr. Saransh Prakash

Assistant Professor

Participated in a one-week Faculty Development Program on “Sustainable Energy Technologies for Climate Mitigation” organized by AICTE Training and Learning (ATAL) Academy at Echelon Institute of Technology (9th–14th February 2026).

Acknowledgement

For the publication of “THE TECHNOPEdia” I would like to thank the members of the faculty of the DCA department for their valuable contribution.

Bhawna

(Trainer, DCA Department)

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TECHNOPEDIA

A Quarterly Newsletter

Department of Computer Application, Echelon Institute of Technology, Faridabad

VOLUME-XIX ISSUE-II

April-June-2026

This is the first issue of “THE TECHNOPEDIA” of the academic year 2025-2026. Here, I would like to encourage all the students to participate in co-curricular activities.

Ms. Shallu Hassija

(Assistant Professor, DCA Department)

Highlights

- ❖ **Message from the Editor**
- ❖ **Vision and Mission**
- ❖ **Student Speaks**
- ❖ **Latest Trends in Computer Science**
- ❖ **Activities in the department**
 - **Aarohan Award Ceremony**
 - **International Yoga Day**
 - **Campus placement drive**
- ❖ **Faculty Achievements**

Message from the Editor

As we step into another vibrant season of learning and innovation, our department continues to serve as a hub where curiosity meets technical excellence. Technology evolves at an unprecedented pace, but it is our collective drive, creative inquiry, and passion for problem-solving that truly shape the future. Our vision remains steadfast: to inspire, inform, and empower every reader to push boundaries and lead with integrity in an ever-changing digital landscape.

Institute Vision and Mission

Vision:

The institute is committed to fulfilling its vision of "Technical and Management leaders engaged in the evolution of life, being at the frontiers of the continuous technological and administrative breakthroughs, inspired by ongoing exploration of self, society, and nature through self-

reflective consciousness by building a culture of inspiration, exploration and growth."

Mission:

M-10 Having a culture of inspiration, exploration and invention through effective, experiential teaching-learning giving rise to ever evolving knowledge and wisdom.

M-11 To have self-inspired students ever engaged in continually working upon and sharpening and deepening computational, creative, innovative and leadership consciousness.

M-12 Having students established in self-reflective consciousness, committed to personal, social & human integrity and engaged in deep inquiry and conversation, giving rise to shared, inter-subjective human values and consciousness.

Department Vision and Mission

Vision:

"To develop competent computer professionals who solve real-world problems through continuous learning and adaptive to rapid changes in

computer science and engineering with ethical, social, and managerial capabilities."

Mission:

M-10 To cultivate a culture of innovation, exploration, and experiential learning in computer applications, fostering the growth of knowledge, skills, and wisdom.

M-11 To inspire students to continuously enhance their computational, creative, and leadership abilities, driving them toward excellence and innovation.

M-12 To nurture self-reflective professionals who uphold personal and societal integrity, engage in meaningful inquiry, and contribute to shared human values through technology and collaboration.

Student Speaks

"From the moment I set foot on Echelon's campus, I knew I was in a place that nurtured ambition and excellence. The state-of-the-art infrastructure, with its modern classrooms and smart technology, created an environment where learning felt dynamic and engaging. The library, a haven of wisdom, offered not just books

but a quiet space for exploration and discovery. Beyond academics, what truly set Echelon apart was its vibrant community. Professors were more than teachers—they were mentors who invested in our growth. The campus buzzed with opportunities, from insightful seminars to thrilling competitions and diverse student clubs, each experience adding to a journey of self-discovery and lifelong friendships. Echelon was more than just my college—it was the foundation of my future."

— **Ansh** (23-BCA-DS-010)

"Joining Echelon Institute of Technology has been an incredibly enriching experience. The mentorship from our professors goes beyond traditional lectures—they actively encourage us to take on real-world projects, participate in hackathons, and publish research. The blend of rigorous academics, state-of-the-art lab facilities, and career-oriented training programs has given me both the technical expertise and self-confidence needed to excel in the IT industry. Echelon truly provides an environment where every student's potential is recognized and nurtured."

— **Ritika**(24-BCA-DS-048)

Latest Trends in Computer Science

Physical AI & Autonomous

Robotics

Physical AI bridges advanced cognitive models with real-world robotics and hardware. By processing spatial data and sensor feeds in real time, these systems enable smart manufacturing, autonomous logistics, and dynamic robotic operations inside unstructured human environments.

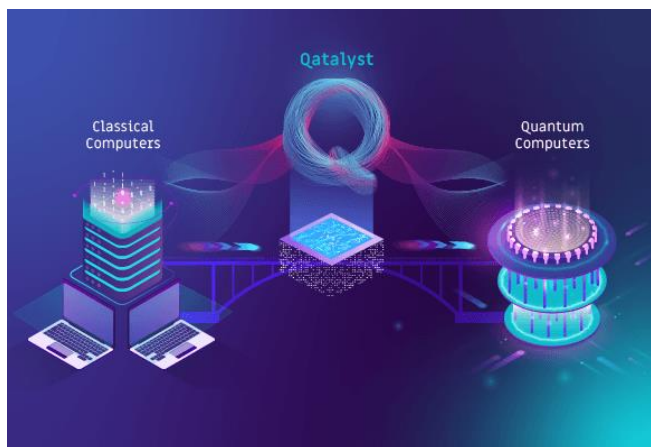


Fig1- Physical AI at the Edge: The Future of Robotics

Quantum-Classical Computing & Hybrid Post-Quantum Cryptography

Practical quantum applications are expanding by integrating Quantum Processing Units (QPUs) with classical High-Performance Computing (HPC) environments. These hybrid setups accelerate complex optimization and molecular simulations, while institutions adopt lattice-based Post-

Quantum Cryptography (PQC) to protect critical data infrastructures.



Activities in the department

Aarohan (आरोहण) Award Ceremony

Echelon Institute of Technology, Faridabad (affiliated with Guru Gobind Singh Indraprastha University), hosted the **Aarohan (आरोहण) Award Ceremony** under the inspiring theme "*नई ऊँचाइयों की ओर*" (*Towards New Horizons*). Held on **May 22nd and 23rd, 2026, from 01:00 PM to 04:00 PM** at the institute campus, the ceremony recognized high-achieving students who secured **more than 70% marks** in their 10+2 Board Exams, celebrating their academic excellence and encouraging them as they step toward new future milestones.



Fig. – Aarohan (आरोहण) Award Ceremony

International Yoga Day Celebration

Echelon Institute of Technology, Faridabad, organized an event to celebrate **International Yoga Day** under the theme "*Yoga for One Earth, One Health.*" Held in collaboration with the Institution's Innovation Council (IIC), the IEEE Student Branch (STB11031), and IEEE Women in Engineering (Wie), the session took place on **June 23, 2026, at 10:00 AM in the Seminar Hall**. Guided by the core message "*Align Your Body, Calm*

Your Mind, Elevate Your Soul," the event encouraged physical well-being, mindfulness, and healthy living across the campus community

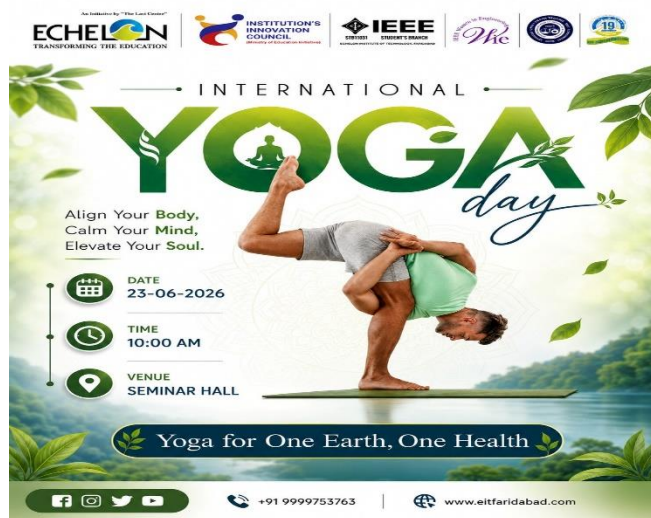


Fig. – International Yoga Day



Fig. – Campus Placement Drive with Elcom International Pvt. Ltd.

Campus Placement Drive with Elcom International Pvt. Ltd.

Echelon Institute of Technology (affiliated with GGSIPU) organized a campus placement drive in collaboration with **Elcom International Pvt. Ltd.** for the profile of **Management Trainee – Sales & Business Development**. Offering career opportunities across **Pan India** locations, the drive provided graduating students with an excellent corporate platform, setting the final application deadline for **June 24, 2026**.

Faculty Achievements

Ms. Shallu Hassija
Assistant Professor

Ms. Shallu Hassija, Assistant Professor at Echelon Institute of Technology, successfully completed a 5-day offline Faculty Development Program on "Data Analytics using Python," organized by

the ICT Academy from June 22, 2026, to June 26, 2026. The program provided hands-on training in data processing, exploratory analysis, and visualization techniques using Python to enhance teaching methodologies and research capabilities in data science.

Ms. Sunita
Assistant Professor

Ms. Sunita, Assistant Professor at Echelon Institute of Technology, successfully completed a 5-day online Faculty Development Program on "Microsoft Power BI Data Analyst Associate," organized by the ICT Academy from May 4, 2026, to May 8, 2026. The training focused on data modeling, business intelligence visualization, interactive dashboard creation, and analytical reporting tools.

Mr. Ranjeet Kumar Roy
Assistant Professor

Mr. Ranjeet Kumar Roy, Assistant Professor at Echelon Institute of Technology, participated in an Online

*Faculty Development Program on "AI Cyber Security and Cyber Forensics" hosted by EASA College of Engineering and Technology, Coimbatore, on **June 18, 2026**. The program focused on the integration of artificial intelligence in threat detection, automated network security, and advanced digital forensic methodologies.*

*Mr. Ranjeet Kumar Roy, Assistant Professor at Echelon Institute of Technology, successfully completed a 5-day offline Faculty Development Program on "**Data Analytics using Python**," organized by the ICT Academy from **June 22, 2026, to June 26, 2026**. The training focused on practical data manipulation, statistical modeling, exploratory data analysis, and visualization techniques using modern Python libraries for academic and research applications.*

Mr. Rahul Sharma
Assistant Professor

Mr. Rahul Sharma, Assistant Professor

at Echelon Institute of Technology, successfully completed a 5-day offline Faculty Development Program on "**Data Analytics using Python**," organized by the **ICT Academy** from **June 23, 2026, to June 27, 2026**. The program provided hands-on experience in data manipulation, predictive analytics, and visualization using Python libraries to support advanced academic instruction and research.

- Ritika (24-BCA-DS-48)

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Echelon Institute of Technology,
Faridabad

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Acknowledgement

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Ms. Shallu Hassija

(Assistant Professor, DCA Department)

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