IARE

INSTITUTE OF AERONAUTICAL ENGINEERING

# SUSTAINABLE DEVELOPMENT GOALS


# ANNUAL REPORT 2025-26

*"Commitment Today, Sustainable Tomorrow"*


EMPOWERING PEOPLE | PROTECTING PLANET | ENRICHING SOCIETY

# TABLE OF CONTENTS

# 1. EXECUTIVE SUMMARY

The Institute of Aeronautical Engineering (IARE), Dundigal, Hyderabad, an autonomous institution affiliated with sustainable and inclusive higher education practices, presents this SDG Report for the academic year 2025-26. This report consolidates institutional data, initiatives, and outcomes mapped against the United Nations' 17 Sustainable Development Goals (SDGs), reflecting the institute's guiding philosophy: 'Commitment Today, Sustainable Tomorrow.'

With a total student strength of 5,689 (5,635 undergraduate and 54 postgraduate), a faculty base of 330 members, and a female student representation of 36.22%, IARE demonstrates a diverse and inclusive academic community. The institute's economically backward student support programmes benefited 508 students, while government fee reimbursement extended to 3,085 students, reinforcing the goal of equitable access to education.

On the environmental front, IARE has installed 160 kWp of renewable energy capacity, generating 1,68,418 kWh of clean electricity against a total campus consumption of 6,95,696 kWh. Wastewater treatment stands at 80%, complemented by rainwater harvesting infrastructure connected to over 1.16 lakh square feet of campus area. The institute has also planted 10,080 saplings, maintaining 5 acres of green area out of its total 10-acre campus.

In research and innovation, IARE recorded 221 published patents and 21 granted patents during 2024, alongside sponsored research funding of ₹75 lakhs and consultancy revenue of ₹4.89 lakhs during 2024-25. These figures reflect a maturing research ecosystem supported by strong institutional infrastructure for innovation and incubation.

This report is organised into detailed sections covering each of the 17 SDGs, supported by quantitative data tables, narrative analysis, and consolidated institutional highlights, providing a comprehensive account of IARE's sustainability journey during the 2025-26 academic year.

# 2. INTRODUCTION TO SUSTAINABLE DEVELOPMENT GOALS

The Sustainable Development Goals (SDGs) are a universal call to action adopted by all United Nations Member States in 2015, comprising 17 interconnected goals designed to end poverty, protect the planet, and ensure peace and prosperity for all people by 2030. Higher education institutions play a pivotal role in achieving these goals through research, teaching, campus operations, and community engagement.

The 17 goals span a wide spectrum of human and environmental priorities: poverty eradication, food security, health, education, gender equality, clean water, affordable energy, decent work, industry and innovation, reduced inequality, sustainable cities, responsible consumption, climate action, life below water, life on land, peace and justice, and global partnerships.

For academic institutions such as IARE, aligning institutional strategy with the SDGs provides a structured framework to measure social, environmental, and economic impact, while also embedding sustainability values into the student and faculty experience.

# 3. SDG FRAMEWORK AND METHODOLOGY

SDG initiatives 2025-26 is compiled through a structured data collection process spanning academic departments, administrative offices, facilities management, and research cells. Each of the 17 SDGs is mapped to specific institutional indicators that are tracked on an annual basis.

Data sources include admission records, financial aid disbursement registers, energy and water utility logs, waste management records, research and patent filings, and community engagement reports submitted by student clubs and NGO partnership cells.

The following sections present a goal-by-goal account of IARE's performance, supported by quantitative indicators and a narrative interpretation of institutional impact for each SDG.

### SDG Framework — Sustainability Pillars

In keeping with the institute's own sustainability classification, the 17 SDGs are grouped under three pillars — Social, Environmental and Economic sustainability. This grouping keeps the framework simple to communicate while still mapping every goal to a distinct owner within the institute.

| Pillar | Goals Covered | Description |
|---|---|---|
| **Social Sustainability** | SDG 1, 2, 3, 4, 5, 10, 11, 16 | Social sustainability aims to create inclusive societies, reduce inequality, and ensure long-term well-being for all people while preserving social cohesion and justice. |
| **Environmental Sustainability** | SDG 6, 7, 12, 13, 14, 15 | Environmental sustainability is the ability to preserve and protect the natural environment over time through appropriate practices and policies, meeting present needs without compromising the availability of resources in the future. |
| **Economic Sustainability** | SDG 8, 9, 17 | Economic sustainability is the approach whereby economic activities are conducted in such a way as to preserve and promote long-term economic well-being. In practice, it aims to create a balance between economic growth, resource efficiency, social equity and financial stability. |

### Goal-wise Mapping to Institutional Initiatives

The table below maps each SDG to its pillar and to illustrative initiatives already underway or planned at IARE. This mapping is the core reference document that departments and cells use to tag their activities for SDG reporting.

| SDG | Goal | Pillar | Illustrative Institutional Initiatives |
|---|---|---|---|
| **SDG 1** | No Poverty | Social | Need-based fee waivers & financial-aid schemes, scholarships for economically weaker students, community poverty-alleviation outreach |
| **SDG 2** | Zero Hunger | Social | Food-donation and community-kitchen drives, nutrition-awareness camps, support for local farming/food-security outreach |
| **SDG 3** | Good Health and Well-Being | Social | Health centre, wellness & counselling cell, blood donation drives, yoga/fitness programmes, campus medical camps |
| **SDG 4** | Quality Education | Social | NIRF, NBA/NAAC-accredited programmes, ISO 21001: 2014, outcome-based education, MOOCs, faculty development, digital classrooms, skill-development cells |
| **SDG 5** | Gender Equality | Social | Women empowerment cell, ICC (Internal Complaints Committee), scholarships for girl students, gender-sensitisation workshops |
| **SDG 6** | Clean Water & Sanitation | Environmental | Water treatment/RO plants, rainwater harvesting, sewage treatment plant, water-audit and conservation drives |
| **SDG 7** | Affordable & Clean Energy | Environmental | Rooftop solar installations, LED retrofitting, energy and green audits, green-building practices |
| **SDG 8** | Decent Work & Economic Growth | Economic | Training & placement cell, entrepreneurship development cell, industry internships, incubation support |
| **SDG 9** | Industry, Innovation & Infrastructure | Economic | Centres of excellence, R&D labs, IPR cell, industry-academia MoUs, innovation incubation centre, STSP |
| **SDG 10** | Reduced Inequalities | Social | Inclusivity and equal-opportunity cell, need-based scholarships, support for differently-abled students |
| **SDG 11** | Sustainable Cities and Communities | Social | NSS/NCC outreach, community development projects, campus accessibility initiatives |
| **SDG 12** | Responsible Consumption and Production | Environmental | Waste segregation & recycling, e-waste management, paperless administration initiatives |
| **SDG 13** | Climate Action | Environmental | Carbon-footprint studies, tree plantation drives, climate-awareness workshops, green campus audits |
| **SDG 14** | Life Below Water | Environmental | Avoidance of single-use plastics and related student projects |

| SDG | Goal | Pillar | Illustrative Institutional Initiatives |
|---|---|---|---|
| **SDG 15** | Life on Land | Environmental | Campus biodiversity/green cover, herbal & botanical gardens, afforestation drives |
| **SDG 16** | Peace, Justice and Strong Institutions | Social | Statutory bodies, grievance-redressal mechanisms, transparent governance, anti-ragging committee |
| **SDG 17** | Partnerships for the Goals | Economic | MoUs with industry/academia/government, alumni engagement, international collaborations |

## Methodology

The methodology follows a Plan–Do–Check–Act (PDCA) cycle, ensuring that SDG implementation is not a one-time reporting exercise but an ongoing institutional process.

| Stage | Description | Evidence / Output |
|---|---|---|
| **Planning** | Institutional SDG Cell / Sustainability Committee sets annual targets aligned to each pillar | Approved annual SDG action plan |
| **Implementation** | Departments, cells and committees execute mapped activities and events | Activity reports, MoUs, photographs, attendance records |
| **Data Collection** | Nodal officers submit quarterly data through a standard reporting template | Quarterly data-collection sheets |
| **Monitoring** | SDG Cell reviews progress against indicators (e.g., energy saved, water recycled, placements, scholarships disbursed) | Dashboard / MIS records |
| **Evaluation** | Internal Quality Assurance Cell (IQAC) audits outcomes against targets | IQAC audit reports |
| **Reporting & Disclosure** | Consolidated Annual SDG Report published on institute website and submitted for NIRF/NAAC | Annual SDG Report, NIRF/NAAC submissions |
| **Review & Improvement** | Governing body reviews gaps and revises the action plan (Plan-Do-Check-Act cycle) | Minutes of review meeting, revised action plan |

## 4. SDG-WISE PERFORMANCE REPORT (GOALS 1–17)

This section presents each of the 17 Sustainable Development Goals individually, along with IARE's corresponding institutional data and a brief narrative on the initiatives undertaken during the academic year 2025-26.

### 1 NO POVERTY

| Indicator | Value |
|---|---|
| Government fee reimbursement | 3,085 students |
| Institution support | 471 students |
| Economically backward students supported | 508 |
| Skill development & employment initiatives | Implemented |

IARE continues its commitment to alleviating financial barriers to education by extending government fee reimbursement and institutional financial support to a significant proportion of its student community. The institute's targeted support for economically backward students, combined with skill development and employment-linked initiatives, reflects a sustained effort to reduce poverty-driven dropout and to enable equitable access to higher education.

## 2 ZERO HUNGER

| Indicator | Value |
|---|---|
| Food waste processed | 36 tons/year |
| Composting & waste segregation system | Yes |
| Sustainable food & waste reduction initiatives | Implemented |

The institute has instituted robust food waste management practices, including a structured composting and waste segregation system. With 36 tons of food waste processed annually, IARE demonstrates measurable progress toward minimizing food wastage and encouraging sustainable food practices across its campus community.

# 3 GOOD HEALTH AND WELL-BEING

| Indicator | Value |
|---|---|
| Yoga participation (twice/week) | 533 students |
| Yoga participation (weekly) | 48 students |
| Pedestrian area | 2 acres |
| Sports area | 4.5 acres |
| Wellness initiatives | Implemented |

Good health and well-being are promoted at IARE through structured wellness programmes, with regular yoga sessions attracting substantial student participation. Dedicated pedestrian and sports infrastructure spanning several acres further supports an active and healthy campus lifestyle for students, faculty, and staff.

## Activities Organised:

### Yoga Day celebration

The main objectives of International Yoga Day, observed annually on June 21st, are to raise global awareness of the benefits of yoga, promote health and well-being, and inspire individuals to incorporate yoga into their daily lives.

IARE organized International Yoga Day celebrations. All the staff and students of IARE actively participated in the event. The event commenced with a comprehensive introduction to Yoga Day by Dr. V. Anitha Rani, and Yoga Therapy Trainer Mr. B. Jagadeesh was welcomed and introduced to the audience. The program kicked off with warm-up exercises, during which all students actively participated. He guided the participants through various sitting and standing asanas, with simultaneous explanations of their significance. The instructor emphasized the importance of incorporating yoga into daily life and maintaining harmony between the body and mind. The session lasted for over an hour, witnessing active participation and engagement from all attendees.

**A seminar on Personal Health and Wellness: Habits for a Better Life**

The pursuit of personal health and wellness involves adopting mindful, consistent habits to achieve a more balanced and fulfilling life. It goes beyond the mere absence of disease, encompassing physical, mental, emotional, social, and other dimensions of well-being.

IARE organized a seminar on Personal Health and Wellness: Habits for a Better Life. The students of IARE actively participated in the event. The event commenced with a comprehensive introduction to Personal Health and Wellness: Habits for a Better Life by Dr. V. Anitha Rani, and Yoga Instructor Mr. B. Jagadeesh was welcomed and introduced to the audience. The instructor emphasized the importance of incorporating good habits into daily life and maintaining a healthy lifestyle for a happy and fulfilling life. It encompasses a balance of physical activity, nutritious eating, mental well-being, and positive habits. This healthy lifestyle provides practical tips and insights into achieving a balanced life by focusing on key elements of health and wellness. By understanding the importance of healthy choices and implementing them in daily routines, individuals can enhance their quality of life, boost productivity, and prevent chronic illnesses.

**National Cancer Awareness**

National Cancer Awareness emphasizes the crucial role of personalized, patient-centered care in the fight against cancer. It highlights the importance of adapting cancer treatments to cater to the unique needs of each individual.


IARE organized a seminar on Cancer Awareness. The students of IARE actively participated in the event. The event commenced with a comprehensive introduction about cancer awareness by Dr. V. Anitha Rani. “Early Detection Saves Lives” remained the central message. Avoiding tobacco, alcohol moderation, a healthy diet, and regular exercise can significantly reduce cancer risk. Vaccination (such as HPV) plays an important role in preventing certain cancers. Technological advancements are making diagnosis and treatment more accessible. Psychological support is essential for patients and families.

**World AIDS Day**

World AIDS Day aims to create awareness about HIV/AIDS prevention, transmission and treatment, while promoting health education and responsible practices. It also seeks to reduce stigma and discrimination and encourage compassion, support and inclusion for people living with HIV/AIDS.

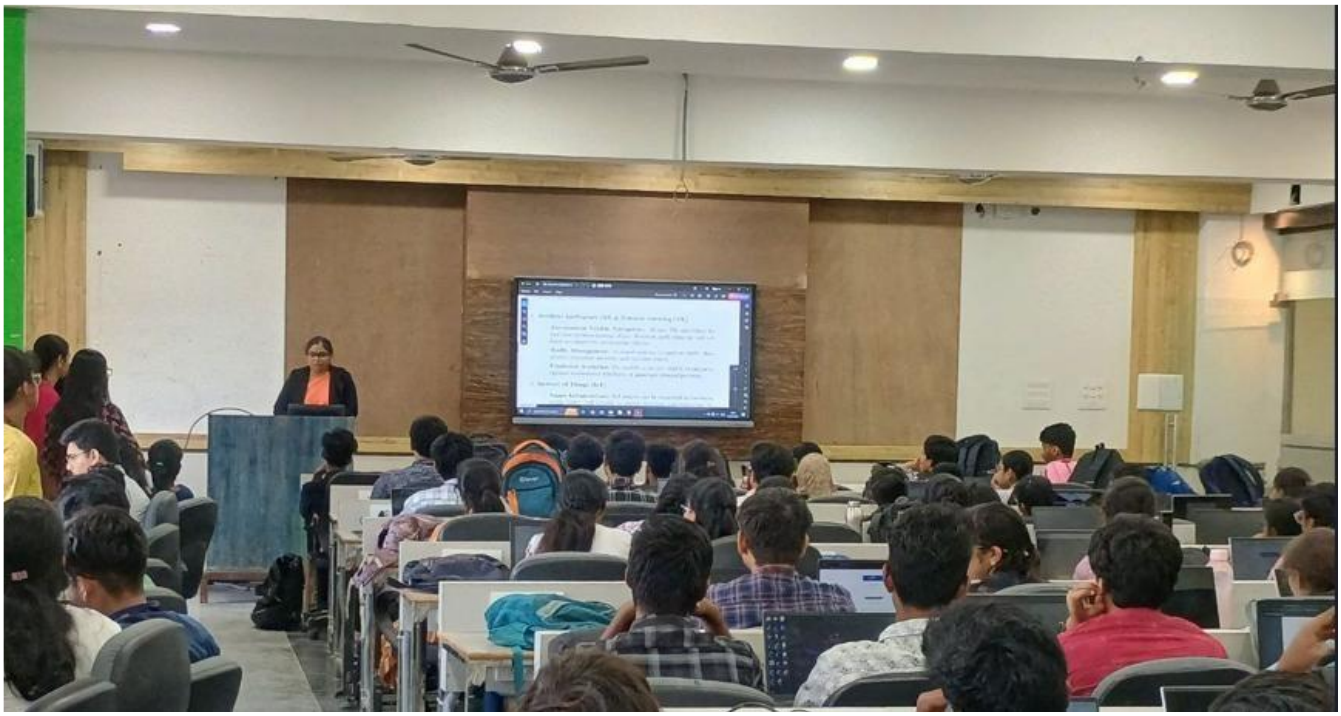

World AIDS Day was observed on 1st December at the Institute of Aeronautical Engineering with the aim of creating awareness about AIDS, promoting prevention, and showing support for people living with HIV. The program was organized by the NSS Unit and Student Activities Club and witnessed active participation from students and faculty members. The program began with an inaugural address by the NSS President, who highlighted the importance of awareness, early diagnosis, and eliminating stigma associated with HIV/AIDS. Students participated in a speech competition, which effectively conveyed messages about safe practices, myths and facts related to HIV/AIDS, and the importance of compassion towards affected individuals. The program concluded with a vote of thanks by the Vice President, acknowledging the efforts of organizers and participants. The celebration was informative and impactful, helping students understand the significance of World AIDS Day and their role in building an informed and stigma-free society.

**Hackathon - Code for Care: AI and Tech for Preventive Healthcare**

Code for Care focused on using AI and emerging technologies to strengthen preventive healthcare. Students explored solutions for early diagnosis, health monitoring, risk prediction and disease prevention. The hackathon promoted AI, machine learning, IoT, analytics and digital applications in healthcare. Participants developed affordable and scalable solutions for rural, remote and underserved populations. The programme encouraged interdisciplinary collaboration among engineering, healthcare and design domains. Ethical AI, privacy, consent, data protection and bias-aware design were highlighted. Students also developed entrepreneurial thinking by exploring health-tech startups and social innovations.

**Hackathon Hack4Health: Digital Solutions for Good Health & Well-Being**

Hack4Health provided a platform for developing digital solutions to real-world healthcare and well-being challenges. Students explored AI, IoT, cloud computing, mobile technologies and data analytics. The programme focused on preventive healthcare, mental wellness, early detection and improved health-service delivery. Participants created practical and scalable solutions for implementation in healthcare settings. Special attention was given to accessibility for rural, remote and marginalized populations. Interdisciplinary collaboration combined engineering, healthcare, design and business perspectives. The event promoted entrepreneurship by encouraging teams to develop potential health-tech startups.



# 4 QUALITY EDUCATION

| Indicator | Value |
|---|---|
| Total students (UG) | 5,635 |
| Total students (PG) | 54 |
| UG intake (2024-25) | 1,110 |
| SC/ST/OBC students | 4,118 |
| Ph.D. full-time scholars | 1 |

As an autonomous institution, IARE serves a large and diverse student population across undergraduate and postgraduate programmes. The institute's substantial intake for the 2024-25 academic year, coupled with a high proportion of SC/ST/OBC students, underscores its role in expanding access to quality technical education.

## Activities Organised:

### Research Talk on SDG's Implementation in Higher Education Institutions

The Research Talk on SDG's Implementation in Higher Education Institutions was successfully conducted on 10 January 2026 as part of the IIC 8.0 initiatives. The session was delivered by Dr. Nagendra K, Founder & Director of the Research Heights Foundation, who shared his extensive experience in sustainability research and institutional development. Dr. Nagendra K began the session by providing an overview of the United Nations Sustainable Development Goals (SDGs) and their global relevance. He emphasized the critical role of Higher Education Institutions in aligning academic activities with SDGs through curriculum integration, interdisciplinary research, innovation projects, startups, and institutional policies. The speaker elaborated on practical frameworks for SDG implementation in HEIs, including mapping SDGs to academic programs, promoting sustainability-driven research, fostering innovation and entrepreneurship aligned with SDGs, and encouraging student-led initiatives. Case studies and best practices from Indian and global institutions were discussed to demonstrate effective SDG adoption. The session also highlighted opportunities for faculty and students to contribute to SDG-focused research, funding proposals, innovation challenges, and community outreach programs. The interactive discussion encouraged participants to reflect on how their institution can contribute meaningfully to sustainable development.


**Motivational Expert Sessions by Successful Innovators & Entrepreneurs**

The “Motivational Expert Sessions by Successful Innovators & Entrepreneurs” was conducted on 15 September 2025, featuring Mr. Manish Vuppu, Founder of Agrodroid, as the expert speaker. The session aimed to inspire students to develop an entrepreneurial mindset and pursue innovation-driven solutions to real-world problems. Mr. Vuppu shared valuable insights from his entrepreneurial journey, highlighting the importance of identifying problems, developing innovative ideas, embracing challenges, taking calculated risks, and persevering towards successful implementation. He also discussed the role of technology and innovation in transforming the agricultural sector and encouraged students to explore entrepreneurship opportunities. The session motivated participants to think creatively, develop practical solutions, and actively engage in innovation and startup activities.

## Innovation & Entrepreneurship Outreach in Schools/Community

The “Innovation & Entrepreneurship Outreach in Schools/Community” programme was conducted at ZPHS, Siddipet, on 12 June 2026 to create awareness among school students about innovation, entrepreneurship, creativity, and problem-solving. The session introduced students to the importance of identifying real-world problems and developing innovative solutions using their creativity and available resources. Participants were encouraged to think beyond conventional approaches, explore entrepreneurial opportunities, and develop an interest in science, technology, and innovation. The programme provided an interactive platform for students to understand the fundamentals of innovation and entrepreneurship and motivated them to become future innovators and problem-solvers.

## Innovation & Entrepreneurship Outreach – Schools/Community

The “Innovation & Entrepreneurship Outreach – Schools/Community” programme was conducted at ZPHS School, Ameenpur, Hyderabad, on 10 July 2026 to create awareness among students about innovation and entrepreneurship. The session focused on the concept of innovation, the importance of creative thinking, identifying real-world problems, and developing innovative solutions. Students actively participated in discussions on how simple ideas can be transformed into useful products or services that address societal needs. The programme encouraged students to observe problems around them, think creatively, explore new ideas, and develop an entrepreneurial mindset. The session successfully motivated students to take an interest in innovation and inspired them to become future innovators and entrepreneurs.

**Industry Focused Software Engineering Skills, Standards and Testing**

The “Industry Focused Software Engineering Skills, Standards and Testing” programme was conducted on 02 June 2025 to enhance students’ understanding of industry-oriented software development practices. The session focused on software engineering principles, development standards, coding practices, software quality assurance, testing methodologies, debugging, and industry expectations. Participants gained practical insights into the software development lifecycle and the importance of quality and reliability in software products. The programme helped bridge the gap between academic learning and industry requirements while strengthening participants’ technical and professional skills.

**Building LLM Applications with Prompt Engineering**

The “Building LLM Applications with Prompt Engineering” programme was conducted on 18 July 2025 to introduce participants to the fundamentals and practical applications of Large Language Models (LLMs). The session focused on prompt design, prompt optimization, context management, task-specific prompting, and developing AI-powered applications**.** Participants learned how effective prompts can improve the accuracy, relevance, and usefulness of LLM-generated outputs. The programme encouraged participants to explore generative AI technologies and apply prompt engineering techniques to real-world academic, technical, and entrepreneurial applications.

## The Future of Autonomous Agents: From AutoGPT to Robotics

The one-day training programme on “The Future of Autonomous Agents: From AutoGPT to Robotics” focused on emerging developments in autonomous AI systems and their applications in intelligent automation and robotics. Participants were introduced to AI agents, autonomous decision-making, task automation, agentic workflows, human–AI interaction, and robotics applications**.** The programme highlighted how autonomous agents can perform complex tasks with minimal human intervention and discussed their potential impact across various sectors. The training encouraged participants to explore emerging AI technologies and understand future opportunities in intelligent systems and robotics.

## Workshop on GitHub

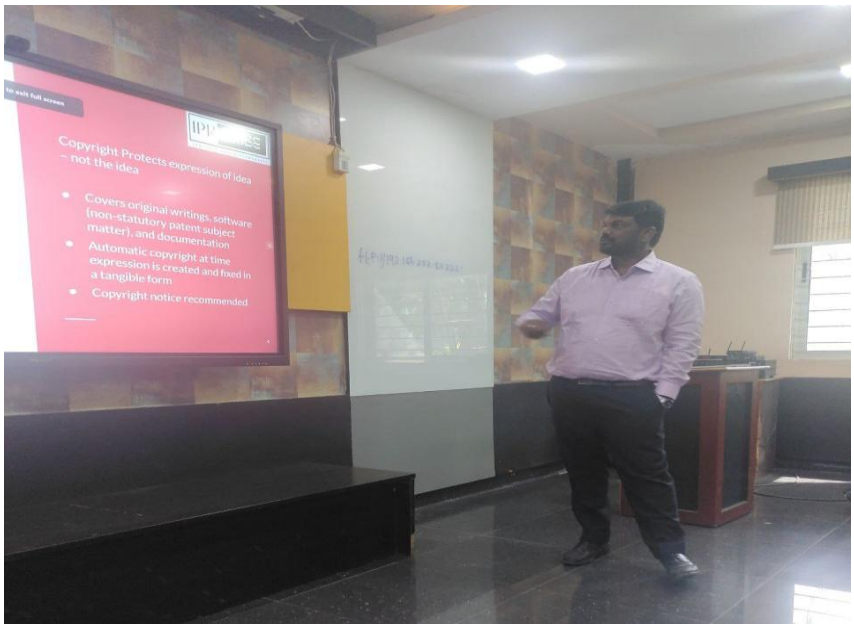
The “Workshop on GitHub” was conducted on 10 September 2025 to familiarize students with collaborative software development and version-control practices. The workshop covered repository creation, Git commands, branching, committing, merging, pull requests, collaboration, and project management using GitHub**.** Participants gained practical experience in managing source code, collaborating with team members, and maintaining software projects systematically. The workshop strengthened participants’ technical and collaborative skills and enhanced their readiness for academic projects, open-source contributions, and industry-oriented software development.

**One Week ATAL–EduSkills FDP on Ethical Hacking**

The “One Week ATAL–EduSkills FDP on Ethical Hacking” was conducted from 19 January 2026 to enhance participants’ knowledge of cybersecurity and ethical hacking practices. The programme covered key areas such as cybersecurity fundamentals, vulnerability assessment, threat identification, penetration testing, network security, and ethical security practices**.** Participants gained awareness of common cyber threats and techniques used to identify and address security vulnerabilities in a responsible manner. The FDP strengthened participants’ cybersecurity knowledge and encouraged the adoption of secure and ethical practices in digital environments.

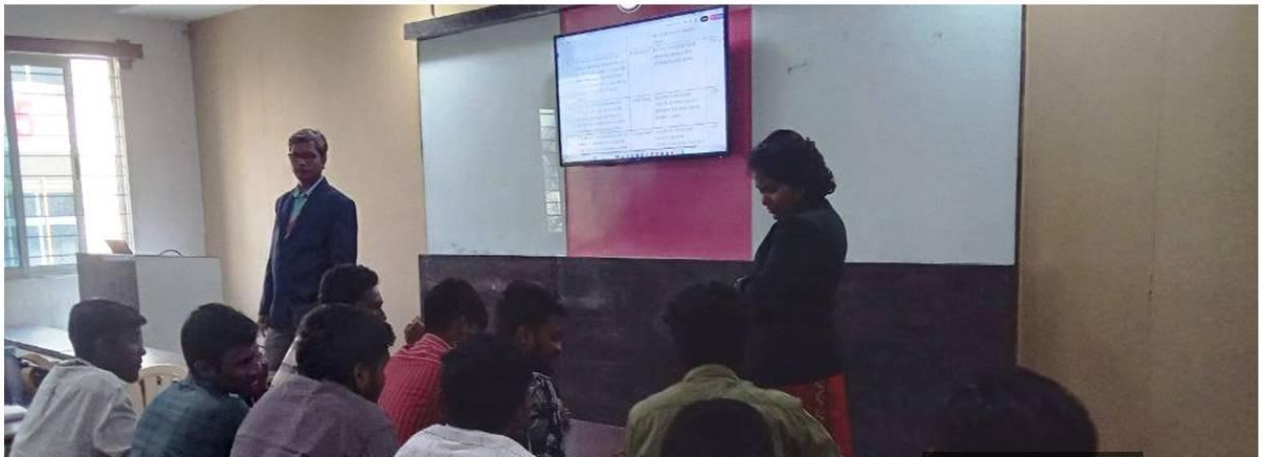
## Future Scope: Exploring Emerging Technologies

The “Future Scope: Exploring Emerging Technologies” programme was conducted on 25 February 2026 to provide participants with an overview of emerging technologies and their future applications. The session explored areas such as **A**rtificial Intelligence, Machine Learning, Robotics, Internet of Things, Industry 4.0, automation, and other transformative technologies**.** Participants gained insights into emerging career opportunities, technological trends, and the potential impact of these technologies on industry and society. The programme encouraged students to continuously upgrade their skills, explore new technological domains, and prepare themselves for future academic and professional opportunities.



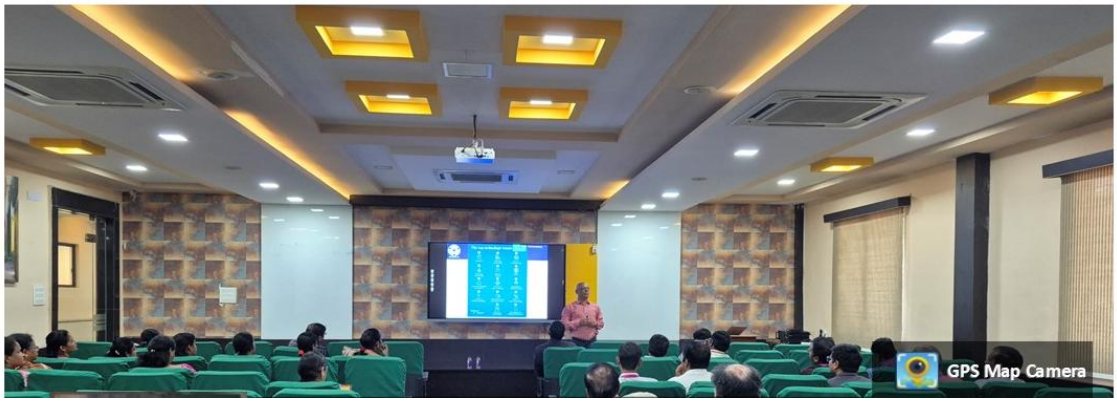

## Problem-Solving Strategies for Engineering Professionals

The programme developed systematic problem-solving capabilities needed by engineering professionals. Students learned to define real-world engineering problems by considering context, constraints and stakeholder requirements. The session emphasized data collection, experimentation, analytical evaluation and evidence-based decision-making. Participants were encouraged to apply scientific principles, mathematics and engineering fundamentals to complex problems. The activity strengthened critical thinking and the ability to formulate practical and technically sound solutions. Students also gained skills in interpreting technical information and evaluating alternative approaches. These competencies improve graduate readiness for professional practice and innovation-oriented engineering work.



**Outcome Based Education Practices for Quality Teaching and Learning**

The programme focused on Outcome Based Education practices for improving the quality of teaching and learning. It emphasized alignment among curriculum, teaching strategies, assessment methods and intended learning outcomes. Participants explored student-centred, active and experiential approaches for developing professional competencies. The event highlighted continuous assessment, feedback and evidence-based academic improvement. Students benefit from clearer course and programme outcomes linked to industry and societal requirements. The approach strengthens critical thinking, problem-solving, communication and lifelong-learning capabilities. It also supports continuous improvement of academic programmes through systematic outcome assessment.

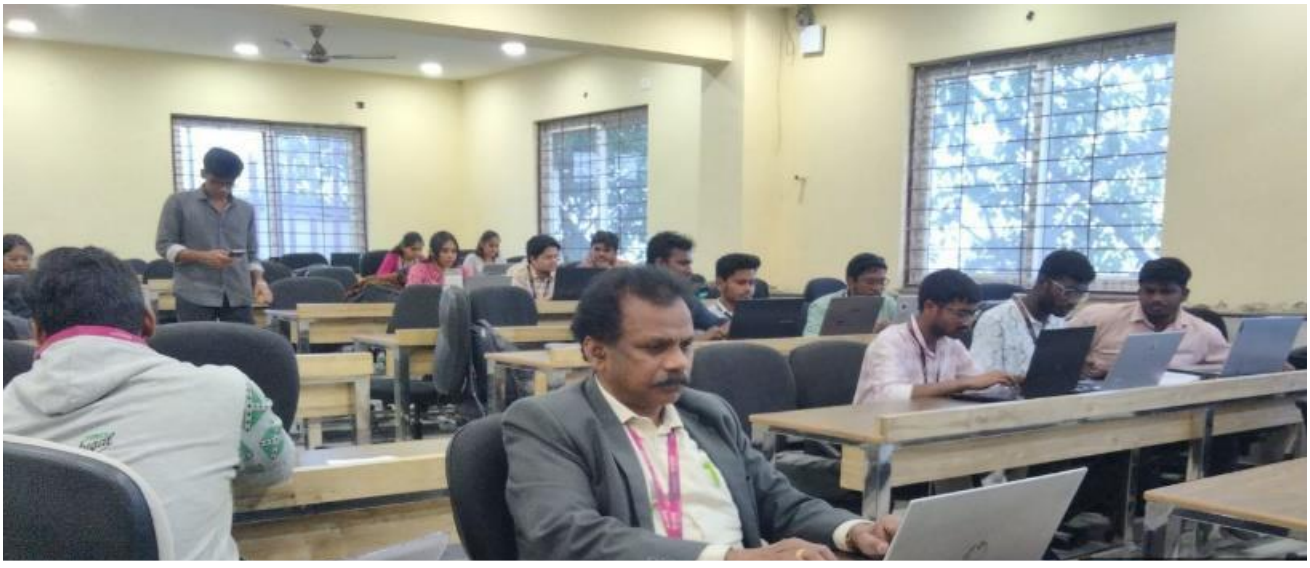



**Tech Insights Meetup: Learning Beyond Classrooms**

Tech Insights Meetup provided participants with exposure to current technologies, innovations and industry practices. The event promoted practical learning beyond the conventional classroom environment. Students interacted with industry experts and professionals to understand real-world applications of technology. Discussions helped participants identify industry expectations, emerging skills and professional competencies. The programme encouraged networking, knowledge exchange and potential collaboration with professionals. Students gained broader awareness of career opportunities associated with technology-driven industries. Such interactions strengthen employability, confidence and the ability to connect academic learning with practice.

**EduEmpower Hack: Creating Tools to Improve Learning Outcomes**

EduEmpower Hack focused on developing technology-driven solutions to improve learning outcomes. Students addressed educational challenges through programming, AI, data science, IoT and application development. The activity encouraged learner-centred design with emphasis on accessibility, usability, inclusivity and scalability. Participants strengthened analytical thinking by applying engineering knowledge to practical educational problems. Interdisciplinary teamwork helped students understand diverse learner needs and develop holistic solutions. The programme introduced emerging EdTech trends such as adaptive learning, AI tutors, analytics and gamification. Entrepreneurial thinking was encouraged through exploration of commercialization and scalability.



**Youth Speak: The Global Goals Hackathon**

The Youth Speak: The Global Goals Hackathon engaged students in technology-driven solutions aligned with the UN SDGs. The event increased awareness of global social, environmental and economic challenges. Participants used creative problem-solving and technical knowledge to design solutions with social impact. The programme promoted interdisciplinary teamwork, collaborative learning and project-based innovation. Students strengthened practical, entrepreneurial, leadership, communication and presentation skills. The activity encouraged technology for social good and inclusive solutions for underserved communities. Winning ideas included AI-based waste management, water-conservation awareness and rural youth skill development.


You don't have to be great to start
but you have to start to be great

# 5 GENDER EQUALITY

| Indicator | Value |
|---|---|
| Female students | 2,063 (36.22%) |
| Inclusive campus policies | Implemented |
| Women participation in academics & faculty roles | Active |

With female students comprising over a third of the total enrolment, IARE has embedded inclusive campus policies that support gender equality in both academic and administrative spheres. Continued efforts toward women's participation in faculty and leadership roles further reinforce the institute's commitment to this goal.

## Activities Organised:

### Hackathon - Inclusive Smart Villages: Empowering Women through Technology

The Inclusive Smart Villages hackathon focused on women-led technological innovation for sustainable rural development. Students addressed social, economic and developmental challenges affecting women and rural communities. The programme promoted women’s participation in technology, innovation, leadership and decision-making. Participants explored technology applications in education, healthcare, safety, livelihoods and governance. The activity strengthened digital literacy, technical competence, teamwork, communication and entrepreneurial skills. Smart-village concepts emphasized accessibility, scalability, community needs and long-term impact. The programme sought to reduce the digital divide between rural and urban communities through inclusive technology.

# 6 CLEAN WATER AND SANITATION

| Indicator | Value |
|---|---|
| Wastewater treated | 80% |
| Rainwater harvesting | Yes |
| Low-flow fixtures installed | Yes |
| Water audits conducted | Yes |
| Rainwater harvesting connected area | 1,16,588 sq.ft. |

IARE has adopted a comprehensive approach to water stewardship, treating a large majority of its wastewater and actively harvesting rainwater across more than a lakh square feet of connected campus area. Regular water audits and the installation of low-flow fixtures collectively support responsible water use and sanitation on campus.

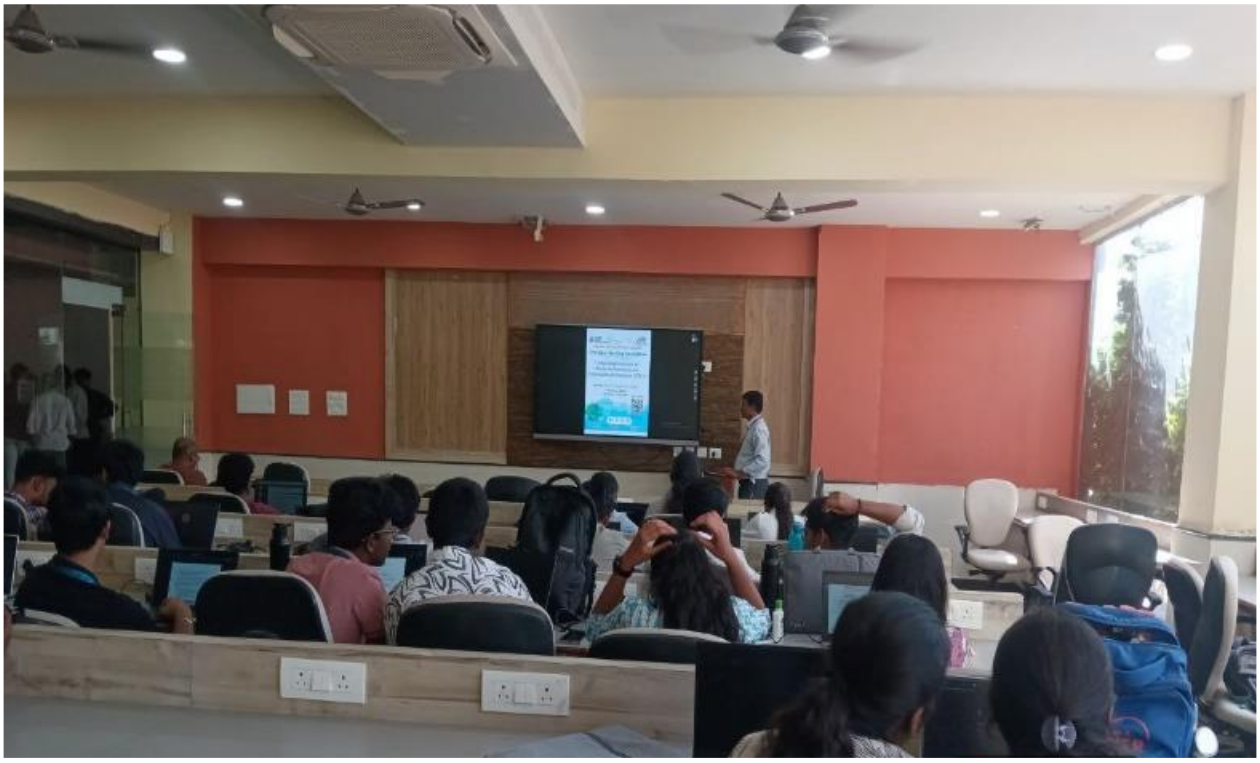
## Activities Organised:

### Computational Fluid Dynamics (CFD)Applications in Hydraulic and Water Resource Engineering

The programme introduced Computational Fluid Dynamics as a powerful tool for hydraulic and water-resource engineering. Students learned the fundamental principles and governing equations used to analyze fluid-flow behaviour. The session demonstrated simulation and visualization of flow patterns, pressure distribution and turbulence. Participants explored applications of CFD to natural and engineered water systems. The activity strengthened students' ability to model complex hydraulic problems using computational tools. Better simulation supports improved design and management of water infrastructure and hydraulic systems. The programme encouraged evidence-based engineering solutions for efficient and sustainable water management.

## Problem-Solving Hackathon: Computing Solutions for Water and Sanitation

The Problem-Solving Hackathon focused on applying computing and engineering knowledge to water and sanitation challenges. Students explored technology-based approaches for clean water access, conservation and sanitation improvement. The activity strengthened innovative thinking by connecting technical skills with real-world environmental problems. Participants developed digital tools, models and practical concepts for sustainable water-resource management. Teamwork and interdisciplinary collaboration encouraged multiple perspectives on water-related challenges. Coding, design, analytical thinking, research and project-development skills were strengthened. The programme increased awareness of responsible water use and sustainable sanitation systems.



# 7 AFFORDABLE AND CLEAN ENERGY

| Indicator | Value |
|---|---|
| Renewable energy installed | 160 kWp |
| Energy generated | 1,68,418 kWh |
| Energy consumed | 6,95,696 kWh |
| LED usage | 80% |
| BLDC fans usage | 20% |
| Solar PV systems & smart energy monitoring | Implemented |

The institute has made significant investments in renewable energy infrastructure, with a sizeable solar capacity generating clean electricity for campus operations. High adoption rates of energy-efficient LED lighting and BLDC fans, supported by smart energy monitoring systems, reflect IARE's transition toward a low-carbon energy profile.

## Activities Organised:

### Cyber Resilient Smart Energy Hackathon for Sustainable Development

The Cyber Resilient Smart Energy Hackathon focused on secure, reliable and sustainable smart-energy solutions. Participants explored digital technologies, communication networks and automation in modern energy systems. The activity highlighted cybersecurity challenges associated with smart grids and digital energy infrastructure. Students addressed energy-efficiency, conservation and renewable-energy integration through practical challenges. The hackathon strengthened technical, analytical, teamwork and real-time problem-solving capabilities. Participants developed innovative concepts and prototypes with emphasis on scalability and practical implementation. The programme promoted entrepreneurship and interaction with mentors and industry professionals.

# 8 DECENT WORK AND ECONOMIC GROWTH

| Indicator | Value |
|---|---|
| Sponsored research funding | ₹75 Lakhs |
| Consultancy revenue | ₹4.89 Lakhs |
| Consultancy projects | 3 |
| Employment & skill training initiatives | Implemented |

IARE fosters an ecosystem of applied research and industry engagement, evidenced by substantial sponsored research funding and active consultancy projects generating measurable revenue. These initiatives, paired with employment and skill training programmes, contribute directly to decent work opportunities and inclusive economic growth.

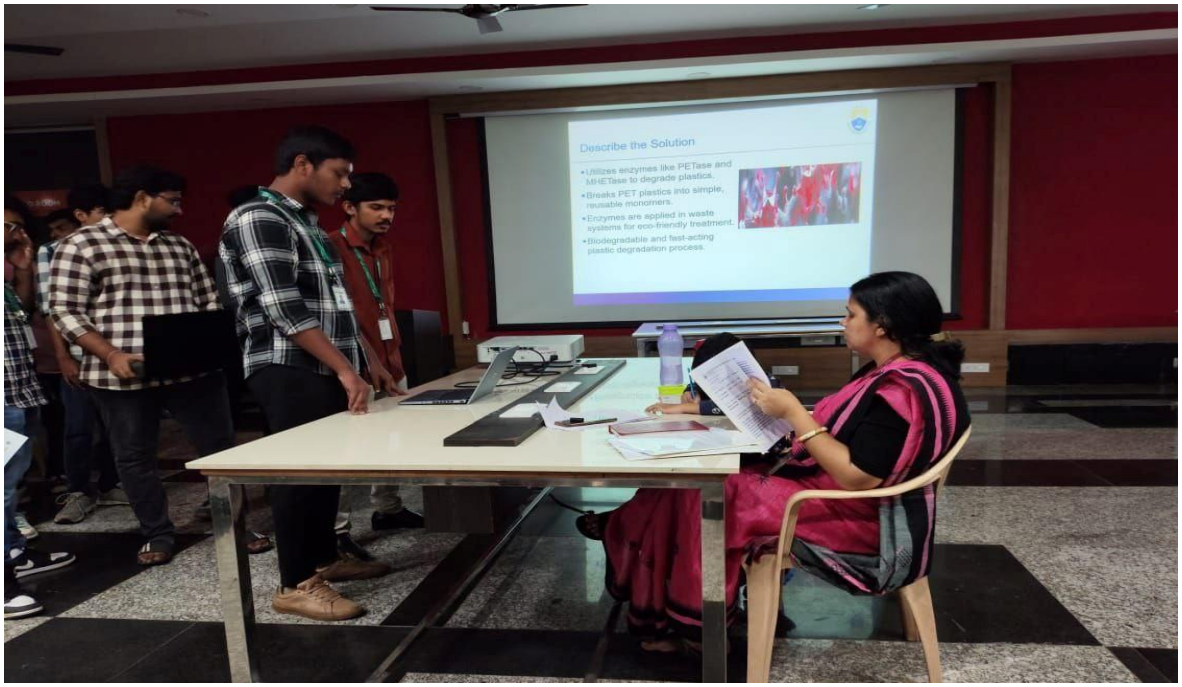
## Activities Organised:

### Entrepreneurship & Innovation as Career Opportunities

The “Entrepreneurship & Innovation as Career Opportunities” session was conducted on 11 September 2025, featuring Mr. E. Mohan Reddy, Alumni and Startup Founder of Criztone Technology, as the expert speaker. The session aimed to create awareness among students about entrepreneurship and innovation as promising career pathways. Mr. Reddy shared insights from his entrepreneurial journey and discussed how innovative ideas can be transformed into successful startups by identifying real-world problems, developing practical solutions, and understanding market needs. He highlighted the importance of creativity, technical skills, leadership, risk-taking, perseverance, and continuous learning in building a successful entrepreneurial career. The interactive session motivated students to explore startup opportunities, develop an entrepreneurial mindset, and consider innovation and entrepreneurship as viable alternatives to conventional career choices.

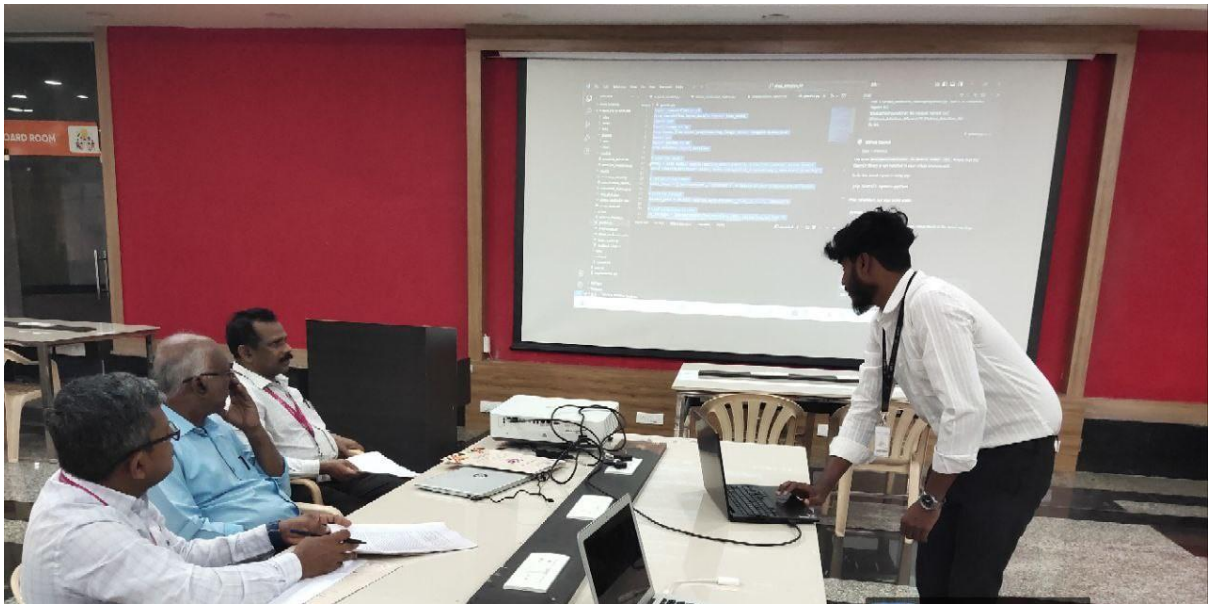
**B-Plan Competition**

The “B-Plan Competition – Entrepreneurship” was conducted on 11 January 2026, where startup students presented their innovative business ideas and entrepreneurial concepts before the evaluators. The competition provided participants with an opportunity to showcase their business models, value propositions, target markets, revenue strategies, and growth plans. Students demonstrated their entrepreneurial skills by explaining the problem addressed by their ventures, proposed solutions, market potential, and scalability. The event encouraged creativity, critical thinking, effective pitching, teamwork, and business-oriented problem-solving, while providing valuable exposure to the practical aspects of entrepreneurship and startup development. Overall, the competition motivated students to transform innovative ideas into feasible business ventures and strengthened their confidence in pursuing entrepreneurship as a career.



## Raising Capital & Finance Management for Start-ups

The “Raising Capital & Finance Management for Start-ups” session was conducted on 1 February 2026 to enhance students’ understanding of financial planning and funding opportunities for startups. The session focused on various sources of startup capital, fundraising strategies, budgeting, financial planning, cash-flow management, and effective utilization of funds. Participants gained insights into how entrepreneurs can assess their financial requirements, approach potential investors, manage business expenses, and make informed financial decisions for sustainable growth. The session highlighted the importance of sound financial management, proper resource allocation, and strategic fundraising in building and scaling successful startups. Overall, the programme equipped aspiring entrepreneurs with practical knowledge to manage startup finances and confidently explore different avenues for raising capital.



## Business Model Canvas & Business Model Fit

The “Business Model Canvas & Business Model Fit” session was conducted on 12 March 2026 to help students and aspiring entrepreneurs understand the key components of a successful business model. The session focused on developing a Business Model Canvas (BMC) by identifying customer segments, value propositions, channels, customer relationships, key activities, key resources, key partners, revenue streams, and cost structure. Participants also learned how to assess business model fit, validate their ideas against customer needs, and align their products or services with market opportunities. The session highlighted the importance of customer validation, market understanding, sustainable revenue generation, and continuous improvement of business models. Overall, the programme enabled participants to structure their startup ideas effectively and develop practical, market-oriented business models.


**Demo Day/Poster Presentation of Business Plans**

The “Demo Day/Poster Presentation of Business Plans” was conducted on 15 March 2026, providing students and aspiring entrepreneurs with a platform to present their business ideas and plans through demonstrations and poster presentations. Participants showcased their problem statements, innovative solutions, target customers, business models, market opportunities, revenue strategies, and growth potential. The event encouraged effective communication, creativity, teamwork, and entrepreneurial thinking while providing participants with an opportunity to receive feedback and suggestions for improving their business concepts. The programme helped students gain practical experience in presenting and refining their startup ideas and strengthened their confidence to pursue entrepreneurial opportunities.

**Start-up Competition**

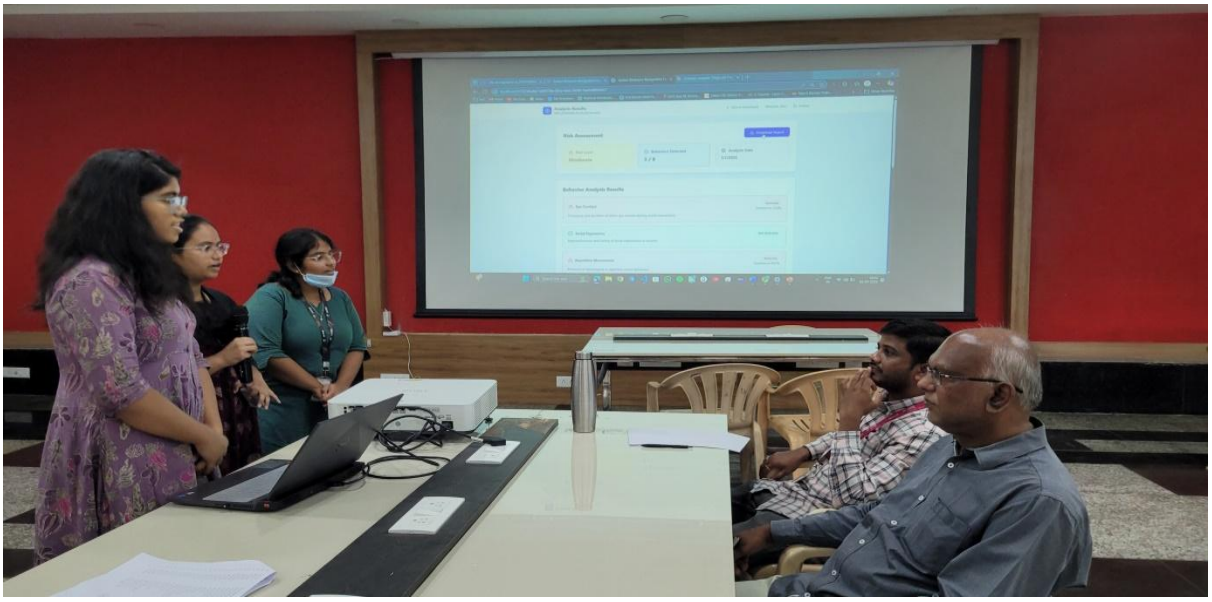
The “Start-up Competition” was conducted on 21 April 2026 to encourage students to showcase their innovative ideas and entrepreneurial capabilities. Participants presented their startup concepts, highlighting the problem being addressed, proposed solution, market potential, business model, innovation, scalability, and future growth plans. The competition provided a platform for students to demonstrate their creativity, pitching skills, problem-solving abilities, and entrepreneurial mindset. The event also promoted healthy competition, peer learning, and constructive feedback, motivating participants to transform promising ideas into viable and sustainable startup ventures.


**Lean Start-up & MVP Boot Camp/Mentoring**

The “Lean Start-up & MVP Boot Camp/Mentoring” was conducted on 12 April 2026 to provide students and aspiring entrepreneurs with practical knowledge of lean startup principles and Minimum Viable Product (MVP) development. The session focused on identifying customer needs, validating ideas, developing MVPs, collecting user feedback, and improving products through iterative testing. Participants learned how to minimize development risks, utilize resources efficiently, and test business assumptions before investing significant time and capital. The mentoring sessions encouraged students to adopt a build–measure–learn approach, refine their solutions based on market feedback, and develop customer-focused products. Overall, the boot camp strengthened participants’ innovation, experimentation, problem-solving, and startup development skills.


**AI for fundraising and Investor Pitch preparation**

The “AI for Fundraising and Investor Pitch Preparation” session was conducted on 1 May 2026 to help students and aspiring entrepreneurs understand how Artificial Intelligence can support startup fundraising and effective investor communication. The session focused on using AI tools for market research, business analysis, financial projections, pitch-deck preparation, identifying potential investors, and refining investment proposals. Participants learned how to present their startup ideas with clarity, highlight their value proposition, demonstrate market potential, and communicate business and financial aspects effectively. The session also emphasized responsible and strategic use of AI in preparing investor pitches. Overall, the programme enhanced participants’ confidence and skills in developing compelling pitches and preparing their startups for potential funding opportunities.



## Start-up Demo Day & Mentor Linkages

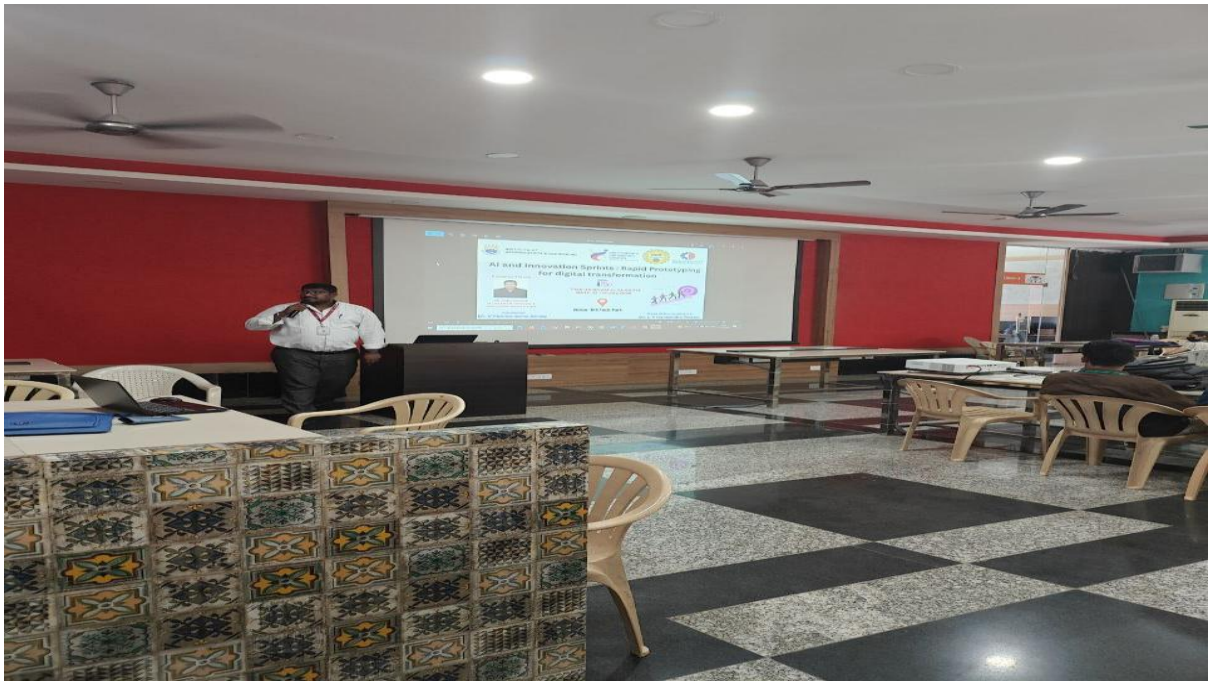
The “Start-up Demo Day & Mentor Linkages” was conducted on 22 May 2026 to provide aspiring entrepreneurs with an opportunity to showcase their innovative startup ideas, prototypes, and business models to mentors and experts. The event focused on startup demonstrations, idea pitching, product validation, market opportunities, business scalability, and entrepreneurial challenges. Participants received valuable feedback and guidance from mentors on improving their products, strengthening their business strategies, identifying potential customers, and preparing for future funding and growth opportunities. The programme also facilitated meaningful mentor–startup linkages, encouraging continued guidance, networking, collaboration, and knowledge sharing. Overall, the event strengthened participants’ entrepreneurial confidence and helped them take their startup ideas closer to market readiness.


## Angel Investment / VC Funding Opportunities

The “Angel Investment / VC Funding Opportunities” session was conducted on 28 May 2026 to create awareness among students and aspiring entrepreneurs about various funding opportunities available for startups. The session focused on angel investment, venture capital (VC) funding, investor expectations, fundraising strategies, valuation, pitch preparation, and the startup investment process. Participants gained insights into how to identify suitable investors, develop compelling investment proposals, communicate business potential, and prepare for investor interactions. The session highlighted the importance of a strong business model, market opportunity, scalability, financial planning, and effective pitching in attracting investors. Overall, the programme enhanced participants’ understanding of startup financing and motivated them to explore appropriate funding avenues for launching and scaling their ventures.

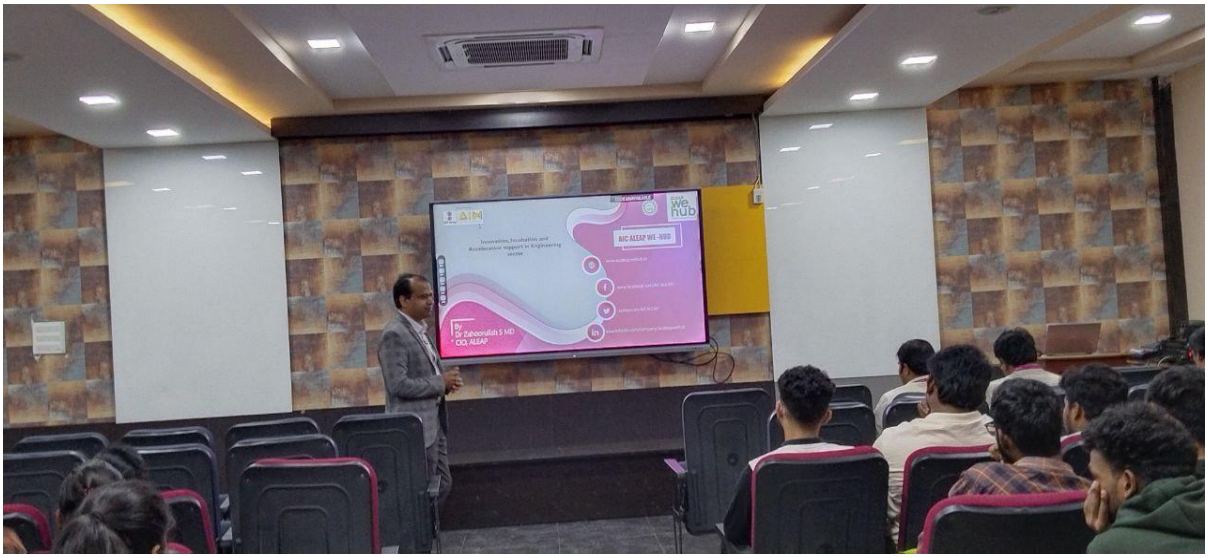

**AI for Investor Pitch/Fundraising**

The "AI for Investor Pitch/Fundraising" session was conducted on 21 June 2026 to help students and aspiring entrepreneurs understand the role of Artificial Intelligence in preparing effective investor pitches and fundraising strategies. The session focused on using AI for pitch-deck creation, market research, competitor analysis, financial projections, investor identification, and refining business proposals. Participants learned how to use AI tools to present their startup ideas clearly, highlight their unique value proposition, demonstrate market potential, and communicate financial and growth plans effectively. The session emphasized the importance of combining AI capabilities with entrepreneurial judgment and authentic business insights. Overall, the programme enhanced participants' confidence and skills in preparing professional investor pitches and exploring suitable fundraising opportunities.



**Lean Start-up & MVP Boot Camp**

The “Lean Start-up & MVP Boot Camp” was conducted on 1 July 2026 to provide students and aspiring entrepreneurs with practical knowledge of lean startup methodologies and Minimum Viable Product (MVP) development. The session focused on identifying customer problems, validating business ideas, developing basic product prototypes, gathering user feedback, and improving solutions through iterative testing. Participants learned how to apply the Build–Measure–Learn approach, minimize development risks, and efficiently utilize available resources while developing startup solutions. The boot camp encouraged participants to test assumptions, understand market requirements, and refine their products based on customer feedback. Overall, the programme strengthened students’ innovation, problem-solving, experimentation, and entrepreneurial skills and helped them move their ideas towards practical implementation.

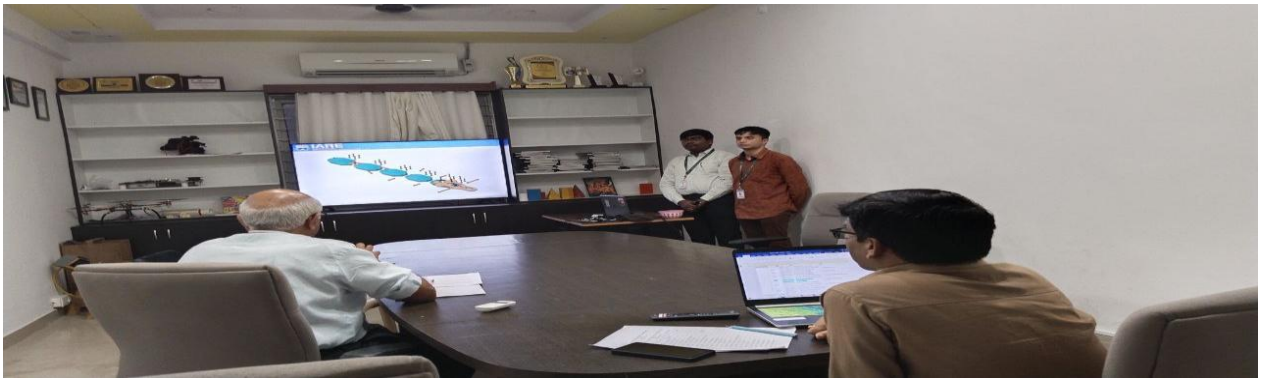


**Angel Investment/VC Funding Opportunities**

The “Angel Investment/VC Funding Opportunities” session was conducted on 05 July 2026 to create awareness among students and aspiring entrepreneurs about various funding avenues available for startups. The session focused on angel investors, venture capital (VC) funding, investor expectations, startup valuation, fundraising strategies, pitch preparation, and the investment process. Participants gained insights into identifying suitable investors, preparing effective funding proposals, presenting business potential, and understanding the factors considered by investors while evaluating startups. The session highlighted the importance of a strong business model, market opportunity, scalability, financial planning, and a compelling investor pitch. Overall, the programme enhanced participants’ understanding of startup financing and motivated them to explore appropriate funding opportunities for launching and scaling their ventures.

**Start-up Demo Day/Exhibition & Mentor Linkages**

The “Start-up Demo Day/Exhibition & Mentor Linkages” was conducted on 10 July 2026 to provide students and aspiring entrepreneurs with a platform to showcase their innovative startup ideas, prototypes, products, and business models. The event featured startup demonstrations and exhibitions, allowing participants to present their solutions, explain their value propositions, and interact with mentors and experts. Participants received constructive feedback on product development, market validation, business strategy, scalability, and funding readiness. The programme also facilitated mentor–startup interactions and networking, enabling participants to seek continued guidance and explore opportunities for collaboration and growth. Overall, the event enhanced entrepreneurial confidence, encouraged innovation, and supported participants in progressing their ideas towards market readiness.



**Seminar on Entrepreneurship Awareness Program (EAP)**

The “Seminar on Entrepreneurship Awareness Program (EAP)” was conducted on 17 September 2025 to create awareness among students about entrepreneurship as a career opportunity. The seminar focused on identifying business opportunities, developing innovative ideas, startup fundamentals, business planning, funding opportunities, and entrepreneurial skills**.** Participants gained insights into the challenges and opportunities

associated with starting a venture and learned about the importance of creativity, risk-taking, leadership, and perseverance. The programme motivated students to explore entrepreneurship and develop an entrepreneurial mindset.


**INCEPTUM – The Beginning of Innovation**

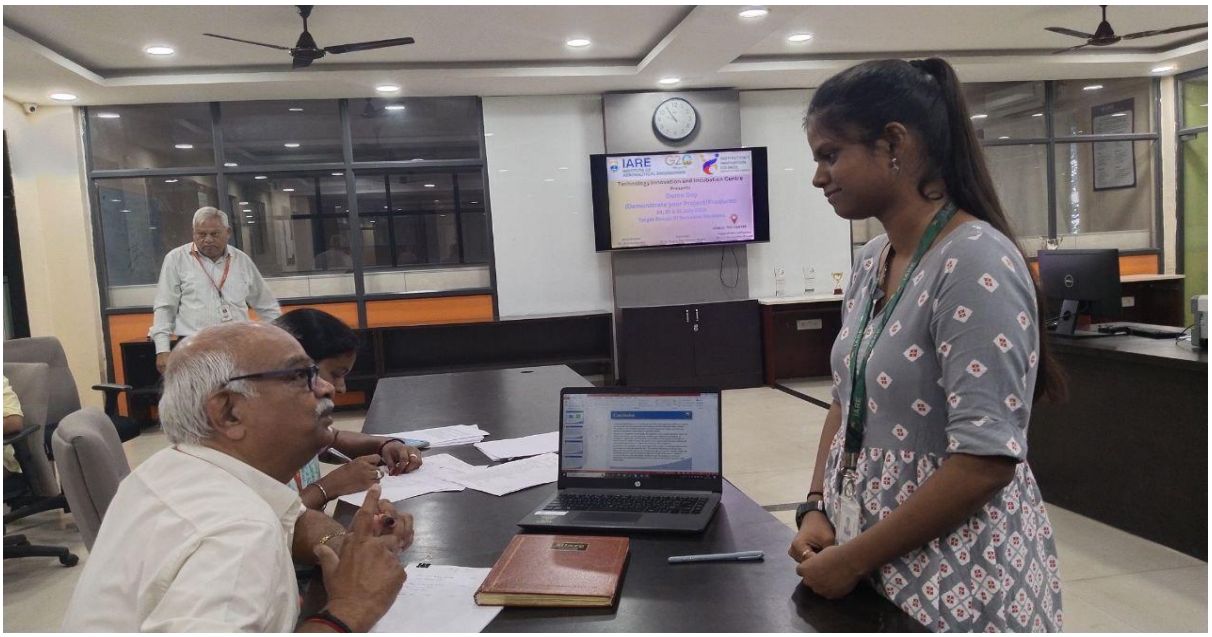
The “INCEPTUM – The Beginning of Innovation” programme was conducted on 21 February 2026 to encourage students to explore innovation and transform creative ideas into practical solutions. The programme focused on problem identification, ideation, innovation, technology applications, prototype development, and entrepreneurial thinking**.** Participants were encouraged to identify real-world challenges and develop innovative approaches to address them. The event provided a platform for idea sharing, interaction, and collaboration, motivating students to take their initial concepts towards further development and implementation.

**Project Expo**

The “Project Expo” was conducted on 28 March 2026 to provide students with a platform to showcase their innovative academic and technology-based projects. Participants demonstrated their working models, prototypes, software solutions, research-based projects, and innovative concepts before faculty members, experts, and peers. The expo encouraged creativity, technical problem-solving, teamwork, effective presentation, and practical application of knowledge. The event also provided valuable feedback to participants and motivated them to further improve their projects and explore opportunities for innovation, entrepreneurship, and commercialization.

**IADEATHON**

The “IADEATHON” was conducted on 20 April 2026 as an innovation and idea-generation challenge aimed at developing students’ problem-solving and entrepreneurial capabilities. Participants worked individually or in teams to identify real-world problems, brainstorm innovative ideas, develop solutions, and present their concepts within a defined timeframe. The event encouraged creativity, critical thinking, collaboration, rapid ideation, and effective pitching. IADEATHON provided students with practical exposure to the innovation process and motivated them to transform promising ideas into feasible solutions with potential societal and market impact.

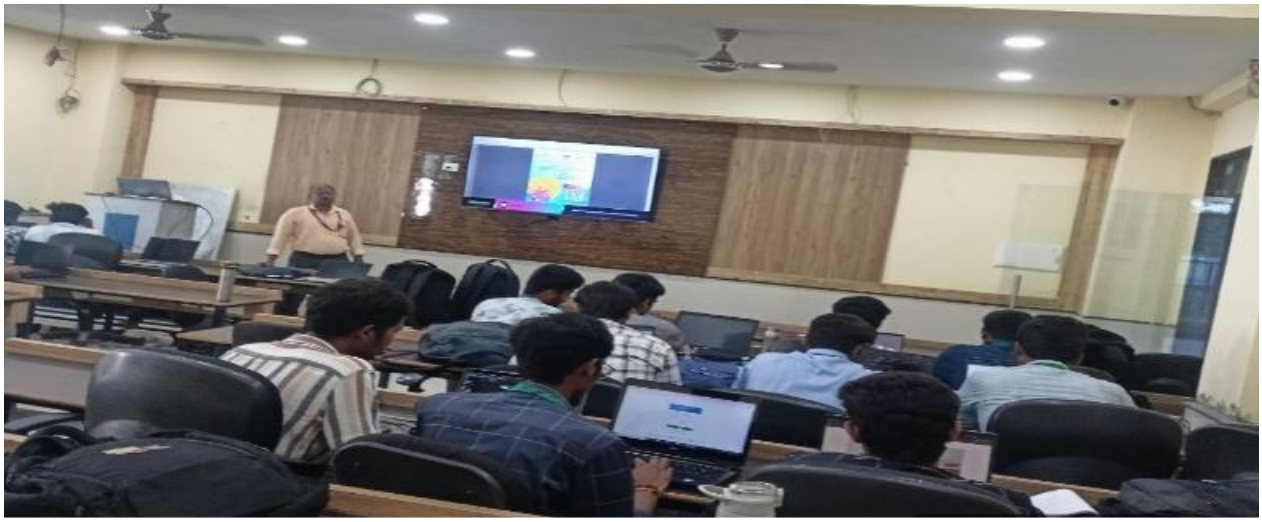



**Concrete Repair and Retrofitting Technology for Buildings**

The event focused on modern concrete repair and retrofitting technologies for extending the service life of buildings. Students learned to identify structural, material, chemical and environmental causes of concrete deterioration. The programme introduced surface repair, crack repair and corrosion-control techniques for damaged structures. Participants explored strengthening methods such as jacketing, FRP wrapping and steel plate bonding. The discussion also highlighted seismic strengthening and base-isolation approaches for safer buildings. Students developed the ability to select suitable rehabilitation methods based on structural condition and performance needs. The event promoted resource efficiency by encouraging rehabilitation and reuse instead of unnecessary reconstruction.


## Hack for Growth: Innovating for Decent Work and Economic Development

Hack for Growth was designed as a skill-enhancement hackathon focused on decent work, entrepreneurship and sustainable economic development. Students addressed unemployment, skill gaps, job creation and inclusive economic opportunities. Participants developed technology-driven concepts and prototypes within a time-bound collaborative environment. The activity strengthened problem-solving, analytical thinking, communication and technical development skills. Students explored entrepreneurial ideas and scalable solutions with long-term economic impact. The programme bridged academic learning with industry requirements through practical challenges. Leadership, teamwork, pitching and decision-making skills were strengthened through project development.



# 9 INDUSTRY, INNOVATION AND INFRASTRUCTURE

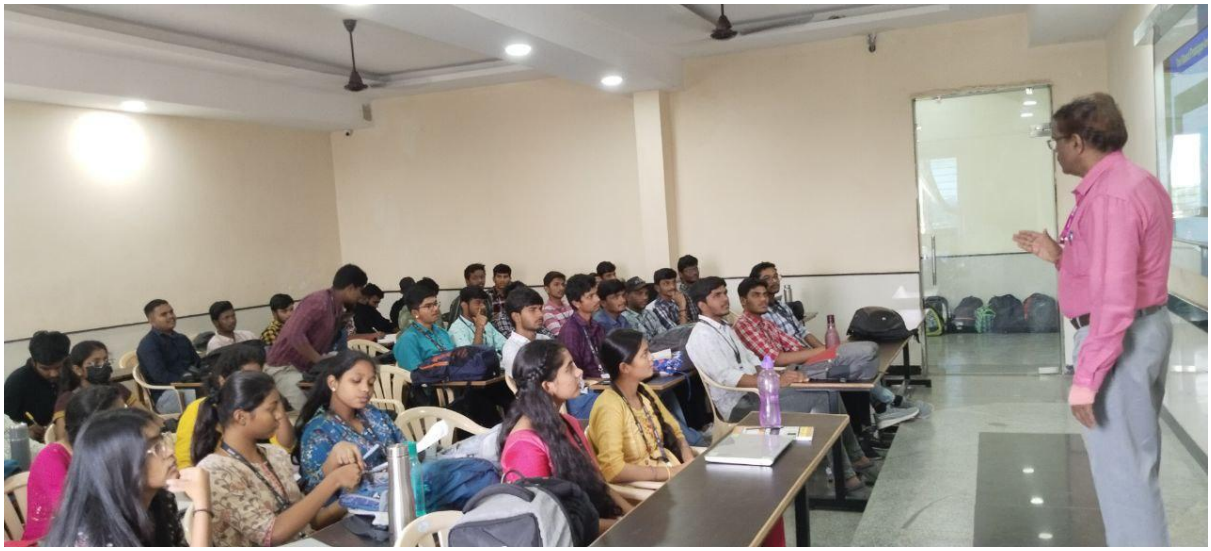
| Indicator | Value |
|---|---|
| Patents published | 221 |
| Patents granted | 21 |
| R&D ecosystem | Strong |
| Infrastructure for innovation & incubation | Established |

A strong culture of research and innovation is reflected in the institute's patent output, with a large number of patents published and several already granted. This is supported by dedicated infrastructure for innovation and incubation, positioning IARE as a contributor to India's growing research and industrial ecosystem.

## Activities Organised:

### Boot Camp on Problem Solving/Ideation

The “Boot Camp on Problem Solving/Ideation” is scheduled to be conducted on 10 October 2025 to develop students’ creative thinking, problem-solving, and innovation skills. The boot camp will focus on identifying real-world problems, understanding user needs, brainstorming innovative ideas, evaluating possible solutions, and developing practical concepts. Participants will be encouraged to think beyond conventional approaches and use structured ideation techniques to generate feasible and impactful solutions. The programme will provide opportunities for interactive activities, teamwork, idea sharing, and mentoring. Overall, the boot camp will help participants strengthen their problem-solving abilities, develop an innovation-oriented mindset, and transform identified problems into promising ideas for further development.



### AI & I4.0 Tools for Innovators & Entrepreneurs

The “AI & I4.0 Tools for Innovators & Entrepreneurs” session was conducted on 12 October 2025 to familiarize students with emerging technologies supporting innovation and entrepreneurship. The session focused on Artificial Intelligence, automation, IoT, data analytics, smart systems, and Industry 4.0 tools and their applications in developing innovative products and services. Participants learned how these technologies can improve problem-solving, productivity, decision-making, and business processes. The session encouraged students to explore technology-driven solutions and integrate emerging technologies into their entrepreneurial ideas.

**IPR Basics for Innovators & Entrepreneurs**

The “IPR Basics for Innovators & Entrepreneurs” session was conducted on 21 October 2025 to create awareness about Intellectual Property Rights and their importance in protecting innovative ideas. The session covered the basics of patents, copyrights, trademarks, designs, and trade secrets, along with the importance of identifying and protecting intellectual assets at an early stage. Participants gained an understanding of how IPR can support innovation, commercialization, and startup growth. The session encouraged students to consider intellectual property protection while developing and presenting their innovative ideas.

**Achieving Problem–Solution Fit**

The “Achieving Problem–Solution Fit” session was conducted on 01 November 2025 to help students and aspiring entrepreneurs understand the importance of developing solutions that effectively address genuine customer

problems. The session focused on problem identification, customer needs, user validation, solution development, feedback collection, and iterative improvement. Participants learned how to test their assumptions and refine their ideas based on user requirements. The session highlighted the importance of understanding the problem thoroughly before developing a product or service and encouraged participants to create relevant, practical, and customer-focused solutions.


**Inter/Intra Institutional Hackathon / Idea Challenge**

The "Inter/Intra Institutional Hackathon / Idea Challenge" was conducted on 05 November 2025 to provide students with a platform to demonstrate their creativity, innovation, and problem-solving abilities. Participants worked individually or in teams to identify challenges and develop innovative, technology-driven solutions within a specified timeframe. The activity encouraged brainstorming, teamwork, rapid prototyping, critical thinking, and effective idea presentation. The challenge provided practical exposure to the innovation process and motivated students to transform ideas into feasible solutions addressing real-world problems.

## Demo Day / Idea Showcase

The “Demo Day / Idea Showcase” was conducted on 12 November 2025 to provide students and innovators with an opportunity to present their innovative ideas, prototypes, and solutions to mentors, experts, and peers. Participants showcased their problem statements, proposed solutions, prototypes, value propositions, and potential applications through presentations and demonstrations. The event encouraged effective communication, creativity, confidence, and entrepreneurial thinking while providing participants with valuable feedback for further improvement. Overall, the programme helped students gain practical experience in showcasing their innovations and motivated them to take their ideas towards further development and implementation.


## Design Thinking, Critical Thinking & Innovation Design

The “Design Thinking, Critical Thinking & Innovation Design” session was conducted on 02 December 2025 to develop students’ creative and analytical abilities for solving real-world problems. The session focused on empathy, problem identification, ideation, critical analysis, prototyping, and solution testing. Participants learned to understand user needs, examine problems from different perspectives, generate innovative ideas, and develop practical solutions. The session encouraged creativity, logical thinking, collaboration, and an innovation-oriented mindset.

**Exposure Visit to Incubation/IP/Tech Transfer Centres**

The “Exposure Visit to Incubation/IP/Tech Transfer Centres” was conducted on 15 December 2025 to provide students with practical exposure to the innovation and entrepreneurship ecosystem. Participants gained insights into the functioning of incubation centres, intellectual property support systems, technology transfer processes, startup mentoring, and commercialization opportunities. The visit enabled students to interact with professionals and understand how innovative ideas can be developed, protected, transferred, and transformed into viable products or businesses. The programme enhanced awareness of available support mechanisms for innovators and entrepreneurs.

## Protecting IPR & IP Management for Start-ups

The “Protecting IPR & IP Management for Start-ups” session was conducted on 17 December 2025 to enhance awareness of intellectual property protection and effective IP management in startups. The session focused on patents, trademarks, copyrights, industrial designs, trade secrets, IP ownership, and commercialization strategies. Participants learned the importance of identifying valuable intellectual assets, protecting innovations at the appropriate stage, and developing an effective IP strategy. The session highlighted how proper IP management can safeguard innovations, strengthen startup competitiveness, and support long-term business growth.


## AI-Powered Solution Expo – AI/I4.0 Prototypes

The “AI-Powered Solution Expo – AI/I4.0 Prototypes” was conducted on 21 December 2025 to provide students and innovators with a platform to demonstrate technology-driven prototypes and innovative solutions. Participants showcased applications involving Artificial Intelligence, automation, IoT, data analytics, smart systems, and Industry 4.0 technologies to address real-world challenges. The expo encouraged practical application of emerging technologies, creativity, teamwork, and effective demonstration of prototypes. The event provided valuable opportunities for feedback, knowledge sharing, and networking while motivating participants to further develop their AI and Industry 4.0 solutions towards practical implementation and commercialization.

## Product-Market Fit, Prototype/Process Design & MVP Development

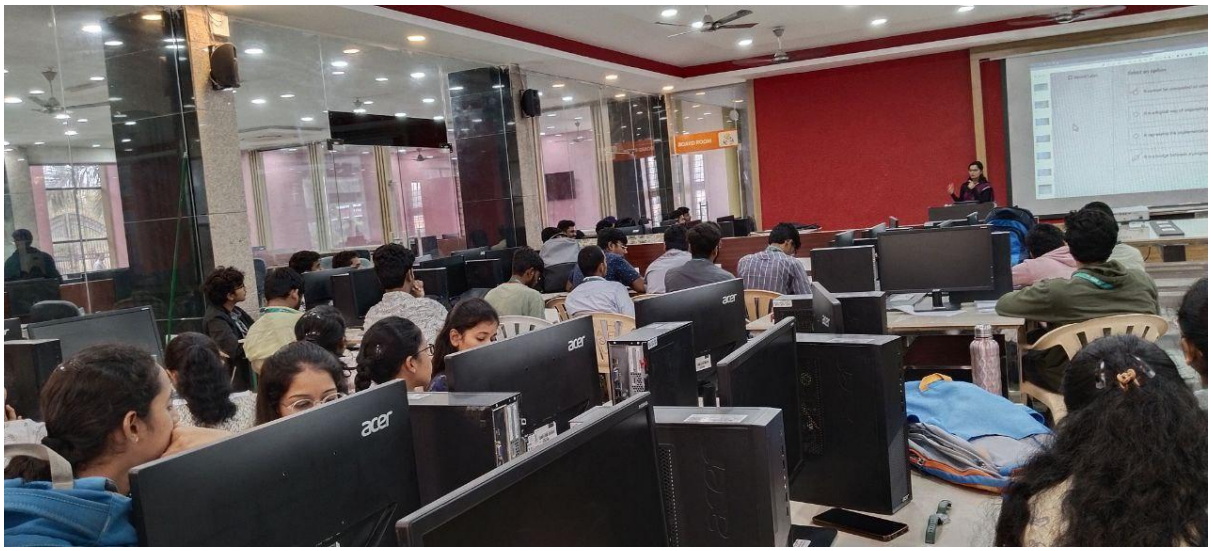
The “Product-Market Fit, Prototype/Process Design & MVP Development” session was conducted on 11 February 2026 to help students and aspiring entrepreneurs understand the process of converting innovative ideas into market-oriented products and services. The session focused on understanding customer needs, achieving product-market fit, prototype development, process design, MVP creation, user testing, and iterative improvement. Participants learned how to validate their ideas, develop functional prototypes, gather customer feedback, and refine their solutions according to market requirements. The session encouraged practical experimentation and helped participants move their concepts towards product readiness and commercialization.

## Accelerators / Incubation Opportunities

The “Accelerators / Incubation Opportunities” session was conducted on 21 February 2026 to create awareness among students and innovators about various opportunities available for developing and scaling startup ideas. The session focused on incubation support, accelerator programmes, mentoring, networking, funding opportunities, infrastructure, technology support, and market access. Participants gained insights into how incubation and acceleration programmes can help startups refine their business models, validate products, connect with experts, and prepare for investment. The session encouraged participants to explore suitable incubation and acceleration pathways for transforming their ideas into sustainable ventures.

## Innovation/Prototype Validation & Value Proposition Fit/Business Fit

The “Innovation/Prototype Validation & Value Proposition Fit/Business Fit” session was conducted on 08 July 2026 to help innovators validate their prototypes and assess their alignment with customer needs and business requirements. The session focused on prototype testing, customer feedback, value proposition validation, market needs, business model assessment, and product improvement. Participants learned how to test assumptions, identify gaps, refine their value propositions, and evaluate the commercial feasibility of their innovations. The session highlighted the importance of achieving both customer value and business viability before moving towards commercialization.




## Accelerators/Incubation Opportunities

The “Accelerators/Incubation Opportunities” session was conducted on 15 July 2026 to familiarize students and aspiring entrepreneurs with the support ecosystem available for startups and innovative ventures. The session highlighted incubation programmes, accelerator support, mentorship, networking, funding avenues, infrastructure, technical assistance, and market linkages. Participants learned how to identify and apply for suitable incubation and acceleration programmes based on their startup stage and requirements. The session motivated participants to leverage available ecosystem support to strengthen their business models, improve their products, access expert guidance, and accelerate startup growth.


## A One Day Guest Lecture on “Quantum Machine Learning”

The “One Day Guest Lecture on Quantum Machine Learning” was conducted on 25 October 2025 to introduce participants to the emerging field of Quantum Machine Learning (QML). The session provided an overview of quantum computing concepts, quantum algorithms, machine learning techniques, and their potential integration**.** Participants gained insights into the applications of QML in solving complex computational problems and its future potential across research and industry. The lecture encouraged students to explore emerging interdisciplinary technologies and develop an interest in advanced computing and AI research.

## A Three-Day Workshop on “Federated Learning & Privacy Preserving AI”

The three-day workshop on “Federated Learning & Privacy Preserving AI” was conducted from 22 January 2026 to provide participants with knowledge of secure and privacy-aware approaches to Artificial Intelligence. The workshop covered federated learning principles, decentralized model training, data privacy, secure data sharing, privacy-preserving techniques, and applications of distributed AI**.** Participants gained an understanding of how machine learning models can be developed collaboratively while minimizing the need to transfer sensitive data. The workshop highlighted the importance of privacy, security, and responsible AI in modern digital systems.


**A Seminar on "Transformer-Based LLMs: Design, Training and Optimization"**

The "Transformer-Based LLMs: Design, Training and Optimization" seminar was conducted on 16 February 2026 to provide participants with an understanding of the technologies behind modern Large Language Models. The seminar focused on Transformer architecture, attention mechanisms, model training, fine-tuning, optimization techniques, and practical applications of LLMs. Participants gained insights into how large-scale language models are developed and optimized for different tasks. The session encouraged students to explore generative AI, advanced machine learning, and emerging research opportunities in LLM technologies.

**A Workshop on "LLM Optimization – Prompting, Fine-Tuning & Model Efficiency"**

The "LLM Optimization – Prompting, Fine-Tuning & Model Efficiency" workshop was conducted on 17 February 2026 to provide practical knowledge of improving the performance and efficiency of Large Language Models. The workshop covered prompt engineering, prompt optimization, fine-tuning approaches, model efficiency, resource utilization, and performance evaluation. Participants learned how to adapt LLMs for specific applications while improving response quality and reducing computational requirements. The workshop encouraged participants to

apply optimization techniques in AI applications and strengthened their practical understanding of generative AI technologies.


**Reality Reimagined: Convergence of AR, VR, AI, and Digital Twin**

The “Reality Reimagined: Convergence of AR, VR, AI, and Digital Twin” programme was conducted on 24 April 2026 to explore the integration of emerging immersive and intelligent technologies. The event focused on the convergence of Augmented Reality (AR), Virtual Reality (VR), Artificial Intelligence (AI), and Digital Twin technologies and their applications in education, industry, healthcare, engineering, and other sectors. Participants gained insights into how these technologies can create immersive environments, intelligent simulations, and real-time digital representations of physical systems. The programme encouraged students to explore interdisciplinary innovation and understand the potential of emerging technologies in shaping future industries.

## Concrete Repair and Retrofitting Technology for Buildings

The event focused on modern concrete repair and retrofitting technologies for extending the service life of buildings. Students learned to identify structural, material, chemical and environmental causes of concrete deterioration. The programme introduced surface repair, crack repair and corrosion-control techniques for damaged structures. Participants explored strengthening methods such as jacketing, FRP wrapping and steel plate bonding. The discussion also highlighted seismic strengthening and base-isolation approaches for safer buildings. Students developed the ability to select suitable rehabilitation methods based on structural condition and performance needs. The event promoted resource efficiency by encouraging rehabilitation and reuse instead of unnecessary reconstruction.


## AI in Sustainable Construction: Risk-Aware, Data-Driven Development

The programme examined how Artificial Intelligence can transform construction into a safer, more efficient and sustainable activity. Students were introduced to automation, predictive analytics and real-time monitoring in construction projects. AI applications for identifying cost overruns, safety hazards, material failures and environmental risks were discussed. Participants understood how data-driven tools can improve project planning, quality control and resource utilization. The event highlighted the role of intelligent technologies in reducing construction waste and improving operational efficiency. Students gained awareness of how AI can support risk-informed decisions throughout the construction lifecycle. The programme connected digital innovation with sustainable construction and responsible resource management.


**Digital Twin–Enabled Resilient and Sustainable Infrastructure**

The event explored the use of Digital Twin technology to create resilient and sustainable infrastructure systems. Students learned how digital representations can support continuous monitoring, simulation and performance evaluation. The programme addressed infrastructure resilience against natural disasters, climate impacts and operational disruptions. Participants examined ways to reduce energy consumption, material waste and greenhouse-gas emissions across the lifecycle. Digital Twins were presented as tools for predicting failures and improving maintenance and asset management. The activity encouraged data-driven planning for infrastructure that can adapt to changing environmental conditions. Students gained an integrated understanding of resilience, sustainability and digital innovation in civil engineering.

## Smart Civil Projects: Leveraging Digital Twin Technology

The event focused on Digital Twin technology and its applications in smart civil engineering projects. Students explored how BIM, IoT and AI can be integrated to create digital replicas of physical infrastructure. Applications in transportation, water systems and urban planning were discussed in detail. Participants learned how real-time data and predictive analytics can improve design, execution and maintenance. The programme demonstrated how digital monitoring can support timely identification of risks and performance issues. Students gained practical understanding of data-driven decision-making for infrastructure management. The activity promoted innovation and technology adoption in the planning and operation of civil infrastructure.

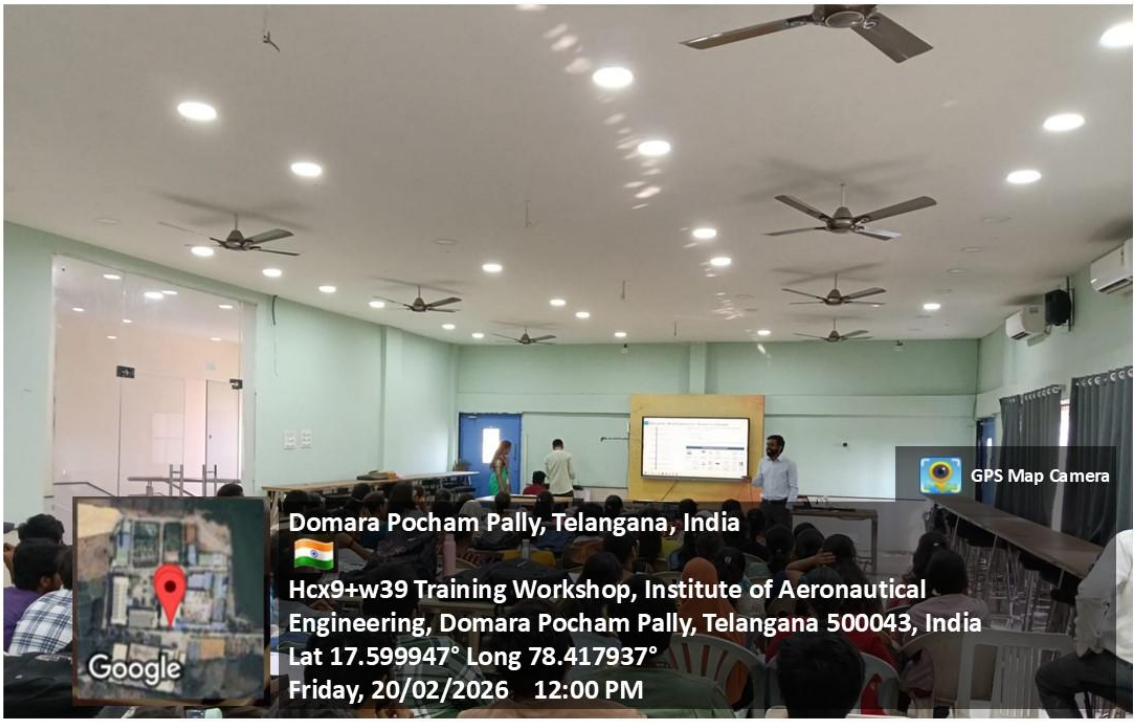
## BIM and Digital Twins for Smart Infrastructure

The event examined BIM and Digital Twins as enabling technologies for smart and sustainable infrastructure. Students learned how BIM models can integrate information on time, cost, performance and asset characteristics. The programme introduced digital approaches for planning, construction, monitoring and infrastructure management. Participants explored data-driven methods for risk assessment, performance evaluation and predictive maintenance. Energy use, environmental impacts and disaster resilience were also considered in infrastructure planning. The activity demonstrated how integrated digital information can improve lifecycle decision-making and efficiency. Students gained awareness of technology-enabled infrastructure that is resilient, resource-efficient and adaptable.

**Future Scope: Exploring Emerging Technologies**

The programme explored emerging technologies that are reshaping engineering practice and societal development. Students were introduced to Artificial Intelligence, IoT, Digital Twins, Big Data and automation.

The session examined how these technologies improve efficiency, accuracy and decision-making. Participants learned to identify appropriate technologies for solving complex engineering and societal problems. The event encouraged technology awareness, innovation-oriented thinking and data-driven problem-solving. Students gained insight into the practical applications and future potential of advanced digital systems. Such exposure strengthens readiness for technology-driven careers and supports continuous innovation.




**Tech Vision 2026 – Department Technical Seminar**

Tech Vision 2026 provided a platform for students to explore current developments in engineering, science and technology. The seminar aimed to strengthen technical knowledge, research orientation and awareness of emerging trends. Students presented innovative ideas and projects, encouraging peer learning and technical communication. Discussions helped participants connect contemporary technologies with real-world engineering problems. The event developed analytical thinking and encouraged students to explore innovative and evidence-based solutions. Exposure to current technological trends supports creativity, research capability and problem-solving skills. The seminar also strengthened students' confidence in presenting technical work and discussing professional applications.

**FUTUREFORGE: SDG 9 INNOVATION HACKATHON**

FUTUREFORGE provided a platform for students to develop innovative solutions aligned with SDG 9. The hackathon encouraged creative problem-solving around industry, infrastructure and sustainable technological development. Participants applied AI, IoT, data science, cloud computing and automation to practical challenges. Teams progressed through ideation, prototyping, testing and presentation as part of an innovation lifecycle. The activity strengthened technical, analytical, design-thinking, research and decision-making skills. Interaction with mentors, industry experts and academicians provided professional guidance and knowledge exchange. The programme encouraged scalable technology solutions and an entrepreneurial mindset for future innovation.

**Hackathon – CODESURFERS 2025**

CODESURFERS 2025 provided an intensive platform for converting innovative ideas into functional technology prototypes. The hackathon covered AI, healthcare, defence, cybersecurity and social applications. Participants progressed through problem selection, design, coding, development, refinement and final demonstration. The activity strengthened programming, technical communication, critical thinking and solution-development skills.

Interdisciplinary collaboration brought together students, developers, researchers and professionals. Cyber awareness and digital security were promoted through solutions addressing privacy, trust and resilience. The programme supported open innovation, entrepreneurship, incubation and academia-industry interaction.


**TECHSPRINT HACKATHON**

TECHSPRINT Hackathon provided B.Tech students with an experiential platform for solving real-world technical challenges. Participants collaboratively analyzed problem statements and developed feasible technology-based solutions. The programme promoted hands-on exposure to contemporary software, hardware and development platforms. Students applied theoretical engineering concepts to practical situations, strengthening technical competence. The activity developed coding, design, development, analytical thinking and decision-making capabilities. Industry-relevant challenges helped students understand current technological trends and professional expectations. Teamwork, leadership, communication and presentation skills were strengthened through project pitching.

# 10 REDUCED INEQUALITIES

| Indicator | Value |
|---|---|
| Within-state students | 3,803 |
| Outside-state students | 1,832 |
| Inclusive financial aid system | Implemented |
| Equal access infrastructure | Established |

IARE draws students from within and outside the state, reflecting its broad geographic reach and reputation. The institute's inclusive financial aid systems and equal-access infrastructure ensure that students from diverse socio-economic and regional backgrounds have equitable opportunities to pursue their education.

# 11 SUSTAINABLE CITIES AND COMMUNITIES

| Indicator | Value |
|---|---|
| Community initiatives | 12 |
| Student participation - tree plantation | 144 students |
| Student participation - social activities | 1,637 students |
| Events organized | 15 |
| NGO & community partnerships | Active |

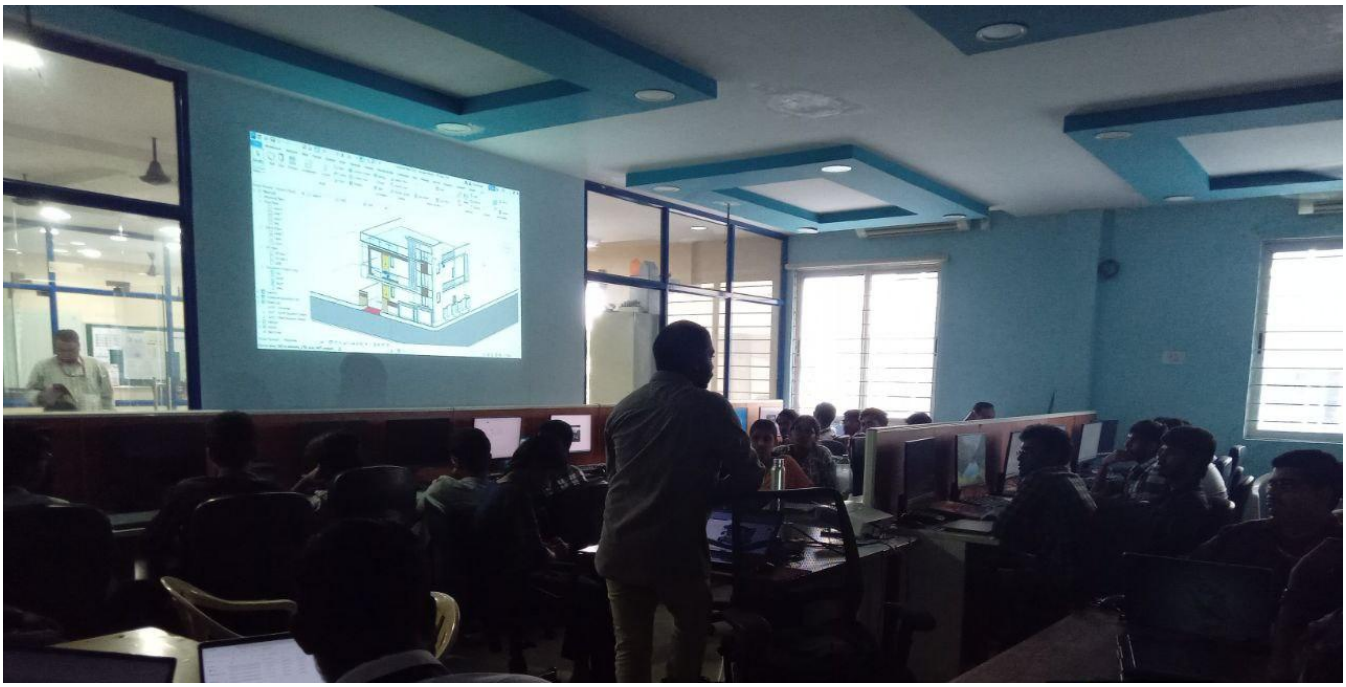
Community engagement is a cornerstone of IARE's sustainability efforts, with numerous initiatives including large-scale tree plantation drives and social activities involving substantial student participation. Active partnerships with NGOs and community organizations further extend the institute's positive impact beyond the campus boundary.

## Activities Organised:

### Certification on Revit Architecture for Sustainable Design

The certification programme introduced Building Information Modeling and Revit as tools for sustainable architectural design. Students learned how digital building models can support energy, daylighting and material analysis. The training emphasized building orientation, climate conditions and site factors in design decisions.

Participants developed skills to create three-dimensional models incorporating energy-efficient and eco-friendly elements. The programme connected digital design practices with thermal comfort and reduced energy consumption. Students gained practical exposure to technologies that support integrated planning and performance evaluation. The activity promoted sustainable building practices and more efficient use of materials and energy.



## Smart City Development through Geospatial Technologies

The programme highlighted the role of GIS, remote sensing and geospatial technologies in smart city development. Students learned how spatial data can support urban planning, infrastructure management and public-service delivery. The session demonstrated applications of geospatial tools for mapping and monitoring urban utilities. Participants explored spatial analysis techniques for informed decision-making and efficient resource allocation. The activity showed how location-based information can improve planning, monitoring and management of city systems. Students developed awareness of technology-enabled approaches to sustainable and organized urban growth. The programme supported better integration of land, infrastructure and public-service planning.

**AI-Enabled Urban Infrastructure & Smart Planning Systems**

The programme examined the integration of Artificial Intelligence into urban infrastructure and smart planning systems. Students explored data-driven approaches for managing city services and improving urban decision-making. Applications for transportation, traffic management, energy, water and land-use optimization were discussed. The session demonstrated how AI can improve coordination and operational efficiency in cities. Participants learned how intelligent systems can reduce congestion and improve mobility and service delivery. Efficient use of energy, water and land can contribute to more sustainable urban development. The activity highlighted technology-enabled planning for resilient, responsive and resource-efficient communities.

**Digital Twins for Smart Cities and Infrastructure Management**

The programme focused on Digital Twins for smart-city planning, infrastructure management and operational improvement. Students learned how real-time digital replicas can support simulation, monitoring and predictive maintenance. The event highlighted applications in land-use planning, transportation and public-service management. Participants explored how virtual simulations can improve decision-making before physical interventions are implemented. Digital Twins can also model disaster scenarios and support more effective emergency response planning. The approach promotes efficient infrastructure operation, better resource use and improved urban resilience. Students gained awareness of how digital innovation can connect planning, monitoring and sustainability objectives.


GPS Map Camera
Domara Pocham Pally, Telangana, India
Hcx9+w39 Training Workshop, Institute of Aeronautical Engineering, Domara Pocham Pally, Telangana 500043, India
Lat 17.599947° Long 78.417937°
Thursday, 23/04/2026 12:00 PM
Google

# 12 RESPONSIBLE CONSUMPTION AND PRODUCTION

| Indicator | Value |
|---|---|
| Total solid waste | 65 tons |
| Recycled waste | 20 tons |
| Food waste processed | 36 tons |
| E-waste generated | 1,056 kg |
| Plastic reduction initiatives | Implemented |

The institute manages its solid waste responsibly, recycling a significant share of the total waste generated and processing food waste through composting. Ongoing plastic reduction initiatives and e-waste management practices demonstrate a systematic approach to responsible consumption and production.

## Activities Organised:

**Eco-Friendly Ganesha Distribution**

Promoting eco-friendly Ganesha idols encourages responsible use of materials and reduces environmentally harmful practices associated with conventional idols.

IARE organized an Eco-Friendly Ekadristi Ganesha programme. All the staff and students of IARE actively participated in the event. Students successfully made Ganesha idols and distributed them as part of the Ganesh Chaturthi celebrations, promoting awareness about the importance of using eco-friendly Ganesha idols. Conventional idols are often made from clay, Plaster of Paris, plastic, and cement, and may be decorated with toxic paints. After immersion, these materials may not completely dissolve in water, leading to water pollution. A total of 50 biodegradable Ganesha idols were distributed, emphasizing environmental sustainability.

# 13 CLIMATE ACTION

| Indicator | Value |
|---|---|
| Solar energy usage | Implemented |
| Energy audits & smart monitoring | Implemented |
| Sustainability reporting | Practiced |
| Carbon reduction measures | Implemented |

Climate action at IARE is anchored in solar energy adoption, regular energy audits, and smart monitoring systems that together support carbon reduction. Transparent sustainability reporting practices ensure accountability and continuous improvement in the institute's climate response.

## Activities Organised:

**National Pollution Control Day – Clean Air, Green Earth: A Step Towards Sustainable Living**

The main objective of National Pollution Control Day – "Clean Air, Green Earth: A Step Towards Sustainable Living" is to raise awareness about the harmful effects of air, water, and land pollution, promote pollution prevention and environmental conservation, and encourage students to adopt sustainable practices and responsible lifestyles for a cleaner, greener, and healthier environment. Pollution Day was celebrated in our college with the aim of creating awareness among students about environmental pollution and its harmful effects on human life and nature. The program began with an inaugural address by Dr. V. Padmanabha Reddy, who emphasized the importance of protecting the environment for future generations. A lecture was delivered by an environmental expert, Dr. Shikha Kumari Pandey, who explained the causes of pollution and suggested practical solutions to reduce it in daily life. A tree plantation drive was also conducted, encouraging students to adopt eco-friendly practices. The program concluded with a pledge taken by all participants to reduce pollution and contribute towards a clean and green environment. The celebration was informative and inspiring, motivating students to become responsible citizens and protect the environment.


**Applications of Automatic Weather Stations in Modern Environmental Monitoring**

The programme introduced Automatic Weather Stations as tools for real-time environmental and climate monitoring. Students learned about AWS components, operation and the measurement of key meteorological parameters. The activity demonstrated how accurate weather data can support environmental studies and climate analysis. Participants explored the use of historical and real-time data for forecasting and early warning systems. The session highlighted applications in disaster preparedness and risk mitigation for extreme weather events. Students gained practical awareness of data-driven approaches to understanding changing environmental conditions. Reliable meteorological information can support better planning of water, land and urban resources.


**Hackathon - Hack4Good: Tech Solutions for a Sustainable Planet**

Hack4Good focused on using technology and innovation to address environmental and sustainability challenges. Students developed solutions related to climate action, clean energy, responsible resource use and environmental protection. The activity provided hands-on experience in coding, designing and developing sustainability projects. Participants connected technical solutions with the UN Sustainable Development Goals and environmental priorities. Teamwork and interdisciplinary collaboration supported multi-dimensional approaches to sustainability challenges. Interaction with mentors and industry professionals provided exposure to sustainable technologies. The hackathon strengthened problem-solving, communication, presentation and responsible-innovation skills.

# 14 LIFE BELOW WATER

| Indicator | Value |
|---|---|
| Wastewater reuse & treatment | 80% |
| Water conservation practices | Implemented |
| Pollution prevention measures | Implemented |

Water stewardship extends to responsible reuse and treatment of wastewater at a high rate, supported by conservation practices and pollution prevention measures that safeguard downstream water bodies and aquatic ecosystems from campus-linked discharge.

# 15 LIFE ON LAND

| Indicator | Value |
|---|---|
| Total land area | 10 acres |
| Green area | 5 acres |
| Trees planted | 10,080 saplings |
| Existing trees | 556+ |
| Green campus initiatives | Implemented |

With half of its total campus area maintained as green space and thousands of saplings planted, IARE has made substantial commitments to terrestrial ecosystem preservation. A thriving population of established trees complements ongoing green campus initiatives aimed at enhancing biodiversity.

## Activities Organised:

**Tree Plantation program**

The main objectives of Tree Plantation Program are to raise awareness about the importance of trees, promote environmental conservation, encourage afforestation, and foster a sense of responsibility towards the environment among participants.

Tree Plantation Program was observed with great enthusiasm at the Institute of Aeronautical Engineering to promote environmental awareness and encourage sustainable practices among students. The event highlighted the importance of trees in maintaining ecological balance and combating climate change. Students actively participated in planting saplings across the campus, including medicinal plants, flowering plants, and shade-giving trees. The collective effort reflected the college's commitment to environmental responsibility and community service. Tree Plantation program 2025 was successfully conducted and achieved its objectives. The programme instilled a sense of responsibility among students towards nature and contributed positively to making the campus greener and healthier.

# 16 PEACE, JUSTICE AND STRONG INSTITUTIONS

| Indicator | Value |
|---|---|
| Transparent governance | Practiced |
| Inclusive policies | Implemented |
| Institutional ethics & compliance | Maintained |
| Regulatory adherence | Maintained |

IARE upholds transparent governance structures supported by inclusive policies, institutional ethics, and strict regulatory adherence. These practices ensure accountability across academic and administrative functions, contributing to strong and credible institutional systems.

## Activities Organised:

**Start-up Legal & Ethical Steps**

The “Start-up Legal & Ethical Steps” session was conducted on 05 January 2026 to create awareness among students and aspiring entrepreneurs about the legal and ethical aspects of establishing and managing a startup. The session focused on business registration, legal structures, contracts, intellectual property protection, regulatory compliance, data privacy, financial responsibilities, and ethical business practices**.** Participants gained insights into the importance of complying with applicable laws and maintaining transparency, accountability, and responsible business practices. The session helped participants understand the legal considerations involved in starting and operating a sustainable and credible venture.

## Ethical AI in Cybersecurity

The “Ethical AI in Cybersecurity” programme was conducted on 13 September 2025 to create awareness about the responsible and ethical use of Artificial Intelligence in cybersecurity. The session focused on AI-driven threat detection, cyber-attack prevention, data privacy, responsible AI practices, security risks, and ethical considerations in the use of intelligent systems. Participants gained insights into how AI can strengthen cybersecurity while ensuring fairness, transparency, accountability, and protection of sensitive information. The programme encouraged students to adopt responsible approaches to AI and cybersecurity and enhanced their understanding of emerging challenges in the digital environment.


## Privacy Preserving Public Auditing for Secure Cloud Storage Using Agentic AI

The “Privacy Preserving Public Auditing for Secure Cloud Storage Using Agentic AI” programme was conducted on 18 December 2025 to enhance awareness of secure cloud computing, data privacy, and emerging Agentic AI technologies. The session focused on privacy-preserving mechanisms, public auditing, cloud data security, data integrity, access control, and the role of AI agents in strengthening security frameworks**.** Participants gained insights into the challenges associated with protecting sensitive information stored in cloud environments and explored intelligent approaches for secure and reliable data management. The programme highlighted the importance of privacy, trust, security, and responsible AI in developing robust digital infrastructure.

# 17 PARTNERSHIPS FOR THE GOALS

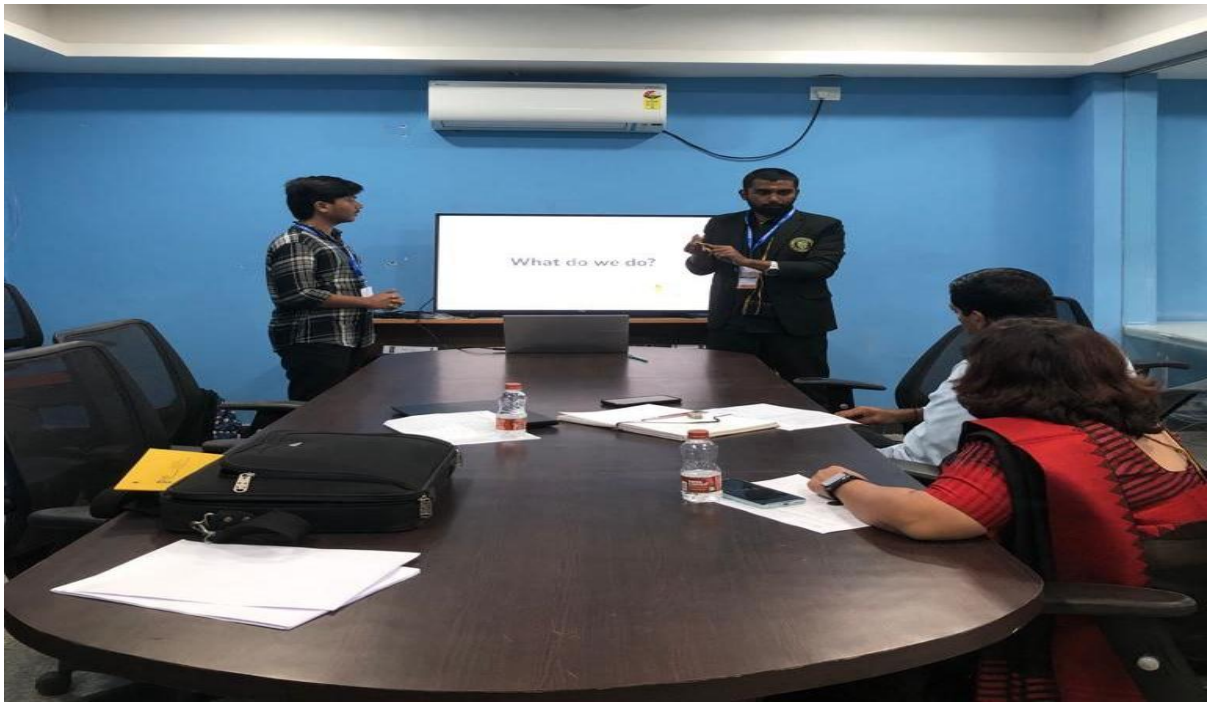
| Indicator | Value |
|---|---|
| Collaborations | NGOs, community organizations & industry |
| Active participation in SDG initiatives | Yes |
| Government compliance frameworks | Followed |

Recognizing that sustainable development requires collective action, IARE actively collaborates with NGOs, community organizations, and industry partners. Its participation in SDG-aligned initiatives and adherence to government compliance frameworks reflect a partnership-driven approach to achieving the Sustainable Development Goals.

## Activities Organised:

### Panel Discussion with Startup Ecosystem Enablers

The “Panel Discussion with Startup Ecosystem Enablers” was conducted on 12 March 2026 to provide students and aspiring entrepreneurs with practical insights into the startup ecosystem. The panel discussion focused on startup development, incubation, mentoring, funding opportunities, innovation support, market access, networking, and challenges faced by emerging entrepreneurs**.** Participants interacted with ecosystem enablers and gained valuable perspectives on converting ideas into viable ventures and accessing available support mechanisms. The discussion encouraged students to explore entrepreneurship, build meaningful networks, and leverage ecosystem resources for startup growth.



## Panel Discussion with Regional/National Startup Ecosystem Enablers

The “Panel Discussion with Regional/National Startup Ecosystem Enablers” was conducted on 10 August 2026 to connect students and aspiring entrepreneurs with key stakeholders from the wider startup ecosystem. The discussion covered innovation, entrepreneurship, incubation, acceleration, funding, intellectual property, mentorship, market linkages, government initiatives, and opportunities for scaling startups. Panel members shared practical experiences, industry perspectives, and guidance on overcoming common challenges faced by entrepreneurs. The interactive session enabled participants to understand the regional and national startup landscape, identify relevant support opportunities, and develop stronger entrepreneurial strategies for building and scaling innovative ventures.

# 5. RESEARCH AND INNOVATION HIGHLIGHTS

Research and innovation form a critical pillar of IARE's institutional strategy, directly supporting SDG 9 (Industry, Innovation and Infrastructure) while also contributing to SDG 8 (Decent Work and Economic Growth). The table below summarises key research metrics for the reporting period.

| Metric | Value |
|---|---|
| Patents Published | 221 |
| Patents Granted | 21 |
| Sponsored Research Funding | ₹75 Lakhs |
| Consultancy Projects | 3 |
| Consultancy Revenue | ₹4.89 Lakhs |

The volume of patents published relative to those granted indicates a robust pipeline of ongoing innovation activity, with a healthy proportion progressing through to grant status. Sponsored research funding of ₹75 lakhs, together with active consultancy engagements, reflects growing industry confidence in the institute's research capabilities and infrastructure for innovation and incubation.

### Research Publications:

The following table presents the research publications and relevant SDGs.

| Title | Authors | Year | Scopus Source title | Volume | Pages | Sustainable Development Goals (2025) |
|---|---|---|---|---|---|---|
| Diabetic Retinopathy Detection Using Deep Learning | Sucharitha, G.\| Sreeja, G.\| Anil, P.\| Mohanty, S.N.\| Danish, S.K. | 2026 | Lecture Notes of the Institute for Computer Sciences, Social-Informatics and Telecommunications Engineering, LNICST | 620 | 234-248 | SDG 3 |
| Solar radiation powered biodiesel synthesis using C&D waste catalyst – a novel approach | Geetha, N.K.\| Chinta, S.\| Dongre, G.\| Balamurugan, S.\| Manoj Prabhakar, B.S. | 2026 | Proceedings of the Institution of Mechanical Engineers, Part E: Journal of Process Mechanical Engineering | 240 | 711-725 | SDG 7\| SDG 9\| SDG 11\| SDG 12 |
| Navigating the Bio-Digital Revolution: AI's Role in Achieving Sustainable Development Goals | Aravinda, K.\| Rangaraju, T.\| Singla, A.\| Parmar, A.\| Ziara, S.\| Devisingh | 2025 | Proceedings - International Conference on Next Generation Communication and Information Processing, INCIP 2025 | - | 262-267 | SDG 1\| SDG 2\| SDG 3\| SDG 4\| SDG 5\| SDG 6\| SDG 7\| SDG 8\| SDG 9\| SDG 10\| SDG 11\| SDG 13\| SDG 15 |

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|---|---|---|---|---|---|---|
| Assessment of the future of FinTech in developing economies: Automated and enhanced functional challenges | Mittapalli, V.\| Kumar, G.A.\| Reddy, N.C.S.\| Nalajala, P.\| Dasore, A. | 2025 | AIP Conference Proceedings | 3342 | - | SDG 1\| SDG 8 |
| Empowering Cyclone Preparedness: An Integrated GIS-AHP based Site Shelter Suitability Mapping of Visakhapatnam, Andhra Pradesh | Sudha Rani, P.\| Suresh Kumar, R.\| Ramanjaneyulu, B.\| Mahesh Babu, K. | 2025 | Disaster Advances | 18 | 44-55 | SDG 11 |
| Seismic response assessment of steel frame building with cross braced systems in different locations of multi-storey building | Vivek Kumar, C.\| Swetha, R.R.\| Manoj, T.\| Preetham, K. | 2025 | Procedia Structural Integrity | 70 | 97-104 | SDG 11 |
| Blockchain Technology Application in Electronic Engineering | Dharmireddi, S.\| Richa\| Aswini, K.\| Kulshrestha, S.\| Nagpal, A.\| Dekkati, S. | 2025 | Recent Trends in Engineering and Science for Resource Optimization and Sustainable Development | - | 139-142 | SDG 11 |
| State-of-the-Art and Upcoming Trends in IoT-Enabled Smart Cities | Goswami, S.\| Nassa, V.K.\| Hussain, S.S.\| Anandhi, R.J.\| Gupta, L.R.\| Bikash, P. | 2025 | Recent Trends in Engineering and Science for Resource Optimization and Sustainable Development | - | 210-213 | SDG 11 |
| Real-Time Traffic Control Using Artificial Intelligence in Smart Cities | Tyagi, S.\| Kathuria, S.\| Rajashekar, N.\| Mohammed, A.F.K.\| Rakesh, S.\| Lakhanpal, S.\| Singh, C. | 2025 | Recent Trends in Engineering and Science for Resource Optimization and Sustainable Development | - | 101-104 | SDG 11 |
| Semantic Segmentation of Satellite Images using various U-Net Architectures: A Comparison Study | Gonthina, N.\| Narasimha Prasad, L.V. | 2025 | International Journal of Computational and Experimental Science and Engineering | 11 | 2298-2312 | SDG 11 |
| Using IOT and ITV to Connect, Monitor, and Automate Common Areas Used by Households | Rai, S.K.\| Bhushanwar, K.\| Krishna, M.H.\| Bhushan, K.\| Sethi, G.\| Jethabhai, P.Y.K. | 2025 | Recent Trends in Engineering and Science for Resource Optimization and Sustainable Development | - | 181-184 | SDG 11 |
| Classification of Environmental and Urban Sounds Using Deep Learning Techniques | Reddy, B.S.\| Chowdary, D.M.\| Srinivas, R.\| Rahmani, M.O. | 2025 | 4th IEEE International Conference on Distributed Computing and Electrical Circuits and Electronics, ICDCECE 2025 | - | - | SDG 11 |

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|---|---|---|---|---|---|---|
| Advanced AI Techniques for Restoring Historical Documents and Photographs with Generative Adversarial and Diffusion Models for Cultural Heritage Preservation | Manjunatha\| Srimani, P.S.\| Gupta, M.\| Suman, B.\| Mohammed, M.W.\| Divetia, K.\| Arun, V. | 2025 | 2025 International Conference on Cognitive Computing in Engineering, Communications, Sciences and Biomedical Health Informatics, IC3ECSBHI 2025 | - | 735-740 | SDG 11 |
| Earthquake Risk Severity Prediction and Disaster Management using a Hybrid ARIMA-LSTM Model | Agone, V.M.\| Rao, P.\| Saini, P.\| Yokar, N.N.\| Kaushal, R.K.\| Pran, S.G. | 2025 | Proceedings of 8th International Conference on Computing Methodologies and Communication, ICCMC 2025 | - | 1439-1444 | SDG 11 |
| A novel approach to real-time environmental monitoring and automated air quality enhancement using smart nanostructured sensors with adaptive data processing | Gowda, V.D.\| Suneel, S.\| Prasad, V.N.\| Jagtap, M.M.\| Prasad, K.D.V.\| Ramaswamy, S.\| Hariram, V. | 2025 | Nanotechnology for Environmental Engineering | 10 | - | SDG 11 |
| Revolutionizing Weather Forecasting: Harnessing Machine Learning and Big Data in Upcoming Technologies | Mallikarjuna, B.\| Tiwari, V. | 2025 | Communications in Computer and Information Science | 2195 | 91-100 | SDG 11 |
| Machine-Learning-Based Seismic Hazard Assessment: Implications for Site-Specific Effects | Regalla, S.R.\| Mittamidi, M.R.\| Samarthi, P.\| Vispute, P.P.\| Nanna, S.R. | 2025 | Lecture Notes in Civil Engineering | 704 | 99-112 | SDG 11 |
| Seismic response assessment of steel frame building with cross braced systems in different locations of multi-storey building | Vivek Kumar, C.\| Ramya Swetha, R.\| Manoj, T.\| Preetham, K. | 2025 | IFAC-PapersOnLine | 59 | 97-104 | SDG 11 |
| Integrative GIS-AHP Techniques for Flood Susceptibility Analysis in Nashik, Maharashtra | Madhusudhan, R.M.\| Bhavani, G.\| Avinash, G.M.\| Sushmanth, J.\| Sri, R.N.\| Praveen, S. | 2025 | Disaster Advances | 18 | 24-37 | SDG 11 |
| AI-Driven Predictive Analytics for Early Disaster Warning Systems | Madhusudhan Reddy, M.\| Sandhya Rani, R.\| Padma Priya, K.T.\| Praveen Goud, U.\| Ghongade, M.D. | 2025 | Lecture Notes in Civil Engineering | 704 | 85-98 | SDG 11 |
| Comprehensive Shear Wave Velocity Analysis for Seismic | Abhishek Kumar, G.\| Madhusudhan | 2025 | Lecture Notes in Civil Engineering | 571 | 259-275 | SDG 11 |

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|---|---|---|---|---|---|---|
| Characterization: A Case Study in Warangal District | Reddy, M.\| Kalyan Kumar, G. | | | | | |
| Future climate projections and sustainable development: The impact of Urban Heat Islands and land use land cover in Telangana's GHMC area | Kishore Kumar Reddy, P.\| Mohan Babu, C.G.\| Padma Priya, K.T.\| Venkata Rami Reddy, Y.\| Vishnu Vardhan Reddy, L.\| Madhusudhan Reddy, M.\| Reddy, S.A.T.\| Sheik, G.\| Kumar, K.R. | 2025 | Indian Journal of Engineering | 22 | - | SDG 11\| SDG 13 |
| Designing Multifunctional Materials for Sustainable Construction: A Review | Kumari, S.\| Krishna, G.R.\| Abhishek, K.\| Pathak, B.N.\| Khayoon, A.T.\| Dutt, A.\| Anandhi, R.J.\| Chandra, P.K. | 2025 | Lecture Notes in Civil Engineering | 601 | 60-71 | SDG 12 |
| Characterization of vinyl silane–treated areca nut woven fiber and bronze filler toughened polyester composite | Balguri, P.K.\| Latha, A.\| Kaur, L.\| Verma, R.\| Kumar, D.S.\| Ramasree, S.\| Krishna, A.R.\| Soudagar, M.E.M.\| Nagabhooshanam, N. | 2025 | Biomass Conversion and Biorefinery | 15 | 14429-14439 | SDG 13 |
| Analysis of convolutional-based variational autoencoders for privacy protection in realtime video surveillance | Sivalakshmi, M.\| Prasad, K.R.\| Bindu, C.S. | 2025 | Expert Systems with Applications | 274 | - | SDG 16 |
| Future trends in IoT, control systems, and remote sensing integration for precision agriculture | Dankan Gowda, V.\| Kavitha, B.C.\| Suneel, S.\| Suganthi, N.\| Mohanrao Jagtap, M.M. | 2025 | Integrating Intelligent Control Systems With Sensor Technologies | - | Jan-28 | SDG 2 |
| Detecting Soil Erosion Patterns Using Convolutional Neural Networks | Kalyani, B.J.D.\| Modadugu, J.K.\| Kumar, C.N.S.\| Neelima, S.\| Deepika, N.M.\| Narendran, R. | 2025 | Journal of Theoretical and Applied Information Technology | 103 | 6785-6792 | SDG 2 |
| Design and Fabrication of All Terrain Unmanned Aerial Vehicle (ATUAV) | Pande, S.D.\| Govardhan, D. | 2025 | AIP Conference Proceedings | 3259 | - | SDG 2 |
| AI-Assisted Fine-Grained Plant Disease Diagnosis from Smartphone Images | Anandhi, R.J.\| Sreenivasulu, D.\| Jain, A.\| Arun, V.\| Jabbar, F.D.\| Boddu, B.\| Divetia, K. | 2025 | 2025 International Conference on Cognitive Computing in Engineering, Communications, | - | 730-734 | SDG 2 |

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|---|---|---|---|---|---|---|
| | | | Sciences and Biomedical Health Informatics, IC3ECSBHI 2025 | | | |
| TLNet: A Novel Model to Detect Wheat Leaf Diseases using Deep Neural Network Architecture | Nagaraju, M.\| Jahnavi, G.\| Sri Vaishnavi, V.\| Vaishnavi, M. | 2025 | 3rd International Conference on Intelligent Data Communication Technologies and Internet of Things, IDCIoT 2025 | - | 1394-1399 | SDG 2 |
| An enhanced convolutional neural network architecture for semantic segmentation in high-resolution remote sensing images | Gonthina, N.\| Narasimha Prasad, L.V. | 2025 | Discover Computing | 28 | - | SDG 2\| SDG 11 |
| Smart Agriculture: Explainable Deep Learning Approach with Gradient-Weighted Class Activation Mapping | Shaik, M.K.\| Prasad, M.L.\| Sowmya Reddy, Y.\| Asif, S.\| Kalpana, D.\| Reddy, P.C.S. | 2025 | 2024 International Conference on Computer, Electronics, Electrical Engineering and their Applications, IC2E3 2024 | - | - | SDG 2\| SDG 13 |
| IoT-Enabled Smart Irrigation System with ABiLSTM for Optimized Water Management and Crop Yields | Chaturvedi, A.\| Rao, P.\| Venkata Maruti Prasad, S.\| Malini, T.\| Prabagar, S.\| Bharathi, K. | 2025 | 3rd International Conference on Integrated Circuits and Communication Systems, ICICACS 2025 | - | - | SDG 2\| SDG 6 |
| Maize Seed Classification Using Convolutional Block Attention Networks | Nennuri, R.\| Geetha, N.\| Prakash, P.B.\| Kedhareswar, M.R.\| Sunitha, G.\| Kumar, N.M. | 2025 | Lecture Notes in Networks and Systems | 1229 | 454-461 | SDG 2\| SDG 8 |
| A Systematic Review of Blockchain Application in Smart and Sustainable Agriculture | Kumar, G.R.\| Poluru, R.K.\| Durgadevi, S.\| Viswanatha Reddy, P.\| Dinesh Kumar, K.\| Sriharsha, A.V. | 2025 | Lecture Notes in Networks and Systems | 1231 | 499-507 | SDG 2\| SDG 8\| SDG 12 |
| Leveraging YOLOv8 for mitigating human-wildlife conflict: A comprehensive solution for agricultural sustainability using deep learning | Mohanty, R.K.\| Mounika, G.\| Rama Padmaja, C.V.\| Lalitha, E. | 2025 | Adaptive Strategies for Green Economy and Sustainability Policies | - | 457-482 | SDG 2\| SDG 8\| SDG 12\| SDG 15 |
| Unified approach for accurate brain tumor Multi-Classification and segmentation through fusion of advanced methodologies | Karthik, A.\| Kumar Sahoo, S.\| Kumar, A.\| Patel, N.\| Chinnaraj, P.\| Phaneendra Maguluri, L.\| | 2025 | Biomedical Signal Processing and Control | 100 | - | SDG 3 |

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| | shuaib, M.\| Rajaram, A. | | | | | |
| A hybrid framework for colorectal cancer detection and U-Net segmentation using polynetDWTCADx | Raju, A.S.N.\| Venkatesh, K.\| Rajababu, M.\| Gatla, R.K.\| Eid, M.M.\| Ali, E.\| Titova, N.\| Sharaf, A.B.A. | 2025 | Scientific Reports | 15 | - | SDG 3 |
| Colorectal cancer detection with enhanced precision using a hybrid supervised and unsupervised learning approach | Raju, A.S.N.\| Venkatesh, K.\| Gatla, R.K.\| Konakalla, E.P.\| Eid, M.M.\| Titova, N.\| Ghoneim, S.S.M.\| Ghaly, R.N.R. | 2025 | Scientific Reports | 15 | - | SDG 3 |
| Expedited Colorectal Cancer Detection Through a Dexterous Hybrid CADx System with Enhanced Image Processing and Augmented Polyp Visualization | Raju, A.S.N.\| Venkatesh, K.\| Gatla, R.K.\| Eid, M.M.\| Flah, A.\| Slanina, Z.\| Ghaly, R.N.R. | 2025 | IEEE Access | 13 | 17524-17553 | SDG 3 |
| Design, theoretical approaches and new framework of pyrazolo[3,4-d]pyrimidine as potent anticancer agents: Efficient synthesis, ADME-T and molecular docking | Reddy, P.S.\| Sekhar, T.\| Thriveni, P.\| Kumar, G.M.\| Rao, A.T.\| Raish, M.\| Giridhar, T.\| Srinivasulu, G. | 2025 | Results in Chemistry | 14 | - | SDG 3 |
| Effects of objects and image quality on melanoma classification using Spatio Temporal Joint graph Convolutional Network | Suryanarayana, V.\| Prabhu Shankar, B.\| Burri, R.D.\| Priyanka, T.\| Saidala, R.K.\| Sasi Kumar, A.\| Chauhan, P.\| Patni, J.C. | 2025 | Biomedical Signal Processing and Control | 101 | - | SDG 3 |
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| Cyber-Resilient Detection of Power Quality Events With NSCT and PCA-SVM | Chatterjee, S.\| Sinha, P.\| Gatla, R.K.\| Kumar, D.G.\| Rao, D.S.N.M.\| Paul, K.\| Ustun, T.S.\| Onen, A. | 2025 | IEEE Access | 13 | 72292-72313 | SDG 7 |
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| Experimental Investigation and Optimization of Stir Casting Parameters for Magnesium Hybrid Metal Matrix Composites Reinforced with Silicon Carbide and Rice Husk Ash | Velmurugan, K.V.\| Dwivedi, Y.D.\| Kumar, R.A.\| Velumayil, R.\| Chandramauli, A.\| Madhavarao, S.\| Vijayan, V. | 2025 | AIP Conference Proceedings | 3270 | - | SDG 9 |
| Transfer Learning-Driven CNN Architectures for Automated Defect Detection in Printed Circuit Boards | Gundlapalle, R.\| Nagpal, A.\| Rangaiah, Y.P.\| Chandini, P.\| Albawi, A.\| Kalyani, S.\| Agrawal, P. | 2025 | 2025 International Conference on Cognitive Computing in Engineering, Communications, Sciences and Biomedical Health Informatics, IC3ECSBHI 2025 | - | 770-775 | SDG 9 |
| High-temperature mechanical behavior of ultrafine-grained metals: Insights from in situ TEM compression experiments | Devaiah, B.K.\| Redd, K.R.R.M.\| Srivastava, A.P.\| Dutt, A.\| Khan, F.A.\| Tyagi, L.K. | 2025 | AIP Conference Proceedings | 3263 | - | SDG 9 |
| Green manufacturing and traditional material processing: Balancing economic and environmental concerns | Jayaram, N.\| Ramya, N.S.\| Srivastava, A.P.\| Nagpal, L.A.\| Gupta, N.\| Singh, S. | 2025 | AIP Conference Proceedings | 3263 | - | SDG 9 |
| Research on Big Data for “Industry 4.0” Cyber-Physical Systems | Singh, A.\| Saxena, N.K.\| Alekhya, J.\| Reddy, U.\| Thethi, H.P.\| Acharjee, P.B. | 2025 | Recent Trends in Engineering and Science for Resource Optimization and Sustainable Development | - | 160-163 | SDG 9 |
| Optimization of Friction Stir Welding Process Parameters for Joining of 3D Printed Specimen | Singaravel, B.\| Devaraj, S.\| Niranjan, T.\| Sharma, S.K. | 2025 | Lecture Notes in Mechanical Engineering | - | 181-190 | SDG 9 |
| Integrating Artificial Intelligence in Project Management Challenges and Opportunities | Reddy, U.\| Rangaiah, Y.P.\| Nagpal, A.\| Meheta, A.\| Karuna, G.\| Adnan, K. | 2025 | Proceedings - International Conference on Next Generation Communication and | - | 56-60 | SDG 9 |

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| | | | Information Processing, INCIP 2025 | | | |
| Enhancing Surface Integrity of Al–Cu–Ni Composites with FeNb Reinforcement Through Laser Surface Melting | Pulisheru, K.S.\| Bannaravuri, P.K.\| Rao, G.B.\| Rao, K.C.H.A.\| Rao, P.S.\| Meenuga, S.R.\| Birru, A.K.\| Ravi, T. | 2025 | Transactions of the Indian Institute of Metals | 78 | - | SDG 9 |
| Future Battlefield System Using Graph Database and Internet of Things (IoT) | Chowdhary, H.\| Gupta, P.\| Swathi, B.\| Kansal, L.\| Acharjee, P.B. | 2025 | Recent Trends in Engineering and Science for Resource Optimization and Sustainable Development | - | 189-192 | SDG 9 |
| AI engineering for the best sustainable practices towards social applications | Chaitanya, A.K.\| Krishna, N.J.\| Manideep, M.\| Reddy, Y.M.\| Sucharitha, G. | 2025 | Artificial Intelligence Technologies for Engineering Applications | - | 93-103 | SDG 9 |
| Bird Strike Impact Strength Analysis of Aircraft Wing Embedded with Cellular Composite Structures | Sudhir Sastry, Y.B.\| Kejriwal, N.\| Prasad, V.V.S.H.\| Kulkarni, S. | 2025 | Springer Proceedings in Materials | 83 | 225-246 | SDG 9 |
| Industrial Wastes and Their Utilization in the Manufacturing of Interlocking Blocks | Reddy, P.S.\| Anand Goud, K. | 2025 | Lecture Notes in Civil Engineering | 570 | 293-299 | SDG 9 |
| Performance of cryogenic treatment and soaking periods in textured inserts | Singaravel, B.\| Devaraj, S.\| Niranjan, T.\| Divya, C. | 2025 | Materials and Manufacturing Processes | 40 | 1703-1712 | SDG 9 |
| Exploring diverse network threats on cyber-physical systems | Rajendra Prasad, K.\| Raja Kumar, R.\| Suneel, S.\| Nuvvusetty, R.\| Nishitha, D. | 2025 | Journal of Discrete Mathematical Sciences and Cryptography | 28 | 2561-2571 | SDG 9 |
| Dynamic Lissajous patterns for real time identification and localization of power quality disturbance | Sinha, P.\| Snehalika, S.\| Gatla, R.K.\| Shashavali, P.\| Kumar, D.G.\| Kasireddy, I.\| Naga Malleswara Rao, D.S.\| Shuaibu, H.A.\| Ustun, T.S. | 2025 | Scientific Reports | 15 | - | SDG 9 |
| Industrial Image Processing-IoT and Big Data Sensor Value Analysis | Jayanthi, M.\| Suneel, S.\| Gupta, M.\| Albawi, A.\| Ramesh, B.\| Yadav, D.K. | 2025 | Proceedings - International Conference on Next Generation Communication and Information Processing, INCIP 2025 | - | 84-88 | SDG 9 |
| Optimization of process parameters for 3D-printed objects | Sudamsetti, S.\| Thalla, S.N.\| Banda, S.K.\| Chauhan, L.K. | 2025 | AIP Conference Proceedings | 3342 | - | SDG 9 |

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| using ABS and PLA materials to improve surface finish | | | | | | |
| Monitoring the Development of the IoT Concept in Various Application Domains | Mishra, A.B.\| Panda, S.R.\| Anitha, G.\| Reddy, U.\| Sethi, G.\| Acharjee, P.B. | 2025 | Recent Trends in Engineering and Science for Resource Optimization and Sustainable Development | - | 177-180 | SDG 9\| SDG 11 |
| Implementing GIS and Analytical Hierarchy Process for Cyclone Shelter Mapping of Vijayawada, Andra Pradesh: A Weighted Overlay Approach | Krishna Reddy, M.\| Bhavani, B.\| Bhogayya Naidu, G.\| Praveen, S.\| Kallakunta, R.K.\| Degala, R. | 2025 | Disaster Advances | 18 | Jan-13 | SDG 9\| SDG 11 |
| Probabilistic Seismic Hazard Analysis of Himachal Pradesh, India: Using Updated Earthquake Catalogue | Janakai, V.\| Madhusudhan Reddy, M.\| Ramanjaneyulu, B.\| Vittalaiah, A.\| Ravi Kumar, K. | 2025 | Lecture Notes in Civil Engineering | 571 | 61-72 | SDG 9\| SDG 11 |
| Zero-waste manufacturing and waste minimization strategies for sustainable production | Sriramaiah, S.P.\| Ramya, N.S.\| Dwivedi, S.P.\| Nagpal, A.\| Divetia, K.\| Pahwa, S. | 2025 | AIP Conference Proceedings | 3263 | - | SDG 9\| SDG 12\| SDG 13 |

## 6. CONSOLIDATED KEY HIGHLIGHTS 2025-26

The following table consolidates the institute's headline sustainability achievements for the 2025-26 reporting period, drawn across environmental, social, and research dimensions.

| Highlight | Figure |
|---|---|
| Saplings Planted | 10,080 |
| Renewable Energy Generated | 1,68,418 kWh |
| Total Electricity Consumed | 6,95,696 kWh |
| Wastewater Treated | 80% |
| Total Solid Waste Recycled | 65 Tons (20 Tons recycled) |
| Students with Inclusive Access | 5,689 |
| Community Initiatives | 12 |
| Patents Published | 221 |
| Research Funding Received | ₹75 Lakhs |

# 7. CROSS-CUTTING ANALYSIS AND IMPACT ASSESSMENT

## Environmental Sustainability

IARE's environmental performance is anchored by its 160 kWp renewable energy installation, which offsets a meaningful share of the institute's 6,95,696 kWh annual electricity consumption. Combined with an 80% LED adoption rate and 20% BLDC fan usage, the institute has made tangible progress in reducing its energy footprint. Water stewardship is similarly strong, with 80% wastewater treatment and rainwater harvesting infrastructure connected across 1,16,588 square feet of campus area.

## Social Inclusion and Access

With 36.22% female representation, significant SC/ST/OBC enrolment (4,118 students), and targeted financial support reaching 508 economically backward students, IARE demonstrates a strong institutional commitment to inclusive access. The presence of 1,832 students from outside the state further reflects the institute's broad-based appeal and inclusive admission practices.

## Research, Innovation and Economic Contribution

The institute's research output — 221 published patents, 21 granted patents, and ₹75 lakhs in sponsored research funding — positions IARE as an emerging contributor to applied research and industry-linked innovation, supporting both SDG 8 and SDG 9 objectives.

## Community and Governance

Twelve community initiatives, encompassing tree plantation drives involving 144 students and social activities engaging 1,637 students, demonstrate active community outreach. This is underpinned by transparent governance practices and institutional ethics compliance that support SDG 16 objectives.

# 8. CHALLENGES AND WAY FORWARD

While IARE has demonstrated strong performance across multiple SDG indicators, certain areas present opportunities for continued improvement:

- International student enrolment remains at zero, indicating scope for expanded global outreach and international collaboration programmes.
- Ph.D. scholarship numbers (1 full-time, 0 part-time) remain modest relative to the institute's overall research ambitions, suggesting an opportunity to expand doctoral research capacity.
- While 80% of wastewater is treated, achieving near-full treatment coverage would further strengthen SDG 6 performance.
- Continued investment in renewable energy capacity could help narrow the gap between the 1,68,418 kWh generated and the 6,95,696 kWh consumed annually.

Going forward, IARE intends to strengthen its doctoral research programmes, expand renewable energy capacity, deepen international academic partnerships, and continue scaling community engagement initiatives, in line with its long-term sustainability roadmap.

# 9. CONCLUSION

The SDG annual report 2025-26 affirms IARE's institutional commitment to embedding sustainable development principles across academics, campus operations, research, and community engagement. From renewable energy adoption and water stewardship to inclusive access and a growing research and patent portfolio, the institute's performance across the 17 Sustainable Development Goals reflects a holistic and measurable approach to sustainability.

As IARE continues its journey guided by the philosophy ‘Commitment Today, Sustainable Tomorrow,’ this report serves as both a record of achievement and a foundation for continued progress toward the 2030 Agenda for Sustainable Development.