

REPORT

on

Six Days Faculty Development Programme

:

“Sustainable Engineering: Multidisciplinary Approaches for Resilient Future”

Date : 02nd – 07th June, 2025



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UNIVERSITY

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School of Engineering and Technology

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IEEE Student Branch, CUTM

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The IEEE Computer Society in India

**Centurion University of Technology and Management,
Odisha, India**



2nd June 2025-DAY ONE, 1st SESSION (Time:10:00AM – 11:30AM)

Understand Criminal law in new age and AI Contribution and AI Appreciation

(Adv. Soura Chandra Mohapatra, Senior Advocate, High Court of Odisha, & Prof. Gadadhar Sahoo, Dept, of CSE, IIT (ISM), Dhanbad)

Speaker's profile:

Adv. Soura Chandra Mohapatra is a distinguished Senior Advocate practicing at the High Court of Odisha, with over three decades of legal experience. Known for his expertise in criminal law, constitutional matters, and legal ethics, he has represented numerous landmark cases and contributed significantly to legal reforms in the state. As a Hon'ble Member of the Odisha State Bar Council, he plays a pivotal role in shaping legal education, upholding professional standards, and mentoring young legal practitioners. His insightful perspectives on the intersection of law, technology, and society have made him a sought-after speaker at academic institutions, judicial forums, and policy dialogues. Adv. Soura Chandra Mohapatra is also recognized for his efforts in promoting legal awareness and ethical practices within the legal fraternity and beyond.

Prof. Gadadhar Sahoo is a senior academician and researcher in the Department of Computer Science and Engineering at IIT (ISM), Dhanbad. With extensive teaching and research experience spanning over three decades, he specializes in Artificial Intelligence, Machine Learning, Software Engineering, and Information Systems. Prof. Gadadhar Sahoo has guided numerous Ph.D. scholars and published widely in reputed national and international journals. His work bridges theoretical advancement with practical implementation, making significant contributions to AI applications in industry and governance. A highly respected speaker and academic mentor, Prof. Gadadhar Sahoo is known for his ability to simplify complex technological concepts and promote ethical AI practices. He actively engages in curriculum development and innovation-driven academic outreach across institutions in India.

Objectives:

- To introduce participants to the evolving challenges in criminal law within the context of digital transformation and cybercrime.
- To provide a foundational understanding of the role and applications of Artificial Intelligence across interdisciplinary domains.

- To highlight the ethical, legal, and societal implications of emerging technologies, especially AI.
- To foster awareness among faculty about integrating legal and AI literacy into academic curricula.
- To encourage critical thinking on policy, privacy, and responsible innovation in a tech-driven society.

Outcomes:

- Participants gained clarity on contemporary legal frameworks addressing cybercrime, digital evidence, and privacy laws.
- Faculty developed an understanding of AI's contributions to sectors such as healthcare, education, and governance.
- Attendees reflected on the ethical use of AI and the importance of transparent, bias-free algorithmic systems.
- The sessions enhanced interdisciplinary perspectives, blending legal, technical, and social viewpoints.
- Educators felt better equipped to introduce legal awareness and AI appreciation within engineering and technology education.

Brief Session Summary:

The Faculty Development Programme commenced on 2nd June with a formal inauguration attended by Prof. Supriya Pattanayak, Vice Chancellor, CUTM; Chief Guest Adv. Pitambar Acharya, Advocate General of Odisha; and invited speakers Adv. Soura Chandra Mohapatra and Prof. Gadadhar Sahoo. The Vice Chancellor addressed the gathering, emphasizing the importance of interdisciplinary learning in today's rapidly evolving world. The inaugural session was followed by a talk by Adv. Soura Chandra Mohapatra, who shared critical insights on the theme "Understanding Criminal Law in the New Age." He discussed the impact of digitization on crime, the growing relevance of cyber law, and the need for legal awareness in the academic and professional domains. Prof. Gadadhar Sahoo then delivered an expert lecture on "AI Contribution and AI Appreciation," where he presented the evolution of AI systems and their transformative influence across sectors like healthcare, education, and governance. He emphasized responsible AI practices and encouraged faculty to promote AI literacy across disciplines. **It was a combined session of the School of Law and the School of Engineering and Technology (SOET)..**

Relevant Photographs:







2nd June 2025-DAY ONE, 2nd SESSION (Time:11:45AM – 01:15PM)

The Indian Knowledge System and Biological Science: An Evolution Perspective

(Prof. Chiranjib Chakraborty, Chair Professor, School of Life Science and Biotechnology, Adamas University, Kolkata)

Speaker's profile:

Prof. Chiranjib Chakraborty is a renowned academician and researcher serving as Chair Professor at the School of Life Science and Biotechnology, Adamas University, Kolkata. With an interdisciplinary background spanning molecular biology, bioinformatics, and biotechnology, he has made significant contributions to the fields of genomic science, evolutionary biology, and systems biology. Prof. Chiranjib Chakraborty has published extensively in high-impact journals and has been recognized globally for his research in AI-driven biomedical applications and the integration of traditional knowledge systems with modern biological science. A respected educator and thought leader, he is known for his engaging lectures that bridge ancient Indian knowledge with contemporary scientific paradigms. His work promotes holistic scientific understanding and has inspired a generation of researchers and students in life sciences and allied domains.

Objectives:

- To explore the connection between ancient Indian knowledge systems and modern biological science.
- To provide an evolutionary perspective on life sciences rooted in traditional Indian philosophies and texts.
- To encourage interdisciplinary learning by integrating cultural, philosophical, and scientific viewpoints.
- To highlight the relevance of indigenous knowledge in current biological research and education.
- To inspire participants to adopt holistic approaches in scientific inquiry and pedagogy.

Outcomes:

- Participants developed a broader understanding of how traditional Indian concepts relate to modern biology and evolution.
- Faculty gained insights into integrating cultural heritage and scientific knowledge in classroom teaching.

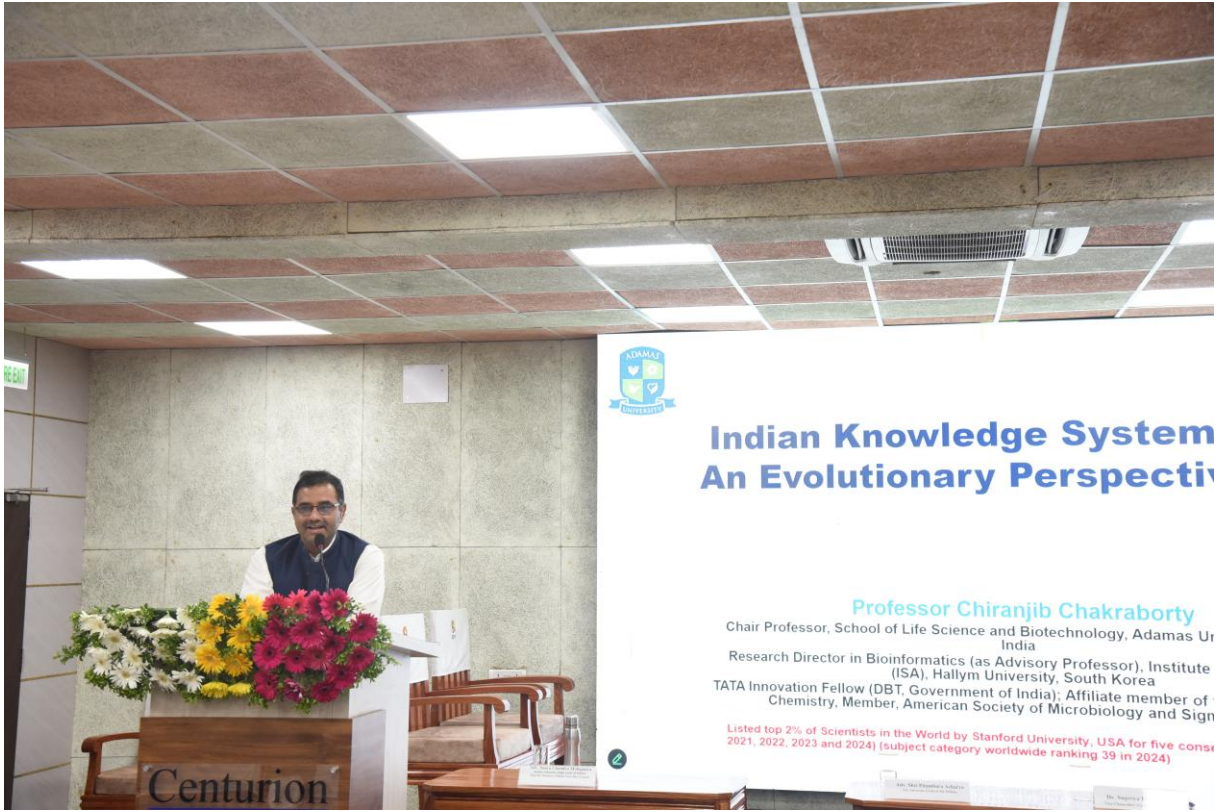
- The session fostered appreciation for indigenous contributions to science and the potential for cross-disciplinary innovation.
- Attendees were encouraged to consider ethical and philosophical dimensions in biological research.
- The lecture sparked interest in further exploration of Indian Knowledge Systems within academic and research contexts.

Brief Session Summary:

Prof. Chiranjib Chakraborty, Chair Professor at Adamas University, Kolkata, presented an enlightening session on “The Indian Knowledge System and Biological Science: An Evolution Perspective.” He explored the deep-rooted connections between ancient Indian philosophical thought and modern biological sciences, offering a multidisciplinary view on the evolution of life and consciousness. Drawing references from classical texts like the Vedas, Ayurveda, and Sankhya philosophy, Prof. Chiranjib Chakraborty illustrated how traditional Indian knowledge anticipated several concepts later validated by modern biology and evolutionary theory. He emphasized the importance of integrating indigenous knowledge systems with contemporary scientific research to foster holistic understanding and innovation. The session also delved into bioethics, genomics, and the cultural dimensions of scientific discovery. Participants were encouraged to reflect on the relevance of culturally rooted knowledge in shaping future research paradigms. His talk reinforced the value of blending heritage and science in academic inquiry and pedagogy. **It was a combined session of the School of Applied Sciences (SOAS) and the School of Engineering and Technology (SOET).**

Relevant Photographs:







2nd June 2025-DAY ONE, 3rd SESSION (Time:02:00PM – 03:30PM)

AI in Earth Observation System

(Dr. Surya Dev Chakraborty, Senior Analyst Mohammed Bin Rashid Space Centre, Dubai)

Number of Participants: 59

Speaker's profile:

Dr. Surya Dev Chakraborty is a seasoned space technology expert currently serving as a Senior Analyst at the Mohammed Bin Rashid Space Centre (MBRSC), Dubai. With a strong academic foundation in Earth observation systems, data analytics, and remote sensing, he has been at the forefront of integrating Artificial Intelligence into satellite imagery and geospatial intelligence. Dr. Surya Dev Chakraborty work focuses on climate monitoring, disaster management, urban mapping, and environmental sustainability using advanced AI-driven models. He has presented his research at numerous international forums and has contributed to several high-impact projects that support regional and global development goals. Known for his interdisciplinary approach and deep technical insight, he actively bridges the gap between data science and Earth system science, making his expertise highly relevant to academic and applied research communities worldwide.

Objectives:

- To introduce participants to the integration of Artificial Intelligence in satellite-based Earth observation systems.
- To explain the role of AI in processing, analyzing, and interpreting large-scale geospatial data.
- To demonstrate real-world applications of AI in climate monitoring, urban planning, and disaster response.
- To highlight the importance of interdisciplinary knowledge in space science, data analytics, and environmental sustainability.
- To encourage faculty and researchers to explore AI-driven methodologies for solving real-world spatial challenges.

Outcomes:

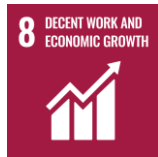
- Participants understood how AI enhances efficiency and accuracy in Earth observation and geospatial analysis.
- Attendees gained insights into tools and techniques used for remote sensing, image classification, and anomaly detection.
- The session fostered awareness about the potential of AI in addressing global environmental and infrastructure challenges.
- Faculty were encouraged to integrate Earth observation and AI topics into academic research and curriculum development.
- The lecture inspired participants to pursue collaborative and interdisciplinary projects in AI, data science, and environmental systems.

Brief Session Summary:

Dr. Surya Dev Chakraborty, Senior Analyst at the Mohammed Bin Rashid Space Centre, Dubai, delivered an insightful session on “AI in Earth Observation System.” He explored how Artificial Intelligence is revolutionizing satellite-based monitoring by enabling efficient analysis of vast geospatial datasets. The talk highlighted practical applications in climate change assessment, disaster management, urban infrastructure planning, and environmental monitoring. Dr. Surya Dev Chakraborty demonstrated how AI techniques such as image classification, anomaly detection, and predictive modeling are being employed to enhance the accuracy and speed of data interpretation. Emphasizing the need for cross-disciplinary expertise, he encouraged faculty to explore AI-powered solutions in Earth sciences and sustainability research. The session offered participants a futuristic view of how space technology and intelligent systems can jointly address global challenges.

Relevant Photographs:





2nd June 2025-DAY ONE, 4th SESSION (Time:03:45PM – 05:15PM)

Emerging AI Trends in 2025 (Virtual Mode)

(Mr. Rajamanickam Antonimuthu, Founder Quality Point Technologies)

Number of Participants: 68

Speaker's profile:

Mr. Rajamanickam Antonimuthu is the Founder of Quality Point Technologies, a technology-driven enterprise focused on software development, AI-based solutions, and digital education tools. With a rich background in computer science and practical experience in web technologies, automation, and data analysis, he has established himself as a thought leader in the application of emerging technologies in real-world scenarios. He is well-known for his work in AI content generation, blogging automation, and technology education, particularly through his popular online platforms and learning resources. Mr. Rajamanickam Antonimuthu actively shares insights on AI trends, productivity tools, and digital transformation, making complex technical topics accessible to a wider audience. His entrepreneurial journey and commitment to knowledge sharing continue to inspire both budding technologists and educators.

Objectives:

- To introduce participants to the latest trends and breakthroughs in Artificial Intelligence expected to shape 2025.
- To explore practical applications of AI in industries such as healthcare, education, content creation, and automation.
- To highlight the growing role of generative AI, explainable AI, and edge AI in real-world scenarios.
- To discuss the ethical, social, and regulatory challenges emerging alongside rapid AI adoption.
- To encourage faculty and researchers to stay updated and adapt their teaching and research in line with evolving AI technologies.

Outcomes:

- Participants gained insights into cutting-edge AI trends, tools, and frameworks relevant for future-ready education and innovation.
- Attendees understood how AI is transforming domains like productivity, software development, and personalized learning.
- The session helped faculty identify opportunities for integrating emerging AI themes into curriculum and research agendas.
- Participants became more aware of the importance of digital ethics, AI governance, and responsible use of intelligent systems.
- The session fostered forward-thinking discussions on the impact of AI on employment, creativity, and decision-making.

Brief Session Summary:

Mr. Rajamanickam Antonimuthu, Founder of Quality Point Technologies, delivered an engaging session on “Emerging AI Trends in 2025.” He highlighted key developments shaping the AI landscape, including the rise of generative AI, explainable AI, and the growing shift toward edge computing and automation. Drawing from his entrepreneurial experience, he demonstrated how AI is transforming sectors like education, content creation, and productivity enhancement. The session also addressed ethical considerations and the need for responsible AI usage in rapidly evolving digital environments. Mr. Rajamanickam Antonimuthu emphasized the democratization of AI tools, enabling even small businesses and independent creators to harness intelligent systems. He encouraged faculty members to adopt AI-powered tools in teaching and research and to promote AI readiness among students. Participants left with valuable insights into how emerging trends are redefining the future of work, innovation, and digital collaboration.

Relevant Photographs:





3rd June 2025-DAY TWO, 1st SESSION (Time:10:00AM – 11:30AM)

Create First AI Agent - Hands-on Workshop (Virtual Mode)

(Mr. Abhishek Agrawal, Software Engineering Manager, Amazon & Mr. Praveen Gupta Sanka, Data Scientist, Meta)

Number of Participants: 86

Speaker's profile:

Mr. Abhishek Agrawal is a seasoned Software Engineering Manager at Amazon, with extensive experience in developing and leading complex, scalable technology solutions. At Amazon, he oversees teams responsible for building high-performance systems that support global-scale operations and customer-centric innovation. With a strong foundation in computer science and a career spanning over a decade, Mr. Abhishek Agrawal specializes in cloud infrastructure, microservices architecture, and agile development practices. He is deeply committed to knowledge-sharing and has mentored numerous engineers and students through technical talks, workshops, and industry-academia collaborations. His insights offer a practical understanding of how leading tech companies apply engineering principles to solve real-world challenges at scale.

Mr. Praveen Gupta Sanka is a skilled Data Scientist at Meta (Facebook), where he works on building intelligent systems that power some of the world's most widely used digital platforms. With deep expertise in machine learning, data modeling, and large-scale analytics, he contributes to the development of algorithms that enhance user experience, engagement, and platform optimization. Mr. Praveen Gupta Sanka has hands-on experience with cutting-edge AI tools, predictive analytics, and personalization engines, and is passionate about applying data science to solve complex real-world problems. A strong advocate for continuous learning and innovation, he regularly engages in mentoring, technical workshops, and collaborations with academic and professional communities. His industry experience offers valuable perspectives on how data-driven decisions shape modern technology ecosystems.

Objectives:

- To introduce participants to the foundational concepts of AI agent design and development.
- To provide hands-on experience in building a functional AI agent using practical tools and frameworks.
- To demonstrate real-time problem-solving using AI models and algorithms.

- To encourage participants to apply AI techniques in academic, industrial, or personal projects.
- To foster confidence in designing intelligent systems for real-world applications.

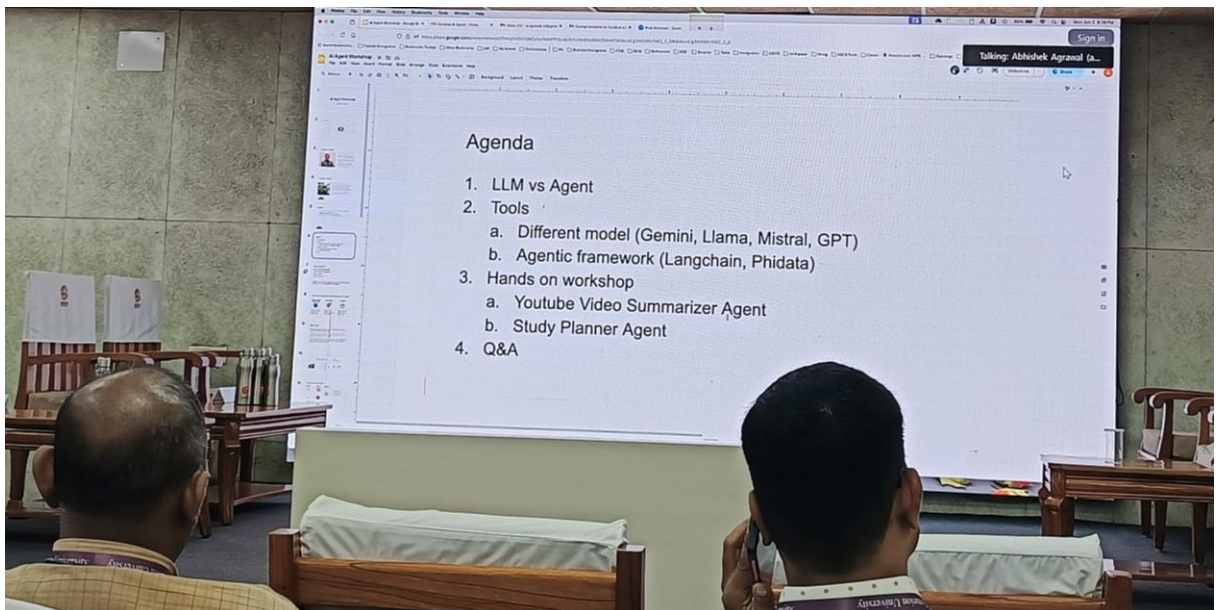
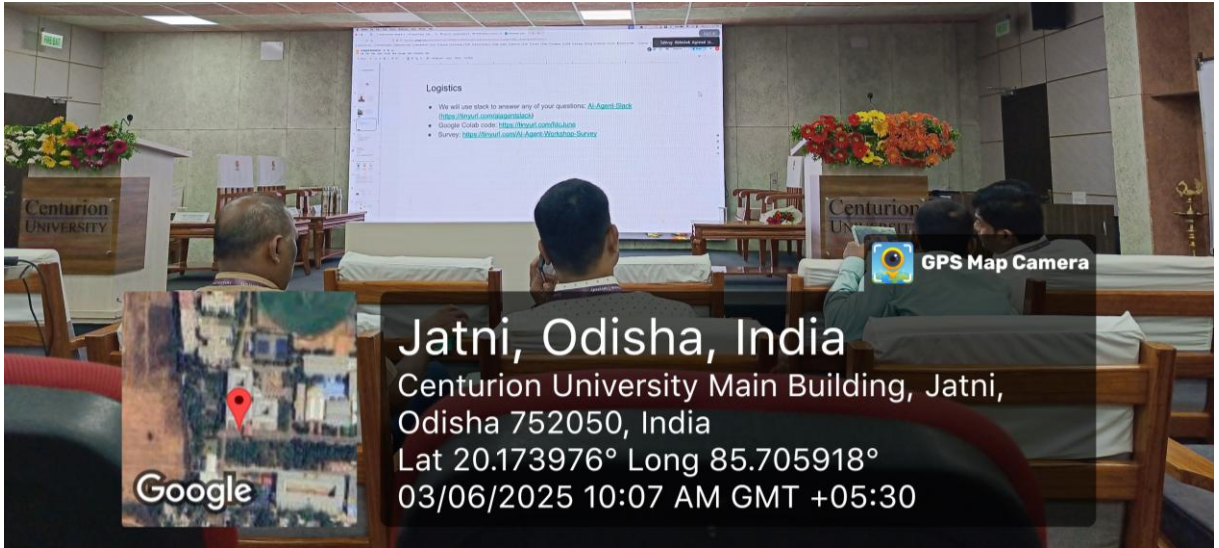
Outcomes:

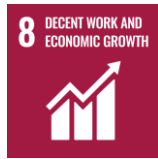
- Participants successfully developed a basic AI agent through guided, hands-on instruction.
- Attendees gained practical knowledge of tools, libraries, and coding workflows used in AI development.
- The workshop enhanced technical confidence in implementing AI logic and interacting with datasets.
- Faculty and learners were motivated to explore more advanced AI projects and integrate AI modules into their curriculum or research.
- The session bridged theoretical understanding with application-based learning in an interactive and collaborative format.

Brief Session Summary:

Mr. Abhishek Agrawal, Software Engineering Manager at Amazon, and Mr. Praveen Gupta Sanka, Data Scientist at Meta, jointly conducted an interactive session on “Create First AI Agent.” The hands-on workshop aimed to bridge the gap between AI theory and practical application by guiding participants through the process of building a functional AI agent from scratch. They introduced key concepts such as agent-environment interaction, decision-making algorithms, and the integration of machine learning models. Using industry-relevant tools and frameworks, participants were guided through live demonstrations on model training, testing, and deployment. The session also emphasized the importance of data handling, feedback loops, and performance evaluation in intelligent systems. Both speakers shared their industry experiences, highlighting how similar AI agents are applied in automation, personalization, and user engagement across platforms like Amazon and Meta. The workshop encouraged participants to explore AI-driven solutions within academic and professional contexts and fostered confidence in independently initiating AI-based projects. The engaging, hands-on format provided a strong foundation for further exploration in applied AI development.

Relevant Photographs:





3rd June 2025-DAY TWO, 2nd SESSION (Time:11:45AM – 01:15PM)

Industry 4.2 (Virtual Mode)

(Dr. Yuvaraju Chinnam, Head – Innovation & Strategy, Co-founder, iSpace & T3-Tech)

Number of Participants: 65

Speaker's profile:

Dr. Yuvaraju Chinnam is a visionary innovator and strategic leader, serving as the Head of Innovation & Strategy and Co-founder of iSpace and T3-Tech. With a distinguished background in engineering and entrepreneurship, he has led several high-impact projects in Industry 4.0, smart manufacturing, and digital transformation. Dr. Yuvaraju Chinnam brings over two decades of experience in building technology-driven solutions and nurturing innovation ecosystems across academic and industrial domains. He is known for his expertise in advanced automation, industrial IoT, and AI-integrated production systems. A passionate educator and mentor, he actively collaborates with universities and startups to promote skill development, innovation mindset, and future-ready technologies. His work bridges the gap between theoretical research and industrial application, making him a sought-after speaker in national and international forums on emerging tech and strategic innovation.

Objectives:

- To introduce participants to the advanced evolution of Industry 4.0, often referred to as Industry 4.2, and its role in shaping future manufacturing and production systems.
- To explore the integration of cutting-edge technologies such as AI, IoT, robotics, and digital twins in industrial environments.
- To provide insight into the strategic and operational benefits of adopting Industry 4.2 practices in both academia and industry.
- To emphasize the importance of innovation, agility, and data-driven decision-making in modern enterprises.
- To encourage faculty to incorporate Industry 4.2 concepts into curriculum, research, and skill-building programs.

Outcomes:

- Participants developed a clear understanding of the key technologies driving Industry 4.2 and their practical implications.
- Attendees gained awareness of how smart factories, real-time data analytics, and automation are reshaping global industry.
- The session equipped faculty with frameworks for aligning engineering education with future-ready industrial needs.
- Participants were inspired to promote interdisciplinary learning and to explore collaborative research opportunities in smart manufacturing.
- The session helped bridge the gap between theoretical engineering knowledge and industrial innovation practices.

Brief Session Summary:

Dr. Yuvaraju Chinnam, Head of Innovation & Strategy and Co-founder of iSpace & T3-Tech, delivered a thought-provoking session on “Industry 4.2.” He explored the next phase of industrial advancement where AI, IoT, robotics, and digital twins integrate to create smart, self-optimizing production systems. Drawing from his entrepreneurial and engineering background, Dr. Yuvaraju Chinnam highlighted how real-time data, automation, and cyber-physical systems are redefining efficiency, agility, and innovation in manufacturing. He emphasized the critical role of academia in aligning engineering education with evolving industrial demands and fostering innovation ecosystems. The session offered insights into sustainable production, intelligent workflows, and the future of digitally empowered enterprises. Participants were encouraged to adopt interdisciplinary approaches and prepare future professionals for Industry 4.2-driven transformation. The talk bridged strategic vision with practical frameworks for academic and industrial collaboration.

Relevant Photographs:





3rd June 2025-DAY TWO, 3rd SESSION (Time:02:00PM – 03:30PM)

Feature Engineering- A practitioner's view (Virtual Mode)

(Mr. Neelamadhaba Praharaj, Data Scientist Head of Data warehouse)

Number of Participants: 79

Speaker's profile:

Mr. Neelamadhaba Praharaj is an accomplished Data Scientist and Head of Data Warehouse with extensive experience in enterprise data architecture, business intelligence, and advanced analytics. With a strong background in computer science and a career spanning over 15 years, he has led data initiatives across sectors including finance, retail, and healthcare. Mr. Neelamadhaba Praharaj specializes in large-scale data integration, feature engineering, and predictive modeling to drive strategic decision-making. As a mentor and speaker, he is known for translating complex data concepts into actionable insights for diverse audiences. His leadership in designing robust data ecosystems has positioned him as a key figure in data-driven transformation efforts. He is passionate about enabling organizations and academic institutions to build data literacy and harness the power of analytics for innovation and growth.

Objectives:

- To provide a practitioner's perspective on the role and importance of feature engineering in machine learning workflows.
- To explain techniques for transforming raw data into meaningful input features that enhance model performance.
- To demonstrate real-world examples where effective feature engineering led to improved predictive outcomes.
- To highlight domain-specific considerations and best practices in feature selection, extraction, and transformation.
- To encourage participants to integrate practical data preprocessing strategies into their teaching and research.

Outcomes:

- Participants gained a clear understanding of the critical role feature engineering plays in building robust ML models.
- Attendees were introduced to commonly used techniques such as encoding, scaling, binning, and feature construction.
- The session bridged the gap between academic theory and real-world data science challenges faced by practitioners.
- Faculty and researchers were equipped with actionable methods to incorporate feature engineering into data-driven projects.
- The talk fostered a deeper appreciation for data quality, representation, and contextual understanding in AI systems.

Brief Session Summary:

Mr. Neelamadhaba Praharaj, Data Scientist and Head of Data Warehouse, delivered a highly practical session on “Feature Engineering – A Practitioner’s View.” He explored the critical role of feature engineering in the machine learning lifecycle, emphasizing how the quality of input features significantly impacts model performance. Drawing from industry experience, Mr. Neelamadhaba Praharaj discussed real-world challenges and techniques used to transform raw data into structured, meaningful variables. He highlighted methods such as encoding, normalization, binning, and dimensionality reduction, explaining their use in different problem contexts. The session bridged academic understanding with hands-on strategies, offering insights into data preprocessing, domain relevance, and model interpretability. Participants were encouraged to apply these techniques in both classroom settings and applied research. The talk reinforced the idea that thoughtful feature engineering is foundational to building effective and reliable AI systems.

Relevant Photographs:





3rd June 2025-DAY TWO, 4th SESSION (Time:03:45PM – 05:15PM)

Advancing Healthcare through AI (Virtual Mode)

(Mr. Naveen Kumar Pedada , Osmania university, Healthcare IT Professional)

Number of Participants: 73

Speaker's profile:

Mr. Naveen Kumar Pedada is a seasoned Healthcare IT Professional affiliated with Osmania University, with extensive experience in leveraging information technology to transform healthcare systems. With a strong foundation in biomedical informatics and digital health solutions, he has led and contributed to numerous projects involving hospital information systems, clinical decision support tools, and health data analytics. Mr. Naveen Kumar Pedada specializes in the integration of AI and machine learning in healthcare settings, focusing on enhancing diagnostics, patient care, and operational efficiency. His work bridges the gap between healthcare practitioners and technology developers, advocating for user-centric, ethical, and scalable solutions. As a passionate educator and consultant, he regularly engages with academic institutions to promote digital health literacy and innovation in medical informatics.

Objectives:

- To explore the role of Artificial Intelligence in transforming healthcare delivery, diagnostics, and decision-making.
- To introduce participants to key AI applications such as predictive analytics, medical imaging, and patient monitoring.
- To highlight the integration of AI in hospital information systems and clinical workflows.
- To discuss challenges related to data privacy, ethics, and regulatory compliance in healthcare AI.
- To encourage interdisciplinary research and innovation at the intersection of AI and medical sciences.

Outcomes:

- Participants gained insights into how AI is revolutionizing diagnostics, treatment planning, and personalized healthcare.
- Attendees understood the use of machine learning in medical imaging, early disease detection, and health risk prediction.
- The session emphasized the importance of collaboration between healthcare professionals, technologists, and researchers.
- Faculty and students were inspired to explore AI-driven solutions in biomedical research and digital health projects.
- The talk reinforced the value of ethical AI practices in maintaining trust, accuracy, and patient safety in healthcare systems.

Brief Session Summary:

Mr. Naveen Kumar Pedada, Healthcare IT Professional from Osmania University, delivered a compelling session on “Advancing Healthcare through AI.” He explored how Artificial Intelligence is revolutionizing patient care, diagnostics, and healthcare management by enabling faster, more accurate decision-making. Highlighting applications in medical imaging, predictive analytics, and clinical decision support systems, Mr. Naveen Kumar Pedada demonstrated how AI technologies are being used to detect diseases early, streamline hospital operations, and personalize treatment plans. He also addressed challenges related to data privacy, algorithmic bias, and the ethical use of AI in sensitive health environments. The session emphasized the importance of collaboration between clinicians, data scientists, and policymakers to ensure responsible innovation. Participants were encouraged to pursue interdisciplinary research and leverage AI to address pressing healthcare needs in both academic and real-world settings.

Relevant Photographs:





4th June 2025-DAY THREE, 1st SESSION (Time:10:00AM – 11:30AM)

AI/ML Applications in Financial Technology, Data Strategy, and Predictive Modeling (Virtual Mode)

(Mr. Sagar Bharat Shah, Alumnus – MS in Business Analytics, University of Cincinnati)

Number of Participants: 82

Speaker's profile:

Mr. Sagar Bharat Shah is a skilled analytics professional with a strong academic foundation and real-world experience in data strategy, business intelligence, and financial technology. An alumnus of the University of Cincinnati, he has worked on a wide range of data-driven projects that combine statistical modeling, machine learning, and predictive analytics to solve complex business problems. His core strengths lie in leveraging big data for strategic planning, improving operational efficiency, and enabling intelligent decision-making in fast-paced environments. Mr. Sagar Bharat Shah is particularly passionate about the use of AI and analytics in the fintech sector, with interests in credit risk modeling, customer behavior prediction, and fraud detection. He also actively engages with academic institutions to share his industry insights and promote a culture of data literacy among students and faculty. His ability to bridge academic theory with practical applications makes him a valuable resource for emerging data professionals and educators alike.

Objectives:

- To introduce participants to real-world applications of Artificial Intelligence and Machine Learning in the financial technology (fintech) sector.
- To explain how data strategy drives innovation and decision-making in modern financial services.
- To demonstrate predictive modeling techniques used for credit scoring, fraud detection, and customer behavior analysis.
- To highlight the importance of aligning data analytics with business goals and regulatory frameworks.
- To encourage participants to explore the intersection of data science, finance, and strategic analytics in research and teaching.

Outcomes:

- Participants understood how AI/ML models are applied in fintech to enhance risk management, personalization, and fraud prevention.
- Attendees gained insights into data pipelines, feature engineering, and evaluation metrics used in predictive financial modeling.
- The session emphasized the importance of ethical data practices and regulatory compliance in AI-driven financial systems.
- Faculty and researchers were inspired to incorporate financial data analytics into academic curricula and projects.
- The talk bridged technical concepts with real-world strategy, equipping participants to translate theory into industry-relevant solutions.

Brief Session Summary:

Mr. Sagar Bharat Shah, alumnus of the University of Cincinnati and a data strategy expert, delivered an insightful session on “AI/ML Applications in Financial Technology, Data Strategy, and Predictive Modeling.” He explored how artificial intelligence and machine learning are revolutionizing the fintech sector by enabling smarter risk assessment, fraud detection, and personalized customer experiences. Mr. Sagar Bharat Shah discussed the role of predictive modeling in credit scoring and portfolio optimization, emphasizing the importance of data pipelines, feature engineering, and model validation. Drawing from industry case studies, he highlighted how a strong data strategy aligns analytics with business goals and regulatory standards. The session also addressed ethical considerations in AI use and the need for transparency in financial models. Participants gained a comprehensive understanding of how data science is shaping the future of financial services.

Relevant Photographs:





4th June 2025-DAY THREE, 2nd SESSION (Time:11:45AM – 01:15PM)

Autonomous Control for Unmanned Robot with ROS
(Dr. Biranchi Narayan Rath, Assistant Professor, Silicon University)

Number of Participants: 107

Speaker's profile:

Dr. Biranchi Narayan Rath is an accomplished academician and researcher, currently serving as Assistant Professor at Silicon University. With a specialization in robotics, control systems, and automation, his work focuses on the development of intelligent unmanned robotic platforms and real-time system integration. Dr. Biranchi Narayan Rath holds expertise in Robot Operating System (ROS), embedded systems, and autonomous navigation technologies, bridging theory and practical implementation in modern robotics. He has contributed to various interdisciplinary research projects and has published papers in national and international journals. Passionate about innovation-driven teaching, Dr. Biranchi Narayan Rath actively mentors students in advanced robotics and embedded applications, while promoting hands-on learning through lab-based experimentation. His academic insight and industry-aligned approach make him a valued speaker in forums focused on robotics, AI, and smart automation.

Objectives:

- To introduce the fundamentals of autonomous robotics and the use of Robot Operating System (ROS) as a middleware for control and communication.
- To demonstrate techniques for enabling autonomous navigation, perception, and decision-making in unmanned robotic systems.
- To familiarize participants with hardware-software integration in mobile robotics using ROS frameworks.
- To encourage academic adoption of open-source tools in robotics research and engineering education.
- To highlight real-world applications of autonomous robotic systems in fields such as surveillance, exploration, and industrial automation.

Outcomes:

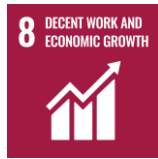
- Participants gained hands-on understanding of how ROS facilitates modular, scalable, and autonomous robot control.
- Attendees learned about sensor integration, path planning, and feedback control for unmanned systems.
- The session bridged theoretical robotics with practical implementation strategies in ROS environments.
- Faculty were motivated to integrate robotics modules and ROS-based experimentation into engineering curricula.
- The talk sparked interdisciplinary interest in autonomous systems, robotics research, and open-source innovation.

Brief Session Summary:

Dr. Biranchi Narayan Rath, Assistant Professor at Silicon University, conducted an engaging session on “Autonomous Control for Unmanned Robot with ROS.” He introduced the fundamentals of the Robot Operating System (ROS) and its role as a flexible framework for developing autonomous robotic systems. The session covered key components such as sensor integration, motion planning, and real-time control essential for building unmanned mobile robots. Dr. Biranchi Narayan Rath demonstrated how ROS enables seamless hardware-software coordination and modular system development for robotics applications. He highlighted practical use cases in surveillance, navigation, and industrial automation, while encouraging participants to explore ROS for academic projects and hands-on teaching. The session bridged the gap between theoretical robotics and practical implementation, offering participants a comprehensive view of intelligent autonomous systems in action.

Relevant Photographs:





4th June 2025-DAY THREE, 3rd SESSION (Time:02:00PM – 03:30PM)

Entrepreneurship & Stratup

(Mrs. Purabee Purnasha Mishra, COO Electropreneur Park, AIC STPI Next Initiatives)

Number of Participants: 88

Speaker's profile:

Mrs. Purabee Purnasha Mishra is a dynamic leader in the Indian startup and innovation ecosystem, currently serving as the Chief Operating Officer of Electropreneur Park under the AIC STPI Next Initiatives. With a rich background in entrepreneurship development, innovation strategy, and ecosystem building, she plays a key role in nurturing early-stage tech startups and fostering industry-academia collaborations. Mrs. Purabee Purnasha Mishra has extensive experience in startup incubation, mentoring, government-supported accelerator programs, and investment readiness for emerging ventures. Her work focuses on enabling deep-tech and ESDM (Electronics System Design and Manufacturing) startups to thrive in competitive markets through structured support and strategic guidance. A passionate advocate for women in tech and entrepreneurship, she regularly speaks at academic institutions, policy forums, and startup conclaves, promoting innovation-driven growth and inclusive development.

Objectives:

- To introduce participants to the fundamentals of entrepreneurship and the startup ecosystem in India.
- To explain the stages of startup development—from ideation and validation to funding and scaling.
- To highlight the role of incubators, accelerators, and policy support in nurturing entrepreneurial ventures.
- To inspire faculty and students to explore innovation and entrepreneurship as viable career pathways.
- To discuss challenges and opportunities faced by early-stage entrepreneurs in technology and product-based sectors.

Outcomes:

- Participants gained a clear understanding of the startup lifecycle and entrepreneurial mindset.
- Attendees learned about institutional and government mechanisms that support startup incubation and growth.
- The session motivated faculty to integrate entrepreneurship modules and project-based learning into academic programs.
- Participants were encouraged to mentor or engage with student-led innovations and startup initiatives.
- The talk fostered awareness about the importance of innovation, risk-taking, and value creation in today's dynamic economy.

Brief Session Summary:

Mrs. Purabee Purnasha Mishra, Chief Operating Officer at Electropreneur Park, AIC STPI Next Initiatives, delivered an inspiring session on “Entrepreneurship & Startup.” She introduced the core principles of entrepreneurship, highlighting the journey from idea generation to market launch and scaling. Drawing from her extensive experience in startup incubation and ecosystem building, Mrs. Purabee Purnasha Mishra discussed the critical role of mentorship, funding, policy support, and innovation hubs in shaping successful ventures. She emphasized the need for entrepreneurial thinking within academia and encouraged faculty to foster innovation-driven learning among students. The session also explored challenges faced by early-stage entrepreneurs and strategies to overcome them in India’s evolving startup landscape. Participants were motivated to actively support and participate in startup culture, contributing to a broader ecosystem of innovation, self-reliance, and sustainable growth.

Relevant Photographs:





4th June 2025-DAY THREE, 4th SESSION (Time:03:45PM – 05:15PM)

Nano composites: Fabrication, Characterization and Applications

(Dr. Sudesna Roy, Associate Professor, KIIT University)

Number of Participants: 83

Speaker's profile:

Dr. Sudesna Roy is an accomplished academic and researcher, currently serving as an Associate Professor at KIIT University. With a specialization in materials science and nanotechnology, her research primarily focuses on the fabrication, characterization, and application of nanocomposites in engineering and biomedical fields. Dr. Sudesna Roy has contributed extensively to the scientific community through peer-reviewed publications, conference presentations, and collaborative research projects. She is recognized for her expertise in advanced materials, particularly in the synthesis and structural analysis of nano-engineered systems. Passionate about bridging research with real-world applications, she actively mentors students and promotes interdisciplinary innovation. Her work has advanced the understanding of sustainable materials and functional composites, making her a respected voice in both academic and applied scientific circles. She is also actively involved in promoting women's participation in STEM and research-driven education.

Objectives:

- To introduce participants to the fundamental principles and methodologies used in the fabrication of nanocomposites.
- To explore advanced techniques for the structural and functional characterization of nano-engineered materials.
- To demonstrate the wide-ranging applications of nanocomposites in fields such as electronics, energy, biomedicine, and environmental engineering.
- To encourage research and innovation in sustainable and high-performance materials within academic settings.
- To foster interdisciplinary collaboration in the development and application of nanotechnology-based solutions.

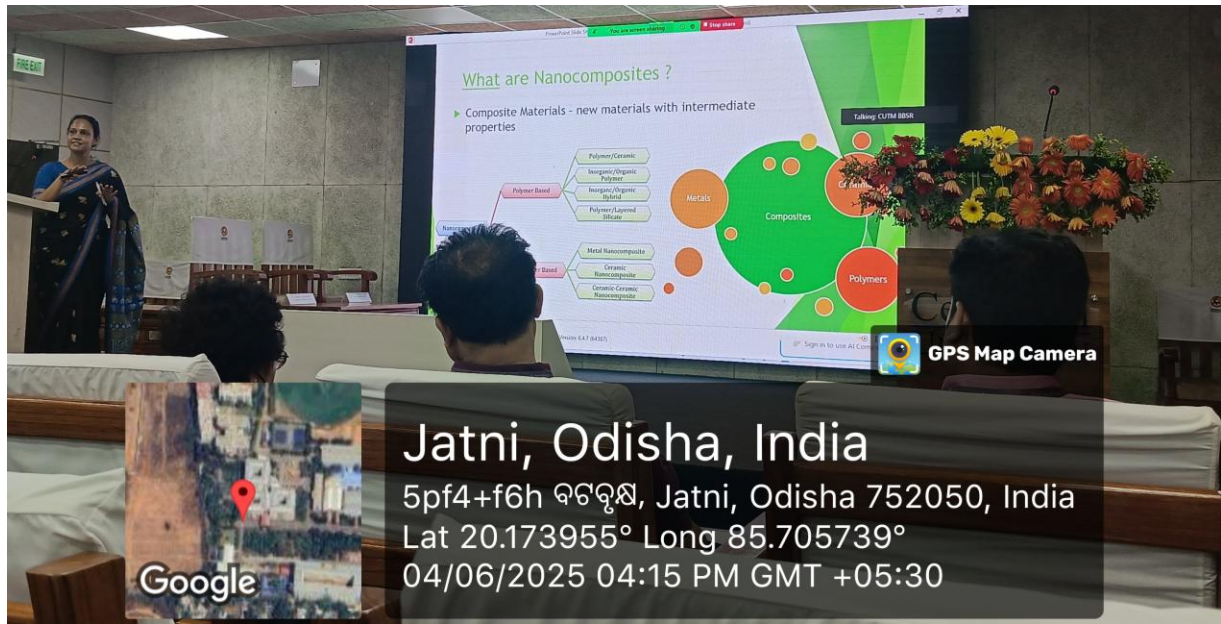
Outcomes:

- Participants gained a comprehensive understanding of nanocomposite synthesis methods and their structural design parameters.
- Attendees learned about key characterization tools such as SEM, TEM, XRD, and FTIR used in material analysis.
- The session highlighted real-world applications of nanocomposites in enhancing material properties like strength, conductivity, and thermal stability.
- Faculty were encouraged to integrate nanotechnology topics into engineering and science curricula.
- The talk inspired participants to pursue research in emerging material technologies with societal and industrial relevance.

Brief Session Summary:

Dr. Sudesna Roy, Associate Professor at KIIT University, delivered an insightful session on “Nano Composites: Fabrication, Characterization and Applications.” She introduced the fundamentals of nanocomposite materials, highlighting various fabrication techniques used to enhance mechanical, electrical, and thermal properties. Dr. Sudesna Roy detailed advanced characterization methods such as SEM, TEM, XRD, and FTIR, explaining how they provide critical insights into material structure and performance. The session emphasized the practical applications of nanocomposites in fields like energy storage, biomedical engineering, electronics, and environmental sustainability. With a focus on interdisciplinary relevance, she encouraged participants to integrate nanomaterials research into academic and industrial projects. The session inspired faculty and researchers to explore innovative materials for next-generation technologies, reinforcing the role of nanoscience in addressing global engineering and societal challenges.

Relevant Photographs:





5th June 2025-DAY FOUR, 1st SESSION (Time:10:00AM – 11:30AM)

Review of modern chip and system design/engineering in the era of cloud and AI (Virtual Mode)

(Dr. Sunil Sabat, Principal Program Manager, Microsoft)

Number of Participants: 85

Speaker's profile:

Dr. Sunil Sabat is a distinguished technology leader and innovation strategist, currently serving as a Principal Program Manager at Microsoft. With over two decades of experience in advanced computing, he specializes in system architecture, AI integration, and cloud-native chip design. Dr. Sunil Sabat has played a pivotal role in shaping modern software and hardware development ecosystems, leading global projects that bridge cutting-edge research with scalable enterprise solutions. His areas of expertise span across semiconductor technologies, digital transformation, and the intersection of AI with embedded systems. He is widely recognized for his contributions to the development of high-performance computing platforms and has authored several technical papers and patents. As a mentor and speaker, Dr. Sunil Sabat is deeply committed to fostering innovation, skill development, and industry-academia collaboration, making him a highly sought-after voice in global technology forums.

Objectives:

- To explore the evolution of chip and system design in the context of cloud computing and AI-driven applications.
- To introduce participants to modern architectures supporting high-performance, scalable, and energy-efficient computing.
- To highlight the integration of AI workloads in chip design and their implications for system engineering.
- To provide insight into cloud-based design, simulation, and deployment tools used in the semiconductor industry.
- To encourage faculty and researchers to align their teaching and projects with emerging trends in hardware-software co-design.

Outcomes:

- Participants gained a clear understanding of how chip and system design is evolving to meet the demands of AI and cloud computing.
- Attendees were introduced to cutting-edge approaches in processor optimization, edge computing, and cloud-native hardware development.
- The session emphasized the need for interdisciplinary skills in hardware engineering, data science, and cloud architecture.
- Faculty members were encouraged to integrate modern chip design concepts into curriculum and lab-based learning.
- The talk inspired academic engagement with real-world challenges in scalable, AI-ready system development.

Brief Session Summary:

Dr. Sunil Sabat, Principal Program Manager at Microsoft, delivered a technically rich session on “Review of Modern Chip and System Design/Engineering in the Era of Cloud and AI.” He examined the rapid transformation in chip architecture and system engineering driven by the demands of AI workloads and cloud scalability. Dr. Sunil Sabat discussed the convergence of hardware and software in designing energy-efficient, high-performance computing systems tailored for data-intensive applications. He introduced participants to cloud-native chip development workflows, edge computing strategies, and the role of AI in intelligent hardware optimization. Emphasizing the importance of cross-domain skills, he encouraged academia to bridge traditional electronics with emerging computational paradigms. The session offered a forward-looking view of how modern hardware is evolving to support global digital infrastructure and innovation in the AI era.

Relevant Photographs:





5th June 2025-DAY FOUR, 2nd SESSION (Time:11:45AM – 01:15PM)

Standards & Sustainability

(Shri A K Purohit, Scientist-F & Head Bureau of Indian Standards)

Number of Participants: 100

Speaker's profile:

Shri A. K. Purohit is a senior scientist and Head at the Bureau of Indian Standards (BIS), with a distinguished career dedicated to standardization, quality assurance, and regulatory frameworks in India. As a Scientist-F, he plays a key role in formulating and implementing national standards that support safety, sustainability, and innovation across industries. With extensive experience in engineering standards and compliance systems, Shri A. K. Purohit has contributed to the development of policies and technical guidelines that align Indian manufacturing and infrastructure with global benchmarks. His expertise spans across multiple sectors, including materials science, civil engineering, and environmental standards. A strong advocate for academic-industry collaboration, he actively engages with institutions to promote awareness of standardization practices, sustainability protocols, and the critical role of quality standards in nation-building.

Objectives:

- To highlight the role of standards in promoting environmental sustainability, safety, and quality across industries.
- To create awareness about national and international standardization frameworks and their relevance to engineering and technology.
- To demonstrate how standards support the development of sustainable infrastructure and responsible production practices.
- To encourage the academic community to integrate standardization principles into research, curriculum, and innovation.
- To bridge the gap between regulatory bodies, industries, and educational institutions for knowledge sharing and compliance.

Outcomes:

- Participants gained insights into the significance of BIS standards in advancing sustainable development goals (SDGs).
- Attendees understood how technical standards influence quality assurance, environmental protection, and public safety.
- The session emphasized the importance of embedding standards education into engineering and management programs.
- Faculty were motivated to align research and product development with established regulatory and sustainability guidelines.
- The talk fostered interdisciplinary dialogue on how structured standardization can drive innovation and resilience in national development.

Brief Session Summary:

Shri A. K. Purohit, Scientist-F and Head at the Bureau of Indian Standards (BIS), delivered a highly informative session on “Standards & Sustainability.” He highlighted the pivotal role of standardization in ensuring environmental responsibility, public safety, and quality assurance across industries. Drawing from his extensive experience at BIS, Shri A. K. Purohit explained how technical standards align with sustainable development goals and contribute to national growth through regulated practices. He emphasized the importance of harmonizing Indian standards with global benchmarks to enhance competitiveness and innovation. The session encouraged faculty and researchers to integrate standardization principles into curriculum design, product development, and policy research. Participants gained valuable insights into how structured compliance and quality frameworks are essential for building a resilient, sustainable, and future-ready industrial ecosystem.

Relevant Photographs:





5th June 2025-DAY FOUR, 3rd SESSION (Time:02:00PM – 03:30PM)

Evolutionary Computing Techniques with Hands on
(Dr. Puspanjali Mohapatra, Assistant Professor, IIIT Bhubaneswar)

Number of Participants: 90

Speaker's profile:

Dr. Puspanjali Mohapatra is an accomplished academician and researcher, currently serving as an Assistant Professor at the International Institute of Information Technology (IIIT) Bhubaneswar. Her expertise lies in evolutionary computing, soft computing, and optimization algorithms, with a strong emphasis on real-world problem-solving through computational intelligence. She has published extensively in reputed journals and conferences, focusing on algorithmic innovation and performance analysis. Dr. Puspanjali Mohapatra's research interests also span artificial intelligence, data analytics, and bio-inspired computing. A dedicated educator and mentor, she actively engages students in research-driven learning and interdisciplinary exploration. Known for her clarity in teaching complex concepts and commitment to academic excellence, Dr. Puspanjali Mohapatra continues to contribute to both scholarly advancement and technological innovation in computer science and engineering.

Objectives:

- To introduce the foundational principles of evolutionary computing and bio-inspired optimization techniques.
- To demonstrate real-world problem-solving using algorithms such as Genetic Algorithms (GA), Particle Swarm Optimization (PSO), and Differential Evolution (DE).
- To provide hands-on experience in implementing evolutionary techniques using computational tools and coding platforms.
- To encourage participants to explore the applicability of soft computing in various engineering and research domains.
- To foster a practical understanding of how evolutionary algorithms can solve complex, non-linear, and multi-objective problems.

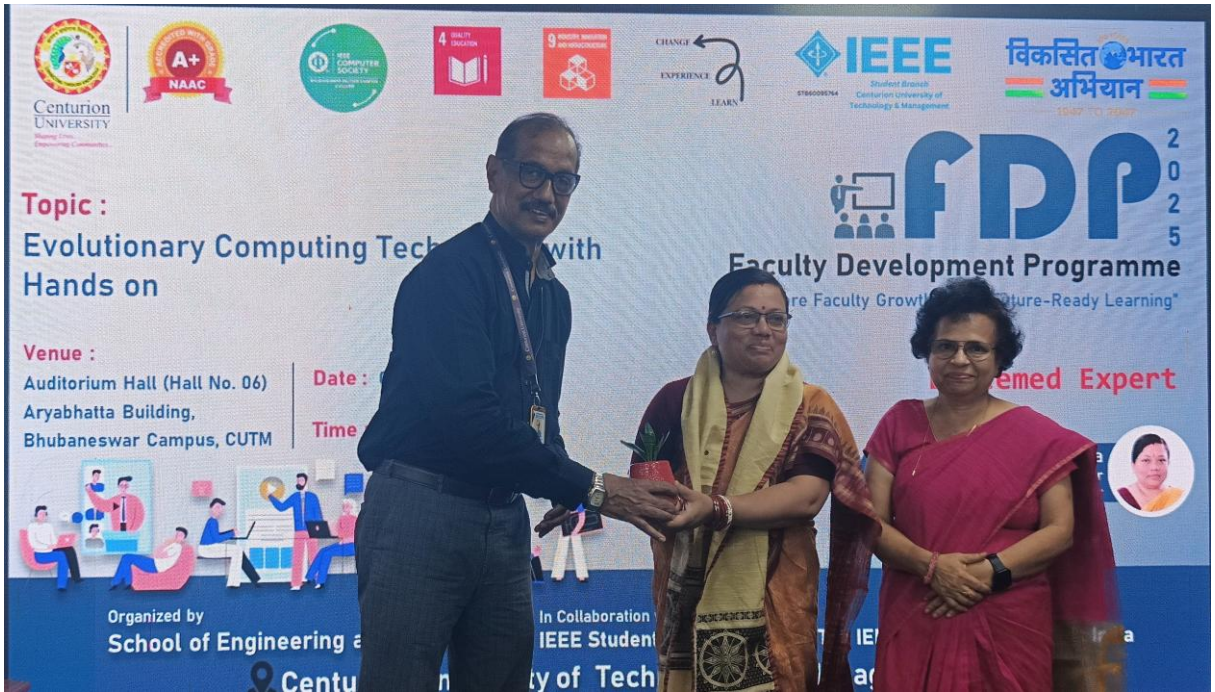
Outcomes:

- Participants developed a conceptual and technical understanding of key evolutionary algorithms.
- Attendees gained hands-on experience in designing, coding, and testing optimization algorithms for real-world scenarios.
- The session highlighted the advantages of evolutionary computing in solving problems where traditional methods fall short.
- Faculty members were encouraged to integrate evolutionary computing modules into advanced computing and research curricula.
- The talk inspired interdisciplinary interest in soft computing approaches across data science, engineering, and applied research.

Brief Session Summary:

Dr. Puspanjali Mohapatra, Assistant Professor at IIIT Bhubaneswar, delivered an insightful session on “Evolutionary Computing Techniques with Hands-on,” blending theory with practical application. She introduced participants to the foundational concepts of evolutionary algorithms, including genetic algorithms, swarm intelligence, and optimization strategies inspired by natural evolution. The session emphasized how these biologically inspired techniques are applied in solving complex engineering and real-world problems. Through hands-on demonstrations, participants explored algorithm design, fitness functions, and evolutionary operations like selection, mutation, and crossover. Dr. Puspanjali Mohapatra also shared relevant use cases in machine learning, scheduling, and computational modeling. The session enabled faculty to appreciate the adaptability and robustness of evolutionary computing and inspired them to integrate these algorithms into research and curriculum to address nonlinear and multi-objective challenges.

Relevant Photographs:





5th June 2025-DAY FOUR, 4th SESSION (Time:03:45PM – 05:15PM)

Fault Analysis in Electronic Circuits using AI/ML Approaches

(Dr. Tapas Kumar Patra, Professor, OUTR)

Number of Participants: 86

Speaker's profile:

Dr. Tapas Kumar Patra is a senior academic and researcher, currently serving as Professor at Odisha University of Technology and Research (OUTR). With extensive expertise in electronics and electrical engineering, his core research areas include fault analysis in electronic circuits, VLSI design, and the application of AI/ML techniques in electronic system diagnostics. Dr. Tapas Kumar Patra has led several funded research projects and published widely in reputed national and international journals. Known for his deep technical insight and innovative approach to electronic systems design, he actively mentors students and promotes interdisciplinary research that merges traditional circuit theory with modern intelligent algorithms. As a committed educator, Dr. Tapas Kumar Patra contributes significantly to the advancement of electronic engineering education and the integration of smart technologies in fault detection and system optimization.

Objectives:

- To introduce participants to fault detection and diagnosis techniques in electronic circuits using Artificial Intelligence and Machine Learning.
- To explain how AI/ML algorithms can enhance accuracy, speed, and reliability in circuit fault analysis.
- To demonstrate practical applications of supervised and unsupervised learning methods in identifying faults in analog and digital systems.
- To encourage faculty and researchers to integrate intelligent diagnostic models into electronic system design and simulation.
- To promote interdisciplinary approaches combining electronics, data science, and automation for smarter circuit analysis.

Outcomes:

- Participants gained insight into the challenges of fault detection and how AI/ML offers robust solutions in circuit diagnostics.
- Attendees learned how to apply classification, clustering, and pattern recognition techniques for real-time fault analysis.
- The session provided exposure to AI tools and datasets relevant to fault simulation and electronic system testing.
- Faculty were motivated to introduce AI-integrated fault analysis into laboratory and research activities.
- The talk bridged core electronics engineering with modern computational intelligence, inspiring innovation in diagnostics and reliability engineering.

Brief Session Summary:

Dr. Tapas Kumar Patra, Professor at Odisha University of Technology and Research (OUTR), delivered an insightful session on “Fault Analysis in Electronic Circuits using AI/ML Approaches.” He explored the intersection of electronics and artificial intelligence, demonstrating how machine learning algorithms can be used to detect, classify, and predict faults in complex circuit systems. Dr. Tapas Kumar Patra discussed the limitations of traditional diagnostic methods and emphasized the advantages of intelligent models in improving accuracy, efficiency, and real-time responsiveness. The session covered both supervised and unsupervised learning techniques applied to analog and digital systems. He also introduced tools and datasets commonly used for fault simulation and testing. Participants gained a strong understanding of how AI can enhance electronic system reliability and were encouraged to incorporate these techniques into teaching, research, and lab practices.

Relevant Photographs:





6th June 2025-DAY FIVE, 1st SESSION (Time:10:00AM – 11:30AM)

Unlocking Data with Graphs A Neo4j Workshop (Virtual Mode)

(Mr. Siva Ramakrishna Reddy Venna, Lead Data Scientist & Mr. Narendra Reddy Sanikommu, Senior Software Engineer)

Number of Participants: 72

Speaker's profile:

Mr. Siva Ramakrishna Reddy Venna is a seasoned data science professional with over a decade of experience in building scalable, AI-driven solutions across domains such as finance, retail, healthcare, and logistics. As a Lead Data Scientist, he specializes in designing end-to-end machine learning pipelines, graph-based analytics, and real-time predictive systems. His expertise spans data engineering, natural language processing, recommendation engines, and advanced data visualization. Known for his hands-on technical approach and deep understanding of data strategy, Mr. Siva Ramakrishna Reddy Venna has led multiple cross-functional teams in developing data products that drive business transformation. He is also an active mentor and speaker, regularly engaging with academic and professional communities to promote AI literacy, practical ML applications, and collaborative innovation in data science.

Mr. Narendra Reddy Sanikommu is a highly skilled Senior Software Engineer with deep expertise in backend development, large-scale system architecture, and intelligent data systems. With a strong foundation in computer science and extensive experience in software engineering, he has contributed to the development of robust, scalable applications across various industries including fintech, logistics, and data analytics. Mr. Narendra Reddy Sanikommu specializes in graph databases, API development, and cloud-native solutions, and has worked on building intelligent systems that leverage real-time data for decision-making. Known for his collaborative mindset and problem-solving approach, he actively mentors aspiring developers and engages with academic communities to share practical knowledge of emerging software technologies. His focus on performance optimization, clean code practices, and innovation makes him a valuable voice in the modern software engineering landscape.

Objectives:

- To introduce the fundamentals of graph databases and their advantages over traditional relational data models.
- To provide hands-on experience with Neo4j, a leading graph database platform, for storing and querying connected data.

- To demonstrate real-world use cases of graph technology in domains like fraud detection, recommendation systems, and social networks.
- To help participants understand Cypher query language and graph modeling concepts.
- To encourage the application of graph-based thinking in data science, software development, and academic research.

Outcomes:

- Participants gained practical knowledge of graph theory applications through the Neo4j platform.
- Attendees learned to build, query, and visualize graph databases using Cypher and Neo4j tools.
- The session showcased how graph models improve data retrieval, pattern detection, and relationship analysis.
- Faculty were encouraged to incorporate graph-based tools and concepts into data science, engineering, and analytics courses.
- The workshop fostered interest in using graph databases for solving complex, interconnected data problems in real-world scenarios.

Brief Session Summary:

Mr. Siva Ramakrishna Reddy Venna, Lead Data Scientist, and Mr. Narendra Reddy Sanikommu, Senior Software Engineer, jointly conducted a hands-on session titled “Unlocking Data with Graphs: A Neo4j Workshop.” The session introduced participants to the fundamentals of graph databases and their growing relevance in solving real-world data challenges. Using the Neo4j platform, the speakers demonstrated how graph-based modeling enables intuitive relationship mapping, efficient querying, and deeper pattern discovery in connected datasets. They explained key concepts such as nodes, relationships, graph traversal, and the Cypher query language through live examples and interactive exercises. Practical applications in fraud detection, recommendation engines, knowledge graphs, and social network analysis were showcased to highlight the flexibility and power of graph databases. The session also encouraged participants to adopt graph-based thinking in problem-solving and system design. It successfully bridged theory and practice, equipping faculty and students with the tools and confidence to implement graph-driven solutions in academic, industrial, and research contexts.

Relevant Photographs:





6th June 2025-DAY FIVE, 2nd SESSION (Time:11:45AM – 01:15PM)

Navigating the Challenges in Patent Examination, Grant, and Commercialization (Virtual Mode)

(Mr. Samparti Basanta, Panasian Pvt. Ltd)

Number of Participants: 52

Speaker's profile:

Mr. Samparti Basanta is an experienced professional in the field of intellectual property (IP) rights and technology commercialization, currently associated with Panasian Pvt. Ltd. With a strong background in innovation management, patent filing, and legal frameworks surrounding IP protection, he has played a key role in helping startups, academic institutions, and enterprises secure and monetize their intellectual property. Mr. Samparti Basanta specializes in guiding innovators through the complex processes of patent drafting, IP strategy, and commercialization pathways across national and international jurisdictions. He actively collaborates with incubators, research centers, and industry stakeholders to promote IP awareness and drive innovation-led growth. As a speaker and mentor, he is known for his practical insights into the patent system and his ability to bridge legal understanding with real-world innovation.

Objectives:

- To provide an in-depth understanding of the patent lifecycle—from filing and examination to grant and commercialization.
- To highlight common challenges faced during patent prosecution and strategies to overcome them.
- To educate participants on national and international IP frameworks, timelines, and procedural requirements.
- To explain methods for technology transfer, licensing, and commercial exploitation of granted patents.
- To encourage academic researchers and innovators to protect their intellectual property and explore monetization opportunities.

Outcomes:

- Participants gained clarity on the steps involved in filing and securing a patent, along with common reasons for rejection.
- Attendees were introduced to tools and best practices for drafting, submitting, and tracking patent applications.
- The session emphasized the importance of IP strategy in academic research and startup ecosystems.
- Faculty and researchers were encouraged to pursue patentable innovations and engage with technology transfer offices.
- The talk provided practical insights into commercial pathways, enabling participants to link innovation with market readiness.

Brief Session Summary:

Mr. Samparti Basanta from Panasian Pvt. Ltd. delivered a highly informative session on “Navigating the Challenges in Patent Examination, Grant, and Commercialisation.” He provided a comprehensive overview of the patent lifecycle, covering critical stages such as drafting, filing, examination, and post-grant strategies. Drawing from real-world case studies, Mr. Samparti Basanta highlighted common pitfalls during patent prosecution and offered practical solutions to strengthen applications. He also discussed commercialization pathways, including licensing models, technology transfer, and IP valuation. The session emphasized the importance of integrating patent awareness into academic research and innovation practices. Participants gained valuable insights into national and international IP systems and were encouraged to treat patents as strategic assets. The talk bridged legal, technical, and entrepreneurial perspectives, empowering faculty and researchers to protect and monetize their intellectual contributions.

Relevant Photographs:

This screenshot shows a Zoom meeting interface. The main content is a presentation slide titled "10 STRATEGIC TIPS TO AVOID OBJECTIONS". The slide includes a disclaimer at the top: ".Confidential – For Educational and Illustrative Purposes Only. Its not a legal advise". The slide lists five bullet points: 1. Draft **claims first**, then write specification to support them. 2. For each feature in claims, the detailed description must explain:

- **Why** it is used.
- **How** it is implemented.
- **What** technical problem it solves.

 3. Use **figures, flowcharts, and reference numerals** to support claims. 4. Include **alternative embodiments and best mode**.

The Zoom interface shows a top bar with "Zoom Workplace Meeting View Edit Window Help" and a system tray with "Fri 6 Jun 12:37 PM". A participant list on the right includes SWARUPA, Dr. Harish Ch..., Jagannath Pa..., Arun Kumar..., CUTMBSRL..., and ANIRBAN BHATTACH... The bottom toolbar shows icons for Audio, Video, Participants (60), Chat, React, Share, AI Companion, Apps, More, and Leave. A macOS dock is visible at the bottom with various application icons.

This screenshot shows a Zoom meeting interface. The main content is a presentation slide titled "9 MITIGATION STRATEGIES DURING DRAFTING". The slide includes a disclaimer at the top: ".Confidential – For Educational and Illustrative Purposes Only. Its not a legal advise". The slide lists five categories of mitigation strategies:

- **Novelty**
 - Conduct thorough **prior art search** before drafting.
 - **Avoid claim overlap** with known disclosures.
- **Inventive Step**
 - Highlight **technical advancement** and **unexpected results**.
- **Clarity**
 - Use **precise terminology**; define ambiguous terms in the specification.
- **Definiteness**
 - Ensure claims have **clear boundaries**.
- **Enablement**
 - Include **working examples**, experimental parameters, and implementation steps.

The Zoom interface shows a top bar with "Zoom Workplace Meeting View Edit Window Help" and a system tray with "Fri 6 Jun 12:36 PM". A participant list at the top includes Dr. Rajendra..., Deepak Mishra, Sushree Jyoti..., Dr. Mukundje..., and Jayashree Su... The bottom toolbar shows icons for Audio, Video, Participants (60), Chat, React, Share, AI Companion, Apps, More, and Leave. A macOS dock is visible at the bottom with various application icons.



6th June 2025-DAY FIVE, 3rd& 4th SESSION (Time:02:00PM – 05:15PM) Igniting Immersive Learning: Unleashing the Power of EONXR in Every Classroom

(Mr. Abhi Mitra, Project Consultant, CUTM)

Number of Participants: 81

Speaker's profile:

Mr. Abhi Mitra is a dynamic professional and Project Consultant at Centurion University of Technology and Management (CUTM), with a focus on immersive learning technologies and digital transformation in education. With a background in educational innovation and technology integration, he has been instrumental in implementing cutting-edge tools such as EON-XR, augmented reality (AR), and virtual reality (VR) into academic environments. Mr. Abhi Mitra specializes in designing experiential learning modules that enhance student engagement, retention, and conceptual understanding across disciplines. His work supports the university's mission of creating future-ready learners through immersive pedagogy and tech-enabled classrooms. As a passionate advocate for transformative education, he actively trains faculty and students in deploying interactive digital tools to bridge theoretical learning with hands-on experiences.

Objectives:

- To introduce participants to the concept and educational potential of EON-XR, an immersive learning platform using AR and VR.
- To demonstrate how immersive technologies can transform traditional classrooms into interactive and experiential learning spaces.
- To train faculty on creating and integrating XR content into curricula across disciplines.
- To promote learner engagement, conceptual clarity, and retention through virtual and augmented reality-based instruction.
- To encourage adoption of immersive digital tools that support outcome-based and skill-oriented education.

Outcomes:

- Participants gained hands-on exposure to the EON-XR platform and its capabilities in content creation and delivery.
- Attendees learned to design immersive lessons that enhance student interaction and experiential learning.
- The session showcased real-life classroom applications of AR/VR in science, engineering, and vocational training.
- Faculty were empowered to blend XR tools with traditional pedagogy for better learning outcomes.
- The session sparked interest in integrating immersive technology as a core component of future-ready academic practices.

Brief Session Summary:

Mr. Abhi Mitra, Project Consultant at Centurion University of Technology and Management (CUTM), conducted a dynamic session on “Igniting Immersive Learning: Unleashing the Power of EON-XR in Every Classroom.” He introduced the capabilities of the EON-XR platform, demonstrating how augmented and virtual reality can transform passive instruction into interactive, hands-on experiences. Mr. Abhi Mitra showcased the creation of immersive learning modules that promote deeper conceptual understanding and active student engagement. The session highlighted real-world use cases across disciplines, illustrating how XR tools can bridge the gap between theory and practice. Participants explored the process of integrating immersive content into their teaching strategies, aligning with modern educational goals. The talk empowered faculty to reimagine classroom experiences through technology, fostering outcome-based, experiential, and future-ready learning environments.

Relevant Photographs:





**7th June 2025-DAY SIX, 1st & 3rd SESSION (Time:09:50AM – 11:00AM)
& (Time:01:45PM – 03:15PM)**

Crack the Code: Publishing in Elsevier Journals & Publication Ethics: Principles and Practice

(Dr. Sakshum Khanna, Associate Scientific Editor, Elsevier, New Delhi)

Speaker's profile:

Dr. Sakshum Khanna is a distinguished academic publishing professional, currently serving as Associate Scientific Editor at Elsevier, New Delhi - one of the world's leading providers of scientific, technical, and medical information. With a strong academic background in the life sciences and research communication, Dr. Sakshum Khanna brings extensive experience in scholarly publishing, peer review processes, and editorial best practices. He specializes in guiding researchers through manuscript preparation, submission protocols, and publication ethics. Dr. Sakshum Khanna actively collaborates with academic institutions to promote awareness of high-impact publishing standards, research visibility, and scientific integrity. As a mentor and speaker, he is known for demystifying the publication process and empowering faculty and early-career researchers to navigate the evolving landscape of academic publishing with confidence and credibility.

Objectives:

- To provide participants with a clear understanding of the publication process in reputed international journals, particularly those under Elsevier.
- To guide researchers on manuscript preparation, submission protocols, peer review stages, and post-publication engagement.
- To highlight the principles and importance of ethical publishing, including authorship, plagiarism, data integrity, and conflict of interest.
- To equip faculty and researchers with strategies to enhance the visibility, impact, and credibility of their scholarly work.
- To promote a culture of responsible research and adherence to global standards of scientific integrity and academic honesty.

Outcomes:

- Participants acquired practical knowledge on how to structure and submit manuscripts to high-impact Elsevier journals.
- Attendees understood key evaluation criteria used by editors and reviewers in the peer-review process.
- The session raised awareness about common ethical pitfalls and how to avoid research misconduct.
- Faculty were encouraged to mentor students and junior researchers on responsible research and publication practices.
- The sessions empowered researchers to build a strong academic profile through ethical publishing and global research dissemination.

Brief Session Summary:

Dr. Sakshum Khanna, Associate Scientific Editor at Elsevier, New Delhi, conducted two insightful sessions on academic publishing. In the first session, “Crack the Code: Publishing in Elsevier Journals”, he demystified the publication process, guiding participants through manuscript preparation, journal selection, peer review, and strategies to enhance research visibility. He offered practical tips to improve acceptance rates and align submissions with editorial expectations. In the second session, “Publication Ethics: Principles and Practice”, Dr. Sakshum Khanna addressed critical issues such as plagiarism, data falsification, authorship disputes, and conflict of interest. He emphasized the importance of transparency, accountability, and integrity in research communication. Together, both sessions provided a comprehensive roadmap for ethical and impactful publishing, equipping faculty and researchers with the knowledge to navigate academic journals confidently and responsibly. **It was a joint session of all the schools, including the School of Engineering and Technology (SOET).**

Relevant Photographs:





7th June 2025-DAY SIX, 2nd SESSION (Time:11:00AM – 12:30PM)

Vibe Coding & AI Tools

(Ms. Sahana Narendran, Co-founder, Dignifi, USA & Mr Biswajit Nayak, Founder CEO, Aveti Learning)

Speaker's profile:

Ms. Sahana Narendran is an accomplished entrepreneur and co-founder of Dignifi, a U.S.-based organization focused on leveraging technology for social impact and inclusive development. With a strong background in computer science and innovation strategy, she has led initiatives that combine AI tools, digital learning, and financial empowerment to support underserved communities. Passionate about using technology for good, Ms. Sahana Narendran works at the intersection of tech innovation, education, and equity. She brings global experience in building scalable digital solutions, designing inclusive platforms, and advocating for ethical AI. As a mentor and thought leader, she actively collaborates with educational institutions, startups, and social enterprises, inspiring learners to apply technology for real-world problem-solving and meaningful change.

Mr. Biswajit Nayak is the Founder and CEO of Aveti Learning, a pioneering ed-tech company dedicated to making quality education accessible to underserved communities in India. With a background in technology, entrepreneurship, and social impact, Mr. Biswajit Nayak has developed scalable digital learning platforms that combine AI, vernacular content, and adaptive tools to enhance student engagement and learning outcomes. His work focuses on bridging the urban-rural education divide by delivering personalized and inclusive content through low-bandwidth digital solutions. A passionate advocate for equitable education, he collaborates with schools, governments, and NGOs to drive grassroots impact. Mr. Biswajit Nayak is widely recognized for his innovative approach to ed-tech and his commitment to transforming education through purposeful technology.

Objectives:

- To introduce participants to the concept of “vibe coding” as a creative and engaging approach to learning programming.
- To demonstrate beginner-friendly AI tools that foster innovation, curiosity, and problem-solving among students.

- To showcase how interactive platforms can improve accessibility to coding and digital literacy, especially in underserved areas.
- To encourage educators to integrate coding and AI into everyday teaching through project-based, inclusive strategies.
- To highlight the role of technology in bridging educational gaps and promoting equity in learning environments.

Outcomes:

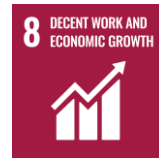
- Participants explored interactive coding environments and AI tools tailored for diverse learning needs.
- Attendees gained insights into low-bandwidth, scalable platforms for coding education and AI literacy.
- The session inspired faculty to adopt playful, student-centric methods for introducing programming and technology in the classroom.
- Educators were encouraged to foster creativity and innovation using AI as a learning enhancer rather than just a technical skill.
- The talk reinforced the value of accessible tech-driven education in empowering young learners and building foundational digital skills.

Brief Session Summary:

Ms. Sahana Narendran, Co-founder of Dignifi (USA), and Mr. Biswajit Nayak, Founder & CEO of Aveti Learning, jointly delivered an engaging session on “Vibe Coding & AI Tools.” They introduced the concept of vibe coding as a creative, engaging, and inclusive method of teaching programming, aimed at making coding intuitive and emotionally connected for learners. Showcasing user-friendly AI tools and interactive platforms, the speakers demonstrated how these technologies can democratize access to digital skills, even in underserved or low-bandwidth environments. They highlighted real-world applications of coding in education and social impact projects, emphasizing the role of storytelling, visuals, and gamification in enhancing learning outcomes. The session encouraged educators to rethink traditional methods by integrating fun, curiosity-driven experiences into their classrooms. Participants left with practical insights into fostering digital literacy, creativity, and equity through accessible tech-based learning models. **It was a joint session of all the schools, including the School of Engineering and Technology (SOET).**

Relevant Photographs:





7th June 2025-DAY SIX, 4th SESSION (Time:03:30PM – 04:30PM)

Mentoring

(Prof. Supriya Pattanayak, Vice Chancellor, CUTM, Odisha)

Speaker's profile:

Prof. Supriya Pattanayak is an accomplished academic leader, researcher, and institution builder, and holds the position of Vice Chancellor at Centurion University of Technology and Management (CUTM), Odisha. With an interdisciplinary background in sociology, development studies, and education, she brings over three decades of experience in academia, research, policy advocacy, and international collaboration. Prof. Supriya Pattanayak has held key leadership roles in higher education across India and Australia, contributing to learner-centric, inclusive, and socially relevant academic models. She is widely recognized for her work in action research, gender studies, rural development, and applied learning frameworks that integrate skills, livelihoods, and community engagement. As Vice Chancellor, she has led numerous initiatives focused on innovation in curriculum, experiential education, and institutional transformation, positioning CUTM as a national model for impactful and holistic education.

Objectives:

- To introduce the concept of mentoring as a developmental partnership between mentors and mentees.
- To highlight the roles, responsibilities, and ethical considerations involved in effective mentoring.
- To equip faculty and professionals with strategies for fostering personal, academic, and career growth in mentees.
- To explore different models and approaches to mentoring across disciplines and institutions.
- To promote a culture of continuous learning, support, and leadership development through structured mentoring practices.

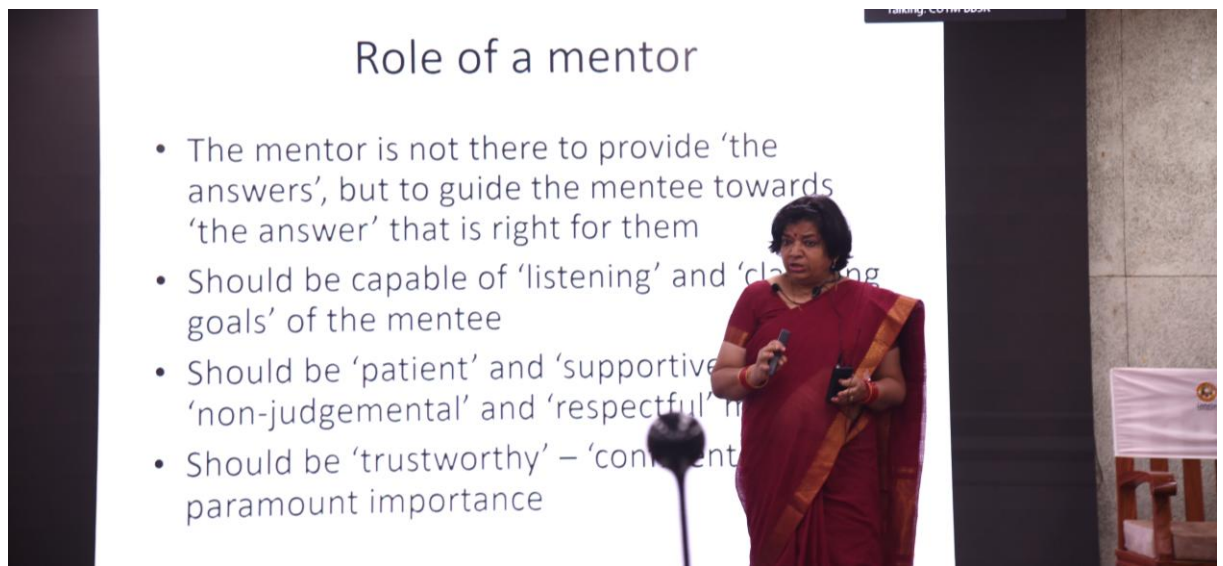
Outcomes:

- Participants understood the principles and benefits of mentoring in academic and professional settings.
- Attendees gained practical tools to initiate, maintain, and evaluate mentoring relationships effectively.
- The session encouraged faculty and leaders to become active mentors and role models within their institutions.
- Participants recognized the impact of mentoring on student success, faculty development, and organizational culture.
- The talk fostered a mindset of collaboration, empathy, and long-term engagement in nurturing future talent.

Brief Session Summary:

Prof. Supriya Pattanayak, Vice Chancellor of Centurion University of Technology and Management, led a deeply reflective session on “Mentoring,” emphasizing its role in academic and professional growth. She outlined the foundational principles of mentoring, highlighting the responsibilities, ethics, and trust required to build effective mentor-mentee relationships. The session explored various mentoring models - from academic guidance to career-focused and peer mentoring - each designed to foster confidence, critical thinking, and long-term development. Drawing from her leadership experience, Prof. Supriya Pattanayak encouraged faculty to embrace mentoring as a core academic function that drives inclusion, institutional excellence, and lifelong learning. She stressed the importance of empathy, active listening, goal setting, and structured feedback in shaping impactful mentoring practices. The session also addressed the mentor's role in guiding students through challenges, decision-making, and professional identity formation. It concluded with a call to institutionalize mentoring as a culture, not just a program, to build resilient and future-ready individuals. **It was a joint session of all the schools, including the School of Engineering and Technology (SOET).**

Relevant Photographs:





7th June 2025-DAY SIX, 5th SESSION (Time:04:30PM – 05:15PM)

Faculty Reflections & Valedictory Session

(Dr. Anita Patra, Registrar, CUTM)

Brief Session Summary:

Dr. Anita Patra, Registrar of Centurion University of Technology and Management (CUTM), joined the Faculty Development Programme virtually to deliver the valedictory address during the closing session titled “Faculty Reflections & Valedictory.” The session opened with faculty members sharing their reflections on the diverse and enriching sessions held throughout the FDP. Participants highlighted key learnings from expert talks on AI, robotics, patenting, immersive learning, and mentoring, emphasizing how the programme offered both academic depth and practical relevance. Joining online, Dr. Anita Patra commended the active participation and intellectual enthusiasm demonstrated by faculty throughout the FDP. She acknowledged the organizers and resource persons for curating a dynamic and interdisciplinary learning experience. In her address, she emphasized the importance of continued professional development, collaboration, and reflective teaching practices. Dr. Anita Patra encouraged faculty to integrate the insights gained into their pedagogy, research, and institutional initiatives, reinforcing CUTM’s vision of future-focused and impactful education. She further highlighted the role of such programmes in fostering innovation, academic integrity, and learner-centric environments. The virtual interaction concluded with a message of motivation and gratitude, reminding participants of their vital role in shaping an adaptive, inclusive, and high-quality academic ecosystem. The session served as both a culmination of shared learning and a forward-looking call to action - inviting educators to remain curious, connected, and committed to academic excellence. **It was a joint session of all the schools, including the School of Engineering and Technology (SOET).**