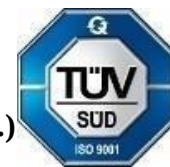




MADANAPALLE INSTITUTE OF TECHNOLOGY & SCIENCE
(Deemed to be University)



Affiliated to JNTUA, Ananthapuramu & Approved by AICTE, New Delhi
NAAC Accredited with A+ Grade, NIRF India Rankings 2024 - Band: 201-300 (Engg.)
NBA Accredited - B.Tech. (CIVIL, CSE, ECE, EEE, MECH, CST), MBA & MCA

A Report on One day workshop on
"Interdisciplinary Approaches to Innovation: AI, Networks, and Industry 4.0 Dynamics"
Organized by
Department of Computer Science and Engineering-Artificial Intelligence and Machine Learning
on 15.11.2025

MADANAPALLE INSTITUTE OF TECHNOLOGY & SCIENCE
DEEMED TO BE UNIVERSITY
(Declared under section 3 of UGC Act, 1956 by Govt. of India - MoE)
Madanapalle - 517325, Annamayya Dist., Andhra Pradesh, India

One Day Workshop
on
Interdisciplinary Approaches to Innovation: AI, Networks, and Industry 4.0 Dynamics
Organized by
Department of Computer Science and Engineering (Artificial Intelligence and Machine Learning)
Date: 15.11.2025 Timings: 10.00 AM to 4.00 PM Venue: Seminar Hall - B

Resource Person
Mr. Sapthagiri Elumalai
Sr. Network & Security Lead,
ALPHA DATA LLC, Abu Dhabi,
United Arab Emirates

Chief Patron Dr. N. Vijaya Bhaskar Choudary
Chancellor and Founder
Patron Mrs. Keerthi Nadella
Executive Director
Program Chair Dr. C. Varadaraj
Vice Chancellor
Convener Dr. S. Padma
Associate Professor & Head
Co-ordinator Dr. R. Praveen Kumar, Asst. Prof.
Mr. B. Tharakeshwara Raju, Asst. Prof.

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Report Submitted by: Dr. R. Praveen Kumar, Assistant Professor, Department of CSE (AI and ML)

Event Coordinators: Dr. R. Praveen Kumar, Assistant Professor, Mr. B. Tharakeshwara Raju, Assistant Professor.

Resource Person Details: Mr. E. Sapthagiri, Sr. Network & Security Lead, ALPHA DATA LLC, Abu Dhabi, UAE.

Participants: 2nd year CSE (AI and ML)

Venue: Seminar Hall B

Date & Time: 15/11/2025, 10:00 AM

Mode of conduct: Offline

Report Received on 24.11.2025.

One-day workshop on Interdisciplinary Approaches to Innovation: AI, Networks, and Industry 4.0 Dynamics was organized by the Department of Computer Science & Engineering (Artificial Intelligence and Machine Learning) on 15th November, 10:00 AM, at Seminar Hall - B. During the session, 133 students attended from the 2nd year CSE (AI and ML).

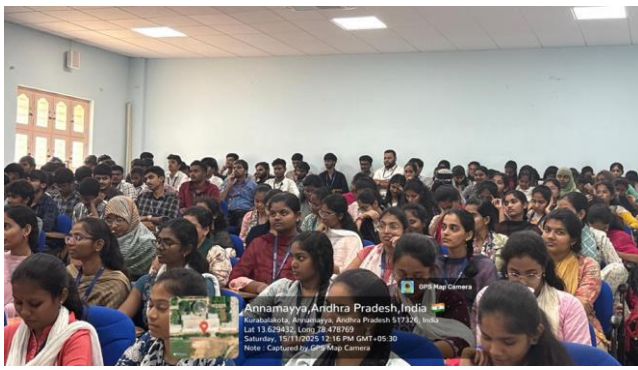
Welcome address:

Dr. R. Praveen Kumar wished all the faculty members and students present in the seminar hall. Then, he introduced the workshop. Before that, he thanked the college management, the vice chancellor, registrar, additional registrar, the principal, vice principal, and HOD madam for providing the resources to organize the workshop. After that, he shared a few words related to the importance of interdisciplinary approaches using AI, Networks, and Industry 4.0.

Dr. E. Sandhya wished all the faculty members and students present in the seminar hall. Then, she shared a few words about the workshop. Further, she encouraged the students to do interdisciplinary projects using AI and ML.

Further, Reddy Laxmi and Varshini (2nd Year CSM students) introduced Mr. E. Sapthagiri, Sr. Network & Security Lead, ALPHA DATA LLC, Abu Dhabi, UAE. Then, the students invited Mr. E. Sapthagiri sir to continue the session. Mr. E. Sapthagiri sir started the session and focused on practical aspects of machine learning, deep learning, and data analytics. He has covered the below-mentioned topics, which include

- Basics of supervised and unsupervised learning.
- Use of AI in predictive maintenance, demand forecasting, quality control, and personalized services.
- Demonstrations / case studies (e.g., anomaly detection in sensor data, recommendation systems).
- Challenges in data quality, model interpretability, and deployment in real-world environments.



After that, he highlighted the role of communication networks and distributed systems in Industry 4.0. Key topics include

- Fundamentals of network topologies, protocols, and architectures relevant to industrial settings.
- IoT (Internet of Things) and sensor networks for real-time monitoring and control.
- Concepts of edge computing and cloud integration.
- Security and privacy challenges in interconnected systems.

Further, he provided an in-depth overview of Industry 4.0 and its impact on manufacturing and services:

- Key pillars of Industry 4.0: automation, robotics, IoT, AI, big data, digital twins, additive manufacturing, etc.
- Integration of cyber-physical systems (CPS) in production lines.
- Case studies from smart factories, logistics, and supply chain management.
- Skill requirements, workforce transformation, and organizational change management.
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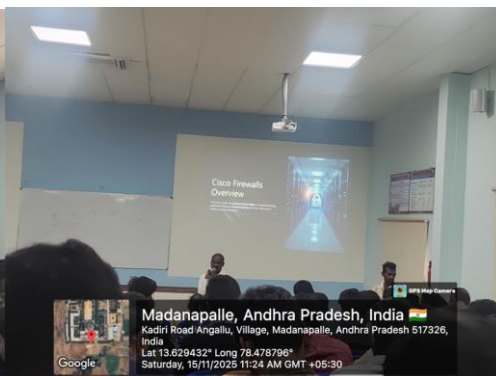


Vote of thanks:

On behalf of the department, Ms. Varshini thanked our college management, Vice Chancellor, Registrar, Additional Registrar, Principal, Vice Principal - Administration, and Head of the Department for providing resources. Further, she thanked resource person, the supporting faculty members, students, and non-teaching staff. Once again, she thanked the resource persons for providing their valuable insights about interdisciplinary approaches to students.

Outcome:

- The students understand the basics of networking concepts.
- The students also understand the basics of Industry 4.0
- The students learned basics of artificial intelligence
- The students understand how to do interdisciplinary approaches by combining ai, networking, and industry 4.0.



SDG's Mapping:

SDG No.	SDG Title	the Workshop Contributes
SDG 4	Quality Education	Enhances skills in AI, networks, and Industry 4.0
SDG 8	Decent Work and Economic Growth	Prepares participants for future digital jobs
SDG 9	Industry, Innovation & Infrastructure	Promotes innovation & digital industrial transformation
SDG 11	Sustainable Cities & Communities	Supports smart city frameworks & technologies
SDG 12	Responsible Consumption & Production	Encourages sustainable industrial practices through automation
SDG 17	Partnerships for the Goals	Strengthens academic–industry collaboration