



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 Six Days Online FDP on “Next Generation Cyber Defence with Deep Learning”

Organized by
Department of CSE (AI & ML)
from 16.03.2026 to 21.03.2026

ABOUT THE FDP: Cyber threats are evolving rapidly with sophisticated attacks such as ransomware, advanced persistent threats (APT), and AI-driven malware. Traditional security mechanisms are no longer sufficient to protect critical digital infrastructures. This Faculty Development Program (FDP) aims to equip faculty members with cutting-edge knowledge of state-of-the-art techniques applied to cyber security. The program provides comprehensive coverage of critical areas such as intrusion detection systems, malware, multi-factor authentication, cloud security, and AI-powered security operations. These domains are essential for addressing modern cyber threats and ensuring the resilience of digital infrastructures. By equipping faculty members with advanced skills, the program empowers them to deliver high-quality education and research to their students, thereby enhancing the overall quality of AI in engineering education. The program highlights the need for continuous learning and skill development in a rapidly changing technological landscape. Faculty members will gain practical insights and research opportunities in the field of cyber security, enabling them to contribute to the growth and innovation of their institutions. The program is designed to be highly interactive, allowing participants to engage in hands-on exercises and collaborative learning. The program is organized by the Department of Computer Science and Engineering (AI and ML) at Madanapalle Institute of Technology & Science (MITS).

ABOUT THE INSTITUTE: Madanapalle Institute of Technology & Science (Deemed to be University) was established in 1998 as the second technology institute in a sprawling 36.17-acre campus. MITS - Deemed to be University is governed by the visionary and proactive leadership of Dr. N. Vijaya Bhaskar Chetty, the Founder and Chancellor. With 27 years of academic excellence, MITS is recognized for its quality standards and contributions to higher education. The institution is MITS conforms to the international standard with commitment and dedication to establish the institution as one of the premier centers of academic excellence in India.

VISION: To serve our region, nation and world through academic excellence, research relevance, and community engagement while emphasizing the importance of the individuals.

MISSION: The MITS Deemed to be University is committed to providing a dynamic and diverse learning environment that nurtures intellectual curiosity, promotes critical thinking, and cultivates ethical leadership. Our mission is to empower students with the knowledge, skills, and values necessary to thrive in a rapidly changing global society.

ABOUT THE DEPARTMENT: The Department of Computer Science & Engineering (Artificial Intelligence & Machine Learning) was established in 2021. The department offers three-year undergraduate degree program designed to be flexible and aligned with the evolving demands of the information technology industry. The College Academic Council and the department's Board of Studies are committed to deliver a high-quality education with an advanced curriculum, ensuring that students are industry-ready and prepared to excel in the modern business environment.

ORGANIZING COMMITTEE:
Chairman: Dr. S. Padma, Assoc. Professor (Head, CSE (AI and ML))
Coordinator: Dr. M. Rajeswari, Assoc. Professor, Dept. of CSE (AI and ML)
Mr. Subhas Das, Assistant Professor, Dept. of CSE (AI and ML)

PROGRAM COORDINATOR MEMBERS:
Dr. Sandhya, Assistant Professor
Dr. R. Preethi Kumar, Assistant Professor
Mr. P. Lishayakumar, Assistant Professor
Mr. B. S. H. Shreyas Ahamed, Assistant Professor
Mr. R. Usha, Assistant Professor
Mr. B. Govindaraj, Assistant Professor
Mr. V. Srinivasan, Assistant Professor
Mr. Theerthadas Raju, Assistant Professor
Mr. G. Nishu, Assistant Professor

REGISTRATION LINK AND QR CODE:
https://mits.edu.in/next-generation-cyber-defence-with-deep-learning
https://mits.edu.in/next-generation-cyber-defence-with-deep-learning

PAYMENT QR CODE:
https://mits.edu.in/next-generation-cyber-defence-with-deep-learning

REGISTRATION QR CODE:
https://mits.edu.in/next-generation-cyber-defence-with-deep-learning

REGISTRATION FEE DETAILS:

Category	Amount
External Faculty	Rs. 2000/-
Internal Faculty (PG Scholars, PhD Scholars)	Rs. 8000/-

FOR OUTCOMES: By the end of this FDP, participants will be able to:
- Explain the role of deep learning in modern cyber defense systems.
- Apply neural networks for intrusion and malware detection.
- Analyze network traffic datasets to detect anomalies using IS, Machine Learning.
- Evaluate the performance metrics of cybersecurity ML models.
- Design and implement a simple intrusion detection system.
- Analyze network traffic datasets and implement performance improvements.

REGISTRATION FEE DETAILS:

EXTERNAL FACULTY: Rs. 2000/-
INTERNAL FACULTY (PG SCHOLARS, PHD SCHOLARS): Rs. 8000/-

DATE: 16th March to 21st March - 2026
TIME: 6:00 PM to 7:30 PM
MODE: Virtual

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Report Submitted by: **Dr. M. Rajeswari Assoc., Professor, Dept. of CSE (AI and ML), Mr. Subhas Das Assistant Professor, Department of CSE (AI and ML).**

Resource Persons

1. **Dr. E. Golden Julie, Assistant Professor (Sr. Grade), Department of CSE, Regional campus, Anna University, Tirunelveli.**
2. **Dr. Kaushlendra Sharma, Assistant Professor, IIIT Nagpur.**
3. **Dr. Balaji Rajendran, Associate Director at CDAC, Bengaluru**
4. **Dr. M. Roshni Thanka, Dr. M. Roshni Thanka, Associate Professor, Department of Data Science and Cyber Security, Karunya University, Coimbatore**
5. **Dr. Subhas Barman, HoD, CSE, JGEC, West Bengal**
6. **Dr. K K Soundra Pandian, Scientist / Additional Director, Ministry of Electronics & Information Technology (MeitY), New Delhi.**

No. of Participants: 106

Mode of Conduct: Online

Time: 06.00 PM to 07.30 PM

Report Received on 07.04.2026.

Department of Computer Science and Engineering (AI and ML) has organized a Six -Day Online FDP on “Next Generation Cyber Defense with Deep Learning” program from 16.04.2026 to 21.04.2026

Welcome Address:

Dr. M. Rajeswari Assoc., Professor, Department of CSE (AI and ML), Madanapalle Institute of Technology & Science (MITS) gave a pleasant and captivating welcoming speech to everyone at 06:00 PM. The program’s primary goal is to equip educators and researchers with the knowledge and skills needed to integrate advanced AI techniques especially deep learning into modern cyber security practices.

Keynote Address

Dr. S. Padma, Associate Professor & Head, Department of CSE (AI and ML), Madanapalle Institute of Technology & Science (MITS), greeted the resource person and welcomed the participants to enrich themselves. She expressed gratitude to the MITS administration and Principal for their continuous and constant support in setting up FDPs, guest lectures, and workshops. She encouraged the participants to acquire skills that are highly sought after in the fields of Cyber Defense with Deep Learning

Presidential Address

Dr. P. Ramanathan, Principal, MITS highlighted the role of Next Generation Cyber Defense with Deep Learning. He stated that this FDP platform will assist faculty in improving their skills in Cyber Defense and Deep Learning, and that these subjects must be taught to students. His speech has included how to improve safety, and quality of life by enabling Next Generation Cyber Defense with Deep Learning.



FDP session Details

Day - 1

Theme: Intelligent Foundations of Cyber Security and Deep Learning

Speaker: Dr. E. Golden Julie, Assistant Professor(Sr.Grade),Department of CSE, Regional campus, Anna University, Tirunelveli

Implied focus areas:

- Understanding modern threats such as malware, phishing, ransomware, APTs, and zero-day attacks.
- Concepts of firewalls, intrusion detection/prevention systems (IDS/IPS), encryption authentication
- Network Security and Traffic Analysis
- Cybersecurity Policies and Governance

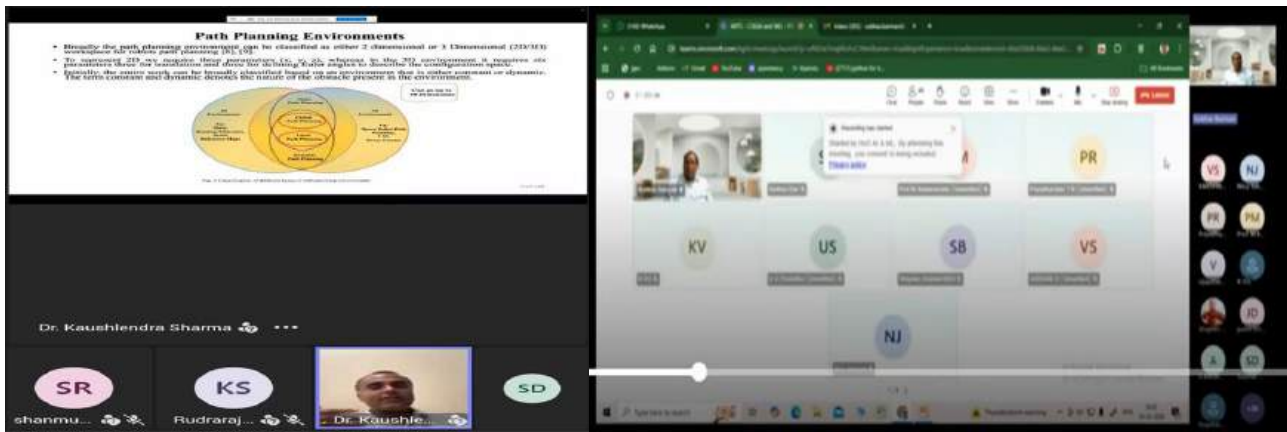
Day - 2

Theme: AIML in Cloud Robotics

Speaker: Dr. Kaushendra Sharma, Assistant Professor, IIIT Nagpur

Implied focus areas:

- AI/ML Integration in Cloud Robotics.
- Cyber security Threats in Cloud Robotics
- Deep Learning Techniques for Threat Detection
- Secure Data Management in Cloud Environments
- Real-time Monitoring and Defense Mechanisms
- Future Trends in Cyber-Resilient Robotics



Day – 3

Theme: Enhancing Cyber Security with Multi-Factor Authentication in Multi-Server Environments

Speaker: Dr. Subhas Barman, HoD, CSE, JGEC, West Bengal,

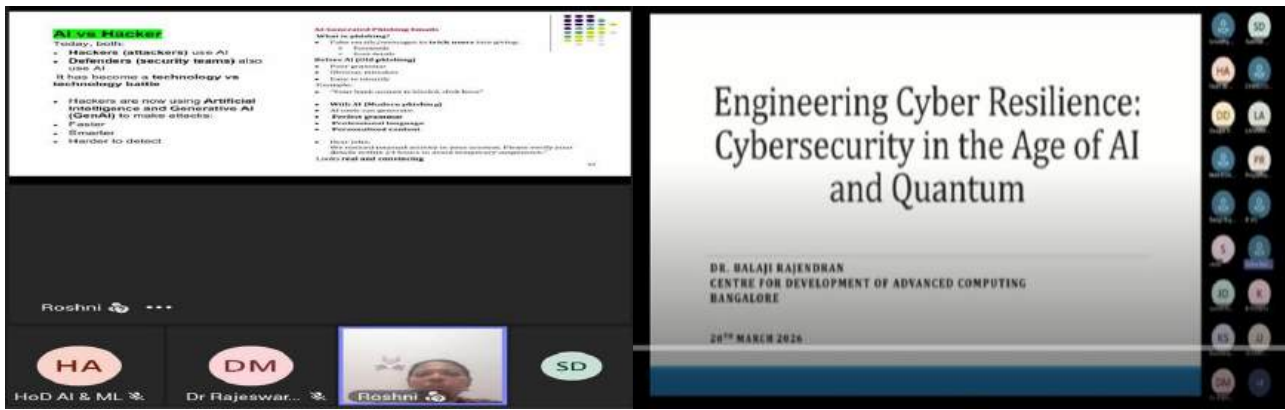
Implied focus areas:

- Fundamentals of Multi-Factor Authentication (MFA)
- Challenges in Multi-Server Environments
- Integration of MFA with Distributed Systems
- Role of Deep Learning in Authentication Security
- Threat Mitigation and Attack Prevention
- Future Directions in Intelligent Authentication Systems

Day – 4

Theme: Generative AI Driven Next Generation Cyber Defense Using Deep Learning for Intelligent Threat Detection and Response

Speaker: Dr. M. Roshni Thanka, Associate Professor, Department of Data Science and Cyber Security, Karunya University, Coimbatore



Implied focus areas:

- Foundations of Generative AI in Cyber security.
- Deep Learning for Intelligent Threat Detection
- AI-Driven Threat Intelligence and Prediction\
- Automated Incident Response Systems
- Adversarial AI and Security Challenges
- Future of Cyber Defense with Generative AI

Day - 5

Theme: Engineering Cyber Resilience: Cybersecurity in the Age of AI and Quantum

Speaker: Dr. Balaji Rajendran, Associate Director at CDAC, Bengaluru,

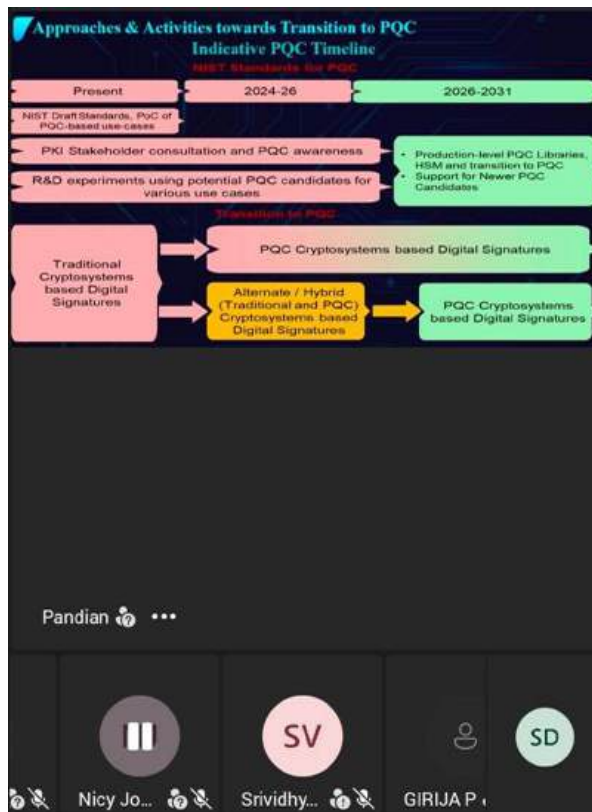
Implied focus areas:

- Understanding resilience beyond security
- Role of AI/ML in both strengthening defenses and enabling more sophisticated cyber attacks.
- Quantum Computing and Cyber security Risks
- Development of quantum-resistant encryption techniques to secure future communication systems.
- AI-Driven Resilience Strategies.
- Designing Robust and Adaptive Security Architectures

Day - 6

Theme: Future Proofing Through Quantum Cyber Resilience in Emerging Technology

Speaker: Dr. K K Soundra Pandian, Scientist / Additional Director, Ministry of Electronics & Information, Technology (MeitY), New Delhi.



Implied focus areas:

- Importance of designing systems that remain secure against evolving threats.
- Quantum Computing and Emerging Threat Landscape.
- Strategies to ensure systems can resist, recover, and adapt to quantum-enabled cyber attacks.
- Post-Quantum Cryptography in Emerging Technologies.
- Integration of AI and Deep Learning for Resilience.
- Security Strategies for Emerging Technologies.

Vote of thanks

With a vote of gratitude, **Mr. Subhas Das, Assistant Professor**, Department of CSE (AI and ML), formally ended the session with question hours. He sincerely thanked the MITS management, Principal, all the participants and Resource persons who have shared their knowledge and experience.

Outcomes:

At the end of FDP, the participants can able to

1. Strong Conceptual Foundation.
2. Application of Deep Learning in Cyber security.
3. Research and Innovation Skills.
4. Hands-on Technical Expertise.
5. Curriculum Enhancement Capability.
6. Problem-Solving and Analytical Ability.
7. Collaboration and Knowledge Sharing.

UN-SDG Mapping:

SDG 4 – Quality Education

SDG 8 – Decent Work and Economic Growth

SDG 9 – Industry, Innovation and Infrastructure

SDG 16 – Peace, Justice, and Strong Institutions

SDG 17– Partnerships for the Goals