



**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 Week Online International FDP on  
“The Intelligent City: Building Urban Futures with IoT and AI”  
Organized by  
Department of CSE (AI & ML)  
from 08.12.2025 to 12.12.2025**

**About MITS Deemed to be University**

Madanapalle Institute of Technology & Science Deemed to be University was established in 1998 in the scenic and serene surroundings of Madanapalle. It is ideally located 27 km from the nearest city, Ananthapuramu, and 100 km from Bangalore. The Institute is well connected to the international airport at Bangalore and the nearest railway station is at Tirupati, 100 km from Bangalore, and 120 km from Tirupati.

With 27 years of academic excellence, MITS has earned NAAC A+ NIRF 2023 in the last 20 years and NAAC accreditation, due to its engine programs. It is ranked 201-300 in the NIRF India Rankings 2024. The Institute is well connected to the international airport at Bangalore and the nearest railway station is at Tirupati, 100 km from Bangalore, and 120 km from Tirupati.

MITS offers 10 undergraduate programs, 10 postgraduate programs, 10 research programs, 10 diploma programs, and 10 certificate programs. The Institute is well connected to the international airport at Bangalore and the nearest railway station is at Tirupati, 100 km from Bangalore, and 120 km from Tirupati.

**Institute Vision**  
To become a globally recognized research and academic institution and develop students in technological and environmental development of the society.

**Institute Mission**  
To foster a culture of excellence in research, innovation, entrepreneurship, critical thinking and create by providing necessary resources to the generation, dissemination and application of knowledge in various fields. With well-defined strategies and guidelines, MITS is committed to provide the students with the best possible education and the best environment for their growth.

**About the Department**  
The Department of Computer Science and Engineering (Artificial Intelligence and Machine Learning) offers a wide range of courses and research areas. The department offers a variety of programs designed to be competitive and relevant to the needs of the industry. The department is highly regarded for its research and teaching activities, and is committed to providing high-quality education and research opportunities.

**Chief Patron**  
Dr. N. Vijaya Bhaskar Choudary  
Founder & Chancellor

**Patron**  
Mrs. Keerthi Nadella  
Executive Director

**Program Co-Chair**  
Dr. P. Ramanathan  
Principal, MITS

**Convenor**  
Dr. S. Padma  
Associate Professor & Head

**Co-ordinator**  
Mr. BSH. Shayeez Ahmed  
Asst. Prof., Dept. of CSE (AI and ML)

**Co-Coordinator**  
Mr. V. Sivaraman  
Asst. Prof., Dept. of CSE (AI and ML)

**Certificate**  
E - Certificates will be provided to all the Registered participants

**Target Audience**  
Registration is open to faculty members of the AICTE approved institutions, Research Scholars, PG Students and Participants from Industry.

**A One Week Online International FDP on**  
“The Intelligent City: Building Urban Futures with IoT and AI”

**MITS**  
MADANAPALLE INSTITUTE OF TECHNOLOGY & SCIENCE  
(Deemed to be University Under Section 3 of UGC Act, 1956)

**Date : 08.12.2025 to 12.12.2025**

**Organized by**  
Dept. of. Computer Science  
and Engineering (AI and ML)  
[www.mits.ac.in](http://www.mits.ac.in)

**About the FDP**

This FDP is designed to equip educators with advanced knowledge and practical skills in cutting-edge technologies. This program emphasizes the integration of the Internet of Things (IoT) and Generative AI to foster innovative solutions for urban development. Participants will explore how these technologies can be harnessed to create robust, secure smart cities for the future. Additionally, the program will focus on Smart cities which are a key component of the future economy and how to improve the quality of life for citizens, enhance sustainability, and streamline the delivery of essential services. By enhancing their expertise, faculty members will be better prepared to guide students in navigating and contributing to the rapidly evolving landscape of technology and sustainability.

**Registration Fee and Link**  
Last date to register : 08.12.2025  
The meeting link will be shared with the registered participants  
Scan Code to Register  
Scan Code to Pay  
Link: <https://forms.gle/CxXzrBaxuZxVGny97>

**Program Schedule**

Date	Day	Time	Program
08.12.2025	Monday	06.00 PM	WELCOME ADDRESS
08.12.2025	Monday	07.00 PM	KEYNOTE ADDRESS
09.12.2025	Tuesday	06.00 PM	SESSION 1
10.12.2025	Wednesday	06.00 PM	SESSION 2
11.12.2025	Thursday	06.00 PM	SESSION 3
12.12.2025	Friday	06.00 PM	SESSION 4

**Follow us on :**

**Resource Persons**

- Mr. Chetan Nandani**  
Deputy Municipal Commissioner, Rajkot, Gujarat
- Dr. Ramkumar Lakshminarayanan**  
Assistant Professor, College of Computing and Information Sciences, University of Technology and Applied Sciences-Sur, Sultanate of Oman
- Dr. S. Albert Alexander**  
School of Electrical Engineering, Vellore Institute of Technology, Vellore, Tamil Nadu
- Dr. Suvra Jyoti Choudhury**  
Assistant Professor, Department of CSE, IIT Nagpur, Maharashtra
- Dr. R. Gopalakrishnan**  
Professor & Dean-Administration, K.S. Rangasamy College of Technology, Tiruchengode, Tamil Nadu

**Organizing Committee**

- Assoc. Professor & Head**  
Dr. S. Padma
- Asst. Professor**  
Dr. S. Priya
- Asst. Professor**  
Dr. E. Sandhya
- Asst. Professor**  
Dr. R. Praveen Kumar
- Asst. Professor**  
Mr. P. Udayakumar
- Asst. Professor**  
Mr. BSH. Shayeez Ahmed
- Asst. Professor**  
Mrs. N. Geethanjali
- Asst. Professor**  
Mrs. R. Usha
- Asst. Professor**  
Mr. V. Sivaraman
- Asst. Professor**  
Mr. Tharakeswara Raju B
- Asst. Professor**  
Mr. Subhas Das
- Asst. Professor**  
Mr. G. Nithin

**Further Details Contact:**  
Mr. BSH. Shayeez Ahmed  
9966390973  
shayeezahamedbs@mits.ac.in

Mr. V. Sivaraman  
9629590800  
sivaramanv@mits.ac.in

**Report Submitted by: Mr. V. Sivaraman, Assistant Professor, Department of CSE (AI and ML); Mr. BSH. Shayeez Ahmed Assistant Professor, Department of CSE (AI and ML).**

**Resource Persons:** Mr. Chetan Nandani, Deputy Municipal Commissioner, Rajkot, Gujarat; Dr. Ramkumar Lakshminarayanan, Assistant Professor, College of Computing and Information Sciences, University of Technology and Applied Sciences-Sur, Sultanate of Oman; Dr. S. Albert Alexander, School of Electrical Engineering, Vellore Institute of Technology, Vellore, Tamil Nadu; Dr. Suvra Jyoti Choudhury, Assistant Professor, Department of CSE, IIT Nagpur, Maharashtra; Dr. R. Gopalakrishnan, Professor & Dean-Administration, K.S. Rangasamy College of Technology, Tiruchengode, Tamil Nadu.

**No. of Participants:** 138

**Mode of Conduct:** Online

**Time:** 06.00 PM to 08.00 PM

**Report Received on** 18.12.2025.

**Department of Computer Science and Engineering (AI and ML) has organized a One Week Online International FDP on “The Intelligent City: Building Urban Futures with IoT and AI” program from 08.12.2025 to 12.12.2025**

**Welcome Address:**

**Mr. BSH. Shayeez Ahmed, Assistant 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 make participants to understand how IoT and Artificial Intelligence enable smart, sustainable urban systems and identify suitable sensors, networks, and architectures for smart city applications.**

**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 IoT and AI.

**Presidential Address**

**Dr. P. Ramanathan, Principal, MITS highlighted the role of IoT and AI in building smart city environments. He stated that this FDP platform will assist faculty in improving their skills in IoT and AI, and that these subjects must be taught to students. His speech has included how to improve urban efficiency, sustainability, safety, and quality of life by enabling data-driven planning, optimized resource management, and responsive city services.**

## FDP session Details

### Day - 1

Theme: Intelligent Farming through IoT Modules – A Research Perspective

Speaker: Dr. S. Albert Alexander (PDF, USA), Raman Research Fellow Vice President, Energy Conservation Society, India, School of Electrical Engineering, Vellore Institute of Technology (VIT), Vellore.

**Key Technologies**

- **Data fusion technology:** to collect data thus more effective and useful data can be combined
- **Self healing technology:** when a small portion device fails to transmit data
- **Power acquisition technology:** the energy for IoT devices are supported by battery
- **Environment compatibility technology:** waterproof, dustproof, anti- vibration/ electromagnetic/ high or low temperature
- **Information security technology:** to avoid information leakage and loss, and protect the safety operation of the applica

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12/8/2025 ALBERT-VIT 20

PV +SS

Albert Alexander S

JP (sophia) Usha R SS Shreyas... S Rangasamy... UP (Maya) EA (Vinita) SV (Shruti) SS (Shashikala) PV (Pooja) +SS

Implied focus areas:

- IoT-based sensing and automation in agriculture
- Data-driven farming for productivity and sustainability
- Research challenges and future directions in smart farming
- Energy-efficient and technology-enabled agricultural systems

### Day - 2

Theme: Future and the Role of AI Agents

Speaker: Dr. Ramkumar Lakshminaryanan, University of Technology and Applied Sciences, Sur, Sultanate of Oman

**IoT as Network of Networks**

**Internet of Things**

1. Individual networks  
2. Connected together  
3. With security, analytics, and management

12/8/2025 ALBERT-VIT 33

Albert Alexander S

JP (sophia) Usha R SS Shreyas... S Rangasamy... UP (Maya) EA (Vinita) SV (Shruti) SS (Shashikala) PV (Pooja) +SS

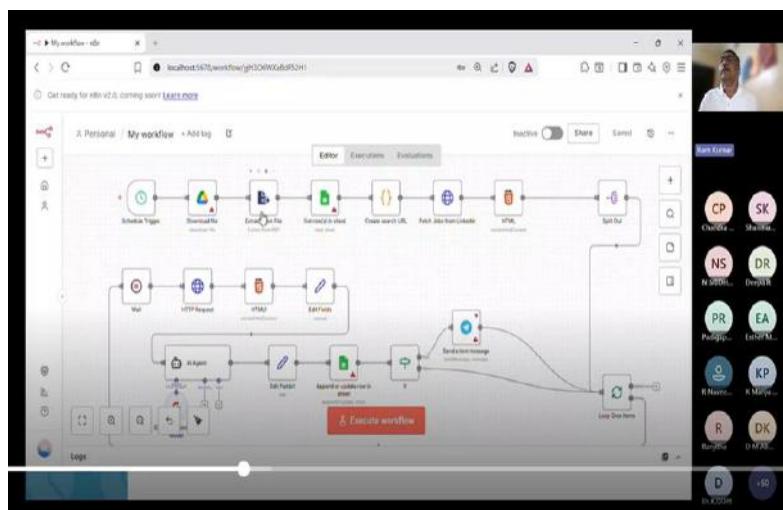
Implied focus areas:

- Differences between non-agentic, agentic, and truly autonomous AI workflows.
- Step-by-step execution enables task planning, research, drafting, and revision in agentic systems.
- The advantages and limitations of one-pass versus iterative AI execution.
- Agentic workflows to decompose complex problems into manageable stages.
- Scenarios where fully autonomous AI agents can operate with minimal or no human intervention.
- Air Pollution Monitoring Device
- Model Context Protocol

### Day – 3

Theme: The Smart City Vision: Where AI Meets Urban Life

Speaker: Dr. R. Gopalakrishnan, Professor & Dean-Administration, K.S. Rangasamy College of Technology, Tiruchengode, Tamil Nadu.



#### Implied focus areas:

- Core Elements of Smart Urban Infrastructure
- Smart cities rely on digital connectivity, data intelligence, and automation
- Integration of IoT sensors, cloud platforms, and AI analytics for real-time monitoring
- Use of Big Data and predictive analytics for planning and decision-making
- Smart governance through e-services, digital platforms, and citizen participation
- Deployment of cyber-physical systems for urban infrastructure control
- Focus on energy efficiency, sustainability, and resource optimization
- Interoperability between transport, power, water, healthcare, and security systems

#### Day – 4

##### Theme: Introduction to IoT & Sustainable Future

Speaker: Dr. Suvra Jyoti Choudhury, Assistant Professor, Department of CSE, IIIT Nagpur, Maharashtra.



#### Implied focus areas:

- IoT Architecture Overview
- Application of IoT
- Objectives of Smart City
- City Wide Smart Solutions
- Consumer IoT Products & Services
- Smart Farming: Use of IoT to Improve Agriculture
- IoT in Manufacturing
- IoT Challenges

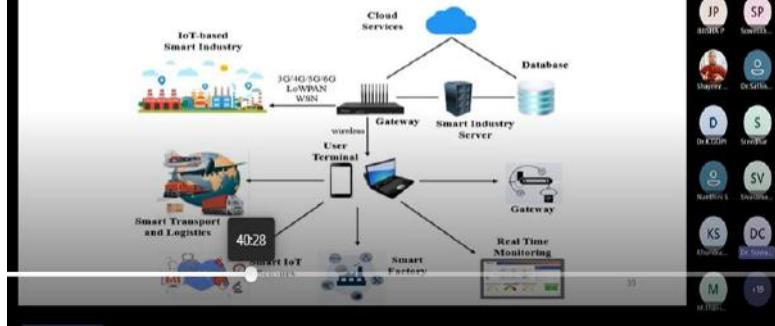
#### Day - 5

##### Theme: Smart City – Case Study on implemented projects, Rajkot

Speaker: Mr. Chetan Nandani, Deputy Municipal Commissioner, Rajkot, Gujarat

## Applications of IoT

- Industrial IoT: Predictive maintenance, supply chain optimization.



Implied focus areas:

- Rajkot Smart City - Case Study
- Integrated Transit Management System (ITMS)
- Adaptive Traffic Control System (ATCS)
- Smart Hawking Solution
- Overview of Enterprise GIS solution
- Digital Highway (OFC) Project
- Municipal Services on WhatsApp

Vote of thanks

With a vote of gratitude, Mr. BSH. Shayeez Ahamed, 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. Understand the role of IoT and AI in smart farming, smart cities, and sustainable development.
2. Identify real-world applications and implemented smart city and agriculture projects.
3. Apply IoT architectures and AI workflows to solve urban and agricultural problems.
4. Analyze the future impact of AI agents in autonomous and intelligent systems.
5. Evaluate sustainability and societal impact of IoT- and AI-based solutions.

UN-SDG Mapping:

SDG 2 – Zero Hunger

SDG 7 – Affordable and Clean Energy

SDG 9 – Industry, Innovation and Infrastructure

SDG 11 – Sustainable Cities and Communities

SDG 13 – Climate Action