

Artificial Intelligence for Robots

11th -17th March 2024

About the Institute: Indian Institute of Information Technology Design and Manufacturing, Kurnool (IIITDMKLN) was announced in 2014 after receiving the assent of President of India to the Institutes of Information Technology Act, 2014, and its subsequent publication in the Gazette of India, Extraordinary, Part- II, Section I, on December 08, 2014. The institute was announced by the Government of India to give effect to its obligation under the Andhra Pradesh State Reorganization Act-2014. The IIITDM Kurnool campus is located far away from the bustling life of the metropolis in the mineral-rich mountain trails of the Rayalaseema region of Andhra Pradesh. The campus is situated atop a hill that oversees Kurnool city. The place offers a perfect environment to nurture a peaceful state of mind required to carry out research and other student activities

About the Department: Department of Mechanical Engineering came into existence in the year 2016. The department has 11 qualified and dedicated faculty members with specializations in various areas of Mechanical Engineering. At present, the department is conducting an undergraduate course, two postgraduate courses, and research programmes leading to Ph.Ds.

CHIEF PATRON

Dr. DVLN Somayajulu

Director

IIITDM Kurnool

PATRON

Dr. Muvvala Pullarao

Head of the Department
Department of Mechanical
Engineering

IIITDM Kurnool

COURSE COORDINATOR

Dr. Ravi Kumar Mandava

Assistant Professor

Department of Mechanical
Engineering

IIITDM Kurnool

Objective of the Workshop: Artificial intelligence (AI) and robotics are a powerful combination for automating tasks in industry and non-industrial applications. AI provides robots a computer vision to navigate, sense and calculate their reaction accordingly. The demand of Artificial Intelligence has become an increasingly common presence in robotic solutions, introducing flexibility and learning capabilities in various rigid applications. To make an intelligent robot in various applications the present workshop will provide the basic knowledge on robotics and Artificial Intelligence. Participants will learn kinematics, dynamics trajectory planning, motion planning, Control and intelligence algorithms for manipulators, mobile robots and legged robots. Hands-on training and practice sessions will help participants gain confidence on robotic concepts, their simulation and implementation including sessions on intelligent agents. This course will be useful for PG and Ph.D students those who are interested in the learning robotics and intelligent systems.

Key Features:

- Introduction to AI in Robotics.
- Kinematics and Dynamics of the Robotic Manipulators.
- Motion Planning and Control Algorithms for Robots.
- Machine Learning Techniques for Robots.
- AI & ML Applications in Robotics.
- Application of Soft Computing Techniques for Robots.
- Neural Networks and Fuzzy Logic Techniques for Robots.
- Deep Learning Architectures.
- Human Activities Recognition using Neural Networks.
- Recent trend of Artificial Intelligence towards Human Decision Making & modern Optimization Techniques.

Registration and Certification:

- There is no registration fee and the number of participants is limited to 25.
- Accommodation with food will be provided.
- Students selected for this workshop are eligible for reimbursement of their Traveling Allowance (TA) (As per Govt. of India) for the shortest route to IIITDM Kurnool and back as per SERB and GoI norms.

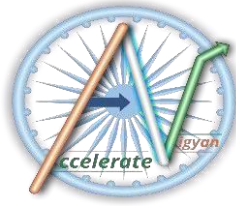
Important Dates:

Registration starts from 1st February 2024
Last date of Application 20th February 2024
Display of Short listed candidates 25th February 2024

Eligibility for Participation:

- ❖ KARYASHALA is open to all the **Research scholars, P.G and U.G final year students**, participants from various disciplines such as, Computer science, Electronics and Communication, Electrical, Civil, Mechanical Engineering etc. from all the institute, college, and universities.
- ❖ The applicants should produce a declaration form along with "No Objection Certificate (NOC)" from the institute and fill the following google form: <https://forms.gle/hmYxKMk4xeb31oSv8>

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Karyashala (High-End Workshop)
on
Artificial Intelligence for Robots
March 11th – 17th, 2024

Funded By: Science & Engineering Research Board (SERB), Under the Accelerate Vigyan Scheme
Organized By: Department of Mechanical Engineering, Indian Institute of information Technology Design and Manufacturing Kurnool, Andhra Pradesh, India

Registration cum NOC Form

Name of the Participant:

Gender:

Pursuing Degree: (Ph.D / PG / UG final Year).....

Department:

Organization:

Mobile Number:

Email:

I agree to abide by the rules and regulations governing the workshop.

Signature of the Participant
 Place:
 Date:

Mr. /Ms. /Mrs.belongs to our Institution and is permitted to attend the program.

Signature of the Head of Department and Seal
 Place:
 Date: