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# A Report on One day Expert Talk on "Robotics and AI"

## Organized by Department of CSE-Artificial Intelligence & Machine Learning on 11-09-2025



**Report Submitted by: Mr. Udayakumar.P, Assistant Professor, Department of CSE-Artificial Intelligence & Machine Learning**
**Resource Person Details: Mr. Pradeep M, Co-founder, KAL-M Robotics and Innovations, Chennai.**
**Participants: CSE- AI and ML (71 Students)**
**Venue: NPN Block AIML Lab, NPN005**
**Mode of Conduct: Offline**
**Report Received on 16.09.2025.**

The Department of CSE (AI and ML) at MITS organized a **One Day Expert Talk on "Robotics and AI"** with the objective of exposing students to **cutting-edge technologies shaping the future of industries**. The event focused on **robotics innovations powered by AI**, emerging research directions, and opportunities for student projects and entrepreneurship. The expert talk bridged the **academic- industry divide**, helping students connect theoretical AI concepts with real-world robotics applications. The session also aimed to motivate students to consider robotics and AI as potential career pathways.

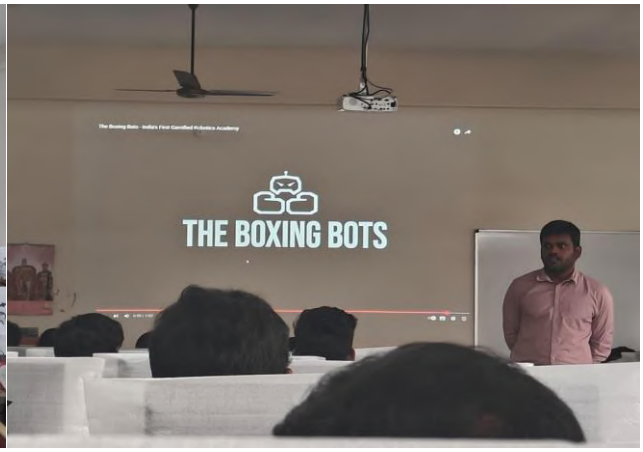
### Welcome Address:

The event began with a warm welcome address by **Mr. P. Udaya Kumar**, Assistant Professor, Department of CSE (AI and ML). He highlighted the vision of the department to continuously expose students to **emerging technologies and industry leaders**, and the importance of robotics in transforming modern industries, from healthcare robots to autonomous vehicles. He emphasized that **AI-driven robotics** represents the next industrial revolution, and sessions like this would provide **practical insights** for students preparing for both academic research and professional careers.

### Keynote Address:

The keynote address was delivered by **Dr. S. Padma**, Associate Professor & Head, Department of CSE (AI and ML). She emphasized the following points:

- Robotics and AI are **multidisciplinary domains** that combine mechanical design, computer vision, deep learning, and control systems.
- AI-powered robots are no longer limited to science fiction but are **transforming industries such as manufacturing, defense, agriculture, and medicine**.
- Encouraged students to actively participate in robotics hackathons, competitions, and collaborative research.
- Highlighted the **alignment of robotics and AI with national initiative** like *Make in India* and *Digital India*.


**Resource Person Lecture:**

Mr. **Pradeep M** delivered an insightful, industry-focused, and interactive session that kept the students engaged throughout. He began with an **introduction to Robotics and AI**, explaining the evolution of robotics from traditional industrial robots to modern intelligent service robots. He highlighted how artificial intelligence enhances robotics through **machine learning, computer vision, and natural language processing**, enabling robots to perform complex tasks with autonomy and precision.

He then discussed the role of **Robotics in Industry 4.0**, emphasizing their applications in **smart manufacturing, predictive maintenance, and supply chain automation**. Mr. Pradeep explained how AI optimizes robotic decision- making, adaptability, and efficiency in real-time environments. The lecture also included a segment on **Human-Robot Interaction (HRI)**, with case studies on collaborative robots (cobots) working alongside humans in assembly lines, as well as emerging applications in **social robotics and healthcare assistance**, demonstrating the expanding scope of robotics in everyday life.

The resource person further shared **innovations at KAL-M Robotics and Innovations**, showcasing real-world projects in automation and intelligent robotic solutions. He discussed the integration of AI into robotics platforms to create scalable and impactful innovations, while also reflecting on his **startup journey and the challenges of building a robotics company in India**. Concluding the lecture, he spoke about the **future scope and career opportunities** in robotics, AI-driven automation, and interdisciplinary engineering, while encouraging students to explore entrepreneurship and innovation.



The session ended with an engaging **Q&A discussion**, where students raised queries about robotics programming, AI models, and startup prospects, making the session both informative and inspiring.

**Memento Presentation:**

As a mark of respect and appreciation, **Dr. S. Padma**, Associate Professor & Head, Department of CSE (AI and ML), presented a **memento** to **Mr. Pradeep M**. The gesture acknowledged his valuable contributions in sharing practical knowledge and motivating students towards innovation in robotics and AI.

**Vote of thanks:**

The program concluded with a heartfelt **vote of thanks** by **Mr. P. Udaya Kumar**, Assistant Professor, Department of CSE (AI and ML). He expressed gratitude to:

- The management of MITS for their constant encouragement.
- The resource person for delivering an inspiring session.
- Faculty coordinators and student volunteers for their dedicated efforts.
- The student participants for their enthusiastic involvement.

## Outcomes:

**At the end of the program, students were able to:**

1. Understand the fundamentals of Robotics and AI and their integration.
2. Explore real-world industrial applications of robotics.
3. Gain awareness of entrepreneurship opportunities in robotics and automation.
4. Develop problem-solving skills for applying AI concepts to robotics projects.
5. Strengthen readiness for higher studies, research, and careers in robotics and AI.
6. Build motivation to participate in robotics hackathons, competitions, and innovation challenges.

## UN-SDG Mapping:

**Goal 4:** Quality Education

**Goal 8:** Decent Work and Economic Growth **Goal 9:** Industry, Innovation, and Infrastructure **Goal 17:** Partnerships for the Goals