

## **Guest Lecture on Applications of Artificial Intelligence in Robotics and Automation**

The Department of **Industrial IOT** organised a **Guest Lecture** titled **Applications of Artificial Intelligence in Robotics and Automation** on **14.03.2026** at **10.30 AM**, in **Room No. 350**.

The expert speaker was Dr. Abhishek D Patange, Data Science and AI Specialist, Centre of Excellence in Process Automation – Digital, ABB Global Industries and Services, Bengaluru. A total of 62 participants had attended the club activity from the department of IIOT. The primary objective of organising this program was for students to gain knowledge about current industrial trends in AI applications and demonstrate their coding skills in devising practical solutions for real-life scenarios. The lecture covered the fundamental concepts in machine learning, such as the various types of machine learning, the importance of dimensions, the characteristics of a good dataset, and the creation of web applications using STREAMLIT. The lecture also introduced students to tools such as WEKA and LeoAI - Copilot. The lecture was concluded with a Question-and-Answer session.

### **Objectives of the Event**

The primary objectives of the event were:

- To explore the transformative impact of AI on robotics and automation, covering cutting-edge applications, challenges, and emerging trends.
- To understand the fundamentals of AI, including AI-powered robotics, industrial automation applications, and autonomous systems insights.
- To address the challenges and future directions related to robotics.

### **Event Overview**

The event started at 10:30 am with a total of 62 participants. Dr. M. Thilagaraj, HoD of the Industrial IOT Department, welcomed the industry expert Dr. Patange with a bouquet. The lecture began with the importance of dimensions in machine learning. Dr. Patange explained how the number of dimensions in a dataset can affect

**An Autonomous Institute**  
**Approved by AICTE, New Delhi**  
**Affiliated to VTU, Belagavi**  
**Recognized by UGC under 2(f) & 12(B)**  
**Accredited by NBA & NAAC**

the performance of a machine learning model, and how techniques such as dimensionality reduction can be used to improve model performance. He also discussed the characteristics of a good dataset, including data quality, data quantity, and data relevance.

Dr. Patange introduced the audience to STREAMLIT, a Python library used for creating web applications. He demonstrated how STREAMLIT can be used to create simple web applications and how it can be integrated with machine learning models to create interactive applications.

The lecture also covered tools such as WEKA and LeoAI - Copilot. Dr. Patange explained how WEKA can be used for data mining and machine learning, and how LeoAI - Copilot can be used for automated machine learning. He demonstrated how these tools can be used to simplify the process of building machine learning models and deploying them in real-world applications.

Throughout the lecture, Dr. Patange emphasised the importance of practical experience in learning AI and machine learning concepts. He encouraged the students to work on projects and participate in coding challenges to improve their skills.

The lecture concluded with a Question-and-Answer session, where the students asked questions on various topics, including the applications of AI in robotics and automation, and the future of AI in industry. Dr. Patange answered the questions and provided valuable insights into the field of AI and machine learning.

Overall, the guest lecture was a great success, and the students gained valuable knowledge on the applications of AI in robotics and automation. The lecture was informative and engaging, and provided the students with a deeper understanding of the subject.

The lecture also highlighted the importance of staying up-to-date with the latest developments in AI and machine learning, and how it can be used to solve real-world problems. The students were inspired by Dr. Patange's experiences and insights, and it is expected that they will apply the knowledge gained from the lecture to their future projects and careers.

**An Autonomous Institute**  
**Approved by AICTE, New Delhi**  
**Affiliated to VTU, Belagavi**  
**Recognized by UGC under 2(f) & 12(B)**  
**Accredited by NBA & NAAC**



Figure 1: Dr. M. Thilagaraj, HoD IIOT, MVJCE, welcoming the Chief Guest



Figure 2: Chief Guest addressing the gathering



Figure 3: Students attentively listening to the lecture

**An Autonomous Institute**  
**Approved by AICTE, New Delhi**  
**Affiliated to VTU, Belagavi**  
**Recognized by UGC under 2(f) & 12(B)**  
**Accredited by NBA & NAAC**

## **Outcomes**

The guest lecture was highly impactful in helping students gain clarity on AI/ML architecture. The students were able to:

- Gain knowledge on AI/ML: Members gain valuable knowledge on leveraging the potential of AI and the fundamentals of machine learning
- Develop Problem-Solving Skills: Members developed their problem-solving skills

**Report by:** Dr M. Thilagaraj

Affiliation: HoD in the Department of Industrial IOT Engineering, MVJ College of Engineering