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# Guest Lecture on AI Enabled Target Detection and Tracking Using High-End Embedded Compute Boards

The department of **Electronics and Communication Engineering** conducted a Guest Lecture titled **AI Enabled Target Detection and Tracking Using High-End Embedded Compute Boards** on **22-08-2025** at **10.30 am**, in **Dr M V Jayaram Auditorium**.

The session was graced by Ms. Devshree Kumar, Principal Scientist at the Unmanned Aerial Vehicles Design and Integration Division, NAL-CSIR, Bengaluru, who served as the Chief Guest and Keynote Speaker. She was warmly welcomed by Dr. Shima, Head of the Department, with a bouquet as a token of appreciation.

The lecture focused on the integration of Artificial Intelligence (AI) in real-time target detection and tracking systems, particularly using high-end embedded compute boards. Ms. Devshree Kumar shared insights into the latest advancements in UAV technologies, AI algorithms for object recognition, and the challenges of deploying AI in embedded systems for defence and surveillance applications.

The session was highly interactive and informative, drawing an enthusiastic response from the audience. Approximately 300 students from 5th and 7th semesters attended the lecture, gaining valuable exposure to cutting-edge technologies and their practical applications in the aerospace and defence sectors.

## Objectives of the Event

The primary objectives of the event were: to expose students to cutting-edge applications of Artificial Intelligence in real-time embedded systems, specifically in the context of target detection and tracking technologies used in Unmanned Aerial Vehicles (UAVs) and to bridge academic learning with industry practices, enhance understanding of AI integration in embedded platforms, and inspire students to pursue innovation in aerospace and defence technologies.

## Event Overview

The event concluded with a Q&A session, where students actively engaged with the speaker, followed by a vote of thanks delivered by a faculty member from the department. This guest lecture served as a significant step in bridging academic learning with industry practices and inspired students to explore AI-driven innovations in embedded systems.


Figure 1: Dr. Shima Ramesh presenting a bouquet to our distinguished guest Ms/Mrs. Devshree Kumar, marking the commencement of her insightful guest lecture on 'AI-enabled Target Detection and Tracking using High-End Embedded Compute Boards'

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Figure 2: Guest Lecture by Ms. Devshree Kumar on 'AI-enabled Target Detection and Tracking using High-End Embedded Compute Boards', an enlightening session exploring the fusion of artificial intelligence and embedded systems for advanced surveillance and automation.

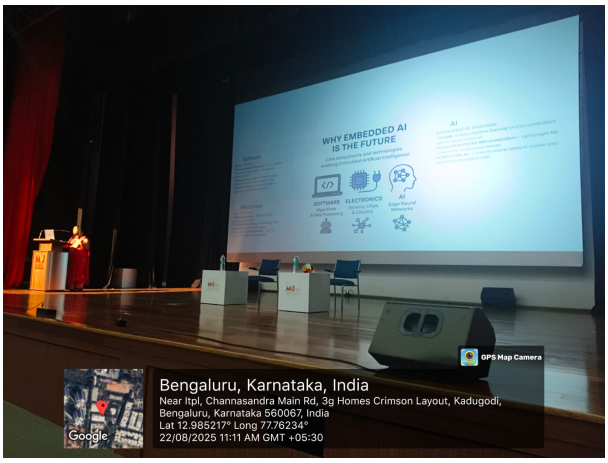


Figure 3: "Ms. Devshree Kumar delivering an engaging presentation on 'AI-enabled Target Detection and Tracking using High-End Embedded Compute Boards', inspiring students with real-world applications of AI in embedded systems.

The event sparked curiosity and inspired many students to explore AI-driven projects and research in embedded systems. It also encouraged interdisciplinary thinking by highlighting the convergence of electronics, computer science, and aerospace engineering. Faculty members noted increased student engagement and interest in related coursework and project-based learning following the session.

Overall, the lecture contributed to the department's ongoing efforts to align its academic offerings with industry needs and to foster a culture of innovation and applied learning.

## Conclusions

The guest lecture on "AI Enabled Target Detection and Tracking Using High-End Embedded Compute Boards" proved to be a highly enriching experience for the students and faculty of the Electronics and Communication Engineering department. It successfully highlighted the relevance of Artificial Intelligence in modern embedded systems and its transformative role in UAV technologies. The presence of an esteemed expert from NAL-CSIR added immense value to the session, bridging the gap between academic learning and industry practices. Events like these continue to strengthen our commitment to delivering industry-aligned education and fostering innovation among future engineers.

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