



MADANAPALLE INSTITUTE OF TECHNOLOGY & SCIENCE
(Deemed to be University)



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NBA Accredited - B.Tech. (CIVIL, CSE, ECE, EEE, MECH, CST), MBA & MCA

A Report on One Day Seminar on
“Industry 5.0: Human-Centric Smart Manufacturing and the Future Role of ECE & EEE Engineers and AI on Wheels: From ADAS to Autonomous Driving”
Organized by Department of EEE and ECE
in Association with MITS – IETE Students Forum (ISF)
13.10.2026

Report Submitted by: Dr Saravanakumar R, Assistant Professor, department of EEE.

Participants: EEE and ECE Students of MITS Madanapalle.

Venue (College/ Institute): Seminar Hall A-Madanapalle Institute of Technology & Science (MITS), Angallu.

Date & Time: 13.10.2026 & 10.00 am to 4.00 pm.

Organized by: Dr R Saravanakumar, Assistant Professor, EEE, Mrs. Revathi K, Assistant Professor, ECE.

Resource Person Details: Dr D Vijendra Babu, Associate professor, VIT Vellore.

Important Dignitaries attended/ organized: Dr. P. Ramanathan-Principal, Dr Manavalan G -HoD/EEE, Dr. Sanjay Kumar C. Gowre -HoD/ECE

All esteemed guests and dignitaries are cordially invited for the seminar program. After that Dr Manavalan G HoD/EEE given welcome address followed by Dr. P Ramanathan, Principal, MITS, shared his views about importance of learning technology among students. Dr D Vijendra Babu, chief guest shares information about opportunity towards image processing and python. Finally, Dr. Sanjay Kumar C. Gowre -HoD/ECE gave vote of thanks for providing this wonderful opportunity.



Industry 5.0 is the next stage of industrial development that combines advanced technologies with human creativity, sustainability, and resilience. Unlike conventional automation, which primarily emphasizes productivity, Industry 5.0 focuses on collaboration between humans and intelligent machines.

Importance of Industry 5.0:

- Human–robot collaboration: Robots and humans work together safely to improve productivity and quality.
- Artificial intelligence and automation: AI helps predict equipment failures, optimize production, and improve decision-making.
- Smart manufacturing: Sensors, IoT devices, embedded systems, and real-time monitoring enable intelligent production.
- Sustainability: Energy-efficient manufacturing and optimized resource utilization help reduce waste and emissions.
- Personalized production: Intelligent manufacturing systems support customized products with improved precision.
- Industrial resilience: Smart systems help industries respond to equipment failures, supply-chain disruptions, and changing demands.

AI on Wheels refers to the use of artificial intelligence, sensors, electronics, control systems, and computing technologies to make vehicles safer, smarter, and increasingly autonomous. ADAS (Advanced Driver Assistance Systems) assists the driver with functions such as automatic emergency braking, lane-keeping assistance, adaptive cruise control, and collision warnings. Autonomous driving builds on these capabilities to perform more of the driving task without continuous human control.

Importance of AI in vehicles:

- Improved road safety: AI helps detect pedestrians, vehicles, obstacles, and potential collisions.
- Real-time decision-making: Intelligent systems process sensor data to support braking, steering, and acceleration.
- Reduced driver workload: ADAS assists drivers during highway travel, parking, and congested traffic.
- Autonomous mobility: AI enables the development of self-driving vehicles and intelligent transportation systems.
- Electric vehicle optimization: AI can improve battery monitoring, energy management, charging, and vehicle efficiency.
- Smart transportation: Connected vehicles can exchange information with infrastructure to support traffic management.

**Conclusion:**

Industry 5.0 and AI on Wheels represent two major directions in the future of engineering. Industry 5.0 focuses on intelligent, human-centric, and sustainable manufacturing, while AI on Wheels focuses on safer, more efficient, and increasingly autonomous mobility. For ECE and EEE students, these topics provide awareness of emerging technologies, practical engineering applications, research opportunities, and industry requirements. They also encourage students to develop skills in AI, automation, embedded systems, robotics, electric mobility, and intelligent control. These topics are valuable for technical seminars, expert lectures, workshops, and industry–academia interactions because they help students connect fundamental engineering knowledge with emerging technologies and future career opportunities.