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AUTO EXPO 2025 VISIT REPORT

Date: January 20 & 21, 2025

Location: Bharat Mandapam, Yashobhumi , New Delhi

Visited by: Students of Electrical Engineering

Introduction:

The Auto Expo 2025, held at Bharat Mandapam in New Delhi, was a spectacular event that showcased the latest advancements in the automotive industry. As students of Electrical Engineering, we were thrilled to explore the expo and learn about the cutting-edge technologies that are revolutionizing the sector. This report provides a detailed account of our visit, highlighting the key exhibits, technologies, and takeaways.

Exhibits and Displays:

The expo featured an impressive array of exhibits and displays from top automakers, component manufacturers, and technology providers. Some of the notable exhibits included:

1. **Electric and Hybrid Vehicles:** We were impressed by the wide range of electric and hybrid vehicles on display, including models from Tata Motors, Mahindra & Mahindra, and Hyundai. These vehicles showcased advanced electric powertrains, battery management systems, and charging technologies.

2. Autonomous Vehicles: The expo featured several autonomous vehicle exhibits, showcasing the latest advancements in self-driving technology. We witnessed demonstrations of Level 3 and Level 4 autonomous vehicles, which can take control of the vehicle in specific situations.

3. Automotive Electronics: We were fascinated by the exhibits showcasing the latest automotive electronics, including advanced driver-assistance systems

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(ADAS) and vehicle-to-everything (V2X) communication technologies. These technologies enable vehicles to communicate with other vehicles, infrastructure, and pedestrians, enhancing safety and convenience.

4. **Charging Infrastructure:** The expo highlighted the growing importance of charging infrastructure for electric vehicles, with several exhibitors showcasing their charging solutions. We saw fast-charging systems, Battery swapping technology, wireless charging technologies, and smart charging systems that optimize energy efficiency.

Key Takeaways:

1. Electrification: The expo reinforced the trend towards electrification in the automotive industry, with many exhibitors showcasing their electric and hybrid vehicle offerings.

2. Autonomous Technology: Autonomous vehicles are becoming increasingly sophisticated, with several exhibitors showcasing their self-driving technologies.

3. Connectivity: The expo highlighted the growing importance of connectivity in the automotive industry, with several exhibitors showcasing their vehicle-to-everything (V2X) communication solutions.

4. Sustainability: The expo emphasized the need for sustainable mobility solutions, with many exhibitors showcasing their eco-friendly vehicle offerings and charging infrastructure solutions.

Technologies and Innovations:

1. Electric Powertrains: We witnessed advanced electric powertrains, including permanent magnet motors, induction motors, and hybrid powertrains.

2. Battery Management Systems: Exhibitors showcased advanced battery management systems, including lithium-ion batteries, nickel-metal hydride batteries, and supercapacitors.

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3. Advanced Driver-Assistance Systems (ADAS): We saw demonstrations of ADAS, including lane departure warning systems, adaptive cruise control systems, and automatic emergency braking systems.

4. Vehicle-to-Everything (V2X) Communication: Exhibitors showcased V2X communication technologies, enabling vehicles to communicate with other vehicles, infrastructure, and pedestrians.
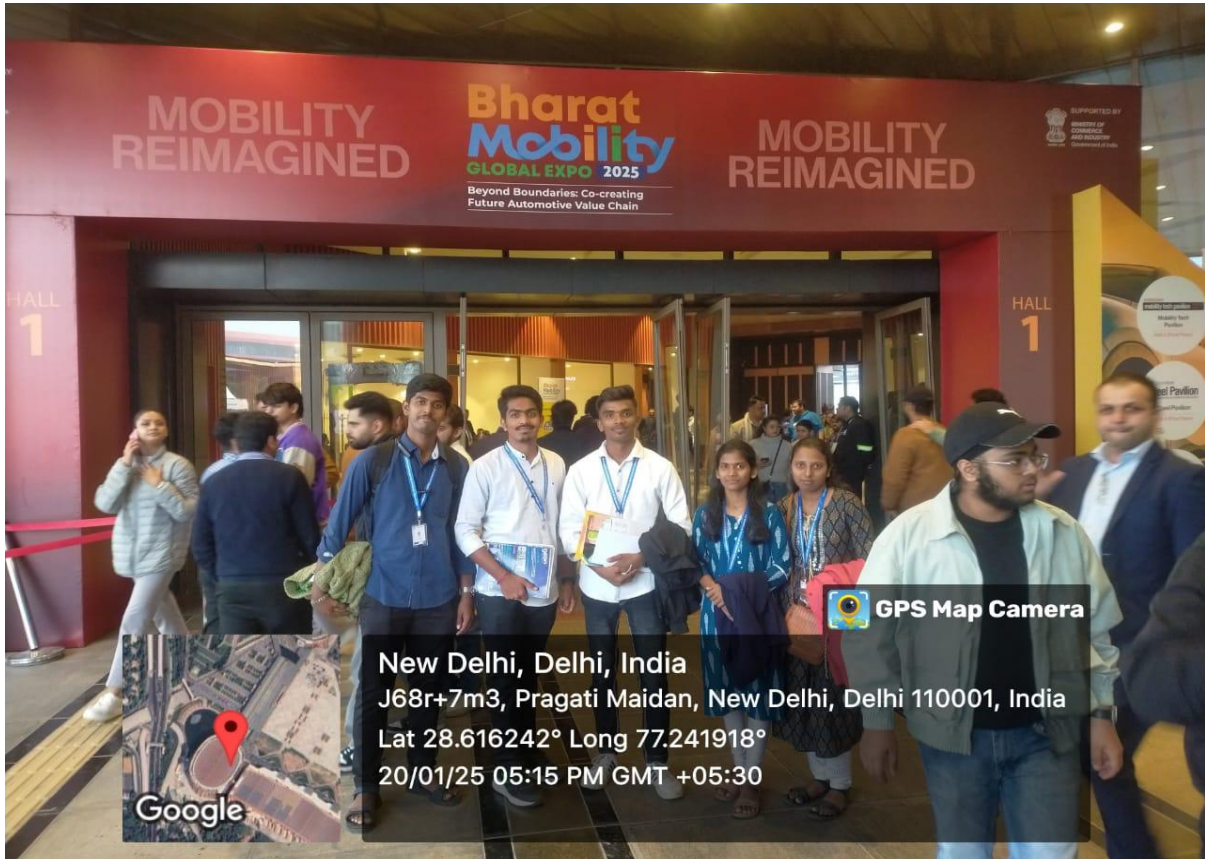
Glimpse Of the Event:

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Conclusion:

The Auto Expo 2025 was an enlightening experience for us as students of Electrical Engineering. We gained valuable insights into the latest advancements in the automotive industry and were impressed by the innovative technologies on display. The expo reinforced the importance of sustainability, electrification, and connectivity in the automotive sector, and we look forward to applying our knowledge and skills to contribute to the growth of this exciting industry.

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