NIT-K launches AI-based E-Mobility management system for its e-fleet

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The Hindu Bureau
MANGALURU

The National Institute of Technology Karnataka, Surathkal, on Friday, launched its E-Mobility management system under which artificial intelligence (AI) has been integrated to optimise the usage of a fleet of electric vehicles on the campus.

The E-Mobility team of the institute, which is led by the project head of the E-Mobility Team at the Centre for System Design (CSD) U. Pruthviraj, and the Coordinator of CSD K.V. Gangadharan, has developed a diverse fleet of electric vehicles. It includes 15 e-cycles, five e-scooters, two e-bikes, an e-trike for organic waste collection, and a specially designed quad bike for the physically challenged. The team has also engineered "URJA", a solar-based charging station.

The E-Mobility team of NIT-K, Surathkal, has developed an e-scooter 'VidhYug 2.2.1' for the hostel office. SPECIAL ARRANGEMENT

Mechanism

According to a press release by NIT-K, the team has designed a new management system wherein AI algorithms are employed to predict demand patterns and optimise the deployment and routing of these vehicles across the campus. The system's predictive maintenance feature enhances vehicle reliability and extends the lifespan of the electric vehicle fleet. AI is being utilised to analyse historical data, real-time usage, and campus events to dynamically manage the charging infrastructure.

The AI algorithms also analyse energy consumption patterns and adjust the charging schedules of vehicles to minimise peak loads. The new e-mobility system integrates with existing campus infrastructure, monitors environmental impact, and provides data on emissions reduction, energy savings, and sustainability achievements. The new system has been designed for scalability and adaptability to emerging technologies and evolving campus requirements, the release said.

The team has developed a new e-scooter model "VidhYug 2.2.1" for the hostel office of NIT-K, with financial assistance from the Mumbai chapter of the NIT-K Surathkal Alumni Association. Students namely Poudhan Kumar, Dixith K., Manish E.S., Vikas, Maclin, Niranjan, Prakash, and Shradha Shetty were involved in developing the new scooter.

NIT-K Director B. Ravi on Thursday, handed over keys of the new e-scooter to the hostel team led by Chief Warden Pushparaj Shetty at a function held on the NIT-K campus. Dean (Alumni and Corporate Relations) Srikanth S. Rao and Mr. Gangadharan attended the event.

The Hindu, Date:16/12/23, p.no - 03