

NITK integrates AI in EVs

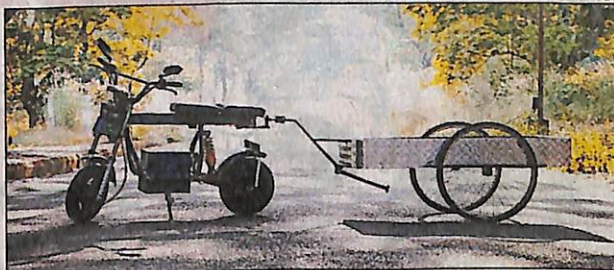
Kevin Mendonsa
@timesgroup.com

Mangaluru: National Institute of Technology Karnataka (NITK) Surathkal has enhanced its indigenous campus transportation by integrating artificial intelligence (AI), to optimise the use of electric vehicles (EVs).

This initiative is spearheaded by Pruthviraj U, project head of the e-mobility team at the Centre for System Design (CSD) and professor in charge of transdisciplinary research and development, and KV Gangadharan, coordinator of CSD and dean of planning and development at NITK Surathkal. The team comprises Poudhan Kumar, Dixith K, Manish ES, Vikas, Maclin, Niranjan, Prakash, and Shradha Shetty.

“This project is financially supported by the Mumbai chapter of the NITK Surathkal Alumni Association, represented by SR Bala, alumni association global secretary. It is specifically designed for the hostel office at NITK, and symbolises user-friendly mobility solutions developed by the team,” said Pruthviraj.

He explained that the pro-



HI-TECH: An EV with AI developed by NITK Surathkal's team

ject at CSD NITK is a display of commitment to sustainable transportation. The team has developed a diverse fleet of EVs, including 15 e-cycles, 5 e-scooters, 2 e-bikes, an e-trike for organic waste collection, and a specially designed quad bike for the physically challenged, with additional innovations in the pipeline. AI algorithms are employed to predict, demand patterns and optimise the deployment and routing of these vehicles across the campus. In addition to the vehicles, the team has engineered 'URJA', a solar-based charging station.

AI is utilised to analyse historical data, real-time usage, and campus events to dynamically manage this charging infrastructure, ensuring a seam-

less charging experience for users. The system's predictive maintenance feature enhances vehicle reliability and extends the lifespan of the EV fleet, exemplified by the current e-scooter model, 'Vidh Yug 2.2.1'. The AI algorithms also analyse energy consumption patterns and adjust charging schedules to minimise peak loads. The AI-based e-mobility system integrates with existing campus infrastructure, monitors environmental impact, and provides data on emission reduction, energy savings, and sustainability achievements. It is designed for adaptability to emerging technologies and requirements.

B Ravi, director, NITK Surathkal, handed over keys to the NITK hostel, on Friday.