

## School of Electrical Engineering *presents*

### A three-day National Workshop (hands-on)

*on*

### Edge AI & Robotics Training Program using NVIDIA Jetbot & Edge Devices

**Dates: 28, 29 & 30 August 2025**

**Venue: TT 311**



#### *Co-ordinators*

**Dr. Monica Subashini M**

**Dr. Geetha M**

**Dr. A. Sharmila**

**School of Electrical Engineering  
Vellore Institute of Technology,  
Vellore-632014.**

#### ABOUT THE WORKSHOP

The rapid growth of Edge AI and autonomous systems is transforming the future of embedded intelligence. To help faculty and students stay ahead, this training offers a structured program focused on practical, hardware-driven AI deployment using NVIDIA JetBot and Jetson-based edge computing platforms. Participants will gain foundational AI knowledge, hands-on experience in real-time model deployment, and practical robotics skills with industry-grade NVIDIA hardware and frameworks—making it ideal for institutions looking to integrate AI into their curriculum or lab infrastructure..

#### Contents:

1. Introduction to Edge AI
2. JetBot Hardware Setup and Jetson Nano Configuration
3. Object Detection Deployment on JetBot using pre-trained models
4. Lane Following and Collision Avoidance using sensor fusion
5. Autonomous Navigation Projects (full-scale implementation)
6. App- and Voice-Based JetBot Control
7. Evaluation and Demonstration of developed solutions
8. DLI Module - Fundamentals of Deep Learning
9. DLI Module - Generative AI with Diffusion Models
10. Edge Inference on JetBot and End-to-End AI Deployment
11. AI driven lung disease classification from parenchymal signatures in pulmonary disorders
12. Pioneering Diagnostics in Diabetic vasculopathy - Bridging experimental Research and clinical reality using Vascular clues.

#### ABOUT VIT

Vellore Institute of Technology (VIT) is a globally recognized institution known for its quality education, cutting-edge research, and strong international collaborations. The university attracts students from across the globe, offering a vibrant and diverse campus environment.

#### Highlights:

- NAAC Accreditation with A++ grade (3.66/4).
- NBA Accreditation (6 years) for UG Engineering programmes: Mechanical Engineering, Chemical Engineering, Electrical & Electronics Engineering (EEE), and Electronics & Instrumentation Engineering (EIE).
- Four subjects — Computer Science & IT, Data Science & AI, Electrical & Electronics Engineering, and Material Science — ranked among the top 200 globally (QS World University Rankings by Subject 2025).
- Ranked 10th best University, 13th best Research Institution, and 11th best Engineering Institution in India (NIRF 2024).
- 2nd in India and in the 501–600 range globally (Shanghai ARWU 2024).
- 396th in the world and 8th in India (QS Sustainability Rankings 2025).

VIT continues to maintain global standards through innovative teaching, advanced research facilities, and strong partnerships with leading international universities.

#### ABOUT THE SCHOOL OF ELECTRICAL ENGINEERING

The School of Electrical Engineering (SELECT) at VIT has over 98 highly qualified faculty members, with UG, PG, and Doctoral degrees from top-tier universities. The school offers B.Tech. (Electrical and Electronics Engineering), B.Tech. (Electronics and Instrumentation Engineering), M.Tech. (Power Electronics and Drives), M.Tech. (Control and



Automation), Ph.D., and Integrated Ph.D. programmes. These programmes attract talented students from across India and abroad. The B.Tech. Electrical and Electronics Engineering (EEE) and B.Tech. Electronics and Instrumentation Engineering (EIE) programmes are accredited by the Engineering Accreditation Commission of ABET, while all UG and PG programmes are accredited by the Institution of Engineering and Technology (IET), U.K. Additionally, the UG programmes in EEE and EIE have NBA accreditation for six years.

Our school is ranked 142nd in the world and 9th in India in Engineering and Technology by the QS World University Rankings by Subject 2025. SELECT boasts state-of-the-art laboratories in all major areas of Electrical, Electronics, and Instrumentation Engineering, along with industry-sponsored advanced labs for world-class research and consultancy. These facilities provide students with hands-on experience in R&D activities under the guidance of expert faculty and industry professionals.

### About Edsols Private Limited

Edsols Innovations Private Limited is an EdTech startup based in Bangalore, India, focused and committed to transforming industries through cutting-edge Artificial Intelligence, Natural Language Processing (NLP), Edge Computing, and Immersive VR Technologies. Their expertise lies in developing intelligent, scalable, and high-impact solutions that enhance business efficiency, automate processes, and elevate user experiences.

### RESOURCE PERSONS

The resource persons are training experts and certified AI instructors from Edsol Innovations Private Limited, Bangalore .



**Dr. Dhamodaran Arul Nambi**, CEO - EdSols Innovations Pvt Ltd, leads the team which excels in AI & Automation, Natural Language Processing (NLP), Edge Computing & IoT and Immersive VR Experiences.

#### Team Edsols:

1. **Dr.Punal M Arabi**
2. **Er. Karthik V**
3. **Dr. Gayathri Joshi**
4. **Dr. T. Prathiba**

#### Team VIT:

1. **Dr. M. Monica Subashini, VIT**
2. **Dr. A. Sharmila, VIT**

### .REGISTRATION

#### Registration Fee : Rs.800/- (Including GST)

Prospective participants are requested to register for the workshop through the following web link.

<https://events.vit.ac.in/>

Maximum 50 participants will be accommodated in the workshop. Hence, the preference will be given based on first come first serve basis.

### WHO CAN APPLY?

Participation is open to newly joined research scholars and faculty members from Science and Engineering streams, as well as students, faculty members, and research scholars from other institutions. Scientists and engineers from R&D organizations and industry professionals seeking a

basic understanding of the concepts involved are also welcome.

### ORGANIZING COMMITTEE

#### Chief Patron

**Dr. G. Viswanathan**  
Chancellor

#### Patrons

Shri. Sankar Viswanathan, Vice President  
Dr. Sekar Viswanathan, Vice President  
Dr. G V Selvam, Vice - President  
Dr. Sandhya Pentareddy, Executive Director  
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Assistant Vice - President  
Dr. V S Kanchana Bhaaskaran, Vice Chancellor  
Dr. Partha S Mallick, Pro-Vice Chancellor  
Dr. T. Jayabarathi, Registrar

#### Organizing Chairs

Dr. Kowsalya M  
Dean, School of Electrical Engineering  
Dr. Ruban N, Associate Dean

#### Convenors

Dr. Vijayapriya P, HoD, Electrical Engineering  
Dr. Mahalakshmi P, HoD, Instrumentation  
Dr. Vinodh Kumar E, HoD, Control and Automation  
Dr. Yedula Pedda Obulesu, PED

### CONTACT DETAILS

#### Faculty Coordinators:

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