

# Suren Elango

Chennai, Tamil Nadu, India

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## EDUCATION

### Vellore Institute of Technology

B.Tech in Computer Science

Aug 2023 – Aug 2027

Vellore, India | CGPA: 9.47

### Bala Vidya Mandir

High School

Apr 2009 – Apr 2023

Chennai, India | Percentage: 92%

## EXPERIENCE

### Research Intern – Deep Learning

IIT Delhi

- Designed deep learning models using CNNs and RNNs to enhance video clarity in rainy conditions.
- Benchmarked OCR accuracy after deraining using Qwen2.5, Tesseract, and EasyOCR.
- Trained and optimized 20+ neural network variants on HPC clusters with multi-GPU NVIDIA DGX-1 systems.
- Optimized data pipelines and debugged model convergence and runtime stability issues.

May 2025 – Nov 2025

Delhi, India

### Autonomous Systems Officer

Team Ojas Racing, VIT University

- Implemented ROS2 autonomous driving pipeline with stereo vision and cone detection.
- Integrated perception and navigation; simulated in Gazebo and tested on NVIDIA Jetson hardware.
- Collaborated with interdisciplinary teams for real-world deployments and demos.

Apr 2024 – Present

Vellore, India

## PROJECTS

### Video Deraining using Deep Neural Networks — PyTorch, CNNs, Temporal Models

- Developed deep learning models removing rain from videos leveraging temporal correlations.
- Trained on synthetic and real datasets; used CNN-RNN hybrid architectures.
- **Tech:** Python, PyTorch, TensorFlow, Docker, OpenCV, Jupyter

May 2025 – Nov 2025

### ROS2 TurtleBot3 Patrol with Nav2 and SLAM — ROS2, Python, Gazebo

- Simulated TurtleBot3 patrol using ROS2 Navigation Stack and SLAM with waypoint navigation.
- Created custom house map and URDF robot; enabled patrol via dynamic goal publishing.
- Final project for Edouard Renard's ROS2 Navigation 2 Stack certification.

Jun 2025 – Jul 2025

### Gesture-Controlled Smart Home — Python, OpenCV, MediaPipe

- Created non-contact smart appliance control system with real-time pose tracking.
- Implemented multiple gesture classes to toggle lights and lock doors, improving accessibility.

Jan 2025 – Apr 2025

## SKILLS & TECH STACK

**Languages:** Python, Java, C, JavaScript, HTML5, CSS3

**Frameworks/Libraries:** ROS2, PyTorch, TensorFlow, OpenCV, Pandas, NumPy, MediaPipe

**Tools:** Docker, Git, Jupyter, Roboflow, HPC, Gazebo, VSCode

**Technologies:** NVIDIA Jetson, Linux, SLAM, Real-time Systems, Computer Vision, Deep Learning, Gen-AI, LLM

## CERTIFICATIONS & HONORS

Oracle Cloud Infrastructure 2025 Generative AI Professional, OCI 2025 AI Foundations Associate, ROS 2 Nav2 with SLAM (Edouard Renard), HackerRank Python/Java (Basic), MATLAB Onramp, Winner – Hack the Hackathon (IEEE CS)

## LEADERSHIP AND RESPONSIBILITIES

### School Pupil Leader

Bala Vidya Mandir Senior Secondary School

- Head Boy and Student Council Member; organized events and promoted engagement.
- Enhanced leadership and public speaking via collaboration with staff and peers.

Jul 2022 – Mar 2023

Chennai, India

### Management Team Member

Team Ojas Racing, VIT University

- Created business plan presentations for Formula Student Germany 2024 and Formula Bharat 2026.
- Led branding, content strategy, jersey design, and managed social media presence.
- Delivered persuasive presentations balancing technical and public-facing tasks.

Apr 2024 – Present

Vellore, India

### Marketing, Outreach, Sponsorship

CSED + IEEE SSIT, VIT University

- Promoted "Code 4 Change" hackathon generating 1000+ registrations.
- Managed outreach and sponsorships to improve industry engagement.

Apr 2024 – Dec 2024

Vellore, India