KUMARI DIVIJA

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# Education

**Vellore Institute of Technology , Chennai Aug. 2023 – May 2027**

*Bachelor of Technology in Artificial Intelligence and Machine Learning Tamil Nadu*

# Relevant Coursework

* Machine Learning
* Database Management

# Experience

* Embedded Systems
* Artificial Intelligence
* Web Development
* Data Visualisation

**Tata Insights and Quants May 2025 – Jul 2025**

*Data Analytics Intern Bangalore, Karnataka*

* + Worked with Data Scientists on Computer Vision & Image Processing, including image sourcing, tagging, preprocessing and model development.
* Gained hands-on experience in ML/DL model testing, fine-tuning and R&D of tools and techniques, improving accuracy and

efficiency.

# Projects

**Monocular Depth Estimation System Web app** *| Streamlit ,Python, MySQL, Fast API, OpenCV* **June 2025**

* + Developed a Streamlit–FastAPI application that performs real-time depth estimation from a single RGB camera using MiDaS (Intel-ISL).
  + Designed an interactive UI for webcam capture, calibration, measurement point selection, and depth map visualization. Implemented Linear Regression calibration to convert relative depth into real-world distances. Integrated a MySQL digital logbook to store events (camera ID, coordinates, distances, image/depth map links, timestamps) with export to CSV/Excel, delivering a cost-effective alternative to stereo camera setups.

**Personal Portfolio Website** *| HTML, CSS, Javascript* **March 2024**

* + Designed and developed a personal portfolio website from scratch using HTML, CSS and Javascript .
  + Showcasing projects , platform handles (GitHub, linkedIn , mail) and a working contact me form . Built with clean UI along with a navigation bar .

**Vehicle Speed Detection** | *YOLO, OpenCV, Python* **May 2025**

* + Built a vehicle speed detection system using YOLO + DeepSORT/ByteTrack, with perspective correction for accurate distance measurement from CCTV footage.
  + Implemented speed estimation pipeline (time between lines → km/hr) with automated logging of results (vehicle ID, speed, timestamp, image) into CSV.

# Technical Skills

**Languages**: C++, Java, C, Python

**AI/ML**: TensorFlow, OpenCV, YOLO, Numpy , Pandas

**Tools & IDE:** Google Colab, Conda , Git, Arduino IDE, VS Code

**Web Development**: HTML, CSS, JavaScript ,React js (learning Full Stack)

**Embedded Systems**: Arduino, esp8266

**Database**: MongoDB (beginner)

**Other**: ROS and Linux Basics

# Leadership / Extracurricular

**Technocrats Robotics 2023 – Present**

*Programming Lead VIT Chennai*

* + Lead the programming team of Technocrats Robotics for Rover and Robocon competitions, managing software design, task delegation, and mentoring members.
  + Developed and integrated robot control, embedded programming, and computer vision modules, coordinating with hardware teams to deliver competition-ready robots.