

Venkatesan M

+91 6374900460 | venkatesan.m2022@vitstudent.ac.in | Portfolio Website | LinkedIn | Github

EDUCATION

Vellore Institute of Technology

B.Tech in Computer Science and Engineering

Specialization in Artificial Intelligence and Machine Learning

CGPA: 8.83

Chennai, TN

2022 – 2026

SKILLS SUMMARY

Programming Languages: Python, JavaScript, C/C++, Java, Dart

Frontend Technologies: ReactJS, ThreeJS, MUI, Tailwind, Flutter, Figma

Backend/DevOps: NodeJS, ExpressJS, MongoDB, PostgreSQL, Firebase, AWS, Docker, Kubernetes

Other Tools/Technologies: ROS, Git, Postman, Linux, Arduino, Blender

WORK EXPERIENCE

KAL-M Robotics and Innovations

Robotics Intern

Chennai, TN

June 2024 – July 2024

- Developed a Robotics STEM Kit, achieving autonomous racing on Nvidia Jetson by implementing neural networks
- Managed version control, debugging, and containerized ROS systems for the Autonomous Ground Vehicle

PROJECTS

Quadruped Robot Dog - Alpha

Python, ROS2, OpenCV, SLAM

2nd Prize at Autodesk Instructables Robot contest

- Led development of Quadruped Robot Alpha, achieving MVP in one month with a \$200 budget, implementing 12 DoF biomimetic movement and inverse kinematics with IMU Sensor
- Revamped systems into ROS, cloud robotics (AWS), and implemented algorithms for autonomous navigation (SLAM) and AI detection

WeMace: Women Empowering Markets & Connecting Enterprises

Flutter, Firebase

Google Solution Challenge 2024 & Finalist, IEEE yesist12 2024

- Led a team of 5 to address 7/17 of the UN Sustainable Goals, conducted surveys with 500+ Self Help Group members for feedback, and tested to develop a cross-platform app using Flutter and Firebase, integrated Google Gemini Vision Pro for AI chat

Deep Learning for Medical Image Segmentation

Tensorflow, Keras, Numpy, Pandas

Collaboration with Nagasaki University, Japan

- Enhanced Stanfordaiml BrainMetShare dataset, increasing usability from 2.5 to 5 Kaggle score, and implemented a modified U-Net for improved image segmentation
- Defined loss functions and optimized model performance, improving deep learning methods for accurate brain metastasis detection

NutShell

ReactJS, MUI, Flask, Azure, AWS

Finalist, Karnataka State Police Datathon 2024

- Selected as Top 3 among 14,000+ Teams for Karnataka State Police to predict and analyse accidents. Developed a React Application with the "PAAR" Concept: Predict, Alert, Analyze, and Report
- Implemented a Dashboard with Random Forest Classifier Model with 80% accuracy to analyse accidents and generate PowerBI Reports summarised by Google Gemini Pro AI. Trained a lightweight Yolo Model for accident detection and deployed Restful API on Azure using Flask

CERTIFICATIONS

AWS Certified Solutions Architect – Associate (SAA-C03)

AWS Certified (Aug 2024 - Aug 2027)

Machine Learning Specialization, Coursera

Dr. Andrew NG (Jun 2024)

The Complete 2024 Web Development Bootcamp, Udemy

Dr. Angela Yu (Apr 2024)