

MOGITHA S M

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EDUCATION

SSVM INSTITUTIONS , COIMBATORE

CBSE

10th - 93% , 12th - 89%

JUNE 2022

AMRITA VISHWA VIDYAPEETHAM , COIMBATORE

B.Tech CSE

CGPA - 7.84/10 (current)

2022 - 2026

PROFESSIONAL EXPERIENCE

Internship , UI Bridge Solutions Pvt Ltd

MAY 2025 - JUNE 2025

- Developed and deployed a hybrid CNN-LSTM based machine learning system for real-time condition-based monitoring (CBM) with 95% fault detection accuracy using vibration sensor data.
- Built a role-based dashboard enabling admins to re-train/predict and users to run predictions with dynamic charts and alerts.
- Implemented a Flask web app for real-time data upload, visualization (time, frequency, spectrogram), and PDF report generation with maintenance suggestions.
- Built a scalable, cloud-ready and on-premise pipeline for data storage and model hosting.

PROJECTS

Smart Wheelchair IoT System (IOT)

APRIL 2025

- Developed an IoT-based smart wheelchair using ESP32 with integrated sensors (MPU6050, MAX30102, GPS, Ultrasonic) for real-time fall detection, health monitoring, location tracking and obstacle detection.
- Implemented Firebase for cloud storage, alerting, and analytics. Built a Flutter-based dashboard and mobile app.
- Used machine learning (XGBoost, Random Forest) for health anomaly detection and fall prediction, achieving 90% fall detection accuracy.

TrafficX

MARCH 2025

- Developed a full-stack intelligent traffic management system with modules for real-time traffic monitoring, violation detection, and parking-based traffic management using MERN stack.
- Created a violation detection system using video analytics to identify speeding, signal jumping, and illegal parking with real-time notifications. Created a challan management portal supporting online fine payment.
- Designed admin dashboards with live traffic feeds, violation alerts, and signal override for authorized personnel.
- Delivered project in 4 Agile sprints using Jira for epic/user story management, sprint planning, role assignments, and Scrum meetings.

Election Administration Platform

MAY 2024

- Built a secure web platform for managing voter registration, polling, and results using Python and hybrid data structures.
- Enhanced backend APIs with role-based access and integrated databases for reliable vote tracking and candidate management.

EVENTS AND HACKATHONS

MSME HACKATHON (Participated)

- IDEA: Smart Pedal Tracking and Adaptive Energy System in Electric Cycles optimizes performance by integrating real-time pedal tracking and intelligent energy management using IoT sensors, embedded systems, cloud integration and machine learning algorithms

IGNITE 24

- Member of the Technical and Design team of the Ignite event 2024

SKILLS

Programming Languages: Python, C, C++, HTML, CSS, JavaScript

Frameworks: ReactJS, Flask, PyTorch , TensorFlow, Flutter, NodeJS

Databases: SQL, SQLite, PostgreSQL, MongoDB, InfluxDB, Firebase

Tools: Git, GitHub, Gephi , AdaFruit IO, ThingSpeak, Canva, Jira

ADDITIONAL INFORMATION

Certification: Artificial Intelligence Foundation Certificate , Deep Learning

Volunteering activities: Class Representative (2024-Current) , Education Support Volunteer (Amrita Seva)

Language: English , Tamil , Kannada