M S SUBAAN

A B.Tech graduate with practical experience as a Graduate Apprentice at the Centre for Development of Advanced Computing (C-DAC), Thiruvananthapuram, where I developed a strong foundation in artificial intelligence, machine learning, and real-time data processing. Skilled in simulation control systems, urban-scale data analysis, and Python full stack development, with a focus on building scalable, intelligent software solutions. Proven ability to integrate complex algorithms into practical applications and deliver robust, data-driven systems. Passionate about applying advanced technologies to solve real-world challenges through clean, efficient, and maintainable code.

Work Experience

Graduate Apprentice, C-DAC Thiruvananthapuram

Aug 2024 - Present

- Contributed to national R&D projects on smart traffic management and intelligent transport systems.
- Engineered a real-time traffic dashboard using Django, Prometheus, and Grafana to monitor 100+ live data points, integrating Prometheus Alertmanager and Grafana alerts to detect anomalies in traffic flow and signal behavior.
- Developed a traffic planning web app with Python (Django) and SUMO integration, allowing real-time signal phase adjustment, scenario-based simulation, and report generation for traffic evaluation.
- Implemented UDP and WebSocket communication for real-time data transfer and interactive D3.js visualizations.
- Designed intelligent simulation tools that reduced average wait time by 18%, and applied ML, neural networks, and RL for traffic prediction, achieving a 25% improvement in accuracy.

Robotics Instructor, Techosa

May 2024– Aug 2024

- Delivered robotics workshops to 100+ students, covering Arduino, Python, and sensors.
- Designed STEM-based modules that improved students' technical problem-solving scores by 30%, based on pre/post assessments.

Educational Background

B.Tech in Computer Science and Engineering

APJ Abdul Kalam Technological University
Aug 2019– Aug 2023

Key Projects

Flood Forecasting System

Designed a machine learning pipeline using Python and TensorFlow to predict flood risks with 80% accuracy. Integrated satellite imagery, meteorological data, and historical flood records to improve disaster readiness.

Digi-Pass Hospital Management System

Developed a secure, contactless web application for hospital visitor management. Streamlined check-in processes with real-time authentication and intuitive user interface.

Contact

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Skills

Technical Skills

- Python
- SQL
- Deep Learning
- Data Analysis
- Java Script
- PostgreSQL
- WebSocket Communication

Tools/Sofware

- Django
- Grafana
- Promethues
- SUMO Traffic Simulator
- Tensorflow
- Pandas
- D3.js
- Alert Manager