Thamaraimanalan M

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EDUCATION

Government College of Technology Coimbatore, IN
Bachelor of Electronics and Communication Engineering *Expected Graduation: June 2026*
Cumulative GPA: 7.8 (up to Semester 5)

EXPERIENCE

Project Intern Feb 2025 – Jun 2025
FOSSEE, IIT Bombay *Report link*
- Developing a cross-platform GUI for OpenModelica using Qt(with Python bindings).
- Collaborating with the FOSSEE team to improve OpenModelica's usability and performance.
- Enhanced the Qt/Python GUI's functionality and performance to improve user experience for OpenModelica's specific simulation and model selection processes.

PROJECTS

Smart Traffic Management GitHub Oct 2024 – April 2025
- Developing a prototype system for traffic junctions to detect emergency vehicles and prioritize their movement.
- Implementing traffic flow control based on real-time traffic density analysis.
- Utilized deep learning (YOLO) for ambulance detection implemented in Hailo 8L and automated signal control using Raspberry Pi and sensor integration.

Project.Eye GitHub Feb 2025 – Present
- Built an AI-powered assistive system using Python, Raspberry Pi, Moondream VLM, and Piper TTS for visually impaired and enabled real-time image capture, processing, and audio feedback via a headset

Sensor Data Processing System GitHub
- Engineered a C program to process and log sensor data.

WiFi Jammer (Python CLI Script) GitHub Jan 2025 – Present
- Developed an interactive Python command-line interface (CLI) script to automate and simulate Wi-Fi deauthentication attacks for educational purposes.

CERTIFICATIONS & ACHIEVEMENTS

Qt-Athon 2024 — Global Coding Competition 2024
Secured 3rd place for a desktop application developed with Qt Quick (QML) and C++. *Check Blog*
NXP AIM 2025: Regional Finalist Bengaluru, IN
Developed an autonomous mobile robot using ROS2, Gazebo, and SLAM for a robotics competition. *Check Blog*
TechForSociety Hackathon by Siemens and Nasscom foundations April 2025
Shortlisted for innovative smart traffic management system. *Check Blog*
Comprehensive Embedded Systems Course by Pyjamabrah Ongoing
Currently diving deep into firmware and system software. *Check Blog*

TECHNICAL SKILLS

Languages: C, C++, Python, Shell Scripting, DSA (Learning)
Developer Tools: Git, GitHub, VS Code, Qt Creator, ROS2
Libraries: PyQt6, PySide6, OpenCV (Beginner)
Operating system: Linux
Embedded Systems: Raspberry Pi, Hailo 8L 13 TOPS

SOFT SKILLS

* Collaborative Teamwork
* Effective Communication
* Project Management