

Thamaraimanalan M

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EDUCATION

Government College of Technology

Bachelor of Electronics and Communication Engineering

Coimbatore, IN

Oct 2023 – Jun 2026

EXPERIENCE

Project Intern

FOSSEE, IIT Bombay

Feb 2025 – Present

Remote

- Developing the GUI for OpenModelica using Qt and Python
- Enhancing user experience and functionality for OpenModelica simulation tools
- Collaborating with the FOSSEE team to improve OpenModelica's usability and performance
- Working on performance improvements, debugging, and integrating new features to support complex system modeling.

PROJECTS

Smart Traffic Management [GitHub](#)

Oct 2024 – Present

- 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
- Building a web application for end users to monitor real-time traffic feeds and analyze past traffic data
- Leveraging deep learning models like YOLO for ambulance detection and automating traffic signal changes using Raspberry Pi

Project.Eye [GitHub](#)

Feb 2025 – Present

- Built an AI-powered assistive system using Raspberry Pi, Moondream VLM, and Piper TTS for blind users.
- Enabled real-time image capture, processing, and audio feedback via a headset.
- Optimized AI models for efficient performance on Raspberry Pi.

CERTIFICATIONS & ACHIEVEMENTS

Qt-Athon 2024

Secured 3rd place in the global-level coding competition and developed Application.

2024

[View Recognition](#)

TechForSociety Hackathon

Shortlisted for innovative smart traffic management system

Jan - Present

Naan Mudhalvan Hackathon

Secured 2nd place in the Naan Mudhalvan Hackathon conducted by TANSAM.

Oct 2024

[Project Info](#)

BIAS 2K24

Secured 1st place in the project presentation at BIAS 2K24, an intra-college departmental event.

2024

[Project Info](#)

Ethical Hacking

Successfully completed the NPTEL course on Ethical Hacking.

2024

TECHNICAL SKILLS

Languages: Python, Shell Scripting, QML

Embedded Systems: Raspberry Pi, IoT, Edge AI

Frameworks: Qt

Developer Tools: Git, Docker, VS Code, PyCharm

Libraries: PyQt, PySide6, OpenCV, Matplotlib, Ultralytics

Operating system: Linux

SOFT SKILLS

- Teamwork
- Communication