

Amulya Thanda

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SUMMARY

Electronics and Communication Engineering student with strong hands-on experience in embedded systems, IoT development, and hardware prototyping. Skilled in Arduino, ESP32, Embedded C/C++, sensor interfacing, GSM/Wi-Fi communication, and real-time system debugging. Experienced in deploying machine learning models on microcontrollers using Edge Impulse and TensorFlow Lite. Actively involved with Circuit Fix Hub, focusing on circuit analysis, electronics troubleshooting, hardware repair, and system optimization. Strong problem-solving mindset with a practical, build-oriented engineering approach.

WORK EXPERIENCE

Research Intern – AI-BCI Systems

May 2025 – June 2025

National Institute of Technology, Warangal

- Designed a real-time embedded stroke detection system using ESP32 and TensorFlow Lite.
- Pre-processed EEG signals and extracted Delta–Gamma frequency band features.
- Trained and deployed ML models achieving up to 90% accuracy.
- Integrated SIM800L GSM module for emergency alerts and LCD for real-time status display.
- Built and tested complete hardware prototype including sensor interfacing, soldering, and debugging.

PROJECTS

Accident Prevention, Detection and Reporting System Embedded Systems Project

Developed a smart accident detection and alert system using NodeMCU and accelerometer sensors. The system detects collisions and instantly sends emergency SMS alerts containing exact GPS coordinates and a Google Maps link to emergency contacts, enabling faster response and improved road safety.

Tech Stack: Arduino IDE, Embedded C

Circuit Fix Hub AI + Web Platform

AI-powered web platform for circuit debugging and electronics troubleshooting with image-based fault detection, chatbot-assisted diagnostics, and community-driven knowledge sharing.

Tech Stack: React.js, Node.js, MongoDB

EDUCATION

2024 – Present **B.Tech – Electronics and Communication Engineering**
Malla Reddy College of Engineering and Technology, Hyderabad
CGPA: 9.45

SKILLS

Programming	C, Embedded C, Python, TensorFlow Lite
Embedded & Electronics	Circuit Design, Soldering, PCB Prototyping, Debugging, Breadboard Testing
Tools & Platforms	Arduino IDE, Edge Impulse, MATLAB, Xilinx, Visual Studio Code

CERTIFICATIONS

- India Semiconductor Workforce Development Program (ISWDP) – Level 1 Certified (Oct 2025)
- AIoT and its Applications Internship – NIT Warangal (May–June 2025)

ACHIEVEMENTS

- Smart India Hackathon – Finalist (College Level)
- Secured top positions in multiple college-level hackathons