K MADHUNISHA

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Executive Summary

Energetic engineering student with hands-on practice in building real-time systems and solving technical problems.
Enjoys creating smart tools, working with data, and improving how things work through clear thinking and teamwork.

Education

ASE, Coimbatore B.Tech · Computerand Communication Engineering	2027 CGPA - 7.3/10
NATIONAL PUBLIC SCHOOL ClassXII-CBSE · mbipc · VEEPANATHAM NAMAKKAL TN (55187)	2023 Percentage - 76.4%
Dr.M.S. Udayamurthy School of Excellence ClassX-CBSE · mbipc · Namakkal	2020 Percentage - 75%

Experience

Emertxe Information Technologies	Link IoT Intern · Internship	Sep 2025 - Nov 2025 Online

Designed and implemented an IoT-based embedded system using microcontrollers and sensors, applying Embedded C programming and SDLC-based project development with hands-on hardware testing.

Projects

AIBookAnalyzer	Link Self-Initiated Project · PyPDF2,NLTK,Pandas,NumPy,Plotly,NetworkX	Jan 2025 - Feb 2025 Artificial Intelligence, NLP

Developed an AI-powered application to analyze PDF books and generate concise summaries, FAQs, and interactive question–answer responses using natural language processing techniques.

Dynamic Spectrum Anti-Jamming Communications Self Project · Software Defined Radio(SDR – RTL-SDR & ADALM-PLUTO),Spectrum Sensing Algorithms,Machine Learning	Dec 2025 - Present Communication Engineering

Developed a dynamic spectrum anti-jamming communication system using spectrum sensing, cognitive radio, and adaptive frequency hopping to ensure reliable wireless transmission under interference.

Home Automation System Emertxe Information Technologies · Arduino, Embedded C , Protocols	Sep 2025 - Nov 2025 Embedded and IoT

Designed and implemented an IoT-based Home Automation System using Arduino, Embedded C, and MQTT/HTTP for remote monitoring and control of home appliances during internship training.

Smart Trolley with Automated Billing System Academic Project · SPI Communication ,Embedded C/C++	Jun 2025 - Present Internet of Things

Built an IoT-enabled smart shopping trolley using RFID and load-cell sensors to automate product detection and billing, reducing checkout time.

Skills

Tools and Technologies: Visual Studio Code, GitHub , Jupyter Notebook, MySQL, Arduino , GNU Radio Companion
Programming Languages: Python, SQL, HTML
Areas of Interest: Data Science & Analytics, Software Defined Radio (SDR), Natural Language Processing , AI & Communication System

Languages

English[Professional Working Proficiency], Tamil [Native Proficiency]

Portfolio

Link