VAISHAKH V

EMBEDDED SYSTEM ENGINEER

Electronics and Embedded systems engineer with a strong foundation in electrical engineering. Passionate about hardware-software integration, IoT, PCB design, and space technology, with a commitment to continuous learning and innovation.

CONTACT

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SOFTWARE

MATLAB
KiCad
LTspice
Etap
Wireless Networking
Vivado
Linux
Keil ARM Cortex
Auto Desk Fusion

SKILLS

Research & Problem-Solving
Project Coordination

PROGRAMMING LANGUAGES

Python (Machine Learning)
Embedded C Programing
VHDL
Assembly

LANGUAGES

English

Malayalam

Hindi

EXPERIENCE

PCB designer - sign eminent enterprises Pvt ltd 2023 -2024

Freelanced as a PCB designer for Sign Eminent Enterprises Pvt Ltd, developing Battery Management System (BMS) PCBs for power management applications using KiCad. Responsibilities included schematic design, circuit optimization, layout implementation, and design validation.

Team lead for nanosat dev project – Gagan aerospace 2020 - 2023

Led development of a nano-satellite with Gagan Aerospace during college, managing component selection, circuit design, and subsystem simulation. Coordinated cross-functional teams, ensured milestone delivery, and conducted rigorous testing to enhance system reliability. Contributed to the project during my college years as part of Gagan Aerospace, a startup incubated under NSSCE.

EDUCATION

MTech in embedded systems

Vellore Institute of Technology (VIT) CGPA: 8.17

BTech in electrical and electronics engineering

NSS College of Engineering Palakkad Kerala CGPA: 7.91

Higher secondary school in computer science

MNKM HSS Chittilamcherry Kerala 87.75%

PROJECTS

Touch & Type Keyboard: A hybrid keyboard that integrates capacitive touch sensors beneath keys to function as a built-in trackpad, enabling seamless typing and cursor control without needing an external touchpad.

FreeRTOS Based Smart Home System: A real-time home automation platform using ESP32 that combines RFID access, ambient light sensing, motion detection, and servo-controlled door access to enhance security, energy efficiency, and user convenience.

Solar storm prediction using CubeSat data: developed an ml model to detect and predict solar storms using CubeSat telemetry.

Machine learning & AI projects: built binary image classifier, hand recognition and tracking system for IoT home automation, line follower.

IOT & Microcontroller projects: Designed and implemented multiple IoT and embedded system-based DIY projects.

Design of BMS for Electric vehicles (ongoing) : Online Udemy course covering BMS architecture, SoC estimation, and STM32-based hardware design.