

Monisha B G

Embedded Systems Engineer

Embedded Hardware Engineer with 1 year of experience in **PCB Design**, schematic design, PCB layout, and debugging. Specialized in **EMI/EMC-compliant designs** for secure and industrial applications. Proven ability to reduce hardware failures and improve testing efficiency. Passionate about **innovative hardware solutions, circuit design, and power integrity analysis**. Collaborates with firmware and cross-functional teams to develop robust and scalable embedded hardware solutions.



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PROFESSIONAL EXPERIENCE

Embedded Hardware Engineer

Avon Building Solution

04/2024 - Present

Automation Product Company

Pune

Achievements/Tasks

- Designed and developed **5+ embedded hardware projects**, improving system efficiency.
- Conducted in-depth **PCB debugging & hardware testing**, reducing failure rates.
- Collaborated with firmware teams to integrate hardware designs seamlessly
- Conducted thorough **PCB testing and debugging** to resolve design issues.
- Documented technical processes, **technical documentation**, and project stages effectively.
- Delivered hardware projects boosting company growth.

Key Projects:

EMI/ EMC complied.

Achievements/Tasks

- 1. Weigand_OSDP Converter** Developed Wiegand & OSDP based PCBs, enhancing compatibility. Maintained signal integrity and compliance with industry standards for secure access systems.
- 2. DOR-2100P (with Keypad)** Designed the DOR-2100P with an integrated, durable keypad for industrial use. Conducted rigorous testing ensuring reliable functionality.
- 3. DOR-2100S (Standalone with Fingerprint Access)** Created a standalone DOR-2100S with advanced fingerprint sensor technology. Delivered a secure, user-friendly access control solution.
- 4. BMS_Server D3** Designed the BMS_Server D3 with EEPROM, flash memory, RTC, and Ethernet. Delivered a robust server system for building automation and data management.
- 5. Door Controller: Intrinsic Safe** Developed a Door Controller for intrinsic safe environments meeting stringent safety standards. Ensured reliable operation in hazardous areas.

EDUCATION

St. Joseph Engineering College Vamanjoor, Mangalore

Engineering

08/2018 - 05/2022

St Joseph's P.U College, Madikeri

St Joseph's P.U College, Madikeri

04/2016 - 05/2018

SKILLS

Hardware Design: Schematic design, component selection, and PCB layout. (Altium, Eagle, Fusion 360)

PCB Testing & Debugging: Oscilloscope, multimeter, and logic analyzers.

Embedded Systems: Microcontrollers, communication protocols (UART, SPI, I2C, RS485, OSDP, Wiegand).

Documentation: Technical reports and project documentation, BOM.

Programming Language: C

PERSONAL PROJECTS

Digital Image Processing:

- This is my mini project which classifies areca nut image as diseased and undiseased areca nut

Mega Project:

- Developed a **deep learning-based web page** to classify insulators as good or bad.

Rain Alarm:

- Designed an alarm system to detect rain, useful for drying agricultural products.

INTERNSHIP

Ardelis technologies: Developed an IoT-based soil and water monitoring system, integrating sensors for real-time data collection and automation.

Wipro MERN Program: 6-month MERN internship

TECHKRITI IIT Kanpur: Hybrid Electric Vehicle building using CATIA Software

LANGUAGES

Kannada
Full Professional Proficiency

English
Full Professional Proficiency

Hindi
Full Professional Proficiency

INTERESTS

Yoga

Drawing

Reading Books