

Vidisha Ravi Jagtap

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Profile Summary

Embedded firmware engineer with hands-on experience in **STM32 (Cortex-M4)**, **FreeRTOS** and board-level design, skilled in **embedded C/C++**, BSP bring up, and peripheral driver development (CAN, LIN, I2C, SPI, UART). Proficient in debugging with JTAG/gdb/SWD and integrating firmware, testing and schematic validation. Passionate about building reliable firmware and intelligent embedded systems.

Work Experience

Apprentice Embedded Developer

Bosch Global Software Technologies Private Limited

Jan 2025 – Jan 2026

Hyderabad

- Hands-on training in Embedded C, ARM Cortex-M, RTOS, debugging, and testing.
- Integrated sensors and actuators with STM32 boards for real-time applications.
- Improved module test efficiency through optimized debugging.

Trainee

Bosch Global Software Technologies Private Limited

Jan 2023 – Jun 2023

Pune

- Extracted and filtered CAN signals for ECU communication analysis.
- Designed log-parsing modules that improved automotive diagnostics by 25%.
- Collaborated with senior engineers to understand full vehicle communication flow.

Intern – Electrical Engineering Of Large Scale Industries

Adani Institute of Infrastructure Engineering

Jul 2021 – Oct 2021

Ahmedabad

- Completed an online internship in Electrical Engineering with exposure to large-scale industrial systems.
- Gained practical insights into power distribution, electrical safety, and infrastructure monitoring.

Technical Skills

Firmware/Embedded: STM32 (ARM Cortex-M4), ESP32, PIC, ATMEL, FreeRTOS, Embedded C, C++, Python, Baremetal, PLL configuration, Linux-YOCTO, Embedded SDLC, BSP, Device drivers, Bootloader.

Tools: STM32CubeIDE, Git, MATLAB, Oscilloscope, Logic Analyzer, EasyEDA, LTspice, Visual Studio, Arduino, PCB Design, Manual Testing, Bug Lifecycle, Database Testing.

Protocols: CAN, UART, I2C, SPI, LIN, Ethernet, DMA, Bluetooth, TCP/IP, ADC, EEPROM, PWM, USB, Wi-Fi, IoT

Education

B.Tech – Electrical Engineering

Walchand College Of Engineering, Sangli, Maharashtra

2019 – 2023

Percentage - 68.9

Class 12th – Science

Sarvodaya Junior College, Sindewahi, Maharashtra

2017 – 2019

Percentage - 72.62

Class 10th

Sarvodaya Girls School, Sindewahi, Maharashtra

2017

Percentage - 91

Projects

Smart EV-Bike System — BOSCH, Hyderabad

2025

- Designed STM32-based EV bike controller using FreeRTOS scheduling, integrating BLDC motor control, RFID authentication, vibration sensor, accelerometer, and wireless communication.

Wearable Health Monitoring Device — BOSCH, Hyderabad

2025

- STM32-based wearable system for continuous heart rate, SpO2, and body temperature monitoring with Bluetooth connectivity, real-time display, secure keypad access, and low-power embedded design.

Dynamic Configuration Of CAN Data Transmission — BOSCH, Pune

2023

- Real-time filtering and extraction of CAN IDs and payloads for ECU monitoring using J1939, improving diagnostic efficiency by 25%.

IoT-Based Agriculture Monitoring System (Arduino + IoT) — Shivaji University, Sangli

2022

- A wireless system using Atmega328P microcontroller board to monitor soil moisture, temperature, and humidity with real-time alerts and scalable architecture used GSM module, reducing manual farm monitoring.

Certifications

Udemy – Embedded System Bare-Metal Programming Ground Up (STM32)

2024

Udemy – Mastering RTOS: Hands On FreeRTOS & STM32 With Debugging

2025

Udemy - Embedded Linux Using YOCTO

2025