



Akash Gadge

EMBEDDED SOFTWARE DEVELOPER

Profile

Embedded Software Engineer with over 2.5 years of experience in developing firmware for microcontrollers and processors. Proficient in full software development lifecycle, from concept to deployment. Expertise in real-time operating systems, communication protocols, and low-power design. Demonstrated ability to meet project deadlines and deliver exceptional code quality. Committed to continuous learning and staying current with emerging technologies in the embedded space.

Employment History

Associate Software 2 Engineer , Global Edge Software Limited,(Capgemini) , Bengaluru

JULY 2022 — OCTOBER 2023

Project: Garuda III

Garuda OBD tool enables vehicle network monitoring, re-programming, and diagnostics for passenger cars, trucks, buses, off-highway vehicles, and DG set applications. It is a plug-and-play model with PC connectivity through USB 2.0, Wi-Fi, and Bluetooth, making it user-friendly even in remote and rugged conditions. The tool supports various protocols such as CAN, KWP, and SAE J2534, allowing rapid identification and remedying of vehicular malfunctions.

Responsibilities:

- Worked on the firmware code flow.
- Analyzed and implemented the logs generated and debugging.
- Ported FreeRTOS into Linux and tested the functionality on the development board.
- Worked on Process IOCTL Command.
- Worked on CAN Standard Filter Messages and Extended Filter Messages.
- Worked on CAN Loop-back mode.
- Played a pivotal role in enhancing, fixing functional, and performance-related bugs in the core product written in Embedded C, contributing to the overall product quality.
- Utilized Mahindra Flashing Software Tool to flash multiple ECUs.

Associate Embedded Engineer, Brose India Automotive Systems Pvt. Ltd. Pune, Pune

MARCH 2022 — JUNE 2022

Project: Cooling Fan Module (CFM)

Performed Unit Tests for different functions, Component & Debugger Tests for specific requirements, and wrote test cases for various functions using Tessy Tool.

Responsibilities:

- Worked on Unit Testing and Debugging the project.
- Conducted Component Testing, Regression Testing, and Installation.

Trainee Engineer , Automatic Electrical Pvt. Ltd., Lonavla

MARCH 2021 — DECEMBER 2023

Project: DC Panel Meters

Developed DC Digital Panel Meters to measure the output voltage across

Details

Udgir , India

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Skills

Programming Languages : C, Embedded C

Operating Systems : Windows, Linux.

Tools : Canalyzer, Visual Studio, Yocto, Atmel Studio, Keil, IAR8, IAR32, MPLABIDEv8.63, Tessy.

Controllers : STM8L, STM32, ATSAM5D27, PIC16f, ARM7.

Communication Protocols : I2C, SPI, UART, CAN, UDS.

Good Understanding of SAEJ2534.

Debugger : J-Link Debugger for flashing ECU's and Finding bugs from firmware, PICKIT-3 in circuit debugger.

Simulation Software: Proteus 7.1 & Proteus 8, Simulink.

CAN protocol tool: CANoe, CANALyzer.

SDLC : Waterfall Model, V-Model software Development.

Knowledge of reading schematics and data sheets, Programming Manuals.

Transducers, which provided output in mVolts or mAmps. Ranges included mVolt DC and mAmp DC.

Responsibilities:

- Worked on the firmware code flow.
- Developed hardware compatible with software, including features that triggered LED indicators and buzzers based on configurable voltage settings.
- Worked on multiple new features and resolved issues on the production site.
- Involved in hardware and software development, testing, and installation.

Education

Electronics and Tele-Communication , Pravara Rural Engineering College , Loni

JULY 2015 — JUNE 2018

Courses

Embedded System Design, Savitribai Phule Pune University (ICIT)

AUGUST 2019 — MARCH 2020