Akhilesh BR

Software Engineer

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PROFILE SUMMARY

Dedicated and skilled Software Engineer with 5.3 years of experience, specializing in Battery Management Systems (BMS), Low-Level Driver development, and Black Box API testing. Adept at designing, implementing, and validating embedded software solutions, with a strong focus on ensuring system reliability and performance. Proven ability to work collaboratively in dynamic environments, delivering high-quality software that meets stringent industry standards.

EXPERIENCE

SOFTWARE ENGINEER

Pravaig Dynamics PVT LTD, Bengaluru, Karnataka, India / May 2023 – Present

- Developed and maintained embedded software for **Battery Management Systems**, enhancing system reliability and efficiency.
- Designed and implemented low-level drivers for various microcontrollers, ensuring seamless hardware-software integration for **FRAM** and **Flash** nonvolatile memories as data written as per to the automotive Indian standard according to BMS.
- Developed black box API by using nonvolatile memories to validate API functionality, performance, and security, contributing to the delivery of high-quality software products.
- Collaborated with hardware engineers to optimize system performance and resolve technical issues.
- Participated in code reviews, ensuring adherence to coding standards and best practices.
- Utilized debugging tools and techniques to diagnose and resolve software defects, improving system stability.

EMBEDDED SOFTWARE ENGINEER

DUXES LAB PVT LTD, Bengaluru, Karnataka, India / Sept 2019 – May 2023

PROJECTS

Bio-Medical Surgical Glove Pin Hole Detection System

Description: The project is to detect the pin hole in the surgical gloves using high precision pressure sensors. Glove testing machine having three modules Rotor, Stator, Application Software installed in PC. The machine can be configured using the application software developed using .Net framework. The configuration data sent from PC is received by rotor which has 16 -modules. Each module having four glove holding actuators, four pressure sensors, one solenoid valve to blow the pressurized air. Each module connected to PC via RS-232 with time slots. In these time slots the configuration data (Type of gloves, Time for filling the air, Result of test) will be received by each module.

Interfaces used: UART (RS-232), LCD display, Pressure Sensors, ADC, Actuators, Relays.

Roles and Responsibilities:

- Design and implement software of embedded device and system from requirements to production and commercial deployment
- Design, develop, code, test and debug system software
- Review code and design

- Analyze and enhance efficiency, stability and scalability of system resources
- Integrate and validate product design.

FROST: SMART HYDRATION MONITORING DEVICE

Description: Product which analyze and notify user on body hydration level and hygiene of the container. Product featured detachable design and a display that displays hydration information. Product enable users to receive alerts and remainders to drink water, to fill water and to clean bottle. Product can monitor the battery level and alert the user since bottle is with USB chargeable port.

Roles and Responsibilities:

- Worked as a developer/reviewer.
- Taken responsibility of modules and integrating the final product code.
- Sensors used: LDR, IR, Buzzer, Programmable LEDs.
- Design and code reviews.
- Participated in board bring up activities with hardware team.
- Application software development.
- Bug fixed based on the outcome of several stages of testing.

EDUCATION

Sapthagiri College of Engineering / BE(EEE) Bengaluru , Karnataka, India 2015 - 2018

Impact College / Diploma Bengaluru, Karnataka, India 2012 - 2015

SKILLS

- **Programming Skills:** C, Embedded C, C++ (Beginner).
- **Miscellaneous Skills:** GIT, Vector DBC, Peak components, Bus master, Visual Studio, Eclipse, DFMEA, Ozone software, CCS (Code Composer Studio), 32-bit Microcontrollers.
- **Communication Protocols:** Proficient in I2C, UART, SPI, and CAN.
- **Soft Skills:** Time management, Teamwork, Problem-solving, Documentation, Scrum Meeting, and Presentation, SDLC process, agile methodologies.