

OBJECTIVE

Pursue opportunities as a Senior Firmware Engineer, bringing 6.5 years of specialized experience in embedded systems and firmware development, with a commitment to improving product lifecycles and system performance across various sectors.

CONTACT

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CORE COMPETENCIES

- Embedded Firmware Development
- RTOS Integration
- Protocol Development
- Microcontroller Programming
- Real-Time System Code Debugging
- Peripheral Configuration and Automation
- Data Structures & Algorithms
- SDK Development and Documentation
- Communication Protocols Integration
- Unit Testing & Code Coverage
- Multithreading
- Kernel Development and Optimization

EDUCATION

- **2016:** B. Tech. in Electrical & Electronics Engineering, JNTU-Hyderabad, Hyderabad, Telangana

CERTIFICATIONS

- 📖 Mastering RTOS: Hands on FreeRTOS and STM32Fx (Certificate)

TRAINING

- Advanced Embedded Systems and IoT Training, ISM, Rajaji Nagar, Bangalore

Veerendra Babu Bommakanti

PROFILE SUMMARY

- Amassed a wealth of experience exceeding 6 years in embedded systems, focusing on firmware engineering and development, while consistently striving for innovation and excellence in the technology sector.
- Function as a Senior Professional at Capgemini Limited, partnering with Silicon Labs to refine documentation processes and elevate user experience through diligent attention to detail and technical proficiency.
- Progressed through various roles, acquiring a wealth of knowledge in embedded software development, debugging, and system optimization, while honing skills in real-time operating systems and protocol development.
- Realized substantial advancements in system efficiency and stability within the current position, leading to increased user satisfaction & operational performance through focused enhancements & testing methodologies.
- Exhibit robust leadership capabilities by promoting collaboration among diverse teams to achieve project success and align with strategic goals, while guiding junior engineers in industry best practices.
- Possess an in-depth knowledge of communication protocols and peripheral configurations, guaranteeing smooth integration and operational functionality across a range of hardware platforms.

WORK EXPERIENCE

May'2023 to Present: Senior Professional at Capgemini Limited, Hyderabad

Key Result Areas:

- **Optimized Documentation & User Experience:** Enhanced Doxygen documentation and streamlined peripheral efficiency to improve developer understanding and user interaction.
- **Improved System Efficiency & Stability:** Analyzed and refined debug schematics, timing sequences, and state diagrams, resulting in **increased system scalability and resource stability**.
- **Resolved Critical Hardware Issues:** Led small-scale hardware debugging efforts, resolving issues and improving overall system performance.
- **Boosted Software Quality:** Implemented and wrote test cases for unit code and modules, ensuring robust, high-quality software delivery.
- **Collaborated with Cross-Functional Teams:** Worked closely with software design teams to define and meet specific design goals and **tight deadlines**, ensuring seamless project execution.

Apr'2022 to May'2023: Firmware Engineer at Mphasis Ltd., Singapore

Key Result Areas:

- **Optimized System Boot Speed:** Reduced boot time for industrial equipment by modifying the kernel base image and experimenting with various kernel configurations.
- **Enhanced Linux Performance:** Worked extensively in the Linux development environment, experimenting with kernel settings to improve performance.
- **Developed for Raspberry Pi Architecture:** Leveraged the Raspberry Pi architecture to implement efficient embedded system solutions.

Mar'2021 to Apr'2022: Lead Engineer at HCL Technologies Ltd., Bangalore

Key Result Areas:

- **Led High-Level & Low-Level Design:** Directed the creation and delivery of CoDDA (High-Level Design), DCSL (Low-Level Design), and TITV (Testing and Inspection) documentation, ensuring alignment with client needs.
- **Ensured Comprehensive Testing:** Spearheaded unit testing and code coverage for various software modules, ensuring the highest standards of software quality.
- **Optimized Client-Facing Processes:** Streamlined design and verification processes, improving **productivity and efficiency** for client learning and production initiatives.

AWARDS & ACHIEVEMENTS



Employee of the Quarter



Runner of the Quarter

PERSONAL DETAILS

Date of Birth: 22nd August 1995

Languages Known: Telugu (Fluent), English (Fluent), and Kannada (Intermediate)

Jun'2018 to Mar'2021: Embedded Software Developer at Utthunga Technologies Pvt. Ltd., Bangalore

Key Result Areas:

- **Achieved Real-Time System Optimization:** Designed, developed, and debugged real-time system code, enhancing system **responsiveness & efficiency**.
- **Enhanced Cross-Platform Integration:** Drove the successful **cross-platform development** efforts, ensuring seamless integration and compatibility with different platforms.
- **Boosted System Scalability:** Applied expertise in **debug schematics, timing sequences, and state diagrams** to drive improvements in system stability and scalability.
- **Collaborated to Meet Design Objectives:** Worked closely with clients & software teams to ensure design goals were defined & successfully achieved.

PROJECTS

DX-IMPROVEMENTS | Capgemini | Client: Silicon Labs

- **Platform:** Si91x
- **Environment:** Simplicity Studio, VS Codes, and Doxygen
- Role involved enhancing the SDK for the Si91x semiconductor, focusing on optimizing SSI peripherals and implementing automation for streamlined testing efforts.

KERNEL UP-GRADATION & MIGRATION | Mphasis Ltd. | Client: Thermo Fisher Scientific

- **Platform:** Linux and Raspberry Pi 4
- **Environment:** VS Codes and GCC
- Developed a kernel based on processor configuration for upgrading instruments from Raspberry Pi 3B/CM3 to 4S/CM4S, ensuring compliance with hardware specifications.

FLIGHT WARNING SYSTEM | HCL Technologies Ltd. | Client: Airbus

- **Platform:** Avionics
- **Environment:** MobaXterm (Internal to Client), DO178-C
- Developed a system to display flight warnings through LCD, light, and buzzer indications, prioritizing warnings based on severity.

KGP-2000 | Utthunga Technologies Pvt. Ltd.

- **Platform:** TI-MSP430F5438
- **Environment:** CCS (Code Composer Studio)
- Collaborated on programming communication protocols and designed firmware for various peripherals, leading to successful integration across multiple screens.

ANSI C OPC UA Server SDK | Utthunga Technologies Pvt. Ltd.

- **Platform:** Tiva C Series TM4C1294XL, Windows, and Linux
- **Environment:** CCS (Code Composer Studio), Qt Creator V5, UaExpert, and WireShark
- Optimized embedded profiles for efficient operation on microcontrollers, implementing security policies and addressing memory footprint reduction.

uSense SF-100 (Sensor Fusion-100) | Utthunga Technologies Pvt. Ltd.

- **Platform:** TI-CC1350
- **Environment:** CCS (Code Composer Studio), Sub 1GHz, FFT, TI-RTOS
- Integrated sensor firmware with TI-RTOS support, designing firmware for vibration and acoustic sensors.