

Professional Summary:

Embedded Systems Engineer with 2 years of industry experience specializing in UEFI BIOS sustenance for Dell systems. Proficient in C programming, feature integration, and debugging low-level firmware. Strong foundational training in RTOS, Linux System Programming, and Embedded C. Adept at working with cross-functional global teams to develop embedded solutions while meeting tight deadlines.

Skills:

- **Languages:** C
- **Microcontrollers:** STM32, ARM Cortex-M4
- **Firmware/Hardware:** UEFI BIOS, Bare Metal Programming
- **Real-Time Operating System:** FreeRTOS
- **Tools:** JDEG, DUDC, Tera Term, Dediprog, Jenkins
- **Protocols:** SPI, I2C, UART
- **Development Areas:** Feature Integration, Debugging, Firmware Enhancement
- **Version Control:** Git, GitHub, Bitbucket
- **IDE & Platforms:** STM32CubeIDE, Visual Studio Code
- **Agile Methodologies:** Scrum, Jira
- Excellent problem solving, analytical and communication skill

Professional Experience:

- ❖ Embedded Software Engineer
- ❖ Mar 2023 - Present
- ❖ 1.5 years of professional experience in UEFI BIOS sustenance.
- ❖ Hands-on experience in C programming, RTOS, Linux System Programming.
- ❖ Skilled in integrating new features into firmware, conducting regression testing, and ensuring platform stability.
- ❖ Adept in using debugging tools like JDEG, DUDC, serial console, and system logs for root cause analysis.
- ❖ Experienced with version control systems including Git and Bitbucket for collaborative development.
- ❖ Familiar with Agile methodologies, including daily stand-ups, sprint planning, and code reviews.
- ❖ Strong communication skills for interacting with cross-functional and global engineering teams.

Training:

- ❖ Embedded Systems – Wipro
- ❖ Apr 2023 – Aug 2023
- ❖ **RTOS Concepts & Programming** – Task Scheduling, Memory Management, Synchronization
- ❖ **Linux System Programming** – Process management, Inter-Process Communication, File Systems
- ❖ **C Programming (Advanced)** – Pointers, Memory Allocation, Data structures, Bit Manipulation
- ❖ Build hands-on mini-projects during training to solidify concepts.
- ❖ Gained exposure to hardware interfacing, embedded drivers, and low-level programming.

Education:

Bachelor of Engineering (B.E) in Computer Engineering

College/University: Pillai College of Engineering, Navi Mumbai.

Year: 2018 – 2022

CGPA: 8.39

Projects:

- ❖ **Project:** Sustenance for Dell UEFI BIOS
- ❖ Embedded Software Engineer
- ❖ **Duration:** Sep 2023 - Present
- ❖ Worked on UEFI BIOS sustenance for Dell platforms, focused on bug fixing, performance improvement, and regression issue resolution.
- ❖ Integrated new features into the existing BIOS codebase while ensuring overall platform stability and compliance with internal validation requirements.
- ❖ Took the lead in managing a small internal team of 3 engineers for BIOS feature integration tasks — including task breakdown, assigning work based on skill sets, tracking progress, and performing final review before submission.
- ❖ Created and maintained internal documentation to streamline onboarding and knowledge sharing for new team members.
- ❖ Specialized in debugging issues related to the **TBT Retimer Flash Update** module, a Dell-specific feature utilizing Intel reference code to handle firmware version updates for the Intel Thunderbolt (TBT) Retimer component within BIOS.

- ❖ Performed deep-level debugging using JDEG, serial logs, platform-specific debug utilities, and Intel debug documentation to trace hardware-software interaction failures.
- ❖ Ensured secure, maintainable, and high-quality code by adhering to Dell's BIOS coding standards and conducting peer reviews through Fisheye.
- ❖ Collaborated closely with cross-functional global teams, including platform team, Validation team, Internal Tools Team, and ODMs, to provide root cause analysis (RCA) and deliver timely issue resolutions.
- ❖ **Tools/Environment:** C, UEFI BIOS, Git, Bitbucket, Jenkins, JDEG, Windows PEI/DXE stages, Fisheye, Dell Internal Tools
- ❖ **Asset Management**
- ❖ Developed a comprehensive asset management system to streamline asset tracking within the organization.
- ❖ Implemented various modules for efficient admin and employee operations.
- ❖ Utilized **C Programming** and **UNIX** for robust project development.
- ❖ Employed **Linked-List** data structure to optimize data management and retrieval.

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