ALLAMPATI SUJITHA

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SOFTWARE ENGINEERING PROFILE

Professional Summary:

- Having 5 years 3 months of experience in development of applications using **Embedded Software** on Windows operatingsystems.
- Hands on working experience in **Embedded C.**
- Hands on experience as a Scrum Master and Team Lead.
- Hands on working experience in Firmware Platforms.
- Hands on working experience in Coverity Analysis.
- Hands on experience as a Scrum Master.
- Hands on working experience in **Windows** environment.
- Hands on experience in developing code using Embedded c**.**
- Hands on working experience in **IAR EMBEDDED WORKBENCH 8.3** and IDE.
- Hands on Experience with **ASCET, ECU Workspace, SDOM, TPT, CI dashboard and JIRA**.
- Having Good working Experience in Embedded C Concepts and interactive debug with **Embedded.**
- Experienced in manual execution of test cases in Windows environment.
- Experienced in developing new modules and classes based on business requirement.
- Experienced in using communication protocols UART, SPI, I2C and CAN.
- Experienced in microprocessors and microcontrollers, ADuCM4050 Ultra Low Power ARM® Cortex®-M4F MCU and LPC2129
- Designed custom UART Protocol to communicate with Android over Bluetooth.
- Have work experience on debuggers like JTAG and Dediprog.
- Proficient in debugging hardware and firmware problems.
- UART Protocol to communicate with Android over Bluetooth
- Familiarity with development best practice such as code reviews and **unit testing.**
- Experience with **Version Controls TFS, SDOM, GIT and Bitbucket.**
- Experience on **Agile Methodology**.
- Experience on **V Model**
- Well acquainted with the Software development life cycle (SDLC) and Software testing life cycle (STLC).
- Have flexibility and ability to learn and use new technologies and to work in team environment as well as independently to get things done.

PROFESSIONAL EXPERIENCE:

Wipro Technologies, Bangalore

Senior Software Engineer, July 2023 to Till Date

Projects undertaken

Project #1:

Dell Core BIOS

Description:

The Silver Surfer Core release team will be responsible for making weekly Core Releases. A Core Release will typically be the release of the Lead Vehicle of a family of systems from the latest code on the trunk (Top-Of-Tree). This will be a full BIOS release with all the various components included such as DPFs, Lesser DPFs, Core Code, etc. The intention is to provide a stable point on the trunk from which to create all the platform releases. This is a non-signed release. It is intentionally not a signed release because it is anticipated that the Lead Vehicle platform

will have late changes that they will want to Cherry Pick onto the release before it is signed and becomes a production release.
Dell BIOS Flash Update is the method by which firmware embedded in a Dell platform is updated via an external utility working with a variety of UEFI Drivers running on the BIOS in the system. This feature supports updating a variety of firmware payloads including the firmware for the System BIOS, ME, EC, Dock firmware and firmware for other components. This document is intended to be used by platform engineers that need to integrate and debug issues with Dell BIOS Flash Update.

Roles & Responsibilities:

- Worked as Scrum Master for the Project.
- Worked with Coverity Analysis at client location.
- Debugging the code with Dediprog.
- Worked as Lead for the Project with team size of 8.
- Involved in Sprint Activities and tracking with JIRA.
- Involved in all projects related activities and Providing KT to the new joiners.

Tech Mahindra, Bangalore
Senior Software Engineer, July 2022 to June 2023

Projects undertaken.

Project #1:

Trailer Light check -HMI Display

Description: The Trailer Light Check feature will allow the vehicle user to independently visually check the light operation of a towed trailer. Upon activation of feature through the vehicle and trailer lights will illuminate in the sequence. The goal of the Trailer Light Check is to enhance the customer trailer towing experience. This typically requires a vocal call and response that good drivers feel obliged to do every time they hitch a trailer and bad drivers will often skip. There is a bulb out detection routine, but it is only effective on ~90% towed trailer lights and does neither check reverse nor rear fog lights or able to detect swapped left/right turn circuitry.

This function allows the user to select using in-vehicle or Customer Pass HMI to initiate or end Trailer Light Check. When the user selects the start test or end test buttons this function will send the user input to ConductTrailer Light Check function. This function also serves to acknowledge receipt of test in progress message.

Roles & Responsibilities:

- Test lead for the project with team size of 6.
- Debugging the issue related
- Involved in the release process.

Capgemini Engineering, Bangalore
Associate, July 2021 to June 2022

Projects undertaken.

Project #1:

Power Train:

Description: **E**lectronic **C**ontrol unit in Bosch develops and manufactures Engine Control Units in international collaboration and offers services for diesel, gasoline engines as well as for alternative power drives. ECU (Engine Control Unit) product development involves development of Hardware, Software and Calibration.

Roles & Responsibilities:

- I have involved in implementing unit test cases for Configuration Module.
- Application development as per the product requirement by using ASCET Tool.
- Involved in integration testing by using ECU Tool
- Involved in unit testing by using TPT tool.
- Involved in the release process of the PVER using SDOM.
- Involved in project activities as per the client requirement.
- Involved in HIL and SIL Testing

Technologies & Tools: Embedded C, ASCET, ECU Workspace, SDOM, TPT and CI dashboard

HCL TECHNOLOGIES, Chennai
Software Engineer, August 2019 to June 2021

Projects undertaken.

Project #1:

Cardiopulmonary Monitoring device (IAR Embedded Workbench tool for development):

Description: The architecture for the CP Monitoring device firmware is based on the RTOS-HAL-Application layer approach. The RTOS used for controlling this device is FreeRTOS. This is a Microkernel OS which has a tiny memory footprint. Due to the availability of small code memory area, this microkernel embedded RTOS is chosen. The programming language to write code on this platform would be Embedded-C.

Roles & Responsibilities:

- I have involved in implementing unit test cases for Configuration Module.
- Application development as per the product requirement.
- UART Driver Programming to transfer data form device to android Apk over Bluetooth.
- Designed Protocols to send binary format file data to Android Apk (NBP Settings).
- Cloud Interface using TCP/IP Protocol via UART.
- Involve in the release process of the firmware using SVN and GIT repository.
- GSM Programming to send details of report to customer mobile number in terms of messages.
- Using Helix QAC tool done the static analysis.
- Involved in Integration Testing protocol and Unit testing protocol.
- Involved in development of CPM Monitoring device including testing, debugging and resolution of bugs.

Technologies & Tools: Embedded C, Embedded Linux & IAR embedded Workbench 8.3 Tool.

Project #2:

HUD Tester Video Generator Box:

Description: HUD tester for testing the HUD unit where the functionality of HUD (Heads-Up Display) shall be tested and validated by connecting to a Host Computer. The User can feed image/Video information through Ethernet Interface or by using HDMI port, hence the HUD Tester shall accept the Image Information and send it to the connected HUD unit for testing HUD's functionality. The HUD unit shall be connected through FPD Link IV, and the HUD Tester is designed to support single HUD unit. HUD Tester supports 10 test patterns sent to HUD in customer provided sequence and time to validate HUD functionality. HUD will have a USB interface to connect with Host PC with which user can configure and control the Tester Functionality.

Roles & Responsibilities:

- Application developing as per the product requirement.
- Designed the software architecture for initial release.
- Designing Protocols to send image data via host PC
- I have involved in implementing Client applications
- Involved in the release process of the firmware using GIT repository.
- Currently working on the project as a software engineer for code development using Linux platform
- Having knowledge in basics of kernel development

Technologies & Tools: GCC compiler, Embedded Linux kernel and ubuntu 18.0 LTS.

Accenture Solutions Pvt Ltd, Bangalore
Associate, July 2018 to August 2019

Projects:

Wolverine:

Description: The project is based on reviewing the data provided by the customer and identifying the bugs. It is completely based on the customer provided tool where we report the identified bugs and make it is as a documented with the feedback information.

Roles & Responsibilities:

- Reviewed the data provided by the customer.
- Involved in identification of bug reports.
- Involved in reporting the bugs through SRT

Technologies & Tools: SRT Tool, Windows.

ACADEMICS:

- **B. Tech (Electrical and Electronics Engineering)** SPMVV, 2018.
- **Intermediate (MPC)**
  Sri Chaitanya Junior College, Nellore, 2014.
- **SSC**
  Viswam High School, Nellore, 2012.

TECHNICAL SKILLS:

- **Programming Languages:** Embedded C
- **Platforms:** Linux, Windows
- **SCM:** GIT, TFS and Bitbucket.
- **Tools:** IAR WORKBENCH, Helix QAC and Visual Studio

Languages Known:
English, Telugu & Hindi
Reference available on request

Place: Bangalore Sujitha Allampati