

NAME: Sri Laxmi

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PROFILE SUMMARY:

Highly skilled Embedded Engineer with over 6 years of experience, combining expertise in defense-related FPGA board testing, software testing in automotive systems, and project management in multi-disciplinary teams. Proficient in working with RTOS, communication protocols (TCP/UDP, UART, SPI, I2C), and wireless technologies (Ethernet, Wi-Fi, ZigBee, Bluetooth). Looking to leverage my technical knowledge and strong problem-solving skills to contribute to cutting-edge embedded systems development.

SKILLS

- Hands-on experience in **FPGA board testing** in defense applications.
- Proficient in **communication protocols** (TCP/UDP, UART, SPI, I2C).
- Experience in wireless **technologies** (Wi-Fi, Ethernet, ZigBee, Bluetooth).
- Knowledge of RTOS.
- Knowledge of ADAS applications.
- Knowledge of Microcontrollers and Microprocessors and C language.
- Worked in **Agile** methodology.

ORGANISATIONALEXPERIENCE

- Working in GVR Technolabs as **an Embedded Engineer**, from May 2024 to present.
- Worked in ApolloDart as **a Reliability Engineer**, from April 2023 to February 2024.
- Worked in Cashapona Technologies as **Software Test Engineer**, from Sep 2020 to March 2023.
- Worked in Cashapona Technologies as a **Project Associate**, from March 2018 to August 2020.

ACADEMIC DETAILS

- B-Tech from ECE in College affiliated to J.N.T.U Hyderabad with 77 % in the year 2014.
- M-Tech from Embedded Systems in College affiliated to J.N.T.U Hyderabad with 78 % in the year 2016.

PROJECT DETAILS

Project 1: Embedded Engineer

- Conduct FPGA board testing and validation for defense applications, ensuring functional and performance integrity.
- Work with various communication protocols such as TCP/UDP, UART, SPI, I2C to ensure data integrity and accuracy across devices.
- Utilize RTOS to manage system resources for efficient multi-threaded operations and real-time performance.

- Implement and debug wireless communication protocols including Ethernet, Wi-Fi, ZigBee, and Bluetooth for military-grade embedded systems.
- Perform failure analysis, root cause identification, and collaborate with cross-functional teams to implement solutions.
- Generate detailed reports for test results, system behaviors, and improvements.

Role and Responsibility:

- Analysed equipment failure data to identify patterns and trends.
- Conducted root cause analysis to determine the underlying cause of problems.
- Developed and implemented new maintenance procedures.
- Implemented new procedures for monitoring and testing equipment.
- Implemented training programs for employees.
- Collaborated with other departments to ensure that reliability is integrated into all aspects of the organization.

Project 2: HKMC - In-Car Application Server

Tools : WinIdea, GIT, Jira, CANOE, EA, Doors, ghs-compiler

Description: An in-car application server is used to verify the received secured messages and to send authentic messages to secured messages while transmitting. This whole functionality takes place in BSW-SECOC(Secured onboard communication).

Role and Responsibility:

- Reviewing Customer Requirements and preparing SW6 Test Requirements.
- Configuration of CAN Stack using vector CANOE
- Validation and verification of CAN Signals based on requirements.
- Testing UDS services and testing.
- Performing coverage test (UT).
- Calibration and measurement of signals using CANape.
- Handling Customer-reported issues with high priorities. Have to provide a solution within 2,3 days for every issue.After validation preparation test spec and updating in doors and creating tickets to development team.

Project 3: IVECO – FRONT CAMERA MODULE (SCAM 4.2)

Tools: GHS, EB Tresos

Description: IVECO: This project focuses on the ADAS Front Camera for Mini VAN.
Handled modules: Object detection, lane detection, high beam/low beam on lanes.

Role and Responsibility:

- Reviewing Customer Requirements and preparing SW6 Test Requirements.
- Configuration of CAN Stack using vector CANOE
- Validation and verification of CAN Signals based on requirements.
- Testing UDS services and testing.
- performing coverage test (UT), running

- Calibration and measurement of signals using CANape.
- Handling Customer-reported issues with high priorities. Have to provide a solution within 2,3 days for every issue validation preparation test spec and updating indoors and creating tickets to the development team.

Project 4: ESP8266 Home Automation Project Using NodeMCU and Blynk App - IoT Projects

Description:

To design and prototype implementation of a new home automation system using NodeMCU and Blynk app which uses WiFi.

Required: Relay, Node MCU (ESP8266), Switches, Internet of Things (IoT), Smartphone, Blynk.

Responsibilities:

- The Home automation is operating with the Nodemcu ESP8266 controller and the command is given by the Blynk android application in a mobile phone using the wi-fi network.
- The Nodemcu ESP8266 has an inbuilt wi-fi module and the devices are connected with Home automation.
- Both wi-fi are connected with an authentication token.
- Blynk android application will transmit commands using wi-fi to the electrical equipment so that its electrical equipment depends upon the required condition.

Microcontrollers, Microprocessors, C, UART, SPI, I2C, CAN, IOT concepts and communication protocols.