R Anish kumar
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Objective:

To utilize my skills towards a challenging career in a growth-oriented Leading organization this will provide opportunities for continuous growth and advancement to me.

Professional Summary:

- Around 1 year experience in Automotive Domain and **AUTOSAR Architecture**.
- Around 4-year Experience in design and development of embedded system firmware for different microcontrollers like 8051, ARM, Arduino, ESP8266, ESP32 and Processor like Raspberry Pi 3.
- Good experience on **8-bit, 16-bit, 32-bit microcontrollers.**
- Working experience **Autosar BSW and Com Stack Configuration**.
- Having programming experience in **Embedded** C/C++.
- Having knowledge on Data Structures(linked list,stack,queue).
- Having Experience in Linux programming and communication protocols.
- Good knowledge on TCP/IP and UDP.
- Expertise in software debugging skills using JTAG, GDB.
- Experience on embedded devices testing and calibration of devices.
- Having working experience in **Autosar Configuration tool Chain**.
- Experienced in all phases of software development life cycle including requirement analysis, design, coding, testing.
- Knowledge on experience on using Canoe, Canalyzer.
- Knowledge on **UDS and Diagnostic** Services.
- Having knowledge on **ADAS** Levels.
- Good knowledge in Real time operating System(RTOS-FreeRtos).
- Having knowledge on python and Bash scripting.

Professional Exp:

- Worked as Voip Engineer in Real Soft(Intl) Pvt.Ltd from may 2016 to march 2018.
- Working as Embedded System Designing & Programming Engineer in APSSDC since Dec 2018 to 2022 November.
- Worked as embedded developer under net connect global pay Roll as client for Tcs from June 2023 to Aug 2023.

Educational Qualification:

Completed B-Tech in Electronics & Communication Engineering during 2008- 12 with aggregate percentage of 60.58% from Gokul Institute Technology And Sciences,affiliated to Jawaharlal Nehru Technology University, Kakinada.

Technical Excellency:

- **Programming Languages:** C,C++,Embedded C Programming, Basics of CAPL Scripting.
- **Micro-controllers:** 8051,RH850,ARM7(LPC2148) AND ARDUINO FAMILY,STM32
- **Automotive protocols:** Basics of CAN Protocol And LIN Protocol.
- **Tools:** Polarion, Jira, Peer review, **Vector davinci Configurator and developer.**

- **Compilers**: GCC

- **System programming:** File Management , Signals, Threads, process management, pipes, Named Pipes,Message Queues, Semaphore, Shared Memory.
- **Semaphores** : POSIX, SYSTEM-V
- **Multi Threading** : POSIX Threads with Mutex
- **Version Control:** Git&Github
- **Communicaction Protocols**: I2C,SPI,UART.
- **App Development:** MIT APP**.**
- **Platforms:** KeilµVision5,Proteus8.0,Arduino IDE,LINUX(Ubuntu),STM32 CUBE IDE.
- **Cloud**: Things Peak,Blynk.Arduino IOT.
- **Interfaces:** ADC,DAC,PWM,Flash,RTC,128x64 LCD,EEPROM.

Project Details:
Project 1: Integration of Autosar BSW modules and CoM stack (ADAS)

Client: Veoner,banglore

The Main Purpose of the project is to Integrate Autosar 4.03 BSW Modules and develop CAN Communication with client Software Component Com Wrapper.

Responsibilities:

- Understanding and analysis of the System CAN module requirements for CAN Stack and update software requirements in Polarion tool.
- Configurations of CAN BSW modules in Vector DaVinci configurator and CAN Software components in Davinci Developer tool and generate code.
- Integrate the CAN Stack, Compile the software and fix the warnings and errors.
- Testing CAN frames as per test specification.

Project 2: Configure DCM Module and Testing Diagnostic UDS Services (Infotainment**)**

Client: Real Soft int private limited,Banglore.

The Main Purpose of the project is developing Display Head Unit for Rsi Customer like Audio, Bluetooth, phone call, navigation and USB connectivity and here in this project we will combine instrument cluster with infotainment system.

Responsibilities:

- Understanding and analysis of the System Diagnostic requirements and prepare software requirements document in xl sheet.
- Configurations of DCM Module in DaVinci configurator by importing CDD file from client.
- Testing of UDS services like 0x10, 0x22, 0x2E, 0x3E 0x19 0x14, 0x27, 0x31, 0x28.

Project 3:

Title: Water Plant Health Monitoring System through IOT

Role: Developer

Software & Tools: MSP432, Code Compiler Studio, Arduino, Putty

Programming Language: C

Description: This project is used for continuous monitoring of the RO water plant. It will monitor the TDS(Water quality) values, Inlet outlet, and wastage of water and water temperature. The above collected data ispublished to the server through MQTT. This project uses MSP432E401Y micro controller, Quectel GSM/GPS module for publishing data to server, and RTL8720DN micro controller which is used for publishing the data to server through Wi-Fi.

Responsibilities: Implemented AT commands related to LTE module. • Worked on LTE functionality of Quectel (BG95) module for publishing the data through MQTT. • Implemented sanity testing for AT commands related to LTE MODULE

• Doing the unit testing for publishing dummy data 24hrs and motoring through web page.

Project 3: Smart E-bin:

Role:Developer

Software & Tools: Arduino IDE.

Language: Embedded C++.

Description: This project utilizes an ESP32 to enable remote monitoring of a smart bin's trash level, temperarture, and fall detection, sending data to the designated recipient via the internet, enhancing waste management efficiency.

Responsibilities:

Integration of hardware components ,including ESP32 microcontroller and sensors.

Development of software for data processing and secure internet communication.

Ensure safe and efficient data storage in the cloud and on an SD Card.

Project 4:

Client: TAGV Embedded Solutions,Hyderabad

Project Title: **Microprocessor Flame Photometer**

The sample solution is aspirated through an automizer. Sample, Air and the fuel are mixed in the mixing chamber which is then sprayed as a very fine mist into the flame. The color of the flame is changed depending upon the concentration of elements present. Radiations from the flame passes through the sensing system and specific narrow band interference filter which permits only the characteristic radiation to pass to the photo-detector. The output of the photo-detectoris then processed by the microcontroller and the final results are displayed on the digital display.

Language: Arduino C++

Keywords: Arduino Mega Board, Flame photometer, LCD,Keypad, Keypad

Responsibilities: ❖ Gathering Functional Requirements.

❖ Developing c++ code for interfacing all modules.

❖ Testing the code by interfacing it with hardware

Signature,
R.Anish Kumar