

KEERTHAN ACHARYA

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EMBEDDED SOFTWARE ENGINEER

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SUMMARY:

Seeking an opportunity to work in an innovative and fast-growing organization which will be helpful for me to exhibit my maximum skills and to help in the growth of company.

TEHNIICAL SKILLS:

Programming Languages:

- C Programming
- Embedded C
- Shel scripting

Development Environment and Tools:

- Ubuntu 20.4
- Yocto BSP SDK
- MPLAB X
- STM Cube IDE
- Arduino IDE
- CCS (code composer studio)

Compilers:

- GCC
- aarch64-linux-gnu-gcc
- XC8

WORK EXPERIENCE:

- Having **2.3 years** of total experience and working as **EMBEDDED SOFTWARE ENGINEER** at **ZumiSolutions(P) Ltd.**, from Dec 2022 - till now
- Hands on experience in low-level software development & validation.
- Experience in handling clients & understand their requirement.
- Good knowledge in tools like MPLAB X, Arduino IDE, CCS IDE, LINUX, Yocto.
- Experience in development & debugging of linux driver
- Worked in communication protocols like **UART, I2C, SPI, USB, GPIO, BLE, Wi-Fi.**
- Worked in modules like **SD card, EMMC, Sensors, WiFi, Bluetooth**
- Experience in handling GitHub tools and ESP32 controller.

Debuggers:

- PIC Kit 3, STLink.

Professional Trainee Certification:

- Undergone Hands on technical training Program at **SMEC Labs**

EDUCATION:

BE(Electronics and Communication Engineering)

Srinivas Institute of Technology, Valachil, Mangalore, Karnataka (2013-2017).

PUC (Pre-University Course)

Shree Durgaparameshwari Temple Pre-University College, Kateel, Mangalore, Karnataka (2011-2013).

PROJECT DETAILS:

Project 1:

Scope of the project is to bring up the WIFI-BT driver for IMX93 NXP Board and DDR Test.

Platform: Yocto

Processor: IMX93 EVK

OS: Ubuntu 20.04

Embedded Vertical: Industrial

S/W Language: C.

Roles & Responsibilities:

- Integrating the WIFI-BT driver code and creating patches with respect to that.
- Testing and automating the changes and attaching the required configurations.
- Creating a DDR test procedure with respect to IMX93 board with all the tests cases and documenting.

Project 2:

Scope of this Project is to establish the connection between a barcode scanner and the Custom board to start and the palm measurement and indicating every stage of process in Led indication.

Platform: Yocto

Processor: IMX8mq

OS: Ubuntu 20.04

Embedded Vertical: Medical

S/W Language: C

Roles & Responsibilities:

- Developing application code to Establish the connection between Barcode scanner ant the Custom board to start the palm measurement.
- Developing application to indicate each stage like board bootup, Barcode scanner connection and error cases in different color LED bar indication.
- Developing application to indicate error cases using Audio messages.
- Developing application code to use the external Memory when the internal memory is full when indicated.

Project 3:

Scope of this Project is to Establish the Connection between the BT trigger and the Custom Board to start and end the Measurement.

Platform: Yocto

Processor: IMX8mq

OS: Ubuntu 20.04

Embedded Vertical: Medical

S/W Language: C

Roles & Responsibilities:

- Establishing connection between BT trigger device and the Custom board where the application is run to Start and end the Palm measurement then the Palm reading is to saved in a raw file.
- Connecting the BT trigger device with the IMX8mq board and writing a script to pair the BT trigger device automatically
- Fixing the size of the measurement file with respect the Processor memory.

Project 4:

Scope of this project is to update the source code into modern Microchip MPLAB X format and updating the Compiler.

Platform: Windows IDE (MPLAB X)

Controller: PIC 18 Microcontroller

OS: Windows

Embedded Vertical: Industrial

S/W Language: C

Roles & Responsibilities:

- Updating the C source code into Modern Microchip MPLAB X format
- Changing the old compiler to new XC8 compiler and compiling the source code.
- Updating the USB Source code according to new USB Chip to use the signals for the new device.
- Performing the Factory Test for the Product working in new Firmware.
- Testing and Documenting the test cases.

Project 5:

Scope of this project is to Read the ADC value from the TI controller and displaying the Voltage value in LCD display.

Platform: Windows IDE (Code composer studio)

Controller: TM4C123GH6PM EVK Board

OS: Windows

Embedded Vertical: Educational

S/W Language: C

Roles & Responsibilities:

- Configuring the ADC and reading the values through 2 ADCs and converting it into Voltage and then the voltages are use to run some other module.
- Configuring the LCD display to Display the voltage values.
- Then the external Hardwares are used to get this volage to rotate a windmill kind of prototype.

Project 6:

Scope of this project is to Port Thread X OS on to the STM32 EVK board and configuring peripheral.

Platform: Windows IDE (STM Cube IDE)

Controller: STM32H7B3I-DK development Board

OS: Windows

S/W Language: C

Roles & Responsibilities:

- Porting the Thread X OS onto STM32 EVK
- Developed sample firmware of GPIO and UART for STM32H7B3I-DK board
- Developed I2C configuration.

PERSONAL DETAILS:

Languages Known : English, Kannada, Tulu, Tamil, Telugu

Marital Status : Single

Nationality : Indian

DECLARATION:

I hereby declare that the above mentioned information is correct up to my knowledge and I bear the responsibility for the correctness of the above mentioned particulars.

Place: Bengaluru

(Keerthan Acharya)