

BHUMIKA M C

Designation : **Embedded Engineer**

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Experience: **1 year 7 months**

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CAREER OBJECTIVE

I wish to pursue a highly challenging and creative career in the embedded industry, where I can apply my existing knowledge and creativity, acquire new skills, and contribute effectively to the organization for mutual growth.

EXPERIENCE SUMMARY

Company : Loginware Softtec Private Limited, Bengaluru.

Experience : May 2023– Present(1 year 7 month)

I have a total of **1 year 7 months** of professional experience focused on embedded product design, development, programming, debugging and testing using languages such as C, Embedded C, Python.

Current Employer: Loginware Softtec Private Limited.

OVERVIEW

- ✓ Experience in **Embedded Software Development**.
- ✓ Complete understanding of Embedded software development life cycle with exposure to various 8/16/32/64-bit **microcontrollers** such as **STM32VGT6F407**, **ESP8266**, **ESP32**, **8051** and **microprocessors** such as **Raspberry pi**.
- ✓ Having knowledge on **cross compilation** and building the source code for various platforms like Raspberry Pi.
- ✓ Hands-on experience in wired communication protocols like **UART**, **SPI**, **I2C** and Basic knowledge on **CAN**.
- ✓ Knowledge in IOT platforms like **Ubidots**, **Blynk**, **ThinkSpeak**.
- ✓ Able to work flexibly in a Linux environment.
- ✓ Knowledge on **ARM Cortex– M4 architecture**.

PROJECTS

Project 1 : **Driver Development**

Microcontroller: STM32F407VGT6

Role : Embedded Software Developer and peripherals Interfacing.

Tools : Embedded C, STM32 Cube IDE, Keil IDE, Logical analyzer.

Description : Driver development for various peripherals as :-

UART Protocol:

Here the communication between Controller to terminal of the system and system to controller for character and string data communication, using both polling and interrupt Method.

I2C Protocol:

This project is interfacing of ADXL345 sensor, EEPROM for the controller using I2C protocol. Then Read/Write operation is done as per the requirement. Using Both Interrupt and Polling Method.

SPI Protocol:

Here the interfacing between controller and RFID, EEPROM then Read and write the data for the tags. Using both Interrupt and Polling method.

During this driver development, also worked on various peripherals like ADC, PWM, etc.,

Responsibilities:

- ✓ Understanding the STM32F407VGT6 data sheet, enable the Required GPIO pins and clock configurations by using reference manual.
- ✓ Develop the code as per the requirements and maintain the coding standards.
- ✓ Resolving Integration problems and testing.

Project 2 : IIOT CNC Monitoring

Microprocessor: Raspberry Pi 4,

Role : Embedded Developer

Tools : Python3, Raspberry Pi compute module 4, Sqlite3.

Others : Linux, Thonny.

Description : Project 2: IIoT CNC Monitoring System... This project collects and analyzes 8 CNC machine signals using Raspberry Pi, enabling real-time monitoring for production, power management, and emergency alarms. Data stored in SQLite and integrated via API for remote access.

Responsibilities:

- ✓ Design the code as per the requirements and maintain the coding standards.
- ✓ Developing in Linux environment, debugging.

Project 3 : Mobile Starter Motor Controller

Microcontroller: ATmega328P

Role : Embedded Software Developer and Hardware Interfacing.

Tools : Embedded C, Arduino.

Description : This device is used to control 3 phase electric motor, sets through mobile phone using GSM technology from remote location. The controller is connected to starter and operating through user mobile. By making call or sending SMS user can turn ON/OFF the Motor. It gives manual ON/OFF control.

Responsibilities:

- ✓ Microcontroller programming using embedded C and testing.
- ✓ Developing code for GSM to interface with ATmega328P.
- ✓ Resolving Integration problems and testing.

ACADEMIC QUALIFICATION

- ✓ B.E.(Electronics and Communication Engineering(ECE)) at Adichunchanagiri Institute of Technology, Chikkamagalur with 7.5 CGPA.
- ✓ PU at St. Joseph's Convent Girls PU College, Chikkamagalur with 70%.
- ✓ SSLC at St. Joseph's Convent Girls High School, Chikkamagalur with 82%

TECHNICAL SKILLSET

Programming Languages : C, Embedded C, Python.
Tools : Ubuntu, STM32 Cube IDE, Keil IDE, GCC, Visual Studio Code, Eclipse IDE, Jupyter(Anaconda).
Configuration Tools : GIT.
IOT Platforms : Ubidots, Thingspeak, Blynk
Communication Protocols : Serial communication protocols including UART, RS232, RS485, SPI, I2C and basic knowledge on CAN protocol.
Peripherals : Timer, Watchdog Timer, ADC, PWM.
Microcontrollers : STM32F407VGT6(32-bit), 8051, ATmega328P, Node MCU.
Microprocessors : Raspberry Pi 3, Raspberry Pi 4.

PERSONAL DETAILS

Name : BHUMIKA M C
Date of birth : 19/08/2001
Father's name : CHANDRASHEKAR M B
Permanent address : D/O Chandrashekara M B, Mugulavalli, Chikkamagalur, Karnataka - 577101.

I hereby declare that the information furnished above is correct to the best of my knowledge.

Place: Bengaluru

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