



JAYESH KUMAR MAURYA



CONTACT

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OBJECTIVE

To enhance my professional skills, capabilities and knowledge in an organization which recognizes the value of hard work and trusts me with responsibilities and challenges.



EXPERIENCE

Sahasra Electronic Solutions Ltd

9 Aug 2024 -

Engineer Software

I am responsible for working with the **Embedded Controller (EC)**, specifically focusing on managing critical functions such as **power sequencing for the motherboard, CPU fan control, and thermal management**. My responsibilities include:

Developing and writing code to ensure seamless control and integration of the power sequencing and thermal management systems. Utilizing the **MEC1521** embedded controller, which is responsible for controlling key functions like CPU fan speed, power sequencing, various sleep states, and overall thermal management.

Reading and interpreting **Intel Raptor lake motherboard** and **schematics** to ensure accurate integration of power and thermal management systems.

I worked on tools such as **oscilloscopes** and **multimeters** to analyze signals and test voltage levels, particularly in relation to **eSPI protocols** and the signal which involve for the power sequencing that facilitate communication between the **Platform Controller Hub (PCH)** and the EC.

i worked on the various tools like **Dedi Programmer** and **MFIT tools** for flashing the **EC and BIOS code**, ensuring proper firmware updates and system functionality.

Documenting technical processes and procedures for future reference and continuous development, contributing to the ongoing improvement of the embedded control systems..



SKILLS

Intel Motherboard and Schematic

Dedi Programmer

Embedded Controller mec1521

C++ Programming language

Object Oriented Programming (OOP)

C Programming language

Data Structure and Algorithms

Bluetooth Low energy (BLE)

Microcontroller

Embedded C

RTOS

Embedded Operating system

Internet of things

Microsoft Office

Git hub and git bash

Nordic Semiconductor

Microchip

Silicon labs

Zephyr RTOS

Written and Oral Communication

Embedded Software

Firmware Technical Documentation

Debugging code

Oscilloscope and digital multimeter

MFIT tool

Linux , Ubuntu



ACHIEVEMENTS & AWARDS

Participation in Participation in senior boys Volleyball competition held at St. John School Tulsipur.

Participation in State Level Volleyball.

Yantram Medtech Pvt Ltd

5 June 2023 - 5 August 2024

Firmware Developer

- As a firmware developer, my primary responsibility is to develop and enhance firmware code for the embedded system by using C/C++ programming technique.
- Writing, testing, and debugging code to ensure the firmware runs smoothly, identifying and fixing any errors or issues that arise.
- Ensuring the code remains maintainable, readable and efficient and integrates the code seamlessly with the existing code.
- Assist in selecting and integrating hardware components, contribute to system design, develop efficient firmware, and conduct comprehensive system testing.
- Maintain firmware documentation, conduct unit and system testing for reliability, perform code reviews to enhance quality, and document test results to report and resolve issues.
- Collaborate across teams for project objectives, update firmware progress in meetings, and seek guidance from senior engineers for skill growth.

Participation in Zonal Level Volleyball Champion.



LANGUAGES

English
Hindi



PERSONAL DETAILS

Date of Birth : 01/01/2000
Nationality : Indian



EDUCATION

Acts CDAC Hyderabad

2023

Post graduate - Diploma In Embedded system design
63

Shambhunath Institute of Engineering and Technology

2022

B.Tech
82

St Thomas School , Gopiganj

2017

Intermediate
63

St Thomas School ,Gyanpur

2015

High School
78



PROJECTS

INTEL RAPTOR LAKE MOTHERBOARD DEVELOPMENT

Currently I am working on the intel raptor lake motherboard mainly focused on the embedded controller mec1521.

ECG Project

Work on the project which is focused on the development and implementation of an ECG (Electrocardiogram) system.

Controller use: Nordic controller

Skill use : C programming language ,SPI,Digital

Multimeter,Oscilloscope and etc.

Vitals

I led A project to develop a system on chip (SoC) using Zephyr RTOS to create a multivitals monitoring device cable of measuring heart rate and blood oxygen SpO2
Controller use:NRF5340,esp32 hub
Skills use:Bluetooth low Energy,C programming language, GSM modules,and
Component
skill use:ADPD144XX,NRF5XX,LIS3DH
Accelerometer,Oscilloscope and Digital multimeter etc

NV Core device

I Led The Project follows a client-server architecture, where the NV-Core device acts as the server its collect the data like temperature and battery from the AT mega controller so with help of NV core we transfer the data to hub. The ESP32 device uses Bluetooth BLE to advertise its services and characteristics, while the mobile application connects to the device and communicates via BLE.
Controller Use: Atmega1608,Esp32C3,ESP Wroom
Component use:NTC Sensor,GSM Modules,RTC.
Skills Use: I2C,Uart,C++,C,SPI programming,Bluetooth low energy(BLE)

V track device

Project using the BGM220PC22HNA brain for a smart device. It can keep an eye on temperature, connects to your phone, and works wirelessly while using very little power
Controller Use: BGM220P
Skills Use: C programming ,BLE ,Uart,NVM flash,low Power etc.

CPAP device

In project using advanced components, the SoC(BGM220PC22HNA) and MCU (ATMEGA4808), to create a smart CPAP device. It ensures controlled airflow, has a user-friendly mobile app, wireless connectivity, Apnea Health Index monitoring, user alerts.

Controller Use: BGM220P and Atmega4808
SKILL USE :C Programming language ,BLE ,I2C,Uart,PWM,Analog etc.
Component Use:Bmp280,External
RTC,Blower,NTC,Flow Sensor,Pressure Sensor external EEPROM.
In this projet I am responsible for debugging the code test functionality calibrate the sensor.

Breast Cancer Device

I led a project to develop the breast cancer device .
Skills Use: C++ and BLE
Controller: Esp32

IoT Based Accident Alert And vehicle Tracking System

I led the Project to develop a Arduino which is used for controlling whole process with GPS receiver and GSM receiver modules.GPS receiver is used for detecting coordinates of the vehicles,GSM modules is used for sending the alert SMS with the coordinates and link to the Google map.Accelerometer namely ADXL335 is used for detecting the accident or sudden changes in any axis and optional 16*2LCD is used for displaying status message or coordinates.

Smart Weather Forecasting station

I led the project to Predict the accurate weather conditions in the Graph by the use of Weather data collected by IOT devices using ESP32 board. This station will show temperature, humidity, air quality etc., using sensors and will be sent to cloud from where data can be collected by users anytime and anywhere.

Atmospheric pressure measurement using BMP280 with Raspberry Pi

The objective of this project is to find application in Weather monitoring, Indoor navigation, Elevator etc., using BMP280 sensor. Sensor is interfaced to Raspberry Pi and monitor the Variation in pressure using I2C protocol.

Home Automation light control with IOT

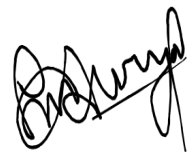
Led the project to Automatic light control with help of Node MCU and wifi-Module.
Based on IOT

+ ADDITIONAL INFORMATION

I have strong programming skills in **C and C++**, with experience working on embedded platforms such as **Arduino, Raspberry Pi, ESP32, ESP8266, ARM Cortex-M, Atmega1608, Atmega4808, BGM220P, nRF5832, and nRF5340 microcontrollers**. I have also gained proficiency in software development for embedded systems using tools like **Cube IDE, Keil, Microchip (MP-Lab), Silicon Labs IDE, VS Code, and Arduino IDE**. My solid foundation includes **microcontrollers, digital electronics, real-time operating systems (RTOS), IoT, and embedded software development**.

In addition to my technical skills, I have worked with the **Intel Raptor Lake motherboard** and have experience reading motherboard schematics. I have utilized tools such as the **Dedicated Programmer and MFIT** tools for flashing **EC and BIOS firmware**. I also have hands-on experience with the **MEC1521 controller**, which is critical for managing power sequencing, CPU fan control, and thermal management.

Outside of my studies and work, I enjoy playing outdoor games like volleyball, cricket, and badminton, which helps me stay active and balanced.



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