**MOGILI SANDHYARANI** 6300544881

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# CAREER OBJECTIVE

Dedicated Embedded Software Engineer with a passion for programming, testing, and problem-solving. Eager to leverage my technical skills and experience to contribute to innovative projects and drive impactful results. Committed to continuous learning and excellence in developing reliable, high-quality embedded systems and software solutions.

# PROFESSIONAL SUMMARY

* Embedded Software Engineer with 1.7 years of experience.
* Hands on experience in C ,Python and Data Structures (Linked list).
* Good knowledge on RTOS.
* Good understanding on Microcontroller and Microprocessor.
* Good knowledge on linux system programming.
* Working experience on I2C, SPI, UART protocols.
* Good knowledge on debugging tools like GDB, JTAG.
* Good knowledge on SDLC.
* Good knowledge on software testing and software integration.
* GOOD knowledge on Jenkins.
* Good knowledge on IPC Mechanism: Pipes, FIOFO’s, Message queues, Shared Memory.
* Good understanding on Android architecture.
* Work experience with Segger Embedded Studio and Code Composer studio.

**PROFESSIONAL WORK EXPERIENCE**

* Working as an Embedded software Engineer at Embinsys (Aug 2023-present)

# SKILLS

|  |  |
| --- | --- |
| Programming Languages | C ,Python and Linux. |
| Data Structures | Single linked lists |
| Debugging Tools | GDB, JLINK, JTAG |
| System Programming | Process management, file management,  Memory Management, Signals, Threads,  IPC mechanism |
| Communication Protocols | UART, I2C, SPI |
| Networking protocols | TCP/IP, UDP |
| Tools | Putty |
| Version control system | Git ,Github |
| IDE’s and Compilers | Code Composer Studio, Segger Embedded studio, Arduino IDE, GCC compiler |
| Boards worked on | MSP432, Arduino uno, nRF52833 |

# PROJECTS

**Project 1:**

**Title: Commercial Grade RO Filter Role:** Test Engineer.

**Software & Tools:** Code composer studio, Arduino, Putty **Programming Language**: Embedded C.

**Description:**

Monitoring of the RO water plant. It will monitor the TDS values, Inlet, outlet and wastage of water and water temperature.

The above collected data is published to the server through MQTT.

This project uses an MSP432E401Y microcontroller, Quectel GSM/GPS module for publishing data to the server and RTL8720DN microcontroller which is used for publishing the data to the server through Wi-Fi.

**Responsibilities:**

* Checked the logs of data using putty tool.
* Tested different AT commands.
* Collected data is transmitted over LTE module using AT commands.

**Project 2:**

**Title:** **DASHPOD (BLE enabled athlete performance)**

**Role:** Tester.

**Software & tools**: Segger Embedded Studio **Language**: Embedded C.

**Description**:

The project is used to facilitate athlete performance analysis through an innovative system incorporating radar and accelerometer technology.

Powered by the nRF52833 main MCU and utilizing Bluetooth Low Energy (BLE) for mobile app connectivity, the system enables seamless communication between the device and the user's smart phone.

Key functionalities include wave and tap detection utilizing the A111 radar sensor and LSM6DSR accelerometer-gyro sensor respectively.

Additionally, the integration of a Buzzer and Addressable LEDs provides real-time feedback to users. Collaborating closely with the app development team.

**Responsibilities:**

* Implemented functionalities based on received commands including wave and tap detection, utilizing embedded C programming in segger embedded studio.
* Tested the dash pod for locking mechanism with both positive and negative test cases.

**Project 3:**

**Title: PTZ IP Camera**

**Role:** Testing

**Software & Tools :**  SADP

**Programming Language :** C

**Description:**

The project involves in the porting of our own Linux Image on the Hikvision PTZ camera. As the camera is being developed by chinese, the data is reaching the chinese servers, so in order to eliminate that issue, I would port our own Linux image so that our data is secure.

**Responsibilities:**

* Configured and compiled the kernel to observe the logs related to SOC.
* Build the kernel image.
* Dumped the kernel image to PTZ camera using SADP tool.

## EDUCATION

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| --- | --- | --- | --- | --- |
| S NO | QUALIFICATION | COLLGE/SCHOOL | YEAR OF PASSING | CGPA |
| 1 | BTech | RISE Krishna Sai Prakasam Groups of Institution | 2019-23 | 7.0 |
| 2 | MPC | Narayana Junior College | 2017-19 | 9.07 |
| 3 | 10th | Govt Girls High School | 2016-17 | 8.7 |

## DECLARATION

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

Place : Hyderabad M.Sandhyarani