

SANCHIT PATIL

Embedded Developer

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SUMMARY

Embedded Developer with 1.7 years of experience in IoT and sensor-based product development. Experienced in C programming, LoRaWAN, sensor integration, and MQTT communication. Skilled in developing reliable firmware, debugging issues, and working with microcontroller peripherals such as UART, I2C, and SPI.

EXPERIENCE

Embedded Developer

Vandyam Solutions

📅 05/2024 - Present 📍 Belagavi, India

- Developed and maintained firmware for IoT devices using C and embedded C.
- Integrated LoRaWAN communication for sending data to the server and over-the-air data handling.
- Worked on sensor interfacing and application-level logic for real-time data processing.
- Implemented MQTT communication for device-to-server data transfer and remote configuration.
- Developed and tested features on ARM-based microcontrollers (UART, I2C, SPI, timers, interrupts).
- Debugged firmware issues using serial logs, logic analyzers, and protocol analyzers.
- Collaborated with the hardware/software team to design stable, low-power embedded solutions.
- Managed version control and code reviews using Git/GitHub.

PROJECTS

IoT based RF-Automatic Traffic Clearance System for Ambulance

📅 2023 📍 Bagalkot

Summary

- IoT-based RF-Automatic Traffic Clearance System for Ambulance, streamlining emergency response.
- Utilized real-time RF technology to prioritize ambulance routes, expediting passage through traffic signals, and also monitor the patient condition.
- Technologies used Arduino UNO, ESP8266, Heartbeat Sensor, DHT11 Sensor

Image Steganography using LSB Encoding and Decoding

📅 2024 📍 Bangalore

Summary

- The objective was to send a secret text file encoded inside an image of bmp file format. Encoded the length of the secret text and then encoded the data into the LSB of the image bytes.
- Embedded C — File operations, pointers, bitwise operations, functions, makefiles, command line arguments.

DECLARATION

I am Sanchit Patil, hereby declare that the above-mentioned information is true to the best of my belief and knowledge, and I bear responsibility for the correctness of the above mentioned.

-Sanchit Patil

TECH STACK

Programming: C, Embedded C
Wireless Communication: LoRaWAN
IoT Protocols: MQTT
MCU: ASR6601 based Ra08h, STM
Communication Protocols: UART, I2C, SPI
Tools: Git/GitHub
Firmware Development: Sensor integration, driver development, debugging

EDUCATION

Bachelore of Engineering in Electronic and Communication Engineering

Basaveshwar Engineering College (A), Bagalkote

📅 12/2020 - 08/2023

Diploma in Electronics & Communication Engineering

Maratha Mandal Polytechnic College, Belagavi

📅 11/2017 - 12/2020

LANGUAGES

English

Proficient



Hindi

Proficient



Kannada

Native



TRAINING / COURSES

Advanced Embedded Systems Course at Emertxe Information Technologies