NIHAL NAVAS

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SUMMARY

Embedded C Developer *fresher with strong hands-on experience in Embedded C programming, microcontroller-based driver development, and serial communication protocols. Proficient in* ***UART, I²C, SPI, FreeRTOS****, and IoT technologies including MQTT and Node-RED. Experienced in sensor interfacing, real-time debugging, and firmware development on* ***LPC1768*** *and* ***STM32*** *platforms. Seeking an entry-level Embedded / Firmware Engineer role in a core engineering company.*

SKILLS

Programming: C, Embedded C, Python
Microcontrollers: LPC1768, STM32, Arduino
RTOS & OS: FreeRTOS,Embedded Linux Fundamentals
Communication Protocols: UART, SPI, I²C, CAN
IoT Technologies: MQTT, Node-RED, ThingSpeak
Development Tools: Keil uVision, Arduino IDE, VS Code, Proteus,Logic Analyzer
Version Control: Git, GitHub
OS: Linux, Windows
Soft Skills: Problem Solving, Debugging & Troubleshooting, Team Collaboration,Technical Documentation

PROJECT EXPERIENCE

UART & I²C Driver Development – LPC1768 [Project Link]

- *Developed low-level UART and I²C drivers using Embedded C on LPC1768 microcontroller*
- *Interfaced temperature sensor and transmitted real-time data via UART*
- *Implemented interrupt-based communication for efficient data handling*

Tools & Technologies : LPC1768, Embedded C, UART, I²C, Interrupts, Keil uVision, Proteus, Logic Analyzer
Training Institute: IIES Bangalore

FPGA Implementation of 4-Bit ALU with Timing Analysis [Project Link]

- *Collected real-time sensor data using Arduino-based embedded system*
- *Transmitted data to MQTT broker over Wi-Fi*
- *Designed live data visualization dashboard using Node-RED*

Tools & Technologies : Arduino, Embedded C, MQTT, Node-RED, ThingSpeak, IoT Sensors, Wi-Fi Module
Training Institute: IIES Bangalore

EDUCATION

B.E – ECE Vinayaka Mission Research Foundation **2020-2024**

TRAINING/CERTIFICATIONS

Embedded systems *IIES Bangalore* **2025 - 2026**