

RAMESH P N

Firmware Developer

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📍 Ramesh P N s/o Nagesh K S , Kanchipura, Hosadurga-577533

CARRIER OBJECTIVE

Purposeful Firmware Developer in embedded systems and skilled in a diverse range of embedded technologies with a proven ability to apply advanced programming techniques to solve challenges. Experienced in collaborating with cross-functional teams to deliver innovative firmware solutions that enhance system performance and drive project success.

EXPERIENCE

Embedded developer

- Developed a temperature control system using a Peltier module with STM32 Discovery board as the microcontroller for the system.
- Focused on maintaining accurate temperature by applying a PID control algorithm to enhance performance and stability and experienced in fine tuning and documentation.
- Developed and tested firmware cases on Automated Petrifilm Feeder Device using embedded C.
- Resolved bugs, implemented new features and prepared documentation.
- Gained knowledge in TTI script for automation test, gap analysis and FMEA, PSRA and HHI documents.

EDUCATION

REVA UNIVERSITY,

BTech (Electrical and Electronics Engineering)
CGPA 8.3

2020 – 2023 | Bangalore, INDIA

Sri Jayachmarajendra Polytechnic,

DIPLOMA (Electrical and Electronics Engineering)
65.76 %

2017 – 2020 | Belaguru, INDIA

SKILLS

C programming, TTL scripting, CPP (basic), RTOS, Communication protocols likes I2C, SPI, UART, STM32 Microcontroller, TI Microcontroller (DSP), Tools like STM32 Cube IDE, CC studio, Teraterm

PROJECTS

Temperature Control of Peltier Module

Developed a new features for POC from the scratch from design to deployment by utilising C programming and STM32 Discovery board. Gained knowledge of configuring ADC and PWM in STM32 Cube IDE and collaborated with different teams to integrate the features and for transparency, obtained knowledge of PID algorithm, fine-tuning, debugging, and validation to ensure reliable firmware operation and created technical documentation for firmware design, configuration, and testing procedures to ensure transparency and maintainability.

Automated Petrifilm Reader

Implemented a new features to pick and place the food samples petrifilm from input bin to output bin, developed and integrated firmware logic to control stepper motors, sensors, and encoders for precise positioning and movement. Performed firmware debugging and issue resolution using STM32CubeIDE, including break-point analysis and real-time debugging. Applied reverse engineering by back-tracing system logs to identify root causes of firmware defects and obtained knowledge about test case creation, execution and documents like FMEA, PSRA etc.