

RUTAWIK KITTUR

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SUMMARY

Experienced Embedded Software Engineer with a strong background in developing and optimizing firmware for microcontrollers. Expertise in C/C++ and low-level driver development for interfaces like UART, SPI, I2C and CAN. Adept at collaborating in cross-functional teams and delivering robust, real-time solutions.

WORK EXPERIENCE

Embedded Software Engineer , MINDAGE Solutions

Oct 2023 - Apr 2025

- Designed and developed embedded firmware in C for microcontrollers to meet real-time application requirements.
- Integrated peripherals such as sensors and actuators using I2C, SPI and UART protocols.
- Debugged and resolved hardware/software interface issues using oscilloscopes and logic analyzers.

EDUCATION

Rajeev Institute of Technology, Hassan

Bachelor of Engineering(B.E) in Electronics and Communication Engineering

CGPA : 7.30(2019)

PROJECTS

1.Embedded Black-Box System

A car black box, also referred to as an event data recorder(EDR) or a vehicle data recorder(VDR), is an automotive device designed to capture diverse data concerning the vehicle's operation. It functions analogously to the flight data recorder (black box) utilized in aircraft.

Technologies used:

PIC micro-controller & schematics, Peripherals: Timers, RTC, EEPROM, CLCD, Matrix-keypad switches and peripheral handling by understanding data-sheets, Interrupt handling.

2.Microwave Oven Controller

Designed and implementation of microwave oven control system. The system supports essential functions such as micro, grill, convection and start operations. The microcontroller manages user inputs, controls the heating mechanism, and ensure proper timing and safety measures.

Technologies used:

PIC micro-controller & schematics, Peripherals: Timers, CLCD, Matrix-keypad switches, FAN, Buzzer and peripheral handling by understanding data-sheets.

ADDITIONAL INFORMATION

- **Technical Skills:** C, C++, UART, I2C, SPI, CAN, PIC microcontroller, PWM, ADC, Timers, Counters, GPIO, CLCD, Analog I/O and Memory
- **Compiler:** GCC, XC8
- **Languages:** English, Kannada, Hindi, Marathi
- **Certifications:** Embedded system and Linux Networking
- **Achievements:** Qualified **GATE2023**, **GATE2024** and **BEL(Bharat Electronics Limited)** Exam