

Anisha Bomma

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OBJECTIVE

Highly motivated and detail-oriented Embedded engineer with experience in the design, development, and testing of embedded systems. Proficient in C, assembly language programming. Seeking to leverage my technical skills and passion for innovation to develop cutting-edge embedded solutions.

WORK EXPERIENCE

Microchip Technology India Pvt. Ltd, Bengaluru, India | *MCU16 Applications Intern* July 2023 – July 2024

- Working as an integral contributor to the Functional Safety team (ISO 26262).
- Bidirectional traceability is being followed for tracking from the stage of design to development. Contributed in developing the diagnostic libraries for the peripherals like Ports and CRC. Supported in development of the diagnostic libraries for other modules.
- Proficient in generating code coverage reports using LDRA Tool Suite, facilitating thorough evaluation of test coverage and compliance
- Proficient in adhering to ASPICE processes and MISRA 2012 standards, ensuring robust development practices for diagnostic libraries for the different peripherals of the dsPIC microcontroller. Actively contributing to the generation of benchmarking and static analysis reports of all modules of dsPIC

Tata Consultancy Services, Hyderabad, India | *Assistant Systems Engineer* August 2020 – Sept 2022

- Client -Aptiv
- Worked with the site modernization team and assisted in providing the V2V migration using VMware vSphere, server data backup, and data migration. Provided day-to-day health-check reports and troubleshooting of the Virtual Machines. Implemented infrastructure changes to enhance performance.

PROJECTS

Lightweight Real-Time Operating System (RTOS) Development for STM32

- Designed and implemented a custom RTOS kernel with Round-Robin, Cooperative, and Rate Monotonic Scheduling algorithms.
- Implemented context switching and task management using bare-metal C and ARM assembly on Cortex-M processors.
- Optimized CPU utilization and RTOS performance by analyzing scheduling algorithms and system overhead.

Implementing RFID Technology with AWS Cloud for Efficient Warehouse Management

- A level 2 Internet of Things (IoT) framework that leverages Amazon Web Services (AWS) IoT core and AWS Lambda services to facilitate communication between RFID tags and Raspberry pi. This communication is established through the publish-subscribe MQTT protocol

TECHNICAL SKILLS

Programming Languages: C, Embedded C, Assembly Language Programming

Protocols: UART, SPI, I2C, Basics of CAN, LIN, MOST, FlexRay, I3C, MQTT

Software Tools: MPLABX IDE, LDRA Tool Suite, Keil uVision, Visual Studio Code, STM32CubeIDE

Real time operating system: FreeRTOS

Operating system: Windows, Linux

Compilers: xc8, xc16, xc32, gcc

Microcontrollers worked on: PIC, ARM, Raspberry Pi

Basics of device drivers and bootloaders

EDUCATION

Vellore Institute of Technology, Vellore, India Sept 2022 – Sept 2024
M.Tech in Embedded Systems CGPA: 8.7/10

Relevant Coursework: Microcontroller Organization and Architecture | Embedded System Design | InVehicle Networking | Fault Tolerance and Dependable System | Intelligent IoT System Design and Architecture | Parallel Processing and Computing | RTOS

Chaitanya Bharathi Institute of Technology, Hyderabad, India August 2017 – Sept 2020
Bachelor of Engineering in Electronics and Communication CGPA: 7.8/10

PUBLICATIONS

Design and Implementation of Energy-Efficient 8-Bit Vedic Multiplier August 2022

- Published in International Journal of Research in Applied Science and Engineering Technology, ISSN No. 2321-9653

AWARDS

- Awards Colleague appreciation - TCS 2022**-Commitment towards delivering great work in the team.
- On the spot - TCS 2021**, In recognition of outstanding performance at the workplace.
- Creative Player - Meta Developers Circle-2021**- In recognition of being the brand evangelist of MDC.