Vijaylaxmi Ittannavar

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PROFESSIONAL EXPERIENCE

UST Global, India | march 2025 – present

- Working as **C++ developer.**
- Mastered with C++, window internals, oops, data structure.

Transcend Satellite Technologies, Bengaluru, India | September 2024 – February 2024

- **Embedded software developer -** Developed software for **ISRO's Digital Twin Spacecraft Project**, focusing on **payload and Quad Mag board using ARM** Cortex **M7.**
- Integrated and tested **sensors:** BMP581, LSM6DSOTR, SI1153, ADC, WBGT, SAR, and MUX.
- Optimized firmware using **Embedded C, RTOS, and debugging tools**.

Engineer Trainee | August 2023 – May 2024

- Completed **Advanced Embedded Systems training** at Emertxe Information Technologies, Bangalore.
- Gained expertise in **microcontroller programming, firmware development, and real-time embedded systems**.

Internship – GTTC, Chikodi, India | May 2022 – June 2022

- **Acquired proficiency in advanced Python programming for Machine Learning applications.**
- **Developed small projects to enhance understanding of data processing, automation, and AI concepts.**

SKILLS

Programming: Embedded C, C++, data structure, Linux internals, Python, Shell Scripting
Embedded Systems: RTOS, Firmware Development, Microcontrollers (ARM Cortex M7, PIC18F4580)
Protocols & Interfaces: I2C, SPI, UART, CAN, ADC, MUX
Development Tools: GIT, Vim, Makefiles, GCC, XC8
Operating Systems: Linux, Ubuntu
Debugging & Testing: JTAG, Logic Analysers, Oscilloscopes
Software Development Life Cycle (SDLC)
SOFT SKILLS: Problem-Solving & Analytical Thinking, Strong Written & Verbal Communication, Leadership & Team Collaboration, Creativity & Innovation, Customer Interaction & Technical Documentation.

PROJECTS

Steganography

- Developed LSB Image Steganography for secure data hiding using RGB colour coding, useful in military applications.
- Implemented file operations, pointers, structures, user-defined types (UDT), and DMA.

Vehicle-to-Vehicle Communication

- Designed a system to reduce road accidents and vehicle collisions.
- Used Li-Fi, IR sensors, ultrasonic sensors, Arduino UNO, and LCD, with event storage in external EEPROM**.**

Car Black Box

- Developed a smartphone-linked black box that records speed, location, distance, and driving frequency.
- Utilized I2C, UART, timers, interrupts, and CLCD for data processing.

Inverted Search

- Built an inverted index for fast full-text search using linked lists, hash tables, file operations, and pointers.

Vending Machine Implementation using HDL

- Designed an automated vending machine system with balance money return functionality.
- Implemented state machines and control logic for user interaction.

EDUCATION

KLE College of Engineering and Technology, Chikodi, India

Bachelor of Engineering in Electronics and Communication

August 2017 – May 2023 | CGPA: 8.23