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**