

Syeda Shaista Zainab P

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Looking for a challenging and responsible opportunity, to explore strengths and potentials and to gain experience from a professional organization to meet employer expectations and to continually develop my technical skills in the field of embedded systems with a view to join a team of professionals and to work with a progressive company for a long and rewarding career.

WORK EXPERIENCE

➤ **Graduate Apprentice Trainee – Bharat Electronics Limited (BEL)**

(Oct 2024 – Oct 2025)

- Contributed to GSAT-7R satellite project, developing and testing firmware on PIC microcontroller.
- Implemented I²C communication protocol for inter-module communication.
- Performed PCB testing and validation, including impedance and voltage checks.
- Hands-on debugging using oscilloscope, spectrum analyzer, signal generator, DC power supply, and multimeter.
- Assisted senior engineers in troubleshooting analog/digital circuits and verifying compliance.

➤ **ADVANCE EMBEDDED SYSTEMS**

since Nov 2023-Aug2024

- Successfully completed a hands-on technical training program – **Advanced Embedded Systems Course** at Emertxe Information Technologies (<http://www.emertxe.com>), Bangalore

TECHNICAL SKILLS

➤ **Programming Languages:**

- Shell scripting
- Advanced C programming
- OOP using C++
- Data structures

➤ **Embedded controllers:**

- Hands-on working with GPIOs, Analog I/Os, Memory usage, interfacing, character LCD
- Peripherals usage - Timers, Counters and Interrupts
- Communication protocols - UART, SPI, I2C etc

➤ **Embedded platforms:**

- Distributions - Linux (Ubuntu)
- PIC (16F877A) board

➤ **Development environment and tools:**

- Dev environment: Vim, Makefiles, MPLAB
- Compilers: GCC, XC8
- Debuggers: GDB

EDUCATION

- B.E (ECE), JIT(Davangere), 70%, 2019-2023
- 2nd PU(PCMB), 80.66%, 2019
- SSLC(StateBoard), 82.08%, 2017

PERSONAL ATTRIBUTES

- Quick learning of new initiatives
- Ability to meet deadlines through effective time management
- Ability to work effectively under pressure
- Maintaining healthy interpersonal relationships with team
- Team player with work ethics, committed to work hard and sincere

PROJECTS

Projects at Emertxe:

1. Command Line Test (By using Bash Scripting)

Developed a command-line based test application with user login, timed questions (10 seconds each), and automated evaluation.

2. Image Steganography using LSB Encoding and Decoding

Implemented text data hiding in BMP images using Least Significant Bit (LSB) encoding and decoding to securely transmit secret messages.

3. Inverted Search

Designed a search engine prototype using an inverted index structure for fast and efficient data retrieval.

4. Car Black Box Implementation

Designed a search engine prototype using an inverted index structure for fast and efficient data retrieval.

Academic projects:

1. Voice Assisted Text Reading System for Blind and Visually Impaired Persons

This project is run by the source code of Python to assist blind dumb and deaf people in a single device which is so compact and easy for them to manage.

2. Obstacle Detector for Blind Persons Using Arduino (mini project)

In this Project we have designed a device that will help blind persons to detect an obstacle. This device is efficient and has unique capability in specifying the source and distance of the objects that may encounter the blind.

INTERNSHIP

- Successfully completed an Internship on “Machine Learning with Python”, with a mini project titled “Drug Classification System”.