V M BHUVANESH

+91- 9019787876 vmbhuvanesh16@gmail.com V M Bhuvanesh Bhuvanesh211

EDUCATION

JSS SCIENCE AND TECHNOLOGY UNIVERSITY **2019 - 2023**
B.E, Electronics and Communication Engineering, ***CGPA: 8.27*** *Mysuru, Karnataka*

TECHNICAL SKILLS

Languages: C/C++, Data Structures, Object-Oriented Programming, Shell Scripting (Bash).
Embedded Systems: PIC(Microcontroller),Peripherals (I2C, SPI, UART), Interrupt Handling.
Developer Tools: VS Code, Vim, Linux (Ubuntu), MPLAB, Git.
Core: Operating System.

PROJECTS

LSB Image Steganography | C - File pointers, Bitwise operations, File I/O Handling

- Developed a **steganography project** utilizing the **LSB (Least Significant Bit) technique** in **C** to embed and extract **hidden messages** within digital images, enabling secure data communication.
- Implemented **secure communication** by creating unique **sender and receiver keys** to accurately extract embedded data.
- Gained foundational knowledge in **image processing** methodologies, leveraging **function pointers**, **file I/O operations**, and **bitwise operations** for efficient image data manipulation.
- Utilized **C programming** to manage **image data** manipulation, ensuring optimal **embedding and extraction processes** with minimal performance overhead.

Lexical Analyzer | C - File I/O, String Operations

- Developed a **Lexical Analyzer** in **C** to tokenize a given **C source file** into **keywords, identifiers, literals, and operators**.
- Implemented **file handling** and **string parsing** techniques to efficiently scan and categorize **tokens** as per **compiler design principles**.
- Ensured **error handling** for invalid tokens, strengthening **syntax validation** and enabling **robust lexical analysis**.
- Enhanced understanding of **compiler front-end** by implementing **tokenization rules** and generating structured **output for further parsing**.

Micro Oven | Embedded C,PIC microcontroller, Timers, CLCD Interface

- Designed and programmed a **micro oven control system** using the **PIC16F877A Microcontroller**.
- Implemented **timer-based cooking modes** with precise time and temperature controls.
- Developed an **CLCD interface** to display cooking parameters and system status in real time.
- Utilized **interrupts** to handle input from **keypad** for user-friendly operation.

Car Black Box (CBB)) | PIC micro-controller,Peripherals and Interrupt handling

- Developed a **Black Box system** on a **PIC microcontroller** for **real-time logging** of critical **vehicle data** such as **speed**, **gear shifts**, and **engine temperature**.
- Designed a **secure, password-protected interface** with **login/logout features** and a **three-attempt lockout** mechanism to restrict access to **log data**.
- Enabled continuous, **proactive event monitoring** to record vehicle issues, promoting **fleet maintenance efficiency**.
- Created a **dashboard display** showing **real-time vehicle data**, **event logs**, and **system settings** for authorized users.

CERTIFICATIONS

- **Hands-on Introduction to Linux Commands and Shell Scripting**
  Coursera
- **8051 Microcontroller Course**
  Bharat Acharya Education

EXTRACURRICULAR ACTIVITIES

- Participated in IEEE-organized Robotics workshop.
- NSS camp volunteer, contributing to community service.
- Captain of inter-branch football team, demonstrating leadership and team coordination.