USMAN MALIK

ussiimalik07@gmail.com
0332-2753666
https://github.com/Sn3pai

SUMMARY

A motivated and technically adept Electrical Engineering undergraduate at COMSATS Islamabad with hands-on experience in embedded systems, object-oriented programming, and data structures. Demonstrated ability to develop robotics and GUI-based applications using Arduino, C++, and microcontrollers. Passionate about problem-solving, real-time systems, and automation technologies.

TECHNICAL SKILLS

- **Programming Languages: C++, C, Python, MATLAB**
- **Embedded Systems: Arduino, L298 Motor Driver, DC Motors, Sensors**
- **Software Tools: Proteus, AutoCAD, Multisim, Code::Blocks, Dev-C++, MATLAB GUI**
- **Principles: Object-Oriented Programming (OOP), Data Structures & Algorithms (DSA), Rapid Application Development (RAD), Circuit Analysis**

PROJECTS

Sumo Robot (Embedded Systems Project)
- Developed an autonomous sumo robot using Arduino UNO and L298 motor driver to control DC motors.
- Integrated IR sensors for obstacle detection and edge avoidance.
- Coded robot logic for real-time movement and strategy in sumo ring battles.

Tic Tac Toe with GUI (C++ / OOP)
- Built a two-player Tic Tac Toe game with a graphical interface using C++ and RAD.
- Applied object-oriented principles to manage game state, user input, and rendering logic.
- Focused on intuitive design and error-handling.

Questionnaire Interface (C++ / OOP)
- Designed a GUI-based multiple-choice questionnaire in C++, incorporating OOP and RAD tools.
- Used class-based architecture to manage questions, user interaction, and scoring logic.

Job Enlisting Forum (DSA-based Project)
- Created a job listing platform utilizing Binary Search Trees (BST) for efficient data storage and retrieval.
- Implemented insert, delete, and search operations for job posts using C++.
- Developed a CLI-based interface with clear categorization and sorting logic.

Atmega328P-Clock
- Built a simple Clock on Arduino Uno using a 16x2 Led.
- Implemented LCD initialization, command/data writing, and custom functions in C.
- Used software counters and delay functions to simulate real-time clock behavior (HH:MM:SS).
- Practiced low-level hardware interfacing (GPIO, LCD control lines, timing).

WORK EXPERIENCE

EXITECH **Jul 2024 - AUG 2024**
- Designed and developed responsive web pages using HTML, CSS, and Java, focusing on creating engaging and user-friendly front-end interfaces.
- Implemented styling, layout optimization, and interactive elements to enhance usability and visual appeal.
- Gained hands-on experience in front-end web development, working with core technologies to build and refine web-based projects.

EDUCATION

Bachelor of Science in Electrical Engineering **Sep 2023 - JUL 2027**
COMSATS University Islamabad
- Relevant Coursework: Embedded Systems, Control Systems, Microcontrollers, Object-Oriented Programming, Data Structures and Algorithms, Digital Logic Design