MUHAMMAD BILAL

Electrical Engineer

CONTACT

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EDUCATION

BSc Electrical Engineering

UET,LHR

CGPA: 3.1/4   2021 - 2025

FSc Pre-Engineering

Govt Shalimar Graduate College, Lahore

Marks: 1081/1100   2019 - 2021

SKILLS

Programming Skills (Python, C)

System Verilog (HDVL)

ALTIUM (PCB Designing)

MATLAB

Power World Simulator

ABOUT ME

I am a dedicated electrical engineering student with a diverse skill set and a passion for innovation. Having completed six semesters, I am proficient in Python and C programming languages, and have applied my programming skills in various projects and coursework. My expertise spans power systems, circuit analysis, and digital system design using SystemVerilog, along with hands-on experience with microprocessor systems. I have completed a comprehensive Power System Analysis course and efficiently use PowerWorld Simulator software. Eager to contribute meaningfully to the field of electrical engineering, I am continuously expanding my knowledge in machine learning, deep learning, and computer architecture.

PROJECTS

GESTURE-CONTROLLED CAR:

Designed and implemented a gesture-controlled car using a Tiva board TM4C123GHCPM microcontroller, MPU6050 accelerometer and gyroscope sensor, and ESP32 module. This project involved interfacing the MPU6050 sensor to detect hand gestures, transmitting the gesture data wirelessly to the ESP32 module , and controlling the car's movement based on the received gestures.

LINE FOLLOWING ROBOT:

Designed and implemented a line-following robot using an ESP32 microcontroller and infrared (IR) sensors. This project involved building a robot chassis, integrating IR sensors for line detection, and programming the robot to autonomously follow a predefined path.

IMPLEMENTATION OF LDR ON STREET LIGHTS:

Designed and implemented a line-following robot using an ESP32 microcontroller and infrared (IR) sensors. This project involved building a robot chassis, integrating IR sensors for line detection, and programming the robot to autonomously follow a predefined path.

POWER SYSTEM ANALYSIS: LAHORE AND KASUR WITH TARBELA DAM AND BALLOKI POWER PLANT

Conducted load flow and fault analysis for Lahore and Kasur power systems integrating Tarbela Dam and Balloki Power Plant as primary generators. Utilized PowerWorld Simulator software to assess steady-state behavior, dynamic response to faults, and proposed optimization strategies for network reliability and efficiency.