

Muhammad Khuzaifa

Electrical Engineering

Mardan, Pakistan

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Skills

- Embedded C
- C/C++
- MATLAB/Simulink
- STM32
- ESP32
- FreeRTOS
- FPGA (Spartan-3E)
- Verilog/VHDL
- LTspice
- Proteus
- Sensor Interfacing
- LaTeX
- Circuit Analysis
- Control systems

Hobbies

- Cricket
- Reading Books
- Volleyball

Extra-Curricular Activities

- Volunteer/Member, VAS Society
- Head Technical Management Team, IEEE
- Member/Volunteer, Muaawin Society at PIEAS

Experience

Research & Development Intern

Jun 2025 – Sep 2025

National Aerospace Science and Technology Park (NASTP)

- Designed optimized IC schematics in Altium, informed by a systematic BCI literature review. Developed a robust MATLAB/Python acquisition pipeline, applying advanced machine learning algorithms to maximize signal classification accuracy.

Intern – Electronics Lab

Jun 2024 – Aug 2024

National Institute of Laser and Optonics (NILOP)

- Engineered high-precision analog signal-conditioning circuits and active filters, and utilized Proteus to design and route high-integrity custom PCBs, optimizing signal fidelity and data acquisition accuracy for laboratory instrumentation.

Education

Bachelor of Science in Electrical Engineering

Sep 2022 – June 2026

Pakistan Institute of Engineering and Applied Sciences (PIEAS)

Islamabad, Pakistan

CGPA: 3.47/4.00

F.Sc (Pre-Engineering)

May 2020 – June 2022

Islamia College Peshawar

Marks: 1009/1100

Matriculation (Science)

May 2018 – June 2020

The Khyber English Medium School Baghicha Dheri

Marks: 1039/1100

Projects

AI-Enabled Mini-UAV for Disaster Assessment and Swarm Applications (FYP)

Real-Time VGA Graphics Controller (Spartan-3E FPGA)

Low-Cost Field-Deployable IoT Weather Station

Advanced SPWM Inverter THD Analysis using Simulink

Class-AB Audio Power Amplifier Design

Online Certifications

Introduction to the Internet of Things and Embedded Systems

Summer Workshop Program on Artificial Intelligence

The Raspberry Pi Platform and Python Programming (Coursera)