Muhammad Hammad Khan

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Date of Birth: 06 September 2000 ◇ Bagh, Azad Kashmir, Postal Code 12500

Summary

Electrical Engineering graduate with practical experience in grid station operations, circuit design, and energy systems. Adept at solving technical challenges, managing academic and technical projects, and collaborating in cross-functional teams. Proficient in ETAP, MATLAB/Simulink, Multisim, and Proteus. Eager to contribute to innovative engineering solutions in sustainable and automated energy environments.

Experience

Intern Jun 2024 – Jul 2024
Islamabad Electric Supply Company (IESCO), Islamabad, Pakistan
Internship at 132KV Grid Station focusing on real-time electrical operations, monitoring, and control systems under professional supervision.

Education

BSc in Electrical Engineering, University of Engineering and Technology Jan 2021 – Dec 2025
Taxila, Pakistan
Specialization: Power Systems CGPA: 3.2 / 4

Intermediate (FSc Pre-Engineering), Spring Field School and College, Bagh AJK 2021
Marks: 953 / 1100 Percentage: 86.63%

Matriculation (Science), Spring Field School and College, Bagh AJK 2017
Marks: 1018 / 1100 Percentage: 92.5%

Certifications

- **Foundations of Project Management**, Coursera Feb 2025
  Gained a solid understanding of project management fundamentals including project life cycles, scope definition, scheduling, budgeting, and risk assessment — crucial for managing technical engineering projects effectively.
- **The Sustainable Development Goals**, Coursera Dec 2024
  Studied global sustainability frameworks and their engineering applications, with a focus on clean energy, infrastructure development, and responsible resource use to align engineering practices with long-term societal impact.
- **Understanding Research Methods**, Coursera Jan 2025
  Learned the principles of quantitative and qualitative research, hypothesis formulation, data collection, and analysis — enabling evidence-based decision-making and technical report writing in engineering contexts.
- **Safety in the Utility Industry**, Coursera Jun 14, 2025
  Explored essential occupational safety protocols and hazard mitigation strategies for utility environments, emphasizing compliance with industry standards, PPE usage, and safe operation of high-voltage equipment.

Projects

Various academic and technical projects demonstrating practical application of electrical engineering concepts.

- Wireless water level indicator and automatic control
- 150VA 4-tap transformer
- Sampling, modulation, and analysis of human voice in MATLAB
- Smart home automation using PIC Microcontroller
- Antenna azimuth position control system
- Steam boiler monitoring and auto-control system

- Load flow and fault analysis of 6-bus power system
- Configurable load bank with integrated energy analyzer
- 200km transmission line modeling and analysis
- Noise removal from ECG signals using digital filters in MATLAB
- Smart energy management system with real-time NILM for appliance identification
- Overcurrent protection of transformer
- Automation of boiler model

Skills

Simulation and Analysis Tools: MATLAB, Simulink, ETAP, MULTISIM, Proteus
Programming and Development: C++, Python, PIC Microcontroller, Embedded Systems, Internet of Things (IoT)
Design and Automation: AutoCAD Electrical, PCB Design, Microcontroller-Based Circuit Design
Project and Office Tools: Microsoft Office Suite (Word, Excel, PowerPoint), Project Documentation
Professional Competencies: Technical Reporting, Time Management, Team Collaboration, Problem Solving, Adaptability

Languages

English: Professional Proficiency
Urdu: Native Fluency

Interests

- Coin Collecting
- Outdoor Sports
- Gardening and Planting
- Hiking and Nature Exploration