

Muhammad Abdul Rehman

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EDUCATION

- **Bachelors in Electrical Engineering** Sep 2022 - Sep 2026
University of Engineering and Technology (UET), Taxila; CGPA: 3.29/4
- **FSc Pre-Engineering** Aug 2020 - Aug 2022
Punjab Group of Colleges; Marks: 80.27% (883/1100)
- **Matriculation** Jul 2018 - Jul 2020
Radiant Secondary School; Marks: 92.45% (1017/1100)

SKILLS SUMMARY

- **Languages:** MATLAB, Python, SQL, C/C++
- **Tools:** AWS (EC2, S3, IAM), Proteus, Cisco Packet Tracer, Wireshark, Linux, Git, Oracle Virtual Box
- **Core Skills:** Networking, Programming, Simulations, Cloud Computing, Data Structures & Algorithms
- **Soft Skills:** Self-directed Learning, Technical Documentation, Problem Solving, Project Management

EXPERIENCE

- **Operations Support Engineer** Mar 2025 - Mar 2026
Arch Technologies - Remote
 - **Workflow Automation:** Automated workflows to reduce manual data entry and repetitive tasks, improving efficiency.
 - **Documentation Management:** Managed documentation using structured templates for standardized reporting.
 - **Client Coordination:** Handled client emails and requests, ensuring smooth coordination and timely responses.
- **Internship Trainee (Electrical)** Jun 2024 - Jul 2024
Islamabad Electric Supply Company (IESCO) - Onsite
 - **Equipment Monitoring:** Monitored high-voltage grid equipment including transformers, circuit breakers etc.
 - **Maintenance Support:** Supported maintenance and testing of electrical power systems.
 - **Safety Compliance:** Prepared grid reports and ensured safety compliance during field inspections.

PROJECTS

- **Campus Network Design and Simulation (Cisco Packet Tracer):** Designed and simulated a dual-campus enterprise network using Cisco Packet Tracer, implementing a three-tier hierarchical model with ten VLANs for department-level traffic segmentation. Configured inter-VLAN routing via router-on-a-stick, router-based DHCP serving ten department pools, and RIPv2 over serial WAN links for dynamic route exchange between campuses. Deployed internal web and FTP servers within the university IT department and ensured routing to reach an externally hosted cloud email server.
- **AI-Enabled Electronic Health Record Management System (Python, Generative Ai):** Developed a comprehensive healthcare management system with Python Flask backend for storing patient records, medical history, diagnoses, and treatment data. Finetuned custom Generative AI models (MedQwen3-4B) to analyze patient information and assist in disease identification. Implemented CRUD operations, Low Rank Adaption, Quantizations and FHIR R4 protocols. Deployed a fully offline AI clinical assistant and management software.
- **Home Automation and Security (Arduino, C++, Proteus):** Developed a simulated home security and automation system integrating PIR, flame, gas, and temperature sensors with an Arduino microcontroller. Implemented keypad-based access control, real-time I2C OLED monitoring, and L293D motor driver logic for automated door and window actuation. Validated hardware-software integration and sensor response logic through comprehensive Proteus circuit simulation.
- **Sequential Conveyor Belt Motor Control System (Omron PLC, CX-Programmer, Ladder Logic):** Programmed interlocked sequence-control ladder logic in Omron CX-Programmer for a three-motor (M1-M3) conveyor: START latches M1 on, sensor S1 stops M1 and starts M2, S2 transfers to M3, and S3 restarts M1, repeating the cycle until STOP is pressed. Implemented latched (SET/RESET) coils, sensor-driven interlocks ensuring one motor runs per stage, and stop-dominant control. Configured a PT-series HMI screen with live M1-M3 ON/OFF indication and screen-key START/STOP, validated via CX-Programmer simulation and online monitoring.

CERTIFICATIONS

- **Cisco Networking Basics:** Technical Introduction to the world of Computer Networking
- **Generative AI Application Developer:** Pakistan Engineering Council (PEC) - Covered NLP and Generation
- **CS50x Computer Science Fundamentals:** Harvard Online - Comprehensive computer science foundation
- **Machine Learning - Regression and Classification:** Coursera - Covered core Machine Learning concepts

HONORS AND AWARDS

- Received "Top Performer" award from **Pakistan Engineering Council (PEC)** for excellent performance in **Generative AI App Developer** Certification Program