

# Syed Zulqarnain Haider

## Electrical Engineer

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📞 71103-8792304-5 🇵🇰 Pakistani 📅 April 13th, 2003

### PROFILE

Driven by a passion for automating systems and solving real-world problems, I pursued an **Electrical Engineering** degree, building a fairly strong foundation through **technical projects** and **research papers**. However, my true passion lies in bridging the gap between **technical implementation** and the **abstract needs** of businesses and society. I am passionate about using **creativity** and **systems thinking** to develop solutions that drive meaningful impact. With a commitment to **continuous learning**, I focus on **empowering teams** and fostering collaboration and research to create innovative, **entrepreneurial solutions** for positive social impact and sustainable development.

### EDUCATION

**2017 – 2018**      **Matriculation**  
Skardu, GB      *Federal Board of Intermediate and Secondary Education*  
Scored **94.9%**

**2019 – 2020**      **FSC Pre-Engineering**  
Skardu, GB      *Federal Board of Intermediate and Secondary Education*  
Scored **87.9%**

**12/2021 – 12/2025**      **BS Electrical Engineering - Telecom**  
Lahore      *Institute of Electrical Electronics and Computer Engineering*  
University of the Punjab  
CGPA - **3.36**  
FYDP/Thesis - **Brainwave Signal Analysis Using AI to Evaluate Cognitive and Emotional Responses in Children Aged 2-7 to Visual and Auditory Stimuli**

### TECHNICAL SKILLS

**Web Dev**  
Basically MERN

**Circuit Design Tools**  
Proteus, Multism

**3D Design**  
AutoCAD

**Matlab & Simulink**  
Fundamentals of  
Engineering Tools

**Programming**  
Python, C++, Assembly

**Embedded Systems**  
Design & Development

### RELEVANT COURSEWORK

Entrepreneurship | Engineering Management | Technical Writing |  
Electronic Devices & Circuits | Electrical Network Analysis |  
Wireless and Mobile Communications | Applied Physics |  
Data Structures and Algorithms | Programming Fundamentals |  
Advanced Programming (OOP) | Transmission and Switching Systems |  
Digital Signal Processing | Digital Communications |  
Computer Communication Networks | Digital Logic Design | Signals and Systems |  
Transducers & Instrumentation | Embedded Systems | Linear Control Systems

## PROJECTS

### **Simplified Network Design for a Small Corporate Office**

#### *Computer Networks*

Designed the network topology and IP schemes, and implemented servers for web, email and dns, configured cisco routers and switches in Cisco Packet Tracer.

### **NeuroSense: The Brain IMDb - Web App [🔗](#)**

#### *Deep Learning and Neuroscience Based Project*

Designed and executed comprehensive study methodology, encompassing data lifecycle management (collection, processing), model training, and the final development and deployment of a demonstration web application.

### **School Management System**

#### *Web Development Project - Proprietary*

Designed, developed and deployed a school management system for a multi-campus school.

### **Air Quality Index Management Subsystem**

#### *Industrial IOT Project*

Designed an automated ventilation management system but then developed a subsystem of it i.e., AQI sensor system using humidity and smoke sensors.

### **RF Wireless Data Transmission Model**

#### *Digital Communications Project*

Designed and built a working miniature model using Arduino and 433-Mhz modules.

### **Modeling And Control Of Mechatronic Aero Pendulum**

#### *Control Systems Project*

Developed a feedback control system for synchronizing the two propelling systems. Physically implemented with customized handcrafted hardware.

### **A Diagnostic Model Of Computer Systems In The Form Of Finite State Machine**

#### *Digital Logic Design*

Utilized the Finite State Machine tool to develop a model of computer systems' states.

### **Online Attendance System**

#### *Data Structures and Algorithms Project*

Designed a functional online web app for students, instructor and coordinator for managing student attendences.

### **Wireless Voltage Detector**

#### *PCB Design Project*

Brainstormed the idea in a group of three, designed on software, and planned the fabrication and put things together in our first hardware based project.

## PUBLICATIONS

### **Design & Analog Implementation of Synchronizaiton Controllers for Feedback Instruments' Servo Trainer Module**

#### *IEEE*

Designed the study procedure and carried out the study. Developed the necessary hardware i.e., state feedback controller using op-amps, and applied it to working physical project - The Aeropendulum

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## PROFESSIONAL EXPERIENCE

### **06/2024 – Network Testing Inter**

#### **08/2024 LCC Pakistan**

#### **Lahore**

As an intern I learned to be a part of a team which was in itself a part of a cluster of teams with different roles. I got experience in drive testing equipment and tools, talking to team members and clients, and managing the test routes and having fun even during longer workdays and projects.

## 🏆 ACADEMIC ACHIEVEMENTS

### Competed In

*ICECE, 2024 Idea Presentation Competition*

We presented the idea and model of a smart, sustainable kitchen and miniature garden ecosystem.

### Positions In

*SEECON '23 & '24 Matlab & Circuit Design Competitions, & Simulink Design*

Winner in SEECON '23 Matlab Programming Competition, Runner Up in Circuit Design and Simulink Design Competitions in SEECON '23 and '24.

### Attended

*International Conference on IT and Industrial Technologies [ICIT] - 2024*

### Managed Sports Event

Planned and organized multiple parts of annual sport, including ESports and team sports like Football, event during senior year of BS program

## 🌐 LANGUAGES

Balti	● ● ● ● ●	Urdu	● ● ● ● ●
English	● ● ● ● ●	Chinese	● ● ● ● ●

## 🧩 PERSONALITY TRAITS

- Diversely innovative and **systems-oriented** by nature, can be slow but diverse
- **Planning-focused** professional skilled in conceptualization, structuring ideas, and process mapping
- **Fast learner** with the ability to analyze complex concepts and develop long-term understanding
- I instinctively **connect the dots** between technical logic, empathetic design, and practicality to envision holistic solutions.
- Collaborative team contributor who stays focused on target when in teams but might go into recursively branched ideation when thinking alone
- Optimistic and growth-oriented mindset with a focus on continuous improvement and impact

## 🔑 INTERESTS

**Pinterest & Instagram** – For ideas & inspiration | **Gaming** – Playing FreeFire only to max ranks & level | **Piano** – Attempts on mobile phone | **Philosophy** – Ideas of different people & groups | **Self Dev Books** – Top Picks: Laws of Success & 12 Rules for Life | **Anime** – Watch character development, twists and politics | **Ideation** – Think of real and unreal ideas | **Workout & Martial Arts** – . . . | **Music** – Listen to music & songs, & sometimes try to write (ft. chatbot) | **Research Market Trends** – Looking at reports & websites of different companies