# Shoaib Khan

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# **Objective**

Versatile Electronics Engineering professional with a strong foundation in electronics manufacturing and a proven track record as a design engineer at NEXTEK, where I have learned a lot and had a blast. As an Electronics Engineering, I'm super excited about making cool electronic devices! I know my way around programming in Verilog, OOP, and C++. Now, I'm on the lookout for a new adventure in a fantastic company where I can bring my skills and enthusiasm to the table.

#### **Education**

Bachelor of Electronics Engineering, UET Peshawar CGPA: 3.3

O Graduated in September 2022

#### **Skills**

- Fundamental technical knowledge in Electronics Circuits and PCB Boards maintenance
- Experienced with FPGA Design, Logic Design, PSpice, Basic Electric and Electronics Circuits Designing
- O Two-layer PCB designing using ORCAD
- Proficient in Verilog, C/C++, and OOP
- Familiarity with op-amps and other electronic components
- Familiarity with microcontrollers like Arduino
- Proficient in using tools and software such as Model Sim, MATLAB, Visual studio Code, Code::blocks
- Strong Time Management and Leadership Skills
- Excellent expression, analytical and Problem-solving mindset











# **Professional Experience**

## **Design engineer at NEXTEK services**

As an Electronics Design Engineer at NEXTEK Services, I've played a key role in developing cutting-edge electronic devices. My responsibilities include designing and implementing electronic circuits, utilizing my expertise in OOP, and C++. Collaborating within a dynamic team, I've contributed to the successful execution of projects, demonstrating my commitment to innovation and precision in electronics design.

#### Project: Digital Video Recorder (DVR) Tester

As an Electronic Engineer on the Digital Video Recorder (DVR) Tester project, I've been instrumental in crafting and refining solutions for accurate voltage recording. My role involves hand's on work in designing circuits, programming, and testing, showcasing my proficiency in electronic engineering.

Through this experience, I've honed my skills in troubleshooting and optimizing digital systems, contributing to the project's success.

### Apprentice, Pakistan Railway

## **Project: Lodhran to Shahdrah**

During my apprenticeship at Pakistan Railways, I played a vital role in a significant project to replace the outdated signalling system from Lodhran to Shahdrah. This experience honed my skills in project management, problem-solving, and teamwork. I leaned about the latest and the advanced signaling system that is Computer Based Interlocking (CBI) system. I gained hands-on expertise in implementing modern signaling solutions, illustrating my ability to adapt and contribute effectively to large-scale infrastructure projects.

# **Other Projects**

#### Final year project

The project focused on simulating the creation of a brain-controlled robotic hand with haptic feedback. Brain signals were converted into electrical impulses to control virtual prosthetic hand movements. A user-friendly control unit interpreted hand movements through potentiometers, translated into servo actions. Realistic haptic feedback was simulated using sensors to mimic object weight. The integration of this feedback enhanced user experience, laying a foundation for future brain-controlled prosthetics development.

#### Semester projects

- Projects on Arduino: Successfully designed the automatic door lock system that utilizes sensors (RFID) to detect human presence and automatically locks or unlocks the door accordingly. It offers enhanced security and convenience by eliminating the need for manual operation. Additionally, engineered an automatic system to manage water resources effectively, improving usage and conservation.
- **O Projects on FPGA:** In these FPGA projects, I focused on implementing diverse logic equations and combinations. Leveraging the Spartan-3 FPGA board, I translated these logical constructs into hardware, utilizing its capabilities to their fullest. I employed LEDs on the board to visually validate the outcomes, while also employing the board's switches to meticulously verify the logic combinations.
- **O** C++ **projects:** Successfully completed several C++ projects including designing a library management system and coding an ATM machine
- ALU design: Developed an arithmetic logic unit (ALU) including its timing diagrams using ModelSim
- **O** Speaker Redesign: Redesigned the speaker from different raw circuits, increased output efficiency

#### Languages

English: FluentUrdu: Native