

RIZWANA KHAN

ELECTRICAL ENGINEER

CONTACT

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PROFILE SUMMARY

I am an Electrical and Electronics Engineer, eager to utilize my skills, enhance my creativity, and grow through new challenges. I aim to gain experience with esteemed organizations and continuously evolve both personally and professionally.

EDUCATION

2019 - 2021

JINNAH COLLEGE KALLUR KOT

- Pre-Engineering
- Grade: A+ (1044/1100)

2021 - 2025

NAMAL UNIVERSITY MIANWALI

- BS Electrical Engineering
- Current CGPA: 3.34

WORK EXPERIENCE

Final Year Project

2024 - PRESENT

Digital System Design

- Title: **Development of MIPI Camera Interface for FPGA**
- FPGAs: ZYBO z7020, z7010 and pz7020 starlite
- Camera: Digilent MIPI PCAM 5C with Omnivision OV5640 sensor
- Software: Xilinx Vivado and SDK
- Application: Rice Detection through Camera (Rice Sorting Machine)

Projects Done

Semester Projects

- RISC-V single cycle implementation on Vivado simulation
- RISC-V 5-Stage Pipeline Processor (also work on GCC Compiler)
- Databus and Address Bus Integration with RISC-V Processor
- RISC-V Processor Implementation on FPGA
- Designing the network structure of NAMAL University on Packet Tracer.
- Robotic Car using Atmega328P.
- Load calculation and finding an alternate method for powering NAMAL University.
- Diabetic Retinopathy Detection using Machine Learning
- Vending Machine Design using verilog in Vivado
- Hostel Management system
- Patch Antenna Design Using HFSS

Internship

Aug 2023 - Sep 2023

Pakistan Super Computing in NICAT

- Verilog coding at the switch, gate, dataflow and RTL level.
- Developed an understanding of FPGAs
- Understanding and Verilog coding for BRAMs (Block RAMs).
- Implementation of digital logics such as: Adder and subtractor circuits,
- LED blinking code on the FPGA platform (Zybo Z7-10).
- Developed an understanding of the RISC-V architecture.

SKILLS

- **Programming Languages:** C, C++, Python, MATLAB, Verilog, Assembly and Structured Query Language (SQL)
- **Softwares:** Proteus, Modelsim, QuestaSim, Icarus Verilog, GTKwave, Matlab, Simulink, Xilinx Tools (Vivado, SDK), ISE Design Suite and MySQL
- Embedded System, Digital Systems Design, Computer Architecture, Digital Logic Design, Database Engineering, Machine Learning, Wireless Communication
- **Hardwares:** FPGAs, Camera Sensors, SOC, Microprocessors, and Microcontrollers
- Leadership, Exceptional organisational skills, Report writing and presentation skills