Muhammad Faraz Malik

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Portfolio: muhammadfarazmalik.github.io/Portfolio/

PROFESSIONAL SUMMARY

Computer Engineering student at UET Taxila with strong fundamentals in programming, networking, and digital systems. Passionate about solving real-world problems through clean, efficient code. Eager to contribute to projects that require focus, adaptability, and technical depth.

EDUCATION

Bachelor of Science in Computer Engineering
UET Taxila | Sep 2022 – Present | CGPA: 3.14

F.Sc. Pre-Engineering
PAEC Model College, Chashma | 2020 – 2022

Matriculation (Science)
PAEC Model College, Chashma | 2018 – 2020

SKILLS

Programming: C++, Python, Java, Verilog, HTML, CSS

Tools/Platforms: MATLAB, Simulink, AutoCAD, OptiSystem, Arduino, PDQ Deploy, Active Directory

Techniques: STFT, MFCC, Convolutional Neural Networks, Digital Logic Design, Embedded Systems, Web Development, GUI Design, Signal Processing, Data Analytics, Software Automation, Modular Architecture, Microcontroller Programming

LANGUAGES

English (Fluent)
Urdu (Native)

HOBBIES & INTERESTS

Enjoy coding, learning new technologies, and exploring complex systems. Outside academics, I enjoy football and cinematic storytelling through films and series.

PROJECTS

- **University Management System:** Comprehensive web-based platform for automating academic, administrative, and financial operations at universities. Features centralized data, secure access, and real-time analytics for all stakeholders.
- **Audio Denoising with STFT:** MATLAB-based solution applying Short Time Fourier Transform and advanced filtering to remove noise from real-world audio. Enhances clarity and preserves signal integrity for practical applications such as noise reduction in hearing aids and medical devices.
- **MIPS Processor:** Designed and implemented a single-cycle MIPS processor using Verilog, targeting efficient execution of a subset of the MIPS instruction set architecture. The processor features a modular architecture, comprising distinct components with detailed testing.
- **Speech Emotion Recognition:** Developed a deep learning system using Convolutional Neural Networks and other techniques to classify speech into seven distinct emotions. Utilized MFCC features and the TESS dataset for robust and improved user interaction.
- **Free Space Optical Communication System:** Designed and simulated a high-speed Free Space Optical (FSO) wireless system using OptiSystem. Analyzed performance under various weather conditions, demonstrating robust data transmission and signal quality.
- **Remote Software Deployment Automation:** Developed a centralized, automated system for deploying software from server to multiple client PCs using PDQ Deploy and Active Directory. Ensured security, scalability, and efficiency for large-scale IT environments.
- **Remote-Controlled Vacuum Cleaning Robot:** Designed and built a cost-effective robotic car integrating microcontroller control, mobility, and vacuum cleaning. Demonstrated efficient debris collection and remote operation for practical automation tasks.