Muhammad Abdullah

+923338453766 — muhammad.abdullah.warraich195@gmail.com —
linkedin.com/in/muhammadabdullah2004 — muhammadabdullah-10.github.io

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1 SUMMARY

Computer Science undergraduate with strong expertise in **AI, Large Language Models, and Backend Development**. Experienced in Python, FastAPI, databases, Docker, and building intelligent systems using **fine-tuning, LoRA adapters, and Retrieval-Augmented Generation (RAG)**. Passionate about solving real-world problems using AI-driven software systems.

2 SKILLS

- **Programming:** Python, C, C++, C#, JavaScript
- **AI / Machine Learning:** LLM Fine-tuning, LoRA, RAG, Vector Databases (FAISS/Chroma), Prompt Engineering, scikit-learn, pandas, NumPy
- **Web & Backend:** FastAPI, HTML, CSS, PHP, REST APIs
- **Databases:** MySQL, MongoDB
- **DevOps & Tools:** Docker, Git, GitHub, XAMPP, WAMP
- **Data Visualization:** Power BI, Matplotlib, Seaborn
- **Computer Vision:** OpenCV

3 EXPERIENCE

Summer Intern, PTCL
June 2024 - August 2024, Gujrat, Pakistan

- Assisted in network system optimization and IT infrastructure support.

Technical Team Member, Zindigi Prize FAST NUCES Peshawar
March 2025 - Present, Peshawar, Pakistan

- Provided technical support to 20+ participants during fintech promotional campaign.

Head of Web Development, GYM Club FAST-NU (Peshawar Campus)
February 2025 - Present

- Led frontend web development initiatives and managed deployment tasks.

4 PROJECTS

Auto Mininet: LLM Based generation of python script for mininet topologies (Final Year Project)

- Built an AI system that generates valid Mininet network topology code from natural language.
- Fine-tuned a Large Language Model using **LoRA adapters** on a custom Mininet dataset.
- Implemented **Retrieval-Augmented Generation (RAG)** with a Mininet knowledge base and vector database.
- Integrated the model with a web interface via API for real-time topology generation.

E-commerce Order Processing System

- Developed Product Service microservice using Python FastAPI, MongoDB, and Docker.

Super Store Sales Dashboard

- Designed Power BI dashboard for sales analytics and forecasting.

Hospital Management System — Web-based system using HTML, CSS, JavaScript, MySQL. **Hotel Management System** — C++ terminal-based project.

5 EDUCATION

BS Computer Science
FAST National University of Computer and Emerging Sciences
August 2022 - Expected 2026
CGPA: 3.4 / 4.0

6   CERTIFICATIONS

- Supervised Machine Learning – DeepLearning.AI (2025)
- Unsupervised Learning Recommenders – DeepLearning.AI (2025)
- Microservices with Docker – Udemy (2025)
- Google AI Essentials – Google (2024)
- Crash Course on Python – Google (2024)