Khawaja Azfar Asif

Aspiring PhD Applicant

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EDUCATION

Lahore Garrison University   **February 2020 – March 2024**

*Bachelor of Science |Software Engineering | **CGPA: 3.0 / 4.0***

Core Courses: Software requirements, Software Construction & Development, Software Project Management, Artificial Intelligence, Machine Learning, Deep Learning, Linear Algebra, Statistics.

PROFESSIONAL EXPERIENCES

Dubizzle Labs   **September 2024 – Present**

Associate Machine Learning Engineer   Lahore, Pakistan

- Architected a scalable ML pipeline for real-time real estate data analysis, leveraging **GPT-4, FastAPI, Docker, and PostgreSQL** to produce structured JSON outputs and dynamically generated prompts.
- **Reduced compute costs by 30%** by developing a **TypeScript load balancer with RabbitMQ** for queue management and automating GPU instance scaling across Genesis and RunPod via MLOps scripting.
- Designed **a modular, maintainable** architecture for containerized **ML workflows.**

InvoZone   **February 2024– May 2024**

Machine Learning intern   Lahore, Pakistan

- Fine-tuned **transformer-based NLP models** (BERT, RoBERTa) using PyTorch/TensorFlow to enhance inference accuracy.
- Developed **API-integrated ML pipelines** to enhance inference accuracy and accelerate AI prototyping.

DevSinc   **July 2023 – September 2023**

Software Engineering Intern   Lahore, Pakistan

- Developed and deployed responsive web pages using **HTML**, **CSS**, and **Bootstrap**.
- **Backend development** by implementing **Django essentials** (MVT, ORM), building **RESTful APIs** using **Django REST Framework**.
- Applied core Django concepts to real-world projects by building interactive **management system** and deployed it.

AI Labs   **August 2022 – February 2023**

Research Assistant   Lahore, Pakistan

- Work on **hybrid deep learning** framework for **SMS phishing detection**.
- Achieving **98.57% accuracy** on the **UCI spam dataset** and **98.29%** on the **British dataset**.
- **Outperforming** traditional machine learning models.

PROJECTS

Dental Enumeration and Diagnosis on Panoramic X-Rays: Built an end-to-end **object detection system** for dental enumeration and disease diagnosis on panoramic X-rays. Achieved **96% accuracy of teeth** detection and **75% of teeth diseases** detection using **YOLOv8 deep learning** for model training. **Leveraged Pandas, NumPy, Matplotlib, Seaborn, and Scikit-learn** for data handling and analysis. Deployed the system on **GCP**.

Pneumonia X-Ray Classifier: Developed **deep learning** system for the **classification** of pneumonia from chest X-ray images. Leveraged **Convolutional Neural Networks (CNNs)** built with TensorFlow/Keras for robust model training, achieving **95% diagnostic accuracy**. Deployed the interactive diagnostic application on **Streamlit Cloud**.

E-commerce RAG System for Internal Communications: Developed a RAG solution using **Pgvectorscale**, Python and utilizing OpenAI's **text-embedding-3-small model** for embeddings. Utilized **Docker** for environment setup and managed database interactions with a **PostgreSQL** GUI client for seamless development and deployment.

LEADERSHIP ACTIVITIES

Event Society of Software Engineering, Lahore Garrison University - *President*   **September 2023 – March 2024**

- Organized university first Job Fair, Onboard 20+ companies and single-handed manages them throughout the event.
- Arrange multiple Industrial visits for student so they can know about latest trends and technology of industry.

DevSinc – Ambassador   **April 2023 – February 2024**

- Leading Ambassador of DevSinc, representing the company at my university.
- Organized and conducted various events to promote Advance Technology on campus.
- Developed and nurtured relationships with students, faculty, and staff.

CERTIFICATIONS

- Machine Learning A-Z: AI, Python & R(Udemy)
- Open-source LLMs: Uncensored & secure AI locally with RAG

TECHNICAL SKILLS

Languages: Python, C++, C#, ROR
Technologies: SQL, Git/ GitHub, Docker, AWS, GCP, HTML, CSS, Postgresql, GCP, RAG, YOLO, Streamlit,
Libraries & Frameworks: FastApi, Django, Transformers, MLOpsor.
AI models: YOLOv5, YOLOv8, Detectron2

HACKATHONS

NASA Space Apps Challenge 2024   **Oct 2024**

Project: Virtual Crop Advisor (Link)
Role: Lead Developer
Technologies Used: NASA APIs, AI/ML API and Gradio
Description: Developed a tool to provide smallholder farmers with real-time insights using NASA's Earth observation data. Leveraged data to assist in informed decision-making about crop rotation, planting dates, and best crop varieties for sustainable agriculture.

Qloo LLM Hackathon   **Aug 2025**

Project: Claim Tracker Bot (Link)
Role: Backend Developer
Technologies Used: Groq API and Hugging face
Description: Automate insurance claim processing with AI and NLP. Build a chatbot to support real-time claim evaluation and feedback. Deliver valid/invalid claim decisions with detailed summaries Act as an educational resource referencing policy handbook.

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