# Ahmad **Liaqat**

Artificial Intelligence Engineer · Data Science Expert

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*"Yesterday I was clever, so I wanted to change the world. Today, I am wise, so I am changing myself"*

## Summary

AI Engineer based in Riyadh, Saudi Arabia, with years of experience in NLP, LLMs, and Computer Vision, specialized in GPT, BERT, and different Transformer-based architectures. Proven expertise in fine-tuning and deploying state-of-the-art AI models for real-world applications, including text generation, language understanding, and AI-driven automation. Skilled in SQL, AWS, GCP, TensorFlow, PyTorch, and Hugging Face, with a track record of integrating AI models into scalable cloud-based environments.

## Education

### GIFT University

*Gujranwala, Pakistan*

Bachelor's of Science In Computer Science — *2019 - 2023*

- **Related Coursework:** Machine Learning, Artificial Intelligence, Natural Language Processing, Data Structures and Algorithms, Database Systems.
- First Position in Final Year Project, received funding from Ignite for project development

## Work Experience

### Devster Labs

*Islamabad, Pakistan*

Artificial Intelligence Engineer — *May. 2024 - Nov. 2024*

- Developed AI chatbots for fintech support, boosting response efficiency by 15% and automating workflows in cloud-based enterprise systems.
- Fine-tuned LLMs (GPT-4, BERT, Hugging Face Transformers) for AI-powered chatbots, enhancing conversational accuracy.
- Implemented CI/CD pipelines for ML models, enabling automated retraining and real-time performance monitoring with MLflow/Kubeflow.
- Benchmarked AI inference workloads, reducing response time by 15% through model quantization and cloud deployment..
- Optimized audio processing models for Sound Event Detection Systems, reducing processing time by 3%.
- Deployed AI-driven weapon and anomaly detection systems in real-world environments, leading to a 40% reduction in violence-related incidents.

### GIFT University

*Gujranwala, Pakistan*

Research Assistant & Tensorflow Developer — *Feb. 2023 - Present*

- Implemented and Achieved 80% accuracy in sketch-to-image synthesis, surpassing state-of-the-art benchmarks.
- Built deep learning models for financial risk prediction with 85% accuracy.
- Developed a deep learning model using CNNs to analyze satellite imagery, achieving 85% accuracy in identifying poverty-stricken regions, and aiding in resource allocation for underserved areas.
- Specialized in GANs for diverse image synthesis, implementing advanced architectures like Pix2Pix and CycleGAN and more for Image-to-Image Translation.

### CodSoft

*Kolkata, India*

Machine Learning Intern - Remote — *Oct. 2023 - Nov. 2023*

- Improved captioning accuracy by 13% using CNN-RNN architecture with Attention mechanisms.
- Enhanced recommendation systems' click-through rates by 25% through collaborative filtering.
- Integrated machine learning models like ChatGPT, Dall-E, Gemini and others into real-world applications using Flask REST APIs for seamless web application interaction.
- Optimized data pipelines and preprocessing for sound event detection, improving real-time classification accuracy on GCP.

## Publications

### 25th International Conference on Digital Image Computing: Techniques and Applications

*Perth, Australia*

Locally-Focused Face Representation for Sketch-to-Image Generation Using Noise-Induced Refinement — *2024*

- This paper introduces a novel approach for sketch-to-image generation, focusing on localized face representation with noise-induced refinement to enhance visual accuracy and realism.

### International Conference on Innovation in Artificial Intelligence and Internet of Things

*Jeddah, Saudi Arabia*

Locally Focused Multi-level Features-based Framework For Poverty Estimation — *Submitted for Publication 2025*

- This study proposes a novel multi-level feature extraction, fusion, and dual-attention mechanism framework for poverty estimation via satellite imagery.

### 3rd International Conference on Energy, Power, Environment, Control and Computing

*Gujranwala, Pakistan*

Sketch To Image Synthese: Harnessing Deep Learning Techniques For Realistic Visual Transformation — *2025*

- Proposed a deep learning solution to transform black-and-white face sketches into realistic color images, addressing challenges in suspect identification. Submitted this work for AI applications in law enforcement.

## Projects

### RAG-based Conversational AI Chatbot

*2022*

- Tech: Python, TensorFlow, Hugging Face, LangChain, OpenAI, CrewAI, AutoGen
- Developed an AI-powered chatbot for fintech support, improving financial advisory responses using RAG models.
- Integrated Palantir Foundry AIP to improve knowledge retrieval from business documents.

### Human Sketch-to-Face Conversion

*2023*

- Tech used: Python, Pytorch, GANs, CNN, Autoencoders
- Developed a GAN-Autoencoder model to convert human sketches to realistic images with feature extraction techniques.

### Sound Event Detection System

*2024*

- Tech used: Python, TensorFlow, Keras, Librosa
- Built a deep learning-based sound event detection system with 7% improvement in accuracy and reduced latency by 2% in real-time detection. Reduced model inference latency by 30% using quantization and model distillation.

### Other Projects

*2024*

- Tech used: Python, Sci-kit learn, Pandas, Numpy, PyTorch, CNN, RNN, SQL, Plotly
- Developed and implemented a variety of machine learning models, including:
  - Image Segmentation using U-net, FCN-8 architecture
  - Implemented deep learning models for fraud detection in digital payments, improving anomaly detection by 12%.
  - Recommendation systems for personalized content delivery, resulting in a 5% enhancement in recommendation accuracy.
  - Time-series forecasting for stock price prediction.
  - Transformer Models for Language Translation.

## Skills & Interests

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|---|---|
| **Programming Languages** | Python (Pandas, NumPy, SciPy, Matplotlib, Seaborn), Latex, Java, C, C#, SQL |
| **ML and AI Algorithms** | Natural Language Processing (NLP), Computer Vision (CNNs), Generative Adversarial Networks (GANs) |
| **Tools and Frameworks** | TensorFlow, PyTorch, Flask, REST APIs, Git, Hugging Face, NLP Libraries (SpaCy, NLTK), Scikit-learn |
| **Cloud Platforms** | Amazon Web Services (AWS), Google Cloud Platform (GCP) |
| **Cloud Tools** | Vertex AI, BigQueryML, Vertex AI Workbench, AutoML, Google Collab |
| **Soft Skills** | Problem Solving, Hardworking, Quick Learner, Communication & Collaboration |
| **Methodologies** | Scrum, Agile Methodology, Hive |
| **Interests** | Image Processing, AI Applications in Gaming, Audio Signal Processing, Machine Learning Research |
| **Languages** | English (Fluent), Urdu (Professional), Arabic(Beginner) |
| **Hobbies** | Watching sports matches, Visiting Northern Areas, Cooking, and reading Books or Blogs |

## Licenses & Certifications

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| 2025 | **Machine Learning on Google Cloud**, by Google Cloud Skills Boost | *Google Cloud* |
| 2025 | **TensorFlow: Advanced Techniques Specialization**, by Laurence Moroney | *DeepLearning.AI* |
| 2024 | **TensorFlow Developer Professional Certificate**, by Laurence Moroney | *DeepLearning.AI* |
| 2024 | **Natural Language Processing Specialization**, by Younes Bensouda Mourri | *DeepLearning.AI* |
| 2023 | **2nd Runner Up: AI Driven Hackathon**, *PAK-UK Academic Bridge and hosted by Comsats University* | *Pakistan* |
| 2022 | **Machine Learning Specialization**, by Prof. Andrew NG. | *Coursera* |