

Ahmad Liaqat

ARTIFICIAL INTELLIGENCE ENGINEER · DATA SCIENCE EXPERT

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“Between noise and pattern, I find meaning. Between data and code, I build purpose.”

Summary

Machine Learning & Generative AI Engineer based in Riyadh with 3+ years of experience delivering production-grade solutions using LLMs, Diffusion Models, and VAEs. Skilled in fine-tuning models like GPT, LLaMA, and Mistral for finance, automation, and customer service. Proficient in RAG pipelines, vector databases, and agentic frameworks (LangChain, CrewAI, Hugging Face). Experienced in QLoRA, quantization, and deploying scalable solutions on AWS and GCP to drive real-world business impact.

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

GAIT

Riyadh, Saudi Arabia

AGENTIC AI ENGINEER - REMOTE

Mar. 2025 - Apr. 2025

- Designed and deployed autonomous AI agents for KnowYour.AI, automating company intelligence workflows, reduced manual research time by 85% and handled data for 1,000+ enterprises.
- Developed an LLM-integrated chatbot capable of retrieving structured data from Google Sheets using natural language prompts, streamlining access to 10K+ records with a 70% faster response time.
- Built AI agents for Watch2Give, a gamified impact platform, including systems for proof validation and reward dispatch using LangGraph and vision models — cut human review time by 60% and improved accuracy in early testing.
- Automated proof verification and staking optimization using LLM + vision agents, accelerating validation time by 60% and increasing vendor participation by 40% during MVP rollout.

Devster Labs

Islamabad, Pakistan

ARTIFICIAL INTELLIGENCE ENGINEER

May. 2024 - Nov. 2024

- Developed and deployed AI chatbots that automated 70% of routine support queries, leading to a 15% boost in response efficiency and reducing customer support costs by 10%.
- Fine-tuned GPT-4 using QLoRA for domain-specific tasks; integrated with vector DBs (FAISS) for fast retrieval in RAG pipelines.
- Implemented CI/CD pipelines for ML models, enabling automated retraining and real-time performance monitoring with MLflow/Kubeflow.
- Optimized transformer models with quantization and multi-GPU on GCP, reducing latency by 15%.
- 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 - Mar. 2025

- Trained GAN sketch-to-image model on GPU, optimized for CPU/GPU deployment; achieved 80% accuracy beating benchmarks.
- Built risk prediction models with 85% accuracy, enabling early detection of defaults in academic finance studies.
- 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, which helps targeted support and policy planning.
- Engineered and optimized zero-shot, few-shot, and chain-of-thought prompts for LLMs, as demonstrated in projects like TailorMade-AI and Multi-agent-Customer-Support-Automation, enhancing AI-driven decision-making and user interactions.

CodSoft

Kolkata, India

MACHINE LEARNING INTERN - REMOTE

Oct. 2023 - Nov. 2023

- Used ResNet-based encoder and custom decoder for image captioning and explored YOLOv5 for object grounding.
- Boosted recommendation CTR by 25% via collaborative filtering, improving engagement on deployed platforms.
- 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
LOCALLY-FOCUSED FACE REPRESENTATION FOR SKETCH-TO-IMAGE GENERATION USING NOISE-INDUCED REFINEMENT
• 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.

Perth, Australia
2024

International Conference on Innovation in Artificial Intelligence and Internet of Things
LOCALLY FOCUSED MULTI-LEVEL FEATURES-BASED FRAMEWORK FOR POVERTY ESTIMATION
• This study proposes a novel multi-level feature extraction, fusion, and dual-attention mechanism framework for poverty estimation via satellite imagery.

Jeddah, Saudi Arabia
Submitted for Publication 2025

3rd International Conference on Energy, Power, Environment, Control and Computing
SKETCH TO IMAGE SYNTHESIS: HARNESSING DEEP LEARNING TECHNIQUES FOR REALISTIC VISUAL TRANSFORMATION
• 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.

Gujranwala, Pakistan
2025

Projects

Human Sketch-to-Face Conversion
• Tech used: Python, Pytorch, GANs, CNN, Autoencoders
• Built a GAN-Autoencoder to convert sketches into realistic faces.

2023

RAG-based Conversational AI Chatbot for Financial Advisory
• Tech: Python, TensorFlow, Hugging Face, LangChain, OpenAI, CrewAI, AutoGen
• Created a highly accurate chatbot using transformer-based models like GPT-3 and BERT.
• Developed a RAG-based chatbot for fintech, enhancing support efficiency, transferable to insurance customer service.

2024

KnowYour.AI Company Intelligence Platform
• Tech used: Python, CrewAI, LangChain, Groq, Chain-Of-Thought Prompting, FAISS
• Built CrewAI agents for autonomous company profiling and summarization, powering KnowYour.AI with a cross-functional team.

2025

Watch2Give – AI-Powered DeFi Ecosystem
• Tech used: LangGraph, OpenAI, Groq, Few Shot Prompting
• Developed LangGraph agents for donation routing, staking logic, and image validation in a gamified cross-chain platform.

2025

Sound Event Detection System
• 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.

2024

Agentic AI Systems – Real-World Problem Solving with Multi-Agent Architectures
• Tech used: CrewAI, LangChain, LangGraph, OpenAI, Groq, FAISS, Vision Models
• Designed and deployed autonomous agents for tasks like company profiling, document parsing, and spreadsheet-driven data querying, handling 1K+ entities and reducing manual work by up to 85%.
• Built AI agent workflows with LangGraph and LLMs for vendor verification and proof validation in a gamified giving platform, improving task speed by 60% and boosting transparency.
• Focused on real-world impact: automating research, streamlining data access, and supporting underserved communities through intelligent agent flows.

2025

Other Projects
• Tech used: Python, Sci-kit learn, Pandas, Numpy, PyTorch, TensorFlow, CNN, RNN, SQL, Plotly
• Developed and implemented a variety of machine learning models, including:

- Image Segmentation using U-net, FCN-8 architecture
- Built a lightweight keyword spotting model using TensorFlow Lite for Microcontrollers.
- 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.

2024

Skills & Interests

Programming Languages	Python, Java, C, C#, SQL, LaTeX
ML and DL Algorithms	Supervised, Unsupervised, Reinforcement, CNN, RNN, LSTM, Transformers, GAN, Autoencoders
Natural Language Processing	Tokenization, POS tagging, NER, Classification, Word2Vec, BERT/GPT, Hugging Face, SpaCy, NLTK
Computer Vision	Image Classification, Object Detection, Face Recognition, Sketch-to-Image, OpenCV, MediaPipe
Data Engineering	Data Cleaning, Preprocessing, Feature Engineering, SQL, Pandas, NumPy, MLflow, Kubeflow, ETL
Frameworks & Libraries	PyTorch, TensorFlow, Keras, Scikit-learn, FastAI, CrewAI, LangChain, llamaindex
Development Tools	Git, Docker, Jupyter Notebook, Google Colab, VS Code, REST APIs, Flask
Evaluation & Visualization	F1-Score, Accuracy, Precision, Recall, Confusion Matrix, Matplotlib, Seaborn, Plotly, Power BI
Cloud & MLOps	AWS, GCP, Vertex AI, BigQueryML, AutoML, MLflow, CI/CD
Soft Skills	Problem Solving, Communication, Teamwork, Adaptability, Quick Learner, Attention to Detail
Languages	English (Fluent), Urdu (Fluent), Arabic (Basic – currently improving for professional use)

Licenses & Certifications

Ongoing	IBM Data Science Professional Certificate , by IBM Skills Network Team	<i>Coursera</i>
2025	MIT 6.S191: Deep Learning Specialization , by Alexander Amini & Ava Amini	<i>MIT</i>
2025	TensorFlow: Advanced Techniques Specialization , by Laurence Moroney	<i>DeepLearning.AI</i>
2024	TensorFlow Developer Professional Certificate , by Laurence Moroney	<i>DeepLearning.AI</i>
2024	Natural Language Processing Specialization , by Younes Bensouda Mourri	<i>DeepLearning.AI</i>
2023	2nd Runner Up: AI Driven Hackathon , <i>PAK-UK Academic Bridge and hosted by Comsats University</i>	<i>Pakistan</i>
2022	Machine Learning Specialization on Google Cloud , by Prof. Andrew NG.	<i>Coursera</i>