

# Ahmad Liaqat

Machine Learning Engineer

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## Summary

Experienced Machine Learning Engineer with a strong background in developing and optimizing AI models and applications. Proficient in using TensorFlow, PyTorch, and Scikit-learn for machine learning and deep learning projects. Proven expertise in audio signal processing, generative AI, and chatbot development. Adept at combining CNNs and Transformers for enhanced image synthesis and recognition tasks. Skilled in leveraging transfer learning and advanced data augmentation techniques to improve model performance. Committed to continuous learning and applying cutting-edge technologies to solve complex problems.

## Education

### GIFT University

Bachelor's of Science In Computer Science

2019 – 2023

Gujranwala, Pakistan

- > **Related Coursework:** Machine Learning, Artificial Intelligence, Natural Language Processing, Data Structures and Algorithms, Database Systems.
- > **Dean's Award:** First Position in Final Year Project, received funding from [Ignite](#) for project development

## Experience

### Devster Labs

Artificial Intelligence Engineer

May 2024 – Present

Islamabad, Pakistan

- > Improved audio signal processing models, optimizing processing time by 2% to 3% overall.
- > Developed generative AI applications to enhance user engagement by 8%.
- > Built chatbots and AI applications using Hugging Face, Vertex AI, and OpenAI, achieving a great improvement of more than 10% in customer query resolution.
- > Led a project to enhance sound event detection, achieving a 2% increase in detection accuracy.
- > Researched and optimized AI models for audio tasks.
- > Collaborated closely with cross-functional teams to integrate AI solutions into existing systems, resulting in a 30% reduction in integration time.

### GIFT University

Research Assistant

Nov 2023 - May 2024

Gujranwala, Pakistan

- > Developed algorithm for sketch-to-image synthesis, achieving great accuracy of 80% and robustness by 10% against state-of-the-art techniques.
- > Enhanced CNN-based face recognition systems, significantly increasing accuracy by 5%.
- > Prepared datasets, using CLEB-A-HQ, for high-quality inputs in sketch-to-image tasks.
- > Specialized in GANs for diverse image synthesis, implementing advanced architectures like Pix2Pix and CycleGAN and more for Image to Image Translation.
- > Conducted experiments and analysis, contributing to AI publications and conference presentations.

### CodSoft

Machine Learning Intern - Remote

Oct 2023 - Nov 2023

Kolkata, West Bengal Headquarters, India

- › Implemented a combined CNN-RNN architecture for image captioning, improving caption accuracy by 13% using Attention mechanisms.
- › Enhanced recommendation systems using collaborative filtering techniques, increasing click-through rates by more than a quarter.
- › Integrated machine learning models with Flask REST APIs for seamless web application interaction.
- › Analyzed user behavior data to optimize product features and enhance engagement.
- › Implemented and optimized natural language processing models for sentiment analysis and text classification, achieving 90% accuracy.

## Projects

### Machine Learning Projects at CodSoft

| [GitHub](#)

- › Tech used: Python, sci-kit learn, pandas, numpy, pytorch
- › Explored various NLP datasets, including Movie Genre classification, Credit Card Fraud detection, Bank Customer Churn prediction, Spam SMS identification, and Hand-drawn text generation. Gained an in-depth understanding of data analysis and pre-processing tasks through hands-on experience with these diverse datasets.
- › Worked on simple transformer model for language translation task.

### Image Caption Generator

| [GitHub](#)

- › Tech used: Python, Pytorch, CNN, RNN
- › Implemented combined CNN-RNN architecture for image captioning
- › Optimized caption generation accuracy by 10% using attention mechanisms

### Gemini Pro Power ATS Tracker Project

| [GitHub](#)

- › Tech used: Python, Streamlit, Gemini Pro API, ATS integration
- › Developed and integrated Gemini Pro Power ATS tracker into recruitment software
- › Enhanced candidate filtering and application tracking functionalities

### Movie Recommendations System

| [GitHub](#)

- › Tech used: Python, Sci-kit learn, numpy, pandas
- › Developed a sophisticated Movie Recommendation System from scratch using the TMDB dataset, which includes comprehensive metadata about movies.
- › Enhanced Movie filtering and Recommendations accuracy by 5%

## Skills & Interests

**Technical** Python, TensorFlow, PyTorch, Flask, REST APIs, Natural Language Processing (NLP), Convolutional Neural Networks (CNNs), Generative Adversarial Networks (GANs), Git, Agile Methodology, Problem Solving, Hardworking, Quick Learner

**Languages** English (Fluent), Urdu (Professional)

**Interests** Image Processing, AI Applications in Gaming, Audio Signal Processing, Machine Learning Research

**Hobbies** Video gaming, watching sports matches, Visiting Northern Areas, Cooking

## Certification & Awards

### Machine Learning Specialization

| [2022](#)

- › Have Done Machine Learning Specialization from Coursera by Prof. Andrew NG.

### AI Hackathon 2nd Runner up

| [2023](#)

- › Issued by PAK-UK Academic Bridge and hosted by Comsats Wah Islamabad, Aug 2023
- › Our project "Crime-Sniffer" was among the top 2 out of 158 submissions.

### Google Cloud Skills Badges

| [2024](#)

- › Earned badges including Introduction to Generative AI, Introduction to Image Generation, Encoder-Decoder Architecture, Attention Mechanism, Responsible AI, Prompt Design in Vertex AI, and Large Language Models.