# **Muhammad Mudassir Azhar**

## **Associate ML Engineer**

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**GitHub:** <a href="https://github.com/mrmudasir05">https://github.com/mrmudasir05</a> <a href="Portfolio:https://portfolio-three-sooty-99.vercel.app/">Portfolio: https://portfolio-three-sooty-99.vercel.app/</a>

#### **SUMMARY**

ML Engineer with hands-on experience in ML model development, deployment, and LLM-based applications. Skilled in Python, TensorFlow, and data visualization with a strong portfolio of real-world projects

#### **EDUCATION**

### **Bachelor's in Artificial Intelligence (CGPA: 3.74/4.0)**

2021 - 2025

The Islamia University of Bahawalpur

#### **EXPERIENCE**

ML Engineer Intern | DeepEmbed | Bahawalpur, Pakistan

(Aug 2023 - Dec 2024)

Gained hands-on experience with machine learning algorithms, model evaluation, tuning, and optimization.

Python Intern | Enigmatix (Pvt) Limited | Bahawalpur, Pakistan (May 2023 – Sep 2023)

Developed proficiency in Python programming, data structures, and OOP concepts.

#### **SKILLS**

- **Programming:** Python (Pandas, Numpy, Matplotlib, Seaborn, Scikit learn, TensorFlow, Pytorch Basics).
- Data Science: Exploratory Data Analysis, Data Visualization, Cleaning, Statistical Analysis, Data Engineering.
- Machine Learning: Supervised and Unsupervised Learning, Neural Networks, NLP, LLM Applications, RAG.
- Tools: SQL, Git, Streamlit, Microsoft Azure (Basics), Kaggle, Google Colab.

## **SOFT SKILLS**

## **ACHIEVEMENTS**

- Problem Solving
- Critical Thinking
- Communication (Verbal & Written)
- Time Management

- Participated in  $M(IT)^2$  2025 Winter Contest
- Participated in AI Bootcamp at DeepEmbed Lab %.
- Delivered Python Workshop for ACM-IUB.
- Python Team Member, ACM IUB Chapter 1.

#### **PROJECTS**

## Virtual Try-On System – Final Year Project:

Engineered a cloud-based AI try-on system using pose estimation, segmentation, and image synthesis; integrated ReactJS frontend with Ngrok-powered inference for realistic virtual fitting.

- Hematology Analyzer using Machine Learning:

Processed animal cell images using OpenCV and PCA and trained a machine learning model to classify normal vs. abnormal cells, enhancing diagnostic accuracy with Plotly/dash as frontend.

Cyanobacteria Classification:

Implemented an EfficientNet-B0 deep learning model to classify 13 cyanobacterium types from microscopy images; expanded the dataset by scraping 3 additional classes online, addressed class imbalance using weighted loss and augmentation, and improved accuracy by 15%.

- AI Analyst - LLM-Powered Data Visualization Tool:

Developed an AI assistant that converts natural language queries into dynamic EDA visualizations using LLMs, generating Python code with Pandas and Seaborn for tasks like chart creation.

Pakistani Legal Chatbot:

Created an AI-powered legal assistant using LangChain, Groq LLM, FAISS, and HuggingFace embeddings to provide real-time, document-grounded answers to Pakistani law queries, with admin-controlled updates and RAG-based QA.

Server Log Management using Streamlit:

Built a real-time server log management system servers using Streamlit, regex, and Plotly to enable interactive monitoring and dynamic visualizations.

- Countries' Poverty Analysis using Streamlit:

Developed a Streamlit dashboard for global poverty analysis, applying data cleaning and feature selection; included multi-select filters and visualizations to explore key economic indicators.

## **CERTIFICATIONS**

-	Data	Analys	is with	Python ·	- IBM
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- Certificate in Artificial Intelligence
- Data Visualization with Matplotlib & Seaborn (Enhanced) from Coursera
- Azure AI Fundamentals Microsoft
- Artificial Intelligence (ML, DL, Communication) NAVTTC
- Python for Machine Learning IBM

February 2025

**November 2024** 

November 2023

September 2023

September 2023

August 2023