

MAHAM ZAFAR

AI / Machine Learning Engineer · Generative AI · LLMs & RAG · Deep Learning · Python

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PROFESSIONAL SUMMARY

Software Engineering graduate specializing in **Artificial Intelligence**, **Machine Learning**, **Deep Learning**, and **Generative AI**, with hands-on focus on **Large Language Models (LLMs)**, **Prompt Engineering**, and **Retrieval-Augmented Generation (RAG)**. Experienced in building real-world AI applications using **Google Gemini**, **Streamlit**, **TensorFlow**, **PyTorch**, **React**, **FastAPI**, and **MongoDB**. Passionate about solving real-world business problems through intelligent, AI-powered software and turning research-grade models into production-ready systems.

TECHNICAL SKILLS

Programming	Python · C++ · Java · SQL · JavaScript · MySQL
AI & ML	Machine Learning · Deep Learning (CNN, LSTM, GRU) · Generative AI · LLMs · Vision-Language Models (VLMs) · Prompt Engineering · RAG · NLP · Digital Image Processing · Intelligent Document Processing (IDP)
Frameworks/Libs	TensorFlow · Keras · PyTorch · Google Gemini API · Donut Transformer · FastAPI · Streamlit · Pandas · NumPy · Matplotlib · Plotly
Databases	MongoDB · MySQL · Oracle SQL
Developer Tools	Git · GitHub · Google Colab · CUDA · Ngrok · VS Code · Jupyter Notebook · PyCharm · MS Office
Languages	English · Urdu · Punjabi
Interests	Artificial Intelligence · Data Science · Software Development · Technology Trends · Career Growth

EDUCATION

B.Sc. Software Engineering — University of Engineering & Technology (UET), Taxila · GPA 3.67 / 4.0	2022 – 2026
F.Sc. Pre-Engineering — Punjab Group of Colleges, Kabir Wala · 95.91% – 3rd Position, Multan Board	2020 – 2022

PROFESSIONAL EXPERIENCE

Data Analyst Intern — Punjab Group of Colleges, Kabir Wala	Jun 2025 – Aug 2025
- Analyzed and cleaned large student performance and attendance datasets using Python and Excel, raising reporting accuracy and consistency. - Produced summary reports and partnered with faculty to standardize records and surface actionable academic insights.	
Exploratory Data Analysis Intern — AI Community of Pakistan (AICP) · Remote	Jan 2024 – Mar 2024
- Performed exploratory data analysis in Python (Pandas, NumPy, Matplotlib) to extract trends and insights from raw datasets. - Delivered weekly analysis tasks on schedule and earned a formal appreciation letter for performance.	
Python & AI Developer (Freelance) — Fiverr · Remote	Mar 2023 – Present
- Built and shipped freelance Python solutions spanning automation scripts, data analysis, and machine learning tooling for global clients. - Sustained strong client satisfaction through timely, well-documented delivery and clear technical communication.	

FINAL YEAR PROJECT — FEATURED

DonutDoc – Intelligent Document Processing (IDP) System using Vision-Language AI	Sep 2025 – Present
<i>Sponsored by the National Aerospace Science & Technology Park (NASTP) React · Vite · Tailwind CSS · Node.js · Express.js · FastAPI · PyTorch · Donut Transformer · MongoDB · Mongoose · Google Colab (CUDA) · Ngrok</i>	
- Built an end-to-end, OCR-free IDP platform that automates document digitization by extracting structured data directly from images and PDFs into JSON using a Vision Encoder-Decoder (Donut Transformer) model. - Architected a scalable multi-tier system — React frontend, Node.js API gateway, GPU-accelerated FastAPI inference engine, and MongoDB backend — with asynchronous communication and tenant-isolated data storage. - Enabled processing of scanned documents, handwritten forms, and multi-page PDFs; designed a flexible MongoDB schema and heuristic validation layer to maximize extraction completeness across heterogeneous formats.	

FEATURED AI PROJECTS

AI Interview Coach [Python](#) · [Google Gemini](#) · [Streamlit](#) · [SQLite](#) · [Plotly](#) · [FPDF](#)

- Developed an AI-powered interview-prep platform featuring **resume parsing**, job-description analysis, and **Gemini-generated** questions with automated answer evaluation.
- Added an interactive **Plotly** performance dashboard, interview-history tracking, and exportable professional **PDF** reports.

AI Research Assistant [Python](#) · [Google Gemini](#) · [RAG](#) · [Streamlit](#)

- Built a context-aware research assistant using **RAG** for semantic document search, paper summarization, and grounded question answering.

DocuMind AI [Python](#) · [Google Gemini](#) · [Streamlit](#) · [RAG](#)

- Created a multi-document intelligence tool enabling context-aware search and AI summarization across large document collections.

Research Paper Summarizer [Python](#) · [Gemini](#) · [NLP](#)

- Automated summarization of research papers, extracting objectives, methodology, results, and conclusions into concise structured digests.

Facial Expression Recognition [TensorFlow](#) · [CNN](#) · [Deep Learning](#)

- Engineered a **CNN** model classifying seven facial emotions at **80% accuracy**, optimized with Batch Normalization and Global Average Pooling.

LEADERSHIP

General Secretary — Artificial Intelligence Community of Pakistan (AICP) | **Graphics Lead** — Software Business Society (SBS) | **Team Lead** — Multiple AI Projects

CERTIFICATIONS

ChatGPT Prompt Engineering & LangChain for LLMs (DeepLearning.AI) · **Supervised Machine Learning & Advanced Learning Algorithms** (Stanford / Andrew Ng, Coursera) · **Crash Course on Python & Operating Systems with Python** (Google)

AWARDS & ACHIEVEMENTS

3rd Position – Multan Board (Intermediate, 95.91%) · PEC Merit Scholarship · Punjab Group of Colleges Merit Scholarship · Prime Minister Laptop Award · Merit Admission to UET Taxila