

Muhammad Mobeen

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SUMMARY

Entry Level Software Engineer with a strong foundation in **Python development** and **applied Machine Learning**. Demonstrated strong problem solving skills in a fast paced environment through multiple **first-place** finishes in Inter-University competitions. Recognized for academic excellence as a **Dean's List** member for consecutive semesters.

SKILLS

Programming Languages: Python, JavaScript, Java, YAML, HTML, CSS

Backend: FastAPI, Flask, Django, Express Js, Node Js

Machine Learning: Tensorflow, Keras, PyTorch, Scikit-learn, Transformers, LangChain

Bonus Skills: MERN Stack, React Js, MongoDB, SQL, Streamlit, TailwindCSS, C++

EXPERIENCE

Dost | ML-Intern (Paid)

August-2024 - Present

- **Fine Tuned** Large Language Models (LLM) on private company invoices for increased accuracy in structured invoice JSON generation.
- Proposed and developed an Intelligent search mechanism using a **RAG** pipeline, allowing customers to find documents through natural language querying.
- Created a CDC **microservice** to synchronize data between MongoDB and Google BigQuery, helping in real-time analytics from invoice data.
- Engineered **LLMs** including **BERT** and **Attention Models** to analyze invoices and find accurate discrepancies in order to find potential fraudulent invoices.

10Pearls | Data Science Intern

September-2024 - November 2024

- Developed customer churn prediction model using machine learning algorithms, achieving **90%** accuracy in identifying at-risk customers.
- Built **RAG-based** natural language interface, coupled with **Text2SQL** model enabling real-time report generation from the database.
- Collaborated in weekly sync-ups and code review sessions to ensure code quality, share insights, and implement best coding practices for maintainable and efficient software development.

AIM Lab | AI-Intern

June-2024 - August 2024

- **Co-led** a research initiative with 4 sophomore students, focusing on emotion detection via video and speech analysis; enhanced model accuracy by 20% and **communicated** findings to the project supervisor.
- **Achieved** a 40 ms response time on the emotion feedback system utilizing self trained models.
- Mapped 7 basic detected emotions to positive and negative personality traits to quantify **soft skills**.

KK Solutions | Software Engineer Intern

May 2024 – June 2024

- Built responsive UI components with React.js and JavaScript, implementing modern web development practices.
- Managed complex application state using Redux and React hooks, implementing efficient data flow patterns

FAST NUCES | Teaching Assistant (Paid)

January 2023 – January 2024

- Teaching Assistant for [CS-2001] Data Structures ('A').
- Teaching Assistant for [CS-2009] Design & Analysis of Algorithms ('A+').

PROJECTS

InterviewerPro | [Demo](#)

FastAPI | Tensorflow | Librosa | OpenCV | React JS

Streamline the hiring process by providing an automated screening layer

- Developed a web based AI Agent to detect emotions from **live** facial and audio input streams.
- Utilized **Llama 3.1** to parse through candidates CV and generate personalized interview questions.
- Evaluated the candidates emotions over time throughout the interview process to map them into soft skills.

IntelligentSearch

FastAPI | Streamlit | RAG | LangChain | OpenAI

RAG Based Document Searching

- Search system using **Retrieval-Augmented Generation** (RAG) with a self-querying retriever to infer metadata and narrow the search space dynamically.
- The system retrieved sensitive user invoice data from natural language querying, enabling line item queries that were not possible directly through the database.

EDUCATION

FAST National University of Computer & Emerging Sciences

Islamabad, Pakistan

B.S. in Computer Science

Expected Graduation, May 2025

- **GPA:** 3.46/4.00

- **Awards & Honors:** Winner NUST Science Bee X Speed Programming and AIRTECH '24 DataQuest, Dean's List