SHAHMEER KAMRAN

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Profile

I am a **Machine Learning Enthusiast** specializing in **fine-tuning large language models (LLMs), Retrieval-Augmented Generation (RAG), and LangChain** to build scalable AI solutions. With hands-on experience in **Python, TensorFlow, and Scikit-Learn**, I follow **best practices** to ensure **efficient model optimization, data preprocessing, and feature engineering**. Passionate about **LLMs, prompt engineering, and generative AI**, I continuously refine my skills to develop **impactful, real-world AI applications**.

Skills

Machine Learning & AI
- LLMs & Fine-Tuning: RAG, LangChain, Chroma DB, Prompt Engineering, RLHF, Model Optimization
- Deep Learning: Transformer Models, Attention Mechanisms, Sequence Modeling
- AI Libraries: PyTorch, TensorFlow, Hugging Face, Scikit-Learn, Keras

Full-Stack Development (MERN)
- Frontend: React.js, Tailwind CSS, Responsive Design
- Backend: Node.js, Express.js, RESTful APIs
- Tools: Git, GitHub, Vercel

Programming Languages
- Python , JavaScript, SQL, C++

Data Analysis & Engineering
- Data Handling: Pandas, NumPy, Feature Engineering, Efficient Preprocessing
- Databases: SQL, MongoDB, Firebase

Professional Experience

ByteSight Pvt Ltd
MERN Stack Intern

islamabad

- Developed and styled responsive front-end interfaces using React.js and Tailwind CSS.
- Integrated APIs and enhanced user experience with dynamic, interactive components.
- Collaborated with team to maintain code quality and implement UI improvements.

RASTA TECH
AI Engineer intern

remote

- Improved ML/DL models to enhance chatbot responses and user experience.
- Preprocessed conversational data, extracted relevant features (like intent, sentiment), and evaluated model performance.
- Built and fine-tuned models using PyTorch and scikit-learn for tasks like intent classification and response generation

Education

COMSATS University
Bachelor's in Computer Science

Certificates

- AI for Public Health 🔗
- Fundamentals of AI Agents Using RAG and LangChain 🔗
- Generative AI Advance Fine-Tuning for LLMs 🔗
- Generative AI and LLMs: Architecture and Data Preparation 🔗

Projects

MarkVista – AI-Powered Crypto Prediction & Risk Management Platform
Final Year Project | FastAPI, Python, ML Models, React JS, MySQL, Figma, CoinGecko API, Postman

- **Developed** ML prediction models for crypto price prediction with real-time market data
- **Engineered** user-configurable risk profiles to manage portfolio risk dynamically
- **Integrated** broker APIs for automated trading execution with responsive risk controls
- **Visualized** analytics through a dynamic portfolio dashboard
- **Built** secure infrastructure and simulated community Q&A
- **Streamlined** user workflows into a unified interface

Private Document Summarization with RAG, LangChain, and LLMs
Fundamentals of AI Agents Using RAG and LangChain certification project | IBM Watsonx.ai, LangChain, Hugging Face Embeddings, Chroma DB, LLMs, Python

- Built a secure **RAG pipeline** using **LangChain**, **Chroma DB**, and **Hugging Face** embeddings to summarize private documents locally.
- Integrated **IBM Watsonx.ai** LLMs (FLAN-UL2, Llama-3-70B) for summarization and Q&A with prompt tuning and memory.
- Created a context-aware chatbot using **RetrievalQA** and **ConversationalBufferMemory**.
- Automated internal document analysis, reducing manual review time while maintaining privacy compliance.

RAG-based Content Evaluation for Children's Media
Fundamentals of AI Agents Using RAG and LangChain certification project | PyTorch, BERT, Hugging Face, Scikit-learn, Matplotlib

- **Embedding Generation**: Used BERT from Hugging Face's Transformers library to generate embeddings for song lyrics and predefined questions.
- **Similarity Measurement**: Implemented dot product and cosine similarity to measure the relevance between song embeddings and question embeddings.
- **Visualization**: Applied t-SNE for visualizing high-dimensional embeddings in a 3D space to analyze clustering and patterns.
- **RAG Workflow**: Combined a retriever (to fetch relevant embeddings) and a generator (to provide responses) for efficient content evaluation.

Air Quality Analysis & Modeling – Bogotá Pollution Data
AI for Good Certification Project | Python, Pandas, NumPy, Scikit-learn, Keras, Matplotlib, Seaborn, GeoPandas

- **Cleaned** multiyear pollution, weather & location data from public sources
- **Analyzed** trends using **correlation**, **time series**, and **geospatial** visualizations
- **Imputed** missing values using **linear interpolation**, **KNN**, and **neural networks**; evaluated with **MAE/RMSE**
- Developed a **hybrid model** combining **KNN** and **neural networks** for robust pollution estimation
- **Trained** and validated models using **cross-validation** at under-monitored sites
- **Visualized** results with **GeoPandas**, **Folium**, and a **Jupyter dashboard**

Cold Email Generator for Business Outreach
Personal project | Groq API, LangChain, Streamlit, Chroma DB, Python (Llama-3.1-8B, Web Scraping, JSON Parsing)

- Built an end-to-end tool to generate personalized B2B emails by analyzing job postings.
- Scraped career pages and extracted job info using **LangChain** + **Groq API (Llama-3.1-8B)**.
- Parsed data into JSON, matched with portfolio links via **Chroma DB** for contextual retrieval.
- Developed a **Streamlit UI** for input and email generation.
- Tuned prompts to simulate a business development tone.