USAMA SHAKEEL

AI ENGINEER

Artificial Intelligence Undergraduate (2021-2025)

Portfolio Website GitHub LinkedIn

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SUMMARY

AI Engineer specializing in ML solutions, with expertise in Deep Learning, NLP, Computer Vision, Generative AI and Agents. Expertise in LLMs LLaMA, Mistral, GPT, Claude, Gemini, Qwen-VL, Gemma and Ollama, llama.cpp (for local, private use) for developing advanced AI agents. Proficient with Groq, OpenAI, Together, (RAG), fine-tuning, chatbots and prompt engineering to develop intelligent, context-aware systems. Experienced in agent-based automation using frameworks like LangChain, LlamaIndex, LangGraph and CrewAI. Proficient in advanced applications such as image generation, vedio/image classification, virtual try-ons also include image processing predictive modeling as well as deploying scalable AI models for real-world applications. Skilled in solving complex technical challenges.

WORK EXPERIENCE

ENDEVSOLS AI Developer 2023-2024

- **Digitalaalim (Islamic AI Chatbot)** Developed a GPT-4-based chatbot for Quran and Hadith queries, ensuring theological accuracy and seamless user interaction on digitalaalim.in
- **Medical Chatbot** Fine-tuned LLama 2 (13B) for medical dialogues, enhancing patient-doctor interactions with accurate and real-time AI-driven responses.
- **Automated Pronunciation Evaluation** Developed an AI-powered Arabic letter pronunciation using Whisper, LLaMA3 with Groq API. The model transcribes spoken input and compares it to reference pronunciations, providing real-time feedback on accuracy. Fine-tuned Whisper-small for Arabic speech recognition and integrated LLaMA 3 for automated pronunciation evaluation.
- **Health & Food Analyzer for Healthcare** Developed a AI App that analyzes food, fruit, or drink images to provide personalized health recommendations. Using LLM, LangChain, it extracts insights based on user-uploaded images and health conditions (e.g., diabetes, fever). The app delivers concise, actionable dietary advice, ensuring informed food choices with persistent data visibility throughout the session
- **AI Career Advisor** An AI-powered system guiding students to the right career through academic, interest, and personality analysis, delivering a Bright Career Report with personalized pathways, learning plans, and learning resources, skill Gap Analysis and job market insights.

Vertekx AI Developer 2025

- **OCR Document (Azure & Gemini)** Developed a secure OCR pipeline using Azure Custom model for sensitive documents (credit cards, passports) and Gemini 2.5 for general document parsing.Built a FastAPI backend deployed on a dedicated server and integrated with a React frontend on a custom domain.
- **TeachMate-AI – Research Assistant Chatbot** Built an RAG-powered AI chatbot to assist professors with research, featuring tool/function calling, web search, and persistent memory.Enabled saving, deleting, and versioning of key research responses for streamlined academic collaboration.

SELF PROJECTS

- **AI Marketing Agency** Develop a React & FastAPI web app leveraging **custom agents** with LLM, function calling to automate Google Ads management. It handles auto campaign setup, auto audience targeting and ad scheduling, and create image ads using (Flux), reducing costs, saving time, and minimizing manual effort.
- Designed and implemented custom **transformer models**, **cnn** Model from scretch without any library custom **hybrids models**, and advanced **neural architectures**, optimizing performance for NLP, computer vision, and time-series analysis.

EDUCATION

Degree	Institution	Grade/CGPA	Year
BSAI	Comsats University Islamabad Institute	3.00/4	2021-2025
Class XII	Sir Syed College Wah Cantt	727/1100	2018-2020
Class X	F.G Public High School Wah Cantt	831/1100	2016-2018

SKILLS

Languages Python, SQL
Frameworks PyTorch, TensorFlow, Keras, OpenCV, Scikit-learn, LangChain,LangGraph, Lamaindex, Hugging Face, FastAPI, crewAI, OpenAI, Groq, Together
Tools Linux, Jupyter Notebook, PyCharm, MS Office
Libraries Keras, Pandas, Matplotlib, SciPy, CuDA