ARSALAN SHAIKH

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PROFILE

Data Scientist skilled in fine-tuning OpenAI and Gemini models, MLOps, generative AI, and applied ML across domains like medical imaging and financial analytics, focused on scalable and production-ready AI solutions.

EXPERIENCE

Software Engineer Intern (Remote) | Dictation Daddy

Sep 2025 - Present

- Fine-tuned **OpenAI Whisper Large** for domain-specific transcription, improving accuracy in production.
- Optimized inference pipeline, reducing latency by 40%+ (1s \rightarrow 600ms) for near real-time response.
- Deployed scalable APIs with monitoring, logging, and fault-tolerance for reliable integration.
- Integrated **Gemini 1.5 LLM** to deliver adaptive text formatting (formal/informal) based on context.

Machine Learning Intern (Remote) | Infosys Springboard

Oct - Dec 2024

- Developed and optimized a CNN model for Iris Eye Tumor Detection, achieving 92% accuracy.
- Processed and augmented 10K+ images, improving model reliability and reducing false positives by 18%.
- Built a scalable, real-time diagnosis pipeline with full project documentation and CI/CD integration.

PROJECTS

Ai Hybrid Chatbot (Demo)

Aug - Sep 2025

- Built a hybrid AI chatbot combining Groq LLM (Llama-3.1) with a knowledge-base retriever for real-time.
- Achieved < 0.8s latency and improved retrieval accuracy using advanced exact, fuzzy, and keyword search strategies.
- Deployed a **scalable production-ready** solution via Flask REST APIs on **Render**, ensuring high availability and rapid response.

Aimers - AI Interview Platform (Demo)

Jan - Mar 2025

- Developed an **AI-powered interview platform** for **semantic answer evaluation**, personalized feedback, and **topic-wise recommendations**.
- Built a BERT-based evaluator (90%+ expert-score alignment) with a TF-IDF + cosine-similarity recommender improving relevance by 40%.
- Optimized FastAPI backend (1.2 s \rightarrow 0.3 s latency) and ensured reproducibility with MLflow & DVC.

SKILLS

- Data Science / ML / DL: Regression, Classification, Clustering, Ensemble Methods, PCA, CNN, Model Tuning, Neural Networks, RNN/LSTM/GRU, Feature Engineering
- Gen Ai: Groq LLM (Llama), Gemini 1.5, OpenAI GPT APIs, Hugging Face Transformers, LangChain, OpenAi Whisper-Large (ASR), RAG pipelines, Prompt Engineering.
- NLP: Text Preprocessing, Tokenization, Word2Vec, BERT, NLTK, spaCy, Text Classification
- Data Analysis & Visualization: EDA, Matplotlib, Seaborn, Power BI, SQL (MySQL), NoSQL (MongoDB)
- Programming & Frameworks: Python (NumPy, Pandas, SciPy, Scikit-Learn, TensorFlow, Keras, PyTorch, FastAPI), React
- MLOps & Deployment: CI/CD, Docker, MLflow, DVC, Render, Netlify, Git/GitHub

EDUCATION

Marathwada Institute of Technology, Aurangabad