Simran Achra

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EXPERIENCE

Machine Learning Intern July 2025 – Present
Jantrah Tech *Remote*
- Built real-time AI applications integrating LLMs, LangChain RAG pipelines, and vector databases for semantic search. Developed and deployed full-stack solutions (Flask backend, React.js frontend) for live data interaction.

Data Scientist & Business Development Associate Aug 2024 – July 2025
Innovtech Studio *Part-Time*
- Led project-based data science engagements from client acquisition to deployment, handling proposal writing, meetings, and deadline management while contributing hands-on to data collection, preprocessing, model development, and deployment—consistently achieving 100% client satisfaction.

Machine Learning Intern June 2024 – Aug 2024
Web3gle *Onsite*
- Improved model accuracy by 26% (71% → 97%) through data augmentation and fine-tuning, developing and deploying ML models (regression, decision trees, random forests, CNN, RNN) with Git and API integration.

TECHNICAL SKILLS

- **Machine Learning & AI:** LLMs, RAG, NLP, Computer Vision, Image Processing, Fine-tuning, CNN, RNN
- **Frameworks & Libraries:** TensorFlow, PyTorch, Scikit-Learn, Hugging Face Transformers, Streamlit
- **Data Analysis & Visualization:** Pandas, NumPy, Matplotlib, Seaborn, Power BI
- **Programming Languages:** Python, JavaScript
- **Web Development & APIs:** Flask, FastAPI, React.js, HTML, CSS, Bootstrap, Tailwind, SQL Database

EDUCATION

Bachelor of Computer Science Aug 2021 – July 2025
Sukkur IBA University

PROJECTS

Generative AI-Based Image Manipulation Detection | Python, React.js, Vision Transformers (FYP)
- Building a real-time web app to detect deepfake images using a pretrained SegFormer model on DEFACTO and IMD2020 datasets, processing 1K+ images with 75% IoU.
- Implemented grayscale mask localization and integrated model inference with React.js and Flask/FastAPI.

Cricket Chatbot | Python, LangChain, Ollama, Mistral, Streamlit
- Built a high-performance Pakistan cricket team Q&A bot using a LangChain RAG pipeline (ChromaDB, Mistral via Ollama) with a Streamlit UI, achieving a 5s query response time.

Multi-modal AI System for Disease Diagnosis | Python, CNN, VAE, ML Models
- Developed a multi-modal AI system combining ML on health records and CNNs on X-rays to diagnose heart disease, diabetes, stroke, and pneumonia.

Facial Emotion Recognition | CNN, MobileNet, Streamlit
- Built a real-time emotion detection system using CNN and MobileNet, classifying 7 emotions from grayscale images with a Streamlit UI.

University Chatbot | Python (Gemini)
- Built a chatbot for Sukkur IBA University using Gemini 1.5 Pro and LangChain for accurate information retrieval.

Marketing Campaign Analysis Dashboard | PowerBI
- Created an interactive Power BI dashboard to analyze the performance metrics of various marketing campaigns, including spend, conversion rates, and ROI.

CERTIFICATES

- Generative AI Training (Pak Angles)
- LangChain for LLM Application Development (DeepLearning.AI)
- Deep learning (Coursera)

VOLUNTEER EXPERIENCE

- Youth Leadership Conference (YLC) Alumni
- Microsoft Learn Student Ambassador(MLSA) Club - Outreach Lead
- Lead AI and Robotics Society, Sukkur IBA University