# Anas Saleem

AI Developer & Software Engineer

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### **Professional Summary**

AI Developer and Data Analyst with expertise in machine learning, deep learning, and computer vision. Experienced in building intelligent systems, training ML models, and developing AI chatbots with NLP pipelines. Proficient in Python, TensorFlow, LangChain, and modern AI frameworks with a focus on scalable analytics and predictive modeling.

#### Technical Skills

- Programming & Tools: Python, MongoDB, Git, Docker, VS Code, Jupyter Notebook
- AI & Machine Learning: TensorFlow, Keras, Scikit-Learn, Computer Vision, NLP, CNN-RNN, YOLOv11
- Frameworks & Libraries: LangChain, Pandas, NumPy, OpenCV, Hugging Face, Django, Groq
- Data Analysis: EDA, Feature Engineering, Data Visualization, Matplotlib, Seaborn, Plotly

## Experience

Machine Learning Intern November 2024 – 31st Jan AugAI

- Developed AI-powered solutions and contributed to data processing, model evaluation, and deployment.
- Applied advanced ML models to solve real-world problems with focus on performance optimization.
- · Worked on company projects gaining professional experience in collaborative development environment.
- Gained hands-on experience in training and optimizing ML models for performance and accuracy.

# Machine Learning & AI Engineer – AugAI 1st February – Present

- Worked on AI and machine learning projects, applying advanced models to solve real-world problems. Gained hands-on experience in training and optimizing ML models for performance and accuracy.
- Worked on company projects that helped in gaining professional Experience.

Languages

- English: Professional Proficiency

Aspire College, Renala Khurd

Intermediate Pre-Engineering 2020-2022

• Urdu: Native

# **Key Projects**

- LangChain & LangGraph RAG with Tools: Built intelligent RAG application using Wikipedia, LLM-Math, and Tavily search for real-time web searching and calculations. Implemented LangGraph for autonomous decision-making in tool selection and query routing.
- LiveKit Voice Assistant with Groq AI: Developed real-time voice assistant with Groq model integration and Deepgram for TTS/STT, enabling seamless voice interactions with edge computing for enhanced performance and low-latency responses.
- •LLM Fine-tuning with LoRA/QLoRA: Fine-tuned large language models on custom datasets using quantization techniques (LoRA & QLoRA) for domain-specific chatbot development, optimizing model performance while reducing computational requirements.
- AI Chatbot with RAG & Vector Database: Engineered advanced chatbot using LangChain and Gemini with Retrieval-Augmented Generation. Built Chroma vector database with Hugging Face embeddings for semantic search and context-aware responses.
- Medical Image Classification with CNN: Developed CNN models for Brain Tumor Classification using MRI datasets and Plant Disease detection. Achieved high accuracy using TensorFlow, Keras with advanced deep learning architec- tures for medical diagnostics.
- Computer Vision & NLP Integration: Created gesture volume control, face anonymization, and skeleton detection using OpenCV and MediaPipe. Integrated multimodal AI for data processing and developed PHP code assistant with Gemini AI for code generation and debugging.

#### Education

■BS Computer Science 2023–2027 University of Education, Lahore