

FAKHIR HASSAN SHABA

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PROFESSIONAL SUMMARY

Software Engineering student with hands-on experience in data integration, ETL pipeline development, and applied AI. Proficient in Python, SQL, and data analysis using Pandas and NumPy. Experienced in building data pipelines, performing data cleaning and transformation, and developing AI/ML solutions. Skilled in AWS cloud services, data visualization with Power BI, and vector database integration.

EDUCATION

Bachelor of Science in Software Engineering | COMSATS University Islamabad, Wah Campus Wah Cantt, Pakistan
Sep 2022 – Jun 2026

- Relevant Coursework: Artificial Intelligence, Database Systems, Data Structures & Algorithms, Data Science, Operating Systems, Software Engineering
- CGPA: 3.21 / 4.00

TECHNICAL SKILLS

Languages & Databases: Python, SQL, JavaScript

Data & Analytics: Pandas, NumPy, Scikit-learn, TensorFlow, Keras, Data Cleaning, ETL/ELT Pipelines, Data Transformation

Visualization & BI: Power BI, Tableau, Matplotlib

Cloud & Infrastructure: AWS (S3, Lambda, EC2), Pinecone (Vector Database), Git

AI/ML & Frameworks: LangChain, OpenAI API, RAG Architecture, OpenCV, Open3D, TripoSR, Wan-AI/Wan2.2, MIDAS

WORK EXPERIENCE

AI Engineer Intern | Low Code Solution Dubai, UAE (Remote)
Feb 2025 – Aug 2025

- Designed and implemented data integration pipelines to ingest, clean, and transform structured and semi-structured data from multiple sources for AI-powered applications
- Built ETL workflows for a RAG-based legal document retrieval system, processing and embedding legal documents into Pinecone vector database using LangChain and Python
- Performed data quality assurance and validation on document embeddings, ensuring accurate semantic search results for lawyer workflows
- Developed AI-powered hospital receptionist agent handling daily calls with inbound and outbound capabilities, requiring data processing and analysis of call records
- Implemented intelligent callback system leveraging data-driven logic to automatically re-engage customers who missed initial calls
- Collaborated with cross-functional teams to gather data requirements, document workflows, and optimize data pipelines for production deployment

Project Lead | ACM CUI Wah Chapter Wah Cantt, Pakistan
Aug 2025 – Nov 2025

- Directed development of the official ACM portal, managing full project lifecycle from requirements gathering to deployment
- Digitalized multiple manual data processes, improving operational efficiency through structured data management

- Coordinated cross-functional team of developers, strengthening project management and stakeholder collaboration skills

PROJECTS

RAG-Based Legal Document Retrieval System | Dec 2025

github.com/fakhirhassan/RAG_lawyer

- Built end-to-end data pipeline for ingesting, chunking, and embedding legal documents into Pinecone vector database for efficient retrieval
- Implemented semantic search enabling natural language queries across legal documents with high precision
- Performed data preprocessing and transformation on unstructured legal text to ensure data quality before embedding
- Tech Stack: Python, LangChain, Pinecone, OpenAI API, AWS

Tumor Detection from DNA Sequences | Aug 2025

github.com/fakhirhassan/Gene-Mutation

- Built classification model analyzing 1.3M+ DNA sequences, performing extensive data cleaning and feature engineering on genomic datasets
- Designed ETL pipeline to extract, transform, and load large-scale genetic data for model training using Pandas and NumPy
- Implemented K-Nearest Neighbors algorithm achieving reliable pattern recognition in high-dimensional genetic data
- Tech Stack: Python, Scikit-learn, Pandas, NumPy

ANIAD – Text to Animation Pipeline | Oct 2025 – Present

fakhirhassan.vercel.app/aniad

- Developing end-to-end data pipeline converting text descriptions to 3D animations using generative AI models
- Integrated TripoSR, MIDAS, and Wan2.2 for 2D-to-3D reconstruction, depth estimation, and text-to-animation generation
- Tech Stack: Python, Wan-AI/Wan2.2, TripoSR, MIDAS, Flask, Next.js

HONOURS & AWARDS

- 1st Place – Debugging Competition, Google Developer Groups on Campus (Nov 2025)
- 2nd Runner Up – HackXila Hackathon, UET (May 2025)
- 3rd Place – Debugging Competition, COMBITS – COMSATS Attock (Nov 2025)
- Best Ambassador Award – Bahria University Islamabad (Oct 2025) & COMBITS (Nov 2025)

LEADERSHIP & EXTRACURRICULARS

- Chairperson, Google Developer Groups on Campus – COMSATS Wah: Led campus developer community, organized technical workshops and debugging competitions
- Coordinator, ACM CodeHub – CUI Wah Chapter: Proposed and led initiative providing students with industry-like internship experience
- Advisor, COMSATS Literary Society: Guided society initiatives and mentored members in organizing literary events and activities
- Volunteer, Campus France Pakistan: Assisted at Education Fair promoting French higher education opportunities (Oct 2025)