

Saqib Ali Shah

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EDUCATION

Institute of Space & Technology

Bachelor of Science in Computer Science (3.86 GPA)

Islamabad, Pakistan

Sep 2016 – July 2020

EXPERIENCE

Software Engineer

Modern Intelligent Solutions

Jul 2024 – Dec 2025

Riyadh, Saudi Arabia(Remote)

- Architected "Imagini," a high-performance B2B leads platform housing millions of records; engineered a credit-based access system and streaming upload pipelines using FastAPI and React to ensure sub-second search responses.
- Developed an agentic RAG system for Mandumah (1.5M+ Arabic documents), utilizing hierarchical agent workflows and custom embedding optimization to handle complex linguistic nuances in academic texts.
- Engineered a secure natural language database interface for the Saline Water Conversion Corporation (SWCC) using LangGraph and Gemini, implementing strict intent classification to prevent unauthorized data modification.
- Designed an RFM-based customer segmentation engine for premium airport services, deploying predictive models to automate dynamic subscription plans and reduce operational costs.

Software Engineer

Voilabs

Nov 2023 – Feb 2024

France (Freelance)

- Fine-tuned DONUT transformer models for OCR-free extraction of French bill data, optimizing the architecture for mobile deployment via ONNX conversion.
- Integrated transformer-based machine learning models into Next.js applications, creating reusable components that improved AI feature integration speed.
- Built robust data processing pipelines using Python, Pandas, and NumPy, and fine-tuned neural networks to improve specific business use-case accuracy by 25%.

ML Engineer Intern

Ksoft

Aug 2022 – Sep 2022

Islamabad, Pakistan

- Implemented computer vision solutions using YOLO for real-time object detection tasks.
- Designed intuitive user interfaces using Figma and contributed to frontend development with React.js.

TECHNICAL PROJECTS

High-Scale Email Verification System | Python, GCP, Docker, Celery, FastAPI

- Engineered a multi-layered validation pipeline (DNS resolution, SMTP probing, and heuristics) that reduced verification costs by 90% compared to commercial providers.
- Implemented asynchronous workers and distributed task queues to process hundreds of thousands of emails concurrently while avoiding IP blacklisting.

Mandumah Multi-Doc Agent | LlamaIndex, Gemini Vertex AI, FastAPI, Python

- Developed an agentic RAG system to navigate 1.5M+ Arabic academic documents using a hierarchical meta-agent architecture and graph-based traversal.
- Optimized retrieval for complex Arabic linguistic nuances, leveraging tool-calling for automated document summarization and deep-dive query answering.

B2B Leads Platform (Imagini) | React, FastAPI, PostgreSQL, Redis, Celery

- Architected a scalable platform managing millions of Saudi-focused leads, featuring streaming data ingestion and a credit-based access system for B2B users.
- Optimized database indexing and caching to maintain sub-second search and filtering performance across massive datasets.

SWCC Natural Language Interface | LangGraph, Gemini Vertex AI, SQLAlchemy, Python

- Built a stateful, agentic SQL interface allowing secure database interaction via natural language for the Saline Water Conversion Corporation.
- Implemented strict security guardrails through intent classification and query simulation to prevent destructive operations like record deletion.

TECHNICAL SKILLS

Languages: JavaScript (ES6+), TypeScript, Python, SQL (PostgreSQL), HTML5, CSS3, Go

Frontend: React.js, Next.js, Redux, TailwindCSS, Material UI, Figma

Backend & Cloud: Node.js, FastAPI, Express.js, Docker, Kubernetes, AWS, Google Cloud Platform (GCP)

AI & Machine Learning: PyTorch, TensorFlow, LangChain, LangGraph, Gemini Vertex AI, OpenAI, RAG Pipelines

Databases: MongoDB, PostgreSQL, Redis, Pinecone, Weaviate, Milvus