

SAAIM ABDULLAH

Backend, Data & Cloud Software Engineer

+92 324 9923289 saaim.abdullah.work@gmail.com

linkedin.com/in/saaim-abdullah github.com/saaim12 [Portfolio](#) [Medium](#)

SUMMARY

Backend and data engineer (2+ years) building production APIs, event-driven ETL pipelines, and AWS-backed services. Delivered backend systems serving 1,000–3,000 daily users, real-time streaming pipelines (Kafka, Spark, Airflow), and RAG/ML services in Python and Django. Strong in REST API design, data warehousing, and containerized cloud deployment on AWS.

EXPERIENCE

Fitter Health

May 2026 - Present

Software Engineer (Backend / Data)

Spain / Remote

- Built backend systems and API services for a preventive health-tech platform using **Django** and **Next.js**, focused on scalable, maintainable product modules.
- Developed cloud-backed services on **AWS** using Redshift, SNS, SQS, ECS, RDS, S3, API Gateway, IAM, and VPC.
- Defined API contracts and backend workflows to improve product reliability, maintainability, and readiness for data-driven features.

Expertflow – Cisco UCCE Solution Partner

Jun 2024 – Feb 2026

Software Engineer (Backend / Cloud)

Lahore, Pakistan

- Built backend APIs serving **1,000–3,000 daily users** via scalable AWS-backed services, deployed as **Docker** containers on **AWS EC2** with IAM, VPC, and S3; configured delivery behind an **Application Load Balancer (ALB)** with rate-limiting and traffic controls.
- Designed and shipped an **event-driven ETL pipeline** with **AWS Lambda** and **S3**, automating ingestion and delivering analytics-ready datasets for reporting and ML workflows.
- Built transformation pipelines to standardize raw inputs, improving data quality and usability across systems.
- Developed a real-time voice/video **communication SDK (WebRTC)** and RESTful APIs integrating frontend clients, SDK modules, and third-party platforms.
- Implemented a chatbot workflow to improve first-response time, and delivered SQL-based analytics for actionable customer insights.
- Enhanced platform security via time-bound access controls, and collaborated across **Angular** frontend, backend, and SDK teams to deliver end-to-end product features.

PROJECTS

Real-Time E-Commerce ETL Pipeline | Kafka, PySpark, Airflow, Postgres [Article](#)

2026

- Built a **medallion-architecture** (bronze/silver/gold) streaming pipeline moving Kafka-published orders into a Parquet bronze layer on S3-compatible storage via PySpark Structured Streaming.
- Modeled a gold **star schema** (customer, product, date dimensions around a sales fact table) and orchestrated batch stages with an **Airflow DAG** on Docker Compose.

Multilingual, Multi-Tenant RAG Engine | Django, PostgreSQL, Local Embeddings, RAG [Article](#)

2026

- Built a production-style **RAG** backend with tenant-isolated retrieval, local multilingual embeddings, and grounded generation for a localization Q&A service on Django + PostgreSQL 18.
- Documented setup, database friction, and fixes in a companion article on running a Django RAG backend on PostgreSQL 18.

[Movie Recommender System](#) | *Python, FastAPI, scikit-learn, Airflow, Redis, Docker* Ongoing

- Building a production-ready movie recommendation service using MovieLens interaction data, item metadata, and modular training/serving pipelines.
- Implemented a hybrid approach combining content-based similarity, item co-occurrence signals, and popularity bias for cold-start stability.
- Developed **FastAPI** endpoints for health checks, personalized recommendations, similar-item retrieval, and model reloading; separated ingestion, feature engineering, training, evaluation, and serving layers.
- Added Docker Compose, optional Redis caching, API-key protected endpoints, structured logging, request tracing, and CI-ready testing workflows.

[Autoencoder Compression for Edge Devices](#) | *Python, TensorFlow, TF Lite Micro, Flask, AWS* 2025

- Developed an autoencoder to compress and reconstruct sensor data for lightweight edge-device communication, tuning latent-vector size for compact representation.
- Converted the encoder for microcontroller-side inference and exposed the decoder through a **Flask API** on AWS EC2 with S3 integration for encoded payload handling.

TECHNICAL SKILLS

Languages: Python, JavaScript, TypeScript, SQL, Java

Backend & APIs: Django, Django REST Framework, FastAPI, Flask, Node.js, Express.js, REST APIs, WebRTC, API Design

Data Engineering: ETL Pipelines, Apache Kafka, PySpark (Structured Streaming), Apache Airflow, Pandas, NumPy, Data Warehousing, Star Schema, Medallion Architecture

Cloud / DevOps: AWS (Lambda, EC2, ECS, S3, RDS, Redshift, SQS, SNS, API Gateway, IAM, VPC, ALB), Docker, Docker Compose, Git, CI/CD

Databases: PostgreSQL, MySQL, MongoDB, DynamoDB, Redis, Firebase

ML / AI: scikit-learn, TensorFlow, TensorFlow Lite Micro, RAG (Retrieval-Augmented Generation), Recommender Systems, Multilingual Embeddings

Frontend: React, Next.js, Angular, HTML/CSS

EDUCATION

COMSATS University Islamabad, Lahore Campus

Bachelor of Science in Computer Engineering

2021 – 2025

Lahore, Pakistan

Relevant coursework: Data Structures, Database Management, Computer Networks, Operating Systems, Software Engineering, Computer Architecture, Machine Learning.

CERTIFICATIONS

[AWS Cloud Technical Essentials](#)

Amazon Web Services, Coursera

Mar 2026

[Introduction to Data Engineering](#)

DeepLearning.AI, Coursera

Feb 2026

[Getting Started with Git and GitHub](#)

IBM, Coursera

Feb 2026