

SAAIM ABDULLAH

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PORTFOLIO

Education

COMSATS University Islamabad, Lahore Campus

2021 – 2025

Bachelor of Science in Computer Engineering

Lahore, Pakistan

Relevant Coursework

- Data Structures
- Database Management
- Computer Network
- Operating Systems
- Software Engineering
- Computer Architecture
- Machine Learning

Experience

Fitter Health

May 2026 – Present

Software Engineer

Spain / Remote

- Working on backend systems and API services for a remote health-tech platform, delivering scalable product features across distributed engineering workflows.
- Contributing to Django/Next.js based product modules and cloud-backed services using AWS infrastructure including Redshift, SNS, SQS, ECS, RDS, S3, API Gateway, IAM, and VPC.
- Supporting service design, API contracts, and backend workflows to improve product reliability, maintainability, and future data-driven features.

Expertflow – Cisco UCCE Solution Partner

Jun 2024 – Feb 2026

Software Engineer

Lahore, Pakistan

- Built an event-driven ETL pipeline using AWS Lambda and S3, automating data ingestion and enabling structured data delivery for analytics and ML workflows.
- Designed data transformation pipelines to standardize raw inputs, improving data quality and usability across systems.
- Developed a real-time communication SDK (voice/video), improving reliability and performance of client-side integrations.
- Implemented a chatbot system to enhance first-response time and streamline customer interactions.
- Deployed scalable backend services on AWS EC2 using Docker, managing IAM, VPC, and S3 integrations.
- Built RESTful APIs enabling seamless integration between frontend, SDK, and third-party platforms.
- Enhanced platform security via time-bound access controls and delivered SQL-based analytics for actionable customer insights.
- Collaborated cross-functionally across frontend (Angular), backend, and SDK teams to deliver end-to-end product features.
- Building backend APIs serving approximately 1,000–3,000 customers daily through scalable AWS-backed services.
- Configured production API delivery behind AWS Application Load Balancer (ALB), including rate-limiting and traffic-control measures to improve reliability and abuse resistance.

Projects

Recommender System | *Python, FastAPI, pandas, NumPy, scikit-learn, Apache 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 recommendation 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.
- Structured the system with separate ingestion, feature engineering, training, evaluation, and serving layers, with Apache Airflow support for scheduled workflows.
- Added Docker/Docker Compose setup, optional Redis caching, API-key protected endpoints, structured logging, request tracing, and CI-ready testing workflows.

- Autoencoder-Based Encryption Model for Edge Devices** | *Python, TensorFlow, TensorFlow Lite Micro, Flask, AWS*
- Developed an autoencoder model for compressing and reconstructing sensor data for lightweight edge-device communication.
 - Built preprocessing and training pipelines using Python and TensorFlow, tuning latent-vector size for compact representation.
 - Converted the encoder for microcontroller-side inference and exposed the decoder through a Flask API for cloud-side reconstruction.
 - Deployed the backend API on AWS EC2 with S3 integration for encoded payload handling and secure data processing.

Technical Skills

Languages: Python, JavaScript, TypeScript, SQL, Java
Backend: Node.js, Express.js, Django, Flask, REST APIs, WebRTC, API Design
Frontend: React, Angular, Next.js, HTML/CSS
Data Engineering: ETL Pipelines, Apache Airflow, Apache Kafka, PySpark, Pandas, Data Warehousing
Cloud/DevOps: AWS Lambda, EC2, S3, IAM, VPC, RDS, ECS, API Gateway, Redshift, Docker, Git, CI/CD
Databases: MongoDB, PostgreSQL, MySQL, Firebase, DynamoDB

Certifications

AWS Cloud Technical Essentials <i>Amazon Web Services, Coursera</i>	Mar 2026
Introduction to Data Engineering <i>DeepLearning.AI, Coursera</i>	Feb 2026
Getting Started with Git and GitHub <i>IBM, Coursera</i>	Feb 2026