

Omar Obaid Alkhamash

ML/AI Engineer - ML/AI Specialist - ML/AI Researcher - Data Analyst

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PROFILE

Artificial Intelligence graduate from the University of Jeddah with strong experience in machine learning, deep learning, and data analytics. Selected among the **top 1% of 23,000+ participants** in the **KAUST Academy** AI program. Built multiple end-to-end AI systems, including non-intrusive human activity classification via Wi-Fi signals, a multi-model cybersecurity dashboard for fraud detection, and a bilingual JEPA text-to-speech architecture. Former **Data Analyst Intern at Makkah Health Cluster**, working with healthcare data, SQL, and Power BI to generate AI-driven insights.

EDUCATION

University of Jeddah

Bachelor's Degree, Artificial Intelligence (GPA: 4.68/5)

Jeddah, Makkah, Saudi Arabia

Aug 2021 – Jul 2026

PROFESSIONAL EXPERIENCE

KAUST Academy AI Specialization Program Internship

KAUST (King Abdullah University of Science and Technology)

Nov 2025 – Present

Thuwal, Makkah, Saudi Arabia

- **Machine Learning Engineering:** Engineered advanced AI solutions as part of the on-campus artificial intelligence specialization internship at KAUST as part of the top 1% cohort (100 selected from 23,000+ applicants), specializing in advanced Machine Learning, Computer Vision, Natural Language Processing, and Reinforcement Learning across all 4 stages.
- Leveraged Python, linear algebra, and deep learning libraries (PyTorch, TensorFlow) to explore AI applications in the physical sciences and Graph Neural Networks.
- Implemented end-to-end MLOps pipelines using Docker and MLflow to streamline model deployment.

Data Analyst Intern

Makkah Health Cluster

June 2025 – Aug 2025

Makkah, Makkah, Saudi Arabia

- Analyzed 91,000+ raw patient records during the Hajj season, utilizing Power BI and SQL to develop 3 interactive healthcare reports.
- Built AI-driven predictive models utilizing Hajj patient datasets to forecast future healthcare trends and system demands.

PROJECTS

JEPA Text-To-Speech (Arabic & English)

Team Lead | Deep Learning & Speech Synthesis

- Developed a novel bilingual Text-To-Speech AI model handling 2 languages (Arabic and English) utilizing the Joint-Embedding Predictive Architecture (JEPA).

Human Activity Recognition via Wi-Fi CSI

Team Lead | Deep Learning & Signal Processing

- Engineered a full-stack AI application utilizing Wi-Fi signals to classify human activities without visual sensors, achieving 97% classification accuracy.
- Spearheaded synthetic data generation techniques that doubled the database size from 4,000 to 8,000 Wi-Fi signal images, significantly enhancing model robustness.

AI Financial Fraud Sentinel

Team Lead | Deep Learning & Cybersecurity

- Engineered a multi-model cybersecurity dashboard with Streamlit, utilizing Random Forest, PyTorch Autoencoders, and Isolation Forests to detect anomalous transactions.
- Automated a data pipeline to process 6.3M+ records with MLflow, achieving a 99.45% fraud detection recall rate on highly imbalanced data.

House Price Prediction and Clustering

Team Lead | Machine Learning & Full-Stack Development

- Built an end-to-end web application integrating predictive regression modeling for house pricing and K-Means clustering across 10+ property features for recommendations.

TECHNICAL SKILLS

Domains & Competencies: Software Engineering, Data Analysis, Business Intelligence, Project Management

Programming: Python, C++, SQL, Java, JavaScript (Node.js), Rust, GO, Object Oriented Programming (OOP)

AI & Machine Learning: Deep Learning, NLP, Reinforcement Learning (RL), Computer Vision, Generative AI, TensorFlow, PyTorch, Scikit-learn

Data & Visualization: Data Science, Power BI, NumPy, Pandas, Matplotlib, Seaborn

Tools & Cloud: GCP, Azure, AWS, MLOps, MLflow, Docker, Anaconda/Miniconda, Prompt Engineering

Languages: Arabic (Native), English (Fluent - IELTS Academic: 7.5 | STEP: 93)

COURSES

- The Advanced & Introductory AI Specialization Programs, KAUST Academy
- Deep Learning Specialization, DeepLearning.AI
- Advanced Pathways in Artificial Intelligence, SDAIA
- Microsoft Power BI Desktop for Business Intelligence, Maven Analytics