

OMAR ALGHANNAM

6th of october, Giza

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Education

Zewail City of Science and Technology

Bachelor of Science in Data Science and Artificial Intelligence — GPA: 2.8

Sep. 2024 – May 2028

6th of October City, Giza

Relevant Coursework

- Data Structures
- Python Programming
- Data Governance
- Database
- Probability
- Linear Algebra
- Data Acquisition
- OOP

Experience and Projects

CineMatch AI – Recommendation System (FastAPI, PyTorch)

March 2026

- Engineered a personalized AI movie platform using the TMDB API to construct dynamic user profiles based on real-time app interactions.
- Optimized candidate retrieval by utilizing TF-IDF and SBERT embeddings to instantly filter thousands of movies into highly relevant subsets.
- Built a hybrid ranking pipeline leveraging SVD collaborative filtering and a PyTorch Neural Network to score candidates via 64-dimensional embeddings.
- Deployed a scalable FastAPI/Supabase backend featuring automated model retraining pipelines, continuously verified through NDCG@10 and Precision@10 metrics.

Mini Database Engine (CSharp, SQL, Systems Design)

Jan 2026

- Implemented core DBMS components: storage engine, B+ tree indexing, and SQL query execution (SELECT, JOIN).
- Built cost-based query optimizer (index vs full scan).
- Designed transaction manager with ACID guarantees, locking, and deadlock handling.
- Implemented WAL-based recovery and simulated distributed features (sharding, 2PC).

Mowasla – Uber-like Ride-Hailing System (SQL + CSharp)

December 2025

- Developed backend in CSharp with SQL database and modeled real-world entities Passenger, Driver, Vehicle, Ride, Payment, etc.
- Implemented passenger features: ride requests, fare estimation, live driver tracking, and trip history.
- Built driver features: accept/reject rides, update ride status, and view earnings dashboard.
- Designed admin panel for user management, monitoring rides, and generating system statistics.

Premier League Analytics Dashboard (Data Visualization/BI Project)

December 2025

- Built an interactive dashboard analyzing the 2023–24 season with advanced visualizations (bar, scatter, donut, area charts) using AmCharts 5.
- Visualized KPIs (goals, assists, squad value, wage efficiency, revenue) with dynamic filters for real-time insights.
- Delivered actionable analytics on player performance, club rankings, and stadium ROI with a polished dark-themed UI.

Timber v2 – Python GUI Chatbot with Data Acquisition

Apr 2025 – Aug 2025

- Built a chatbot with Tkinter GUI, supporting games, movie recommendations, translation, and voice interaction.
- Web scraping with BeautifulSoup.
- APIs for live data.
- Selenium automation for dynamic web extraction.

Data Governance Project – Credit Card Fraud Detection

Feb 2025 – May 2025

- Applied data cleaning, validation, and quality control on Kaggle's Credit Card Fraud dataset.
- Implemented privacy methods: encryption, hashing, GDPR/CCPA/HIPAA compliance, RBAC.
- handled encryption and GDPR compliance.

Technical Skills

Languages: Python, C++/C, CSharp, SQL, JavaScript, HTML/CSS

Backend Systems: FastAPI, Flask, REST APIs, System Design

ML/AI: PyTorch, Scikit-learn, TensorFlow, NLP, Recommendation Systems

Data: Pandas, NumPy, Data Analysis, Data Visualization

Tools: Git, Firebase, Supabase, VS Code, Visual Studio

Competitions and Achievements

Certificate of Participation – 20th Undergraduate Research Forum (UGRF), Nile University, Egypt Aug 2025

Project: : Cleaning System Robot