

OMAR AHMED ELSAYED

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PROFESSIONAL SUMMARY

Results-oriented **Data Engineer** with production experience in **Snowflake**, **dbt**, and **LLM** integration. Proven track record of architecting high-volume extraction pipelines processing **hundreds of GBs** of unstructured data weekly. Active **Open Source Contributor** to AI tools (Wren AI). Skilled in modernizing legacy infrastructure and building real-time analytics dashboards. Winner of the **Arab AI & IoT Challenge** and exhibited at **GITEX Global**.

TECHNICAL SKILLS

Data Engineering: dbt, Snowflake, Web Scraping, ELT/ETL, Blob Storage

AI & LLMs: LLM Ops, Vector Databases, RAG (Retrieval-Augmented Generation), Wren AI (Text-to-SQL)

Languages: Python (Advanced - Pandas/NumPy), SQL, Golang, Bash/Scripting

Cloud & Tools: AWS, Azure, Git, Docker, Linux, CI/CD

Frontend & Visualization: Expo (React Native), Streamlit, PowerBI

EDUCATION & CERTIFICATIONS

Arab Academy for Science, Technology and Maritime Transport

Cairo, Egypt

B.Sc. Computer Engineering

Sep. 2020 – May 2025

Certifications:

- **ALX Data Science** (ExploreAI) – [Certificate](#)

- **NVIDIA DLI:** Fundamentals of Deep Learning – [Certificate](#)

- **Udacity:** Machine Learning Cross-Skilling Nanodegree – [Certificate](#)

PROFESSIONAL EXPERIENCE

Data Engineer I

Sep 2024 – Present

Raisa Energy

Cairo, Egypt

- **High-Volume Data Pipelines:** Architected and deployed scalable extraction pipelines for APIs, websites, and emails, processing **hundreds of gigabytes** of unstructured data weekly into **Blob Storage** and **Snowflake**
- **dbt Optimization:** Engineered custom dbt incremental strategies and materializations, reducing pipeline build times by **70%** and optimizing cloud operational costs
- **CI/CD:** Architected end-to-end CI/CD workflows for dbt projects, establishing automated testing gates and deployment pipelines
- **Natural Language to SQL Insights:** Developed a Question-Answering application using SQL-based RAG to query databases via natural language, bridging the gap between non-technical stakeholders and complex datasets
- **Documentation:** Authored technical documentation and internal best practices for CI pipeline implementation

Data Engineering Intern

Jul 2024 – Sep 2024

Raisa Energy

Cairo, Egypt

- **Infrastructure:** Spearheaded legacy infrastructure modernization, driving critical platform updates that significantly improved system reliability and performance
- **Analytics:** Designed and optimized complex data models to power mission-critical Power BI analytics dashboards

Technical Support Subject Matter Expert

Jun 2023 – Dec 2023

Teleperformance Egypt

Cairo, Egypt

- Mentored new agents on technical protocols and data security compliance, ensuring high service standards

OPEN SOURCE & PROJECTS

Open Source Contribution: Wren AI (Text-to-SQL Engine) | *Contributor*

- Collaborated with the core engineering team to identify and resolve critical bugs in the open-source **Wren AI** engine; successfully pushed and merged Pull Requests (PRs) to fix backend issues

AIoT Smart Shopping Cart (Graduation Project) | *Data Visualization & Frontend Engineer*

Mar 2023

- **Awards:** Winner of **Arab AI & IoT Challenge & EGAIOT**; **2nd Place** at AUC Hackathon; Exhibited at **GITEX Global**
- Partnered with **Spinneys** and **Quanttronix** to pilot a smart retail system
- Developed the **Real-Time Analytics Dashboard** and consumer mobile app using **Expo (React Native)**, implementing real-time data synchronization via **MQTT**

Intelligent Maze Agent (Dell Hacktrick Hackathon) | *Machine Learning Engineer*

Mar 2023

- Ranked in top 10 of 200+ teams; developed a Deep Q-Network (DQN) agent using **TensorFlow** and **PyTorch** deployed on **AWS EC2**

VOLUNTEERING & LEADERSHIP

Technical Instructor & Lecturer

Sep 2022 – Present

IEEE AAST Cairo Student Branch

Cairo, Egypt

- Designed and conducted **Python programming workshops**, mentoring 100+ students in core coding concepts and debugging
- Led technical R&D sessions, breaking down complex technical topics for diverse audiences