

Mostafa Emad

Data Engineer

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PROFESSIONAL SUMMARY

Data Engineer with a background in mathematics and computer science, experienced in building scalable data pipelines, managing ETL workflows, and integrating data from multiple sources. Proficient in Apache Airflow, Spark, SQL, Docker, and cloud environments. Developed automated data infrastructure to support analytics, reporting, and real-time data access across teams.

PROFESSIONAL EXPERIENCE

Information Technology Institute (ITI)

Data Engineer Trainee

Port Said, Egypt

Jun 2025 – Present

- Currently enrolled in an intensive 4-month training program in data engineering and business intelligence.

Rehabilitation Center (military services)

Data Specialist

Cairo, Egypt

May 2024 – Jun 2025

- Managed 300+ visitor registrations daily in a high-pressure, client-facing environment.
- Built an OCR ID card extractor, reducing post-registration data verification workload by over 2 hours daily.
- Streamlined the data entry workflow, improving daily processing efficiency by 3 hours.
- Achieved a 50% reduction in overall registration time by redesigning the process.

EDUCATION

Damietta University

Pre-Master's in Computer Science

Egypt

Sep 2023 – Jun 2024

Relevant coursework: Advanced Machine Learning, Image Processing, Research Methodologies, Computational Intelligence, Advanced Artificial Intelligence, Pattern Recognition and Data Mining

Al-Azhar University

Bachelor of Science in Pure Mathematics and Computer Science

Egypt

Sep 2019 – Jun 2023

Grade: **Excellent with Honors**; ranked first in class.

Relevant coursework:

- **Computer Science:** Data Structures & Algorithms, Operating Systems, Database Systems, Systems Design, Image Processing, Artificial Intelligence
- **Mathematics:** Graph Theory, Linear Algebra, Calculus, Statistics, Probability, Numerical Analysis, Operations Research, Discrete Mathematics, Functional Analysis

PROJECTS

FordGoBike Data Pipeline

[GitHub](#)

- Orchestrated a data pipeline with Airflow, PostgreSQL, and Docker to process over 3 million trip records.
- Delivered actionable insights through Power BI dashboard visualizations of ride data, leading to the identification of 4 key areas to fix the three most common types of user complaints.
- Revealed that weekday peak hours had 30% more rides, informing bike placement and staffing strategy through data extraction and data modeling.

Bike Sharing Data Exploration – San Francisco Bay Area

[GitHub](#)

- Uncovered that rides under 30 minutes are most common during work commutes (7–9 AM and 4–6 PM), indicating usage for short-distance daily transport.
- Revealed behavioral differences in ride duration—customers averaged 22 mins vs. 12 mins for subscribers, with male users riding the longest.

Customer Churn Analysis Dashboard

[GitHub](#)

- Monitored KPIs across 7043 customers, revealing a churn rate of 26.54%.
- Quantified \$1.67M in revenue loss and tracked LTV before and after churn (\$2.28K vs \$2.55K), highlighting upsell opportunities and long-term value patterns.
- Uncovered that customers with fewer services (1–2) had the highest churn rate (40%) using a combo chart of churn vs. service count.

LinkedIn Data Visualization Dashboard

[GitHub](#)

- Identified that 98% of connections were in data-related field, indicating strong industry alignment.
- Visualized the leading 10 affiliated companies via bar charts; ITI ranked highest.

TECHNICAL SKILLS

- **Data Analysis & Visualization:** Power BI, Excel, Pandas, NumPy, Matplotlib, Seaborn
- **Programming:** Python, Bash, DAX, Java
- **Data Engineering:** Airflow, Spark, Power Query, PostgreSQL, SQL Server, MySQL, MongoDB
- **Machine Learning:** Scikit-learn, TensorFlow (basic), PyTorch (basic)
- **Cloud & DevOps:** Docker, AWS, Git, GitHub Actions

CERTIFICATIONS

- **AWS Public Cloud Practitioner – NTI AWS Academy** *Feb 2024*
- **Applied Data Science Lab – WorldQuant University** *Jul 2023*
- **Udacity – Data Analyst Nanodegree** *Oct 2022*

LANGUAGES

- **English:** Fluent
- **Arabic:** Native