

Loay Ayman Mohamed

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EXPERIENCE

Data Analyst Trainee

Digital Egypt Pioneers Initiative – DEPI

Nov 2025 – Present

Internship | Hybrid

- Performed data cleaning, transformation, and analysis using SQL and Python.
- Developed interactive dashboards and analytical reports using Power BI and Tableau.
- Identified trends and delivered actionable insights to support data-driven business decisions.

PROJECTS

Layoffs Analysis [GitHub Link](#)

- Engineered an end-to-end ETL pipeline using SQL to clean and standardize a global layoffs dataset, utilizing CTEs and Window Functions to eliminate duplicates and ensure 100% data integrity across 1,900+ records.
- Standardized inconsistent data and handled null values through SQL Joins and updates, improving analytical accuracy.
- Conducted Exploratory Data Analysis (EDA) in SQL to identify critical market shifts, uncovering a 67% layoff concentration in the US and a record-high peak of 53k+ redundancies in November 2022.
- Architected a relational Star Schema data model in Power BI, implementing complex DAX measures (e.g., Rolling Totals, Time Intelligence) to track workforce reduction trends across 30+ industries.
- Developed an 8-page interactive dashboard providing stakeholders with deep-dive insights into geographic distributions, funding impact correlations, and temporal layoff patterns from 2020–2023.

HR Analysis [GitHub Link](#)

- Automated the ETL process using Power Query to clean and transform 6,000+ HR records, resolving data inconsistencies, handling null values, and standardizing categorical fields for analysis.
- Architected a Star-Schema data model to integrate 6+ relational tables, optimizing report performance and ensuring 100% calculation accuracy across fact and dimension tables.
- Engineered 15+ complex DAX measures (e.g., Attrition Rate, Time-Intelligence, Tenure Metrics) to automate the tracking of core HR KPIs and headcount fluctuations.
- Performed Exploratory Data Analysis (EDA) to synthesize attrition drivers, uncovering a high turnover correlation among low-tenure staff and entry-level roles to inform retention strategies."
- Designed an 8-page executive dashboard providing deep-dive into employee demographics, performance ratings, and job satisfaction to support data-driven talent management.

World Population (EDA) [GitHub Link](#)

- Conducted Exploratory Data Analysis (EDA) on a global population dataset using Python (Pandas, Matplotlib, Seaborn) to uncover long-term demographic trends.
- Cleaned and transformed the dataset by removing non-numerical fields, creating numeric subsets, and calculating correlation matrices for feature relationships.
- Performed data validation, missing-value analysis, and statistical summaries.
- Created correlation matrices and continent-level aggregations to analyze population growth patterns. Visualized insights using line charts, heatmaps, and boxplots.

EDUCATION

Bachelor's degree in communications and electronics engineering.

Sep 2020 – June 2025

Mansoura Higher Institute of Engineering and Technology.

Graduation Project: A+

Grade: Very Good

SKILLS

Technical Skills:

- **Programming & Querying:** SQL (MySQL, PostgreSQL), Python (Pandas, NumPy, Matplotlib, Seaborn)
- **Data Analysis & Visualization:** Power BI (DAX, Power Query, Data Modeling), Excel (Pivot Tables, Power Pivot, Power Query)
- **Tools & Platforms:** Git/GitHub, AWS
- **Concepts:** ETL Processes, Data Modeling (Conceptual, Logical, Physical), Data Warehousing, Data Cleaning, EDA, Statistics

Soft Skills: Problem-Solving, Attention to Detail, Analytical Thinking, Data Storytelling, Data-Driven Decision Making, Presentation Skills, Team collaboration.

CERTIFICATES

- Data Analysis with Excel Power Tools – Datacamp [show certification](#)
- Excel Fundamentals – Datacamp [show certification](#)
- Data Analyst in Power BI – Datacamp [show certification](#)
- Data Analyst in Python – Datacamp [show certification](#)
- The Science of Statistics for the Purposes of Data Science and Artificial Intelligence – Unihance [Show certification](#)

LANGUAGES

- **English:** B2 – Verified via British Council
- **Arabic:** Native