

# Loay Ayman Mohamed

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## OBJECTIVE

Data Analyst skilled in transforming raw data into actionable insights that drive business decisions. Proficient in data cleaning, analysis, visualization, and reporting using tools such as SQL, Power BI, Excel, and Python. Experienced in delivering clear, concise findings and building interactive dashboards to support strategic initiatives. Passionate about continuous learning and applying analytical expertise to real-world projects.

## PROJECTS

### Layoffs Analysis [GitHub Link](#)

- Executed end-to-end data analysis on global layoff trends by building a complete ETL pipeline for 1.9k+ records, transforming raw data into an interactive executive dashboard.
- Cleaned and transformed data using SQL by removing duplicates, standardizing formats, correcting inconsistencies, and handling NULL/blank values to ensure reliable analysis.
- Conducted Exploratory Data Analysis (EDA) in SQL to identify patterns, calculate rolling totals, and determine the top 5 most impacted companies and industries annually.
- Improved data quality and analytical precision by creating DAX measures and calculated columns to fill data gaps, enabling actionable business insights.
- Developed an 8-page interactive Power BI dashboard implementing star-schema modeling to optimize relationships between fact and dimension tables and enhance performance.

### HR Analysis [GitHub Link](#)

- Cleaned and transformed 6,000+ HR records using Power Query, ensuring consistent and analysis-ready data.
- Developed 15+ DAX measures to calculate core HR KPIs including Attrition Rate, Active Employees, Average Salary, Hiring Trends, and Tenure Metrics.
- Designed a star-schema data model with one fact table and multiple dimension tables to improve calculation accuracy and report performance.
- Built a multi-page Power BI dashboard covering employee demographics, performance ratings, satisfaction levels, and attrition patterns.
- Identified attrition drivers by job role, department, and employee tenure, improving the accuracy of HR retention analysis.

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

- Performed exploratory data analysis (EDA) using Python on a global population dataset to identify trends, patterns, and continent-level growth insights.
- Loaded and validated data in Pandas, conducting structural checks, summary statistics, missing-value analysis, and unique-value profiling.
- Cleaned and transformed the dataset by removing non-numerical fields, creating numeric subsets, and calculating correlation matrices for feature relationships.
- Developed visualizations using Matplotlib and Seaborn, including heatmaps, line plots, and boxplots to highlight population distribution and historical changes.
- Aggregated data by continent and decade using groupby operations to analyze long-term population shifts and compare demographic growth across regions.

## EDUCATION

### Bachelor's degree in communications and electronics engineering.

Sep 2020 – June 2025

Mansoura Higher Institute of Engineering and Technology.

## SKILLS

### Technical Skills:

- Programming Languages:** Python (Pandas, NumPy, Matplotlib, Seaborn), SQL (MySQL, PostgreSQL)
- Data Analysis & Visualization:** Power BI (DAX, Power Query, Data Modeling), Excel (Pivot Tables, Pivot Charts, Power Pivot, Power Query, Macros)
- Other Tools:** Git/GitHub, AWS, MS Office (Word, PowerPoint)
- Familiar With:** ETL Process, CCNA, Atoll, Packet tracer

**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](#)
- Power BI Fundamentals – Datacamp [show certification](#)
- Data Analyst in Python – Datacamp [show certification](#)
- Python Data Fundamentals – Datacamp [show certification](#)
- The science of statistics for the purposes of data science and artificial intelligence – Unihance [show certification](#)