# Omar Sobhy

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## EDUCATION

- **Helwan University** *Sep 2017 - Jul 2021*
  *Bsc in Computers and Artificial Intelligence* Cairo, Egypt
  ◦ GPA: 3.00

## EXPERIENCE

- **MNT Halan** *May 2024 - Present*
  *Data Engineer* Cairo, Egypt
  ◦ Designed and maintained large-scale data pipelines for real-time analytics, ensuring high availability and efficient workflows for data migration, integration, and transformation.
  ◦ Led the migration from MongoDB to Delta Lake and PostgreSQL, integrated Kafka streams using Scala and Apache Spark, and optimized Apache Airflow DAGs for smooth operations and schema consistency.
  ◦ Increased pipeline uptime to 99.9 percent, reduced compute resource consumption by 15 percent, automated ETL workflows (cutting manual intervention by 50 percent), and enhanced SQL-based data processing for better decision-making.

- **Data Science LTD** *March 2023 - Aug 2024*
  *Data Engineer* Remote, Cairo Egypt
  ◦ Led the migration of legacy systems to SAS platforms, enhancing data processing efficiency and ensuring compliance with international fraud detection and AML regulations.
  ◦ Worked with high-profile stakeholders, including the Saudi Ministry of Investment and Qatari Customs, to align data solutions with national priorities and support cross-border collaboration.
  ◦ Developed reports and dashboards using SAS tools and provided training to facilitate smooth adoption of SAS systems for improved analytics and business insights.
  ◦ Worked across distributed teams using Slack and Notion for async communication.
  ◦ Managed deliverables autonomously with minimal supervision in a fully remote setting.

- **Technocolabs** *Jan 2022 - Apr 2022*
  *Data Analyst Intern* Remote, Lahore India
  ◦ Developed predictive models for mortgage prepayment forecasting, achieving 96 percent accuracy using logistic regression to improve risk assessment.
  ◦ Conducted exploratory data analysis (EDA), refined models with statistical techniques, and managed large datasets using SQL.
  ◦ Built and deployed machine learning models with Streamlit, delivering real-time insights and an end-to-end mortgage analytics solution for better decision-making.

## PROJECTS

- **Mortgage Prepayment Prediction System** *Mar 2022*
  *Tools: [Python, SQL, Streamlit, Logistic Regression]* [⬡]
  ◦ Cleaned and transformed mortgage loan datasets by handling missing values, encoding categorical variables, and normalizing features to ensure data consistency and quality.
  ◦ Conducted statistical analysis and visualizations to identify key correlations between loan attributes and prepayment behavior, improving model interpretability.
  ◦ Built and trained a logistic regression model for predicting mortgage prepayment, achieving 96 percent accuracy on the test dataset through feature selection and optimization.
  ◦ Assessed model performance using confusion matrices and ROC curves, and deployed the trained model using pickle for real-time predictions in mortgage risk assessment.

- **ETL Pipeline for E-Commerce Data Processing Using Apache Airflow and PySpark** *Feb 2025*
  *Tools: [Python, PSQL, PySpark, Apache Airflow, Psycopg2]* [⬡]

- Extracts raw e-commerce data from JSON files, transforms it using PySpark, and loads it into a PostgreSQL database.
- Manages task execution, including dropping and recreating tables, running ETL transformations, and optimizing database performance.
- Ensures efficient data handling, normalization, and storage for analytics and reporting.

## SKILLS

- **Programming Languages:** Python, Scala, Java
- **Database Systems:** PSQL, MySQL, MongoDB
- **DevOps & Version Control:** Git, Github, Docker
- **Specialized Area:** ETL, ELT, Data Pipelines
- **Other Tools & Technologies:** Grafana, Kibana, Dataform, Apache Spark, Apache Airflow, Hadoop, GCP BigQuery

## CERTIFICATIONS

- **Quantexa Certified Data Engineer** *Feb 2024*
- **Deep Learning Nanodegree from Udacity** *Nov 2021*
- **Advanced Data Analysis from Udacity** *Mar 2021*

## VOLUNTEER EXPERIENCE

- **OGV Member** *Jan 2018 - May 2018*
  *AIESEC* []
  - Worked in helping foreigners who are doing charity work in Egypt by being their escort and being there if they need any kind of accommodation or help.