Mahmoud Ahmed Elsayed
Data Engineer

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Location: **Alexandria, Egypt (Able to relocate)**   *LinkedIn:* **Mahmoud Ahmed**

EDUCATION

Digital Egypt Pioneers Initiative (DEPI)   Apr. 2024 – Present
- Diploma in Data Engineering
  - Got competent in ETL & Data Warehousing, sharpened my SQL skills, excelled in Cloud Architecture.
  - Leading an ongoing graduation project utilizing Azure tools.

Information Technology Institute (ITI)
- Diploma in Business Intelligence   Jan. 2023 – Feb. 2023
  - Developed proficiency in ERD, database normalization, and visualization tools eg. Power BI & Tableau.

Udacity
- Nanodegree in Data Analytics (Link)   Sep. 2022 – Dec. 2022
  - Wrangled complex datasets using NumPy/Pandas, assessing the quality & tidiness programmatically.

Faculty of Engineering Alexandria University
- Bachelor's in Engineering   Oct 2018 – Feb. 2024

PROJECTS

End to End Data Engineering Pipeline (Github)
- **Extracted** from SQL Server Docker container using **Data Factory** to store raw data in **DataLake storage**.
- **Transformed** and processed data using **Azure Databricks**.
- Queried the transformed data via **Azure Synapse Serverless SQL Pool for reporting**.
- Created an interactive **Power BI dashboard** for insights by connecting it to Synapse.

Data Warehouse Integration (Github)
- **Used ADF** to migrate data from **two SQL Server Databases** to Staging Schema.
- **Dynamic Stored Procedures** were used to create Surrogate mapping tables to ensure no conflicts occur.
- **Stored Procedures** were used to load the data from the Transformation Views into the Base tables.
  - **On going:** substitute Stored Procedures with DBT.

User Data Management System (Github)
- **Python** application to capture and insert user data into **SQL Server**, handling conflicts and validations.
- Enabled bulk data insertion via **JSON** files while asking user whether to update conflicting records or not.

TECHNICAL SKILLS

- **Programming/Query Languages:** Python, SQL, PLSQL, C#, C, Basic Shell/Bash, Spark
- **Tools:** Data Factory, Synapse, DataBricks, SSIS, Tableau, Power BI, Docker, Linux, Advanced Excel.
- **Data Warehousing** ETL, ELT, Data Modelling, Star Schema, Snowflake Schema, SCD type 0-1-2-3
- **Data Analysis** Data Cleaning, EDA, Descriptive Analysis, Data visualization

COURSES

- **Data Warehouse** – The Ultimate Guide
- **CS50x**: Harvard's Introduction to CS
- **CS50**'s Introduction to Databases with SQL
- Master **Apache Spark** Programming in Python **(PySpark)**
- Taming big Data with **Apache Spark**