

YOUSEF MAHMOUD

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Professional Summary

Junior Data Engineer with a solid foundation in Computer Science and AI. Currently a Data Engineering Trainee at ITI, gaining hands-on experience in building robust ETL pipelines and data warehousing (Snowflake, dbt). Skilled in automating workflows using Airflow and Python. Passionate about optimizing data architectures within Linux and Docker environments to drive actionable business insights.

Education

Information Technology Institute (ITI)

Minya, Egypt

Data Engineering Trainee

Nov. 2024 – Present

- Developing end-to-end data pipelines using Apache Airflow, Spark, and Python in an intensive 9-month program.
- Designing and implementing Data Warehouses using Snowflake and dbt, reducing query latency by 30%.
- Collaborating with cross-functional teams to integrate AI models into data workflows using Docker containers.

Beni-Suef University

Beni-Suef, Egypt

Bachelor of Computer Science

Aug. 2024

Projects

Olist E-commerce ELT Pipeline | Snowflake, Airflow, dbt, Docker, Power BI

- Architected a scalable ELT pipeline processing 100K+ records of Brazilian e-commerce data using Medallion Architecture.
- Orchestrated daily data workflows using Apache Airflow and containerized the environment with Docker for reproducibility.
- Implemented dbt for data transformation, ensuring data quality with 26+ automated tests and modeling a Star Schema.
- Designed interactive Power BI dashboards to visualize revenue distribution, aiding strategic decision-making.
- **Repo:** github.com/YOU5F/Olist_ETL_Project

ITI Examination System | SQL Server, T-SQL, SSMS, Docker

- Engineered a normalized relational database using SQL Server (T-SQL) to manage students, courses, and exams.
- Scripted complex Stored Procedures for automated exam generation, reducing manual admin work by 90%.
- Established a secure Role-Based Access Control (RBAC) system for Admins, Instructors, and Students.
- Created automated Audit Triggers to track critical data changes, ensuring 100% data integrity.
- **Repo:** github.com/YOU5F/CTRL-EXAM

Skin Cancer Detection (AI Healthcare Platform) | Python, TensorFlow, Flutter

- Spearheaded an integrated healthcare platform for early skin cancer detection using Deep Learning (CNNs).
- Built a comprehensive patient ecosystem featuring a drug reminder system and doctor-patient chat modules.
- Programmed the backend logic to handle real-time image processing and secure user data management.
- Awarded "Excellent" grade for the project's technical complexity and social impact.

Technical Skills

Languages: Python (Advanced), SQL, Bash Scripting, Java, C++

Data Engineering: Apache Airflow, Apache Spark, Hadoop, Kafka, dbt

Databases & Cloud: Snowflake, PostgreSQL, MySQL, SSMS, AWS (S3), MongoDB

DevOps & Tools: Linux, Docker, Git/GitHub, Jenkins (CI/CD)

Visualization: Power BI, Matplotlib

AI & ML: Machine Learning Concepts, NLP, Web Scraping

Soft Skills: Problem Solving, Team Leadership, Agile Methodology, Critical Thinking

Languages: Arabic (Native), English (Advanced)