

Shehab El-Din Ahmed

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Professional Profile

Junior data engineer who has designed and implemented powerful, scalable data infrastructures from the ground up. Excels at transforming complex and disparate data into streamlined, high-value assets that empower data science teams and fuel strategic business intelligence. Leverages deep expertise in cloud-native ETL/ELT pipelines, big data processing, and Lakehouse data implementation to solve critical data challenges, increase operational efficiency by up to 30%, and unlock new analytical capabilities. Actively scaling mastery in distributed computing frameworks and advanced cloud data services to address large-scale data issues.

Core Competencies & Technical Proficiencies

- **Data Engineering:** I specialize in ETL/ELT Pipeline Development & Orchestration, Data Lake & Warehouse Architecture, Data Modeling, Master Data Management (MDM), and Data Governance & Quality Frameworks.
 - **Cloud Platforms:** I have practical expertise in AWS (S3, Glue, IAM, CloudWatch) and Snowflake (Virtual Warehouses, Data Sharing, Cloning).
 - **Programming & Querying:** I code in Python (Pandas, PySpark, NumPy, Requests) and write advanced SQL (Query Optimization, Complex Joins, Window Functions, CTEs).
 - **Big Data Technologies:** I work with the Hadoop Ecosystem (HDFS, YARN) and Apache Spark (Spark SQL, DataFrames) for large-scale data processing.
 - **Databases & Sources:** I use relational databases (MySQL, PostgreSQL), integrate RESTful APIs, and process structured & semi-structured data (JSON, CSV, Parquet, Avro).
 - **Development & Tools:** I apply Git Version Control, CI/CD principles, basic Docker containerization, and Linux/Unix environment practices.
 - **Professional Skills:** I bring cross-functional collaboration, strong technical communication, agile methodologies, systematic problem solving, requirements analysis, and performance tuning & cost optimization.
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Professional Experience

Data Engineer | Digital Egypt Pioneers Initiative (DEPI) | Beni Suef, Egypt

July 2025 – Present

- Spearheaded the design and implementation of a centralized data lake on AWS S3, establishing a scalable architecture that broke down silos and unified 10+ heterogeneous data sources into a single source of truth.
- Pioneered automated, serverless data ingestion frameworks using AWS Glue and Python scripts, reducing data onboarding time by 60% and ensuring near real-time data freshness.
- Championed performance and cost-efficiency by optimizing PySpark jobs and complex SQL queries; strategic improvements in partitioning, caching, and query restructuring reduced resource consumption by 25%.

- Collaborated with data science and BI teams, translating business requirements into validated Snowflake data models, enabling the launch of 5+ real-time dashboards and supporting the first predictive ML models within the organization.

Professional Experience

Data Engineer | Digital Egypt Pioneers Initiative (DEPI) | Beni Suef, Egypt
July 2025 – Present

- I spearheaded the design and implementation of my organization's centralized data lake on AWS S3, establishing a scalable architecture that broke down silos and unified 10+ heterogeneous data sources into a single source of truth.
- I pioneered automated, serverless data ingestion frameworks using AWS Glue and Python scripts, accelerating the onboarding process and ensuring high data freshness and accessibility for downstream consumers.
- I championed performance and cost-efficiency by optimizing PySpark jobs and complex SQL queries, applying partitioning, caching, and query restructuring to reduce resource consumption and operational costs.
 - I collaborated closely with data science and BI teams, translating ambiguous requirements into validated Snowflake data models. My work directly enabled the development of real-time dashboards and the organization's first predictive machine learning models.

Education

Beni Suef University | Beni Suef, Egypt
Bachelor of Science in Industrial Electronics & Control Engineering
Relevant Coursework: Systems Design, Signal Processing, Algorithmic Thinking, Automation Logic

Certifications & Development

- CS105: Introduction to Python | Saylor Academy | 2025
- I am currently pursuing advanced certifications in Apache Spark and AWS Data Analytics to deepen my architectural expertise.