

# BRIAN OTINA MAKAU

## Big Data Engineer

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### PROFESSIONAL SUMMARY

Experienced and results-driven Data Engineer with a strong foundation in data modeling, analytics, and engineering. Proficient in designing and developing scalable data pipelines using tools like Python, Spark, SQL, and cloud platforms (AWS). Adept at implementing automation solutions that improve data quality and job efficiency.

### PROJECTS

#### Crypto Currency Data Pipeline (Apache Kafka, Airflow, Docker, AWS3, Medallion Architecture)

- 📅 2025
- Ingested real time crypto data into S3 bucket using Apache Airflow.
  - Processed and transformed data using SQL and Python in Snowflake.
  - Loaded data into Snowflake after Medallion Architecture and created interactive dashboards with PowerBi.

#### Airflow Data Engineering Pipeline Orchestration (s3 to snowflake ETL)

- 📅 2025
- Ingest FX and product data from Amazon S3.
  - Transform and load data into Snowflake using external stages and SQL scripts.
  - Apache Airflow capabilities: XComs, Branching, Hooks, Trigger Rules, and Custom Operators.
  - Ensure robust orchestration with task retries, conditional logic, and modular structure.

#### End-to-End Data Modernization (SQL Server Data Warehousing and Analytics)

- 📅 2025
- Built a data ingestion pipeline to SQL Server (on-prem). Extracting, transforming, and loading data from source systems into the warehouse.
  - Developed a Lakehouse architecture using SQL in SQL server (Bronze, Silver, Gold).
  - Developing fact and dimension tables optimized for analytical queries.
  - Creating SQL-based reports and dashboards for actionable insights.

### EXPERIENCE

#### Personal End-to-End Data Engineering Projects

- SELF**
- 📅 01/2023 - Present
- Designing and implementing a production-grade data pipeline using Apache Kafka, Apache Airflow, Snowflake, and AWS services. Built real-time ingestion, transformation, and orchestration layers following the Medallion Architecture.

#### Self-Study and Upskilling

- SELF**
- 📅 01/2023 - Present
- Currently pursuing AWS Certified Data Engineer Associate while building personal projects using Snowflake, Python, and Apache Airflow.

### SKILLS

|               |                    |            |        |
|---------------|--------------------|------------|--------|
| Airflow       | Amazon S3          | Apache     |        |
| Apache Kafka  | Apache Spark       | AWS        |        |
| AWS Services  | Big Data           | Databricks |        |
| Docker        | SQL server         | Git        | GitHub |
| Kafka         | Microsoft Power BI | Python     |        |
| Pandas        | PostgreSQL         |            |        |
| Communication | Problem Solving    |            |        |
| Snowflake     | SQL                |            |        |

### PORTFOLIO & SOCIALS

- [My Portfolio](#)
- [X](#)
- [LinkedIn](#)
- [GitHub](#)

### EDUCATION

- Bachelor of Applied Statistics with Programming
- Muranga University of Technology**
- 📅 09/2021    📍 Murang'a, Kenya
- Currently in Final Year

### CERTIFICATIONS

- AWS Certified Data Engineer – Associate (in progress)
- Python Programming
- Data Analysis with Python – cognitive skills powered by IBM

# EXPERIENCE

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## Big Data Engineer Intern

### Safra Data

📅 05/2024 - 10/2024    📍 Westland, Nairobi

- Automated data profiling and quality checks in Python, improving accuracy by 15% and reducing processing time by 25%
- Enhanced SQL queries and Airflow dags (bucketing, salting, partitioning, caching), leading to a 5% increase in job efficiency

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## Data Analyst

### MultiChoice

📅 11/2024 - 03/2025    📍 Nairobi

- Achieved 40% reduction in average turnaround time via ETL pipeline automation
- Reduced refund processing time by 20% through data-driven strategies