Nathan Mwasuku

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Skills

Languages: Python, MATLAB, SQL | **Tools:** Git, GitHub, Linux, CI, CD | **Databases:** PostgreSQL
Cloud Computing: AWS (EC2, RDS, S3, IAM, MWAA, MSK, VPC), Apache Kafka, Spark, Airflow, Databricks

Education

AiCore
Data Engineering Career Launch Programme Sept 2023 – Dec 2023
- An extensive bootcamp centred on experiential learning, emphasising practical skills acquisition by actively participating in hands-on projects to create real-world applications

Manchester Metropolitan University
BSc Mathematics Grade: 1^{st} Sept 2020 – Aug 2023
Dissertation: Investigating the effectiveness of neural networks to forecast stock prices in the short term (1^{st})

All Saints Catholic High School
A-Levels: Mathematics (B), Biology(B), Physics(C)

Projects

Pinterest Cloud-Based Data Pipeline
- Established an AWS-based data pipeline mimicking Pinterest's experimental framework, employing a Lambda architecture for seamless batch and stream processing integration
- Created a robust API using AWS API Gateway and utilised AWS MSK and MSK Connect to distribute data to an AWS S3 data lake
- Extracted batch data from AWS S3 buckets and transformed them in Databricks using pySpark
- Implemented real-time data streaming with AWS Kinesis and performed near real-time analysis using a Databricks Spark cluster on databricks

Multinational Retail Data Centralisation
- Engineered an efficient system to extract retail sales data from diverse sources, including PDF documents, an AWS RDS database, RESTful API, JSON and CSV files
- Cleaned and processed 100k+ records, ensuring readiness for modelling within a star-based database schema
- Developed a star-schema database, joining 5 dimension tables to make the data easily queryable allowing for sub-millisecond data analysis
- Used complex SQL queries to derive insights and to help reduce costs by 15%

Python for scientific computing and TensorFlow for Artificial Intelligence workshop
- 25+ hours of hands-on training allowed for learning foundational programming concepts like functions, loops and conditional statements
- Developed skills in deep learning techniques like backpropagation algorithms, Keras, and TensorBoard by implementing models for image processing
- Implemented convolutional and recurrent neural networks in TensorFlow using Google Colab notebooks

Experience

SCS
Sales Professional Sept 2023 – Present
- Communicated with clients to facilitate meaningful discussions aimed at resolving sofa selection, consistently surpassing monthly sales targets by 20%
- Built and maintained relationships with clients ensuring a thorough understanding of their requirements and preferences to give the best service to create an everlasting impression

MyTutor
A-Levels and GCSE's Mathematics Tutor Nov 2021 – Jan 2023
- Assisted 3 struggling GCSE students and one A-Level student in surpassing their predicted grades
- Communicated complex mathematical concepts in a concise manner, resulting in a 40% reduction in students' average time spent on homework