Nathan Mwasuku

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Skills

Languages: Python, SQL | **Tools:** Git, GitHub, Linux, Pandas, Keras, TensorFlow | **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 – Jan 2024
- An extensive programme 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})

Projects

Pinterest Cloud-Based Data Pipeline (AiCore) Github Repo
- Established an AWS-based data pipeline mimicking Pinterest's experimental framework, employing a Lambda architecture for seamless batch and stream processing integration
- Derived actionable insights in Databricks utilising SQL Spark, including the popularity of categories by age or country
- 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

Multinational Retail Data Centralisation (AiCore) Github Repo
- Implemented >10 complex SQL queries to extract business insights, including the velocity of sales, yearly revenue and regions with the most sales
- Developed a star-schema database, joining 5 dimension tables in PostgreSQL
- 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-schema database

Python for scientific computing and TensorFlow for Artificial Intelligence workshop
- 25+ hours of hands-on training allowed for learning foundational programming concepts like functions and loops
- 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
- Orchestrated targeted tutoring sessions and provided academic support to 3 GCSE students and 1 A-Level student, leading to them surpassing their predicted grades by 25%
- Concisely communicated complex mathematical concepts, resulting in a 40% reduction in students' average time spent on homework