

Uche Madu, Data Engineer

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<https://github.com/uche-madu>

PROFESSIONAL SUMMARY

Highly adaptable and driven professional, proficient in GCP and AWS, possessing a deep understanding of cloud technologies and services. Skilled in data modeling, batch and streaming data pipelines, and database management, utilizing programming languages like Python and SQL to design and implement scalable data solutions. Detail-oriented and committed to maintaining data quality and integrity throughout the data lifecycle. Passionate about optimizing data infrastructure using robust data engineering tools and services on the cloud to deliver efficient and insightful data-driven solutions. Adept at problem-solving and known for consistently delivering high-quality results in fast-paced environments. Eager to apply my technical expertise, data-driven mindset, and dedication to excellence to contribute to a dynamic team in a data engineering role.

SKILLS

Python, SQL, Pyspark, Data Warehousing (BigQuery), Databases (PostgreSQL, Cassandra, DynamoDB, Neo4J), Data Lakes (GCS & S3), Data Processing (Apache Beam, Dataflow, Dataprep, Apache Kafka, Apache Flink) Visualization (Matplotlib, Seaborn, Power BI, Tableau, Data Studio), dbt, Bash Scripting and Linux Shell, Airflow, Cloud Infrastructure Provisioning (Terraform, AWS CloudFormation), Monitoring (Prometheus, Grafana) TensorFlow, Scikit Learn, Hugging Face, MLOps (Kubeflow, TFX, Vertex AI, MLflow), FastAPI, CI/CD (CircleCI, GitHub Actions, Cloud Build), Docker, Kubernetes, Ansible

DATA ENGINEERING PROJECTS

Automated and Scalable Data Platform — <https://github.com/uche-madu/deb-infrastructure>

- Followed GitOps approach to create Airflow-based platform on Google Kubernetes Engine with particular consideration for security using IAM, workflow identity federation, and secret management.
- Provisioned all Google Cloud infrastructure with CI/CD (Terraform, ArgoCD, Github Actions).
- Accomplished data processing and analytics with Airflow, PySpark, self-fine-tuned Hugging Face sentiment analysis model with TensorFlow, dbt, BigQuery, PostgreSQL, GCS etc.

Twitter Streaming Pipeline with GCP — <https://github.com/uche-madu/twitter-pipeline>

- Created an Apache Beam-driven ETL and ELT pipeline to stream tweets using the Twitter API into BigQuery.
- Provided for dead letter handling in case of failure of the pipeline to process tweets.

Automated Web Scraping Pipeline — https://github.com/uche-madu/podcast_scraping_pipeline

- Created an Apache Airflow-orchestrated data pipeline that scrapes podcast data into a Google Cloud SQL-managed PostgreSQL database.
- Enabled the pipeline to upload the audio files of each podcast episode into a Google Cloud Storage bucket.

WORK EXPERIENCE

Andela, Nigeria — Peer Mentor (Cloud Engineering)

Jul 2022 – Dec 2022

- Followed up on cloud engineering learners' progress in the 2022 Google Africa Developer Scholarship Program.
- Provided tips and advice on learners' problem areas to encourage program completion.

Wonder, US (AskWonder.com) — Research Analyst

Feb 2018 – Present

- Execute projects demonstrating good understanding of research analysis techniques and applications.
- Provided secondary research and timely delivery of 400+ research briefs to corporate and individual clients across multiple industry verticals.
- Skillful adoption of generative AI tools like ChatGPT for analysis, significantly enhancing research efficiency and speedy delivery to clients.

EDUCATION

Wizeline Academy, Data Engineering Bootcamp	Aug 2023 – Oct 2023
Udacity, Cloud DevOps Engineer Nanodegree	Nov 2022 – Feb 2023
Google Africa Developer Training Program	Jul 2021 – Dec 2021
University of Nigeria, Nsukka, MBA in Marketing Candidate	Jan 2019 – Present
University of Nigeria, Nsukka, Doctor of Veterinary Medicine	Oct 2009 – Oct 2015

CERTIFICATIONS

DataCamp Associate Data Analyst Certificate
Microsoft Certified: Azure AI Fundamentals certification
Microsoft Azure Data Scientist Associate Certificate