

Onyekachi Emenike, PhD

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PROFILE

Data Engineer and Analytics professional with a Ph.D. in Computational Mathematics and hands-on experience designing and implementing layered data warehouse architectures, complex SQL transformations, and production-grade ELT pipelines. Experienced in translating business requirements into clean, well-documented, and reproducible data models. Worked across the full stack from raw ingestion through staging to analytics-ready marts. Comfortable in greenfield data environments, agile team settings, and cross-functional stakeholder collaboration. Based in Germany, EU work authorisation, fluent in English.

RELEVANT PROJECTS

NourishMama - Cloud-Native ELT & Data Warehouse

Python - GCP (GCS + BigQuery) - Terraform - Bruin - Streamlit

- Architected a cloud-native ELT pipeline on GCP using Terraform for infrastructure-as-code and Bruin for batch orchestration, ingesting 8,000+ external records into a layered data warehouse (raw, staging, marts, reports) - the same modelling pattern dbt is built around.
- Designed staging and mart-level transformations to serve an interactive Streamlit dashboard for non-technical end users, translating raw source data into analysis-ready, business-facing tables.

Citi Bike Analytics Platform

Python - SQL - DuckDB - BigQuery - Streamlit

- Built a production-style ELT analytics platform for millions of trip records using a layered raw to staging to marts architecture mirroring enterprise cloud ELT and analytics-engineering practice.
- Modelled time-series analytical tables tracking daily KPIs, 7-day moving averages, monthly trends, and categorical splits, deployed for stakeholder-facing reporting.

House Price Predictor — Rhineland-Palatinate

Python - SQLite - XGBoost - Streamlit - MLflow - Plotly

- Built an end-to-end ML pipeline for 3,800+ regional real estate listings; designed local SQLite database schema from scratch, conducted full EDA, feature engineering, and XGBoost.
- Interactive Streamlit app with SHAP explainability and LLM-powered chat assistant.

End-to-End MLOps Pipeline - Demand Forecasting

Python - MLflow - Prefect - Docker - Kubernetes - GitHub Actions - Evidently

- Engineered a full pipeline from raw data ingestion through modelling to deployment, with orchestration (Prefect), CI/CD (GitHub Actions), containerisation (Docker/Kubernetes), and automated data/model monitoring (Evidently) - the same rigour required for a warehouse rebuild on a new ERP system.
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EXPERIENCE

Lecturer - Data Analytics & Machine Learning (MSc)

Oct 2024 – July 2026

Berlin School of Business & Innovation | Berlin, Germany

- Designed and delivered graduate curriculum in applied statistics, machine learning, and data pipeline engineering, requiring students to build end-to-end analytical pipelines using Python, SQL, and cloud tools.
- Mentored students on reproducible workflow design, data modelling, and communicating quantitative results clearly to non-technical stakeholders - the core skill this role needs when working with business teams.

Senior Research Associate / Visiting Assistant Professor

Aug 2022 - Aug 2023

Illinois Institute of Technology (IIT) | Chicago, USA

- Developed modular, reusable Python components for numerical simulation workflows, emphasising portability and code quality across an international collaboration.

- Taught undergraduate Calculus to classes of 40+ students; designed and graded assessments.

Research Scientist

Dec 2018 - Jul 2022

Johann Radon Institute for Computational and Applied Mathematics (RICAM) | Linz, Austria

- Built high-performance numerical algorithms in Python and MATLAB as part of an international research collaboration (Belgium, Austria, US), resulting in 4 peer-reviewed journal publications.
- Served as teaching assistant for Mathematics for AI I, II & III at Johannes Kepler University, supporting 100+ students per course.

Note: Career break - international relocation from the United States to Germany (Aug 2023 - Oct 2024).

EDUCATION

- MSc Financial Engineering (Part-time) | WorldQuant University, Online - 2024 - Ongoing
- PhD Computational Mathematics | Johannes Kepler University, Austria - 2019 - 2022
- MSc Mathematics | African University of Science and Technology, Nigeria - 2016 - 2017
- BSc Industrial Mathematics & Computer Science | Ebonyi State University, Nigeria - 2010 - 2014

TECHNICAL SKILLS

Data Modelling & Warehousing: SQL, layered warehouse design (raw/staging/marts), dbt (Data Engineering Zoomcamp), data quality & testing

Programming: Python, SQL, R

Cloud & Platforms: GCP (BigQuery, GCS), DuckDB, cloud data warehouses

Orchestration & Infra: Airflow, Prefect, Bruin, Docker, Kubernetes, Terraform, Git/GitHub, GitHub Actions (CI/CD)

Visualisation & Reporting: Streamlit, Plotly, Power BI

MLOps: MLflow, Evidently

Languages: English (Fluent), German (A2, actively improving)

AWARDS & CERTIFICATIONS

- 2026 Data Engineering Zoomcamp - DataTalksClub (includes dbt, orchestration, and analytics engineering best practice)
- 2024 First Place, Data Science & Machine Learning Hackathon - MIT Institute for IDSS
- 2024 MLOps Zoomcamp - DataTalksClub
- 2021 Special Prize Zonta Award - Johannes Kepler University, Linz, Austria