

# MICHAEL TUNWASHE

Mathematics Student | Applied Machine Learning & Statistical Analysis | Focus: Financial & Economic Data

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## Professional Summary

I am a B.Sc. Mathematics student focused on understanding how data, uncertainty and models interact in real-world systems.

My work centers on statistical analysis, machine learning and time-series modelling, with interests in financial and economic data applications. While I am early in my career, I avoid building generic products, I approach projects as investigations into practical problems, formulating questions, evaluating models and explaining results clearly.

I am building toward research-oriented ML and quant-adjacent roles while taking on applied data analysis and ML contracts aligned direction

## Projects

**Does financial news sentiment contain stable predictive signal for short-term market returns? (Sep 2025 – Nov 2025)**

**Status:** Rebuilding

**Core question:** Can textual embeddings of financial news provide signal beyond noise when predicting short-horizon asset returns?

**Approach (planned):** Data source(s): News data + historical price data Baseline model or statistical method: naive return models One improvement or comparison: linear models vs shallow neural networks Evaluation metric and why it matters: out-of-sample performance, stability across time windows

**Expected outcome:** What you expect to learn: Determine whether observed accuracy is stable or regime-dependent What failure would look like: Identify failure modes and sources of leakage

## Applied Systems (Supporting Work)

Built data ingestion and visualization tools to support exploratory analysis and reporting. Developed hybrid recommendation system for music data using collaborative filtering. Created ETL workflows and dashboards for retail analytics and economic indicators.

## Technical Skills

**Mathematical Foundations:** Probability & Statistics, Linear Algebra, Calculus (ongoing)

**Data & Modeling:** Pandas, NumPy, scikit-learn, PyTorch (applied, non-research)

**Analysis & Evaluation:** Exploratory data analysis, Feature construction, Model evaluation & error analysis

**Supporting Tools:** SQL (PostgreSQL), Git, Linux

## Professional Experience

**Data Analyst Intern**

Aug 2025 – Nov 2025

*HNG Tech*

- Cleaned and transformed large business datasets using Python and SQL
- Wrote SQL queries for recurring reporting tasks
- Built dashboards in Metabase to support business insights
- Assisted team with lightweight automation pipelines

## Education

**B.Sc. Mathematics**

2024 – 2028

*University of Lagos*

- Relevant Coursework: Probability, Statistics, Linear Algebra, Calculus