

## **Geoffrey's Professional Portfolio**

### **Profile Summary**

A Machine Learning Engineer, and Backend Developer with over 5 years of experience delivering innovative solutions in data-driven environments. My expertise spans building predictive models, fine-tuning state-of-the-art AI systems, creating real-time applications, and providing actionable insights for businesses. I am passionate about technology-driven problem-solving, particularly in the domains of store clustering, pricing strategies, sentiment analysis, and advanced analytics.

### **Key Highlights**

#### **ML Engineer**

- Successfully implemented clustering, price predictions, and sentiment analysis projects using tools like SKlearn, TensorFlow, and Keras.
- Developed innovative solutions like text-to-music models and image-to-text models, leveraging state-of-the-art neural networks.
- Utilized Retrieval-Augmented Generation (RAG) and fine-tuning to optimize Large Language Models (LLMs) for various applications, including creative marketing campaigns and advanced user interactions.

#### **Backend Developer**

- Built scalable applications using Django, seamlessly integrating AI models, WebSockets, REST APIs, and databases like PostgreSQL and MongoDB.

#### **Data Analyst**

- Leveraged machine learning and statistical models to support companies like Domino's, Cold Stone, and the Nigerian National Petroleum Corporation (NNPC) across Nigeria and Kenya.
- Designed Power BI and Tableau dashboards that enhanced decision-making processes for pricing, inventory management, and marketing strategies.

### **Technical Expertise**

Programming Languages: Python, R, SQL

Frameworks & Libraries: Django, TensorFlow, Keras, Pandas, Numpy, Matplotlib

Analytics Tools: Power BI, Tableau, R Tidyverse

Cloud Platforms: Google Cloud Platform (GCP)

AI Specialization: NLP, Fine-Tuning, Retrieval-Augmented Generation (RAG), Image to text,

Text-to-Text & Text-to-Speech Models  
**Database Systems:** PostgreSQL, MongoDB

## **Selected Projects**

1. **Cluster-Based Pricing for Domino's Nigeria**
  - Designed a K-means clustering model for segmentation based on sales, location, and demographic data.
  - Enabled tailored pricing strategies for each cluster, leading to a measurable increase in profitability.
2. **AI-Enhanced Marketing Campaigns**
  - Fine-tuned GPT-based models to generate creative content for graphics and social media teams.
  - Significantly reduced the time to create effective marketing copy while improving engagement rates.
3. **Streamlit-Powered Document Analysis Application** (*In Progress*)
  - Building a Django-based application that fine-tunes Llama 3 models for document analysis.
  - Allows users to upload PDF documents and interact with them using RAG techniques for enhanced comprehension.
4. **Real-Time WebSocket Integration for Streaming Platform**
  - Engineered a robust WebSocket infrastructure for real-time user interaction on streaming platforms.
  - Managed connection setups, message handling, and integration of MediaSoup for enhanced video streaming capabilities.

## **Certifications**

- Google Machine Learning Engineer Certification - [https://www.linkedin.com/in/geoffreyweta/details/certifications/1708812935103/single-media-viewer/?profileId=ACoAAA9CucIBFCsKc5O4S\\_RUqroMdX3RqAL0I18](https://www.linkedin.com/in/geoffreyweta/details/certifications/1708812935103/single-media-viewer/?profileId=ACoAAA9CucIBFCsKc5O4S_RUqroMdX3RqAL0I18)
- FreeCodeCamp Advanced Data Science Program - <https://www.freecodecamp.org/certification/GeoffreyWeta/machine-learning-with-python-v7>

## **Education**

- **M.Sc in Statistics** – University of Ilorin, Nigeria
- **B.Tech in Statistics** – Federal University of Technology Yola, Nigeria

## **Personal Attributes**

- Personality Type: INTJ – Strategic thinker with a natural ability to innovate and optimize systems.
- Interests: Space exploration, technology solutions, and faith-based community impact.