AMAH A. Daniel

AI/ML Engineer | Data Scientist

Data Science and Machine Learning professional with 5+ years of experience in predictive modeling, data analytics, and deploying production-ready ML solutions. Proficient in Python, R, SQL, and cloud technologies (Azure/GCP), with a proven track record of driving business growth through advanced analytics and AI-driven solutions. Passionate about solving complex problems through data science and AI, with a focus on fairness, efficiency, and bias handling in machine learning models. Active contributor to the data science community through published research and open-source ML applications.

Seeking a challenging role in Data Science, Machine Learning, or AI Engineering to leverage my expertise in building scalable AI/ML solutions and driving innovation on a global scale.

Professional Experience

2023 - Present — Data Analyst (Customer Behavior Focus)
Wema Bank PLC

1. Architected end-to-end customer journey analytics system using Python, SQL, and Power BI to analyze multi-channel interaction data, resulting in 25% reduction in digital channel drop-off rates and 15% increase in mobile app engagement
2. Developed and deployed machine learning models for customer segmentation and behavior prediction, driving 20% improvement in targeted marketing campaign effectiveness through data-driven personalization
3. Engineered automated reporting pipeline using R, SQL, and Power BI that reduced manual analysis time by 40% while providing real-time insights into customer interaction patterns
4. Spearheaded cross-functional initiatives between product and marketing teams to optimize digital banking experience, implementing A/B testing frameworks that identified and resolved key user pain points
5. Built comprehensive user behavior tracking system integrating web analytics, transaction data, and customer feedback, enabling granular analysis of customer journeys and precision in targeted interventions
6. Led implementation of real-time monitoring dashboards for customer engagement metrics, facilitating proactive decision-making and contributing to 15% improvement in overall digital commercial performance

2021 - 2023 — Data Analyst (Customer Behavior Focus)
Polaris Bank LTD

1. Pioneered customer segmentation strategy using advanced clustering techniques and behavioral analysis, driving 30% increase in conversion rates through targeted engagement
2. Reduced operational costs by 50% through intelligent automation of data collection and analysis processes, streamlining reporting workflows while improving accuracy
3. Integrating Grafana to create real-time monitoring system for customer journey analytics, enabling proactive intervention strategies that improved digital engagement metrics by 15%.
4. Built customer lifetime value prediction model using survival analysis and machine learning techniques, enabling targeted retention strategies that improved retention by 20%
5. Developed recommendation engine using collaborative filtering and content-based approaches, increasing cross-sell success rate by 30%
6. Created interactive Power BI dashboards with drill-down capabilities, enabling stakeholders to analyze customer behavior patterns across multiple dimensions
7. Implemented feature store using Feast to standardize feature engineering across multiple ML models, improving model development efficiency by 40%.
8. Established automated reporting ecosystem with R, R Markdown and SQL that reduced manual analysis time by 50% while enhancing the accuracy of daily customer interaction insights

2020 - 2021 — Data Analyst
SurveyPlus LTD

1. Spearheaded market research initiatives using advanced analytics to improve targeting accuracy by 25% through sophisticated demographic and behavioral segmentation
2. Developed executive dashboards in R Shiny that transformed raw data into actionable insights, driving strategic decision-making across marketing, sales, and product teams
3. Implemented rigorous data validation framework for agent onboarding processes, preventing fraudulent customer registrations and saving significant compensation costs while improving data integrity by 15%
4. Implemented automated monitoring systems for campaign outcomes, reducing reporting time by 40% while maintaining GDPR and NDPR compliance

2020 - 2020 — Info. Technology / Teaching and Advice
Salem Secondary School

1. Designed and delivered comprehensive curriculum in programming and data analysis, incorporating real-world applications that resulted in 85% of students successfully completing end-of-term projects in web development and basic machine learning
2. Mentored and guided 40+ students through hands-on projects in Python programming and data analysis, fostering analytical thinking and problem-solving skills through practical applications

Highlight Projects

ML & Computer Vision

Drowsiness Detection: Developed a realime system using OpenCV and MediaPipe to detect driver drowsiness, achieving 95% accuracy.

Brain Tumor Detection: Built a deep learning model for brain tumor detection from MRI scans, leveraging LabelImg and YOLO v5.

Image Segmentation App: Created an app for recise object detection and segmentation using YOLO v8.

Generative AI

IELTS Writing Task Generator: A GPT-based model to generate IELTS writing tasks, automating task generation, performance evaluation and report

CV/Cover Letter Reviewer: AI-powered app for resume and cover letter feedback using Cohere's command-r Chat API.

Automated EDA and RAG: A tool for automated exploratory data analysis and report generation, integrating RAG.

MLOps

Ether Streaming Dashboard: Designed a real-time dashboard for monitoring Ethereum transactions using ML models and cloud infrastructure.

Orchestrating ML Development: Implemented MLOps pipelines for salary prediction using ZenML and MLFlow, ensuring reproducibility and scalability.

Technical Skills

Core ML/AI

* **Deep Learning & ML Frameworks**: TensorFlow, PyTorch, Scikit-learn, tidymodels, Vetiver, XGBoost, etc
* **Computer Vision & Image Processing:** OpenCV, MediaPipe, YOLO, Image Segmentation/Detection
* **Natural Language Processing & GenAI:** GPT-based models, LangChain, Cohere Command-R, LLaMA, Chain of Thought (CoT), OpenAI API

Engineering

* **MLOps & Deployment:** ZenML, MLFlow, Apache Airflow, Prefect, Mage, Feature Store (Feast),
* **Cloud & Infrastructure:** Azure ML, Google Cloud Vertex AI, Comntainerization, API Dev.
* **Data Engineering & ETL:** dbt, SQL, Apache Airflow, Python ETL libraries, Pipeline & Validation Frameworks

Tools & Platforms

* **Development & Version Control:** Python, R, Git, GitHub, CI/CD
* **Visualization & Reporting:** Power BI, Tableau, GGPlot, Seaborn, R Markdown, Shiny, Grafana
* **Web Dev:** Django, Flask, Streamlit, REST APIs
* **Database & Query Languages:** SQL, NoSQL, Google Apps Script, ETL Workflows

Education

2014 - 2018 — Obafemi Awolowo University, Ile-Ife, Osun State

Bachelors in Applied Statistics; (4.39/5.0)

Professional Certficates

2024 — MLOPs
DataTalks

2024 — AI Engineer (Associate)
Microsoft

2024 — Data Scientist
DataCamp

2023 — Data Analytics
Google

2022 — Data Analytics in Banking
CIBN

2021 — Data WareHousing
Udemy

2021 — Azure Fundamentals
Microsoft

Publications & Research

2024 — George, O., **Amah, D.**, & Emmanuel, J. (2024). Towards fairness and efficiency: A low-weight computer-aided model for melanoma detection with racial bias handling. In ICRS-STI 2024: Book of Abstracts (pp. [33]). Covenant University.

2018 — Evaluation of Household Age Data in the Nigerian Demographic and Health Survey, 2013.

2017 — Mass Media: Assessing Fertility Rates with Family Planning, A case study of Ilesha, Osun State