

BRYAN MOGENDI BOSIRE

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[GitHub](#) | [LinkedIn](#) | [Portfolio](#)

PROFILE

Innovative **Machine Learning Engineer & NLP Researcher** with 4+ years of hands-on experience in **Python, ML model development, and LLM applications**. Adept in **data pipelines, model optimization, and production deployment** across financial and e-commerce sectors. Skilled in leveraging **transformers, PyTorch, and Scikit-learn** to solve complex problems in credit scoring, forecasting, and customer analytics. Experienced in deploying **AI assistants integrated into Microsoft Teams** to drive productivity. Passionate about using AI to bridge business strategy and data-driven decision-making.

EDUCATION

MSc. Computational Intelligence – Strathmore University (2023 – 2025)

BSc. Actuarial Science – University of Nairobi (2014 – 2018)

Certifications:

- AWS Machine Learning Engineer Nanodegree – Udacity, 2021
 - AWS Certified Cloud Practitioner – Amazon Web Services, 2020
 - Moringa School – Full Stack Software Engineering (2022)
 - Machine Learning in Python with Scikit-Learn – MOOC, 2020
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TECHNICAL SKILLS

Languages: Python, SQL, JavaScript (React), FastAPI, Django

ML Frameworks: Scikit-learn, PyTorch, TensorFlow, Keras, Jax, XGBoost

NLP & LLMs: LangChain, OpenAI APIs, Hugging Face Transformers

Data Tools: Pandas, NumPy, Power BI, Azure ML, AWS Sagemaker

DevOps & Cloud: AWS, Databricks, Docker, Git, REST APIs

Concepts: Supervised/Unsupervised Learning, NLP, Time Series, Feature Engineering, MLOps, Statistical Modeling

SELECTED PROJECTS

AI Knowledge Assistant (LLM + Microsoft Teams Integration) (2025)

- Built an **internal AI assistant** using **OpenAI GPT-4**, **LangChain**, and **Azure Bot Framework**, integrated into **Microsoft Teams** to assist data and business teams.
- Designed retrieval-augmented generation (RAG) pipelines to query internal documentation and datasets securely.
- Enabled real-time Q&A, policy lookup, and predictive insights within Teams.
- Deployed on **Azure Functions** with caching via **Redis**, reducing response latency by 40%.

Credit Risk & Lending AI System – I&M Bank (2023–2025)

- Developed and deployed **credit scoring and behavioral models** (Logistic Regression, XGBoost, LightGBM) for personal and SME loans.
- Delivered >KES 5 B disbursements with NPL < 6% through data-driven automation.
- Created a **360° Customer View CRM**, combining NLP, segmentation, and credit models.
- Implemented **Early Warning System** using time-series and anomaly detection for delinquency prediction.
- Built end-to-end pipelines (ETL → Model → Deployment → Power BI Reporting).

Demand Forecasting & Supply Optimization – Twiga Foods (2020–2022)

- Built forecasting models (Prophet, ARIMA, LSTM) achieving >90% accuracy for produce supply chains.
- Automated Power BI + Python data pipelines, cutting manual data prep by 15 hrs/week.
- Applied clustering to retailer purchase patterns for logistics optimization.

EXPERIENCE

Senior Data Scientist | I&M Bank Digital Factory (Mar 2023 – Present)

- Designed ML solutions for digital lending (Short-Term Loans, BNPL, Unsecured Loans).
- Conducted **feature engineering**, **model calibration**, and **performance tracking** in production.
- Collaborated with stakeholders to align AI initiatives with lending KPIs.

- Deployed ML models through **MLOps pipelines** with scheduled retraining and monitoring.
- Mentored data science team on Python best practices, model governance, and explainability (SHAP, LIME).

Software Developer | Moringa School (May 2022 – Mar 2023)

- Built and deployed **full-stack web apps** (ReactJS + FastAPI,Django) aligned with learning and client needs.
- Mentored junior developers on **data-driven design** and Agile delivery.
- Integrated Dockerized ML microservices for student analytics dashboards.

Data Scientist | Twiga Foods (Jan 2020 – May 2022)

- Developed predictive and prescriptive models for **inventory and logistics optimization**.
 - Created **real-time Power BI dashboards** for sales and operations.
 - Automated data ingestion and cleaning pipelines with **Python and SQL**.
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SOFT SKILLS

- Analytical Thinking
- Stakeholder Communication
- Mentorship
- Agile Collaboration
- Problem Solving
- Project Management