

VANESSA NGENO
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EDUCATION

Yeshiva University
Master of Science in Data Analytics and Visualization

New York, NY
Expected December 2025

Jomo Kenyatta University of Agriculture and Technology
Bachelor of Science in Actuarial Science

Nairobi, Kenya
November 2015

SKILLS

Non-Technical: Performance Analysis and Management | Problem Solving | Creative and Critical Thinking
Technical: PostgreSQL | Python | R | Tableau

PROJECTS

Loan Default Prediction Model

- Developed a decision tree model to predict loan defaults for a financial institution. Performed a 70/30 train-test split to ensure robust evaluation, built a binary classifier with scikit-learn, and enhanced the model through feature engineering (mean imputation and mean encoding). Evaluated performance using metrics such as accuracy, ROC, confusion matrix, K-S, and F1 score to provide actionable risk mitigation insights.

Healthcare Feature Creation for Fraud Detection Analysis

- Engineered features from a raw CMS healthcare dataset to detect anomalies. Each feature was justified for its potential to reveal irregular patterns, and their distributions were visualized to support anomaly detection. This project demonstrates advanced feature creation, data visualization, and domain-specific analysis.

WORK EXPERIENCE

Data Analytics Partner

Nairobi, Kenya

Safaricom PLC

September 2023 – February 2024

- Utilized advanced data analytics & management tools (SQL, Qlik Sense, MS Excel) to uncover trends and patterns in customer behavior. This helped to identify key drivers of customer acquisition and retention, enabling the company to maintain a stable market share of 65%.
- Developed and implemented data-driven retention strategies, resulting in 25% increase in customer retention rate and 12% reduction in churn rate, translating to \$5 million in cost savings.
- Presented data-driven stories to senior management, influencing strategic decisions and driving business growth, resulting in 20% increase in sales from targeted customer segments, 15% reduction in operational costs through process optimization and 12% increase in active subscribers.

Regional Business Intelligence Lead (Job Rotation)

Nairobi, Kenya

Safaricom PLC

January 2023 – August 2023

- Tracked lead and lag KPIs and analyzed growth to show how the business sits economically.
- Successfully automated reports onto Qlik Sense using SQL scripts to shorten analysis time.
- Attended market visits to get one-on-one feedback on customer experience, provide product knowledge and use the information to work out appropriate, customer satisfaction driven insights.

Customer Experience Executive

Nairobi, Kenya

Safaricom PLC

October 2016 – December 2022

- Responded to customer requests for products, services, and company information.
- Provided customers with product and service information by clearly explaining procedures, answering questions, providing information.

SPECIAL INTERESTS

- Researching and developing data-driven solutions to optimize food distribution, reduce waste, and improve access to nutritious food in vulnerable communities.
- Utilizing data and AI to develop tools for community education on safe technology use to address social media influence and teenage mental health, substance abuse prevention and promoting healthy online interactions and digital citizenship.