

NICHOLAS BIY BWALLEY

Data Scientist | Data Analytics.

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[LinkedIn](#), [GitHub](#)

PROFESSIONAL SUMMARY

I am a Data Scientist with over six years of experience applying advanced analytics, statistical modeling, and machine learning to solve complex business problems. I specialize in transforming large, complex, and unstructured datasets into actionable insights that support revenue growth, risk management, operational efficiency, and regulatory compliance. I have strong expertise in exploratory data analysis, feature engineering, predictive modeling, and model performance evaluation, with experience deploying and monitoring analytical models in production environments. I work closely with business intelligence teams, data engineers, and business stakeholders to translate analytical findings into practical solutions, reports, dashboards, and decision support systems. I am highly analytical, detail oriented, and experienced in working within Agile environments while maintaining high standards for data quality, governance, and security in enterprise and financial services contexts.

CORE TECHNICAL COMPETENCIES

Data Analysis and Statistics

Exploratory Data Analysis, Statistical Testing, Regression Analysis, Probability Distributions, Hypothesis Testing, Data Validation, Performance Metrics Evaluation

Machine Learning and Advanced Analytics

Predictive Modeling, Classification and Regression Models, k Nearest Neighbors, Naive Bayes, Support Vector Machines, Decision Trees and Forests, Feature Engineering, Model Optimization and Evaluation

Programming and Data Science Tools

Python, NumPy, Pandas, Scikit learn, R fundamentals, MatLab exposure, Weka exposure, Scripting for Data Analysis

Databases and Data Management

SQL, Oracle fundamentals, OLAP concepts, MongoDB, NoSQL data handling, Data Modeling, Data Warehousing Concepts

Data Engineering and Preparation

Data Sourcing, Data Cleaning and Transformation, Handling Large Datasets, Text Extraction from HTML and PDF Files, Data Quality Assurance, Anomaly Detection

Business Intelligence and Visualization

Analytical Reporting, Dashboards, Charts, Metrics Definition, Business Insight Generation, Stakeholder Presentation

Model Deployment and Monitoring

Model Performance Tracking, Monthly Model Metrics Reporting, Production Readiness Validation, Continuous Improvement of Analytical Models

Others: Touch Typist with speeds averaging 120 Words Per Minute (WPM)

PROFESSIONAL EXPERIENCE

Data Scientist & Analytics Specialist | Remote | Mar 2021 – Present

Designed and deployed predictive analytics and machine learning models across fintech, real estate, and digital platforms, enabling data driven decision making and reducing operational costs by up to 40 percent through risk and performance insights.

Conducted exploratory data analysis on large structured and semi structured datasets to identify behavioral patterns, trends, and anomalies, supporting product optimization and revenue growth initiatives.

Built and evaluated supervised learning models including classification and regression techniques to predict customer engagement, churn probability, and usage outcomes, publishing recurring performance metrics to track model accuracy and stability over time.

Developed an end to end Customer Churn Prediction System using Python, SQL, and machine learning techniques, performing feature engineering, model selection, and optimization to generate actionable insights for retention strategies.

Software Engineer Intern | Turbo G & K Networks Ltd, Nairobi | Jan 2024 – Jun 2024

- Revamped website into a React SPA (MERN Stack), cutting load time by 55% and increasing traffic by 40%.
- Migrated from monolith to microservices architecture, reducing MTTR from 30 mins to under 10 mins.

- Implemented CI/CD pipelines with Docker & GitHub Actions, achieving zero-downtime deployments.

Cybersecurity Analyst Intern | Senselearner Technologies Pvt., Remote | Sep 2023 – Dec 2023

- **Conducted end-to-end security assessments** including network scanning, vulnerability analysis, and penetration testing of web applications, leveraging tools such as OWASP, Metasploitable and Hacksplaining to identify and mitigate **95% of critical threats**, enhance system resilience by **40%**, and deliver comprehensive remediation reports with actionable insights.

EDUCATION

Sustainable Urban Planning and Development (Challenge Driven Education (CDE) project), Exchange Program

KTH Royal Institute of Technology, Stockholm, Sweden | Aug 2024 – Jan 2025

BSc Business Information Technology (First Class Honours, GPA 3.8/4.0)

Strathmore University, Nairobi, Kenya | Sep 2021 – Jun 2024

Diploma in Business Information Technology (Merit)

Strathmore University, Nairobi, Kenya | May 2019 – Sep 2021

PROJECT HIGHLIGHTS

- Led an AI-driven mobility optimization project in Viksjö, Sweden, using advanced machine learning algorithms to generate insights and inform municipal transport efficiency modeling.
- Built two profitable B2C SaaS products, [LinguaFlash](#) and [BlogFlow](#), both generated consistent Monthly Recurring Revenue (MRR) and sold them for a fortune.
- Published a research article called “AI-Powered Customer Churn Predictor” that uses Machine Learning in predicting the probability that a customer in the bank will default and leave the banking services or not based on his usage metrics. Check it out [here](#)

CERTIFICATIONS & ACHIEVEMENTS

- Published Research: AI-Powered Customer Churn Predictor, ReadyTensor (Mar 2025)
- Dean's List Award Academic Year (2021–2022 & 2022-2023), Strathmore University.
- Certified Transcriptionist (120WPM on average)
- Weightlifter 3rd Place Award, Strathmore Sports Day (Aug 2023)

LANGUAGES

- English (C2 – Native; Both Spoken & Written)

- Swahili (C2 – Native; Both Spoken & Written)
- French (C1 – Working Proficiency; Both Spoken & Written)

HOBBIES

- Fitness Coach
- Professional Swimmer
- Table Tennis
- Pool Games & Bowling
- Speed Cuber & Card Magician.