# NICHOLAS BIIY BWALLEY

"I Build Intelligent Customized Solutions to Address Unique Business Needs."

## Full-Stack Software Engineer | AI Automations Expert | MCP | RAG | SaaS Consultant.

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**LinkedIn**, **GitHub**

## PROFESSIONAL SUMMARY

I'm a Full-Stack Software Engineer with a specialization in AI Automations for Business with 6 years of experience designing and deploying scalable, intelligent, and compliant digital systems. I build end-to-end, highly interactive, and scalable solutions from creating custom AI automation workflows and AI-powered chatbots to enterprise-grade SaaS platforms that streamline operations, enhance customer engagement, and scale effortlessly to millions of users. I specialize in transforming complex business processes into self-operating AI ecosystems using both code-based and low/no-code automation tools. By combining deep expertise in software architecture, AI automations and cloud infrastructure, I build robust and secure systems that adhere to both international and local set laws ensuring every solution is scalable, compliant, and built for measurable business impact.

## CORE TECHNICAL COMPETENCIES

**AI Tools & Automations:** OpenAI, Claude, LLaMA, LangChain, RAG, MCP, n8n, Flowise, CrewAI, LangGraph, LangSmith, HuggingFace, Prompt Engineering, Cursor, Claude Code, Claude Desktop, Lovable, Windsurf, Replit, Google Gemini CLI, Google AI Studio.
**Software Engineering:** Python (FastAPI, Flask), Node.js, Next.js, React, Express.js, REST APIs, OAuth 2.0, Docker, Vercel, Render, AWS (EC2, S3, Bedrock), CI/CD (GitHub Actions), Kubernetes, Apache Kafka.
**Databases:** PostgreSQL, Supabase, MongoDB, MySQL, Pinecone, ChromaDB, Redis Streams.
**Architecture & Scalability:** Cloud-Native SaaS Systems, High Availability (HA) Design, Vector Databases, API Integration, Event-Driven Systems, Serverless Functions.
**Compliance & Security:** SOC 2, GDPR, OWASP, Penetration Testing, Secure API Design.

## PROFESSIONAL EXPERIENCE

**Full Stack Software Engineer & AI Automations | Remote | Mar 2020 – Present**

- Delivered 15+ AI-powered web applications for e-commerce, fintech, and real-estate clients, automating workflows, cutting operational costs by up to 40%, and successfully completing over

170 projects. Check it out [here](#).
- Built production-grade AI RAG chatbots with n8n and OpenAI, leveraging Pinecone for semantic search cutting research time by 90% and boosting customer engagement by 40%.
- Developed 2 functional solo SaaS Application [LinguaFlash](#) (lightweight alternative to NotebookLM) and [BlogFlow](#) (AI-powered writing assistant for technical creators), both generating consistent MRR after validation and launch.
- Hired to improve a company's organic traffic by optimizing code for Search Engine Optimization (SEO), reducing Mean Time to Recovery (MTTR) by 45%, and increasing overall web traffic by 65%.

**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.
- 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, Swimming, Table Tennis, Pool Games, Bowling, Speed Cuber and Card Magician.