

Nicholas Biiy Bwalley

Full-Stack Software Engineer | AI & LLM Engineer

Nairobi, Kenya | +254 714 394 332 | nickbiiybwalley@gmail.com | **LinkedIn:** <https://www.linkedin.com/in/nick-bwalley-49220a269> | **GitHub:** <https://github.com/NickBwalley>

Professional Summary

Proactive Full Stack AI Software Engineer with 5 years of experience building scalable web applications and deploying production-grade machine learning systems. Skilled in Python, JavaScript, TypeScript, and the MERN stack, with deep expertise in creating AI Agents, Agentic AI workflows, Retrieval-Augmented Generation (RAG), and Model Context Protocol (MCP). Known for delivering user-focused, cost-effective solutions that enhance operational efficiency. Strong communicator and team leader, effective in dynamic, remote environments.

Core Competencies

• Python • JavaScript • TypeScript • Retrieval-Augmented Generation (RAG) • LangChain / LangGraph • Hugging Face Transformers • OpenAI-Agents-SDK • CrewAI • AutoGen • MCP • n8n • Agentic RAG • Fast API • REST API • OAuth 2.0 / JWT Authentication • ReactJS / Redux • NodeJS • ExpressJS • Next.js • Redis Streams • MongoDB • PostgreSQL • MySQL • ChromaDB • FAISS • Cloud & DevOps (AWS, Render, Docker, GitHub Actions, CI/CD) • Kubernetes • Apache Kafka • Data Pipelines • Prompt Engineering & Fine-Tuning • Agile / Scrum • Technical Leadership

Work Experience

Freelance AI Software Engineer | Remote | Mar 2020 – Present

- Designed and delivered 15+ AI-powered applications for clients in e-commerce, fintech and real-estate, automating manual workflows and reducing costs by up to 40 %.
- Built end-to-end RAG chatbots with LangChain, OpenAI GPT-4o and ChromaDB, achieving customer-satisfaction scores above 90 %.
- Fine-tuned open-source LLMs (Llama 3, Mistral 7B) using LoRA/ QLoRA, Quantization and PEFT, lowering inference latency by 30 % while preserving answer quality.
- Integrated AI micro-services into existing MERN and Laravel stacks, cutting feature delivery time by 25 %.
- Led agile teams of 2–5 developers: set sprint goals, performed code reviews and mentored juniors in best practices.
- An active GitHub Account having done and completed over 160+ project in the past.

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

- **Revamped the customer-facing website** into a modern single-page application with **ReactJS** on the front end and **Node.js (Express)** APIs on the back end, cutting average page-load time by 55 % and boosting weekly visits by 40 %.

- **Migrated the legacy monolithic codebase to a microservices architecture** (auth, content, payments, analytics), enabling independent deployments and reducing mean-time-to-recovery from 30 min to under 10 min.
- **Introduced automated CI/CD with GitHub Actions and Docker**, adding unit tests, linting, and blue-green deployments that now ship reliable updates twice a week with zero downtime.
- **Improved SEO and accessibility** through server-side rendering, structured data, and Lighthouse audits, raising organic search impressions by 38 % in the first quarter after launch.

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

- Completed a remote Cybersecurity Analyst internship at Senselearner Technologies (Sep–Dec 2023), mastering ethical-hacking fundamentals, foot printing & reconnaissance, network scanning, vulnerability analysis, exploitation/post-exploitation, and full web-app pentesting with clear remediation reporting.

Education

- **Exchange Program** – Challenge Driven Education (CDE) Project Sustainable Urban Planning & Development – KTH Royal Institute of Technology, Stockholm, Sweden | Aug 2024 – Jan 2025
- **BSc Business Information Technology (First-Class Honors, 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

Academic Projects

- Led AI-driven mobility optimization project for Viksjö in Sweden using Machine Learning Algorithms to drive insights and to inform municipality modelling transport efficiency and flow.
- Built “Stora Ecom”, a full-stack e-commerce platform demonstrating modern UX and scalable architecture.
- Researched on Spotify’s subscription model, proposing data-driven revenue-diversification strategies to increase their revenue growth.

Technical Skills

- **Languages:** Python, JavaScript, TypeScript, Java, PHP, C++, SQL, NoSQL.
- **Frameworks/Libraries:** React.js, Redux, TypeScript, Node.js, Express.js, Next.js, Tailwind-CSS, TensorFlow, PyTorch, LangChain, LangGraph, OpenAI-Agents-SDK, Crew AI, AutoGen, Hugging Face Transformers, MCP, RAG, Fast API, OAuth2.0, JWT, GraphQL
- **Databases:** MongoDB, PostgreSQL, MySQL, Chroma DB, FAISS, Astra DB, Redis.
- **Cloud & Tools:** AWS, Amazon Bedrock, Render, Docker, Git, GitHub, GitHub Actions, Postman, Linux, Webpack, Vite, MLflow, Kubernetes.

Certifications & Achievements

- Published research article in Ready Tensor's Agentic AI Challenge (Mar 2025).
<https://app.readytensor.ai/publications/ai-powered-customer-churn-predictor-TbSqv34bmnZy>
- Dean's List Award, Strathmore University, Academic Year (2021–2022), (2022-2023).
- 3rd Place Award, Weightlifting – Strathmore Sports Day (Aug 2023).

Languages

- English (C2) - Native
- Swahili (C2) - Native
- French (C1) – Professional fluency
- Swedish (A1) - Elementary
- Spanish (A1) - Elementary

Hobbies & Interests

- Fitness coaching
- Competitive swimming
- Table tennis
- Speed-cubing & Card Magic