

Nicholas Biiy Bwalley

AI / LLM Engineer | Full-Stack Software Engineer

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Professional Summary

Proactive AI/LLM Engineer with 4 years of hands-on experience designing, fine-tuning and deploying production-grade machine-learning systems. Blends strong full-stack engineering skills (adept in Python, JavaScript, MERN STACK) with deep expertise in creating AI Agents, Agentic AI Workflows, Retrieval-Augmented Generation (RAG) and Model Context Protocol (MCP). Recognised for delivering robust, user-centric solutions that streamline business processes and cut operational costs. Comfortable leading cross-functional teams, communicating with stakeholders, and thriving in fast-paced, remote environments.

Core Competencies

• Python • JavaScript • AI/LLM Solution Architecture • Retrieval-Augmented Generation • LangChain / LangGraph • OpenAI-Agents-SDK • CrewAI • AutoGen • MCP • Full-Stack Development (ReactJS, TypeScript, NodeJS, ExpressJS, MongoDB) • Cloud & DevOps (AWS, Azure, Render, Docker, CI/CD, GitHub Actions) • Prompt Engineering & Fine-Tuning • Data Pipelines & Vector Databases • Agile & Technical Leadership.

Professional Experience

Freelance AI Software Engineer | Remote | Jan 2021 – 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, 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.

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

- Installed high-performance fibre-optic networks that boosted throughput by 30 % for SME clients.
- Launched an SEO-optimised company website, raising organic traffic by 40 % in three months.

- Restructured router-to-splitter layouts via ODFs to lift end-user speeds by 25 %.
- Maintained 99.9 % service uptime through proactive monitoring and rapid incident response.

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

- Performed vulnerability assessments and penetration tests on web apps, producing actionable remediation reports.
- Applied exploitation and post-exploitation techniques to validate security controls and harden systems.

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 for Viksjö, Sweden, modelling transport flows to inform municipal policy.
- 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, C++, SQL

Frameworks/Libraries: React.js, Redux, TypeScript, Node.js, Express.js, Tailwind-CSS, TensorFlow, PyTorch, LangChain, LangGraph, OpenAI-Agents-SDK, CrewAI, AutoGen, MCP, RAG, Prompt Engineering.

Databases: MongoDB, MySQL, Postgres, ChromaDB, AstraDB.

Cloud & Tools: AWS, Azure, Render, Docker, Git, GitHub, Postman, Bash.

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), Swahili (C2), French (C1), Swedish (A1), Spanish (A1)

Interests

Fitness coaching • Competitive swimming • Table tennis • Speed-cubing