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