

JAMES KANYIRI

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PROFESSIONAL PROFILE

I am an experienced software engineer specialising in building AI solutions using the LangChain ecosystem: LangChain, LangGraph, LangSmith, and LangGraph Studio, with a focus on building agent harnesses, agents, and workflows. I also work as a backend engineer, primarily using Python and FastAPI, and build frontend applications using Next.js. I started out as a UX/UI designer and bring that perspective to all my work.

Some of my major projects are [PayeLink](#), a developer tool for agent-to-agent payment and identity, and [Workpods](#), an AI collaboration tool for teams. I love participating in and building communities - I have won 2 hackathons and lead the LangChain Community in Kenya.

KEY SKILLS

- Multi-Agent System Design and AI Solution Development with LangGraph, LangChain, LLMs, MCP Protocol, and Tools (Tavily, Firecrawl, Unstructured)
- MCP Server Development using MCP Protocol
- Tracing and Evaluation using LangSmith
- Backend API Development with FastAPI and Laravel
- Database Management with MongoDB, MySQL and Vector DBs (Qdrant, ChromaDB)
- Fintech Integration with M-Pesa Daraja API, Stripe API
- DevOps and Dockerized Deployment with CI/CD Pipelines

PROFESSIONAL EXPERIENCE

AI Engineer (Contract) | Bayes Consulting *July 2025 - Present*

- Design and deploy AI solutions for enterprise clients using LangGraph, LangChain, OpenAI and Anthropic tools.
- Build multi-agent architectures for data analysis and reporting automation.
- Lead internal research on LLM-driven workflows for corporate innovation.
- Develop custom LangChain tools to streamline client operations.

LangChain Community Kenya Lead (Volunteer) | Self-Organised *July 2025 - Present*

- Organise and lead workshops, webinars, and online events for developers building with LangChain, LangGraph, and LangSmith.
- Create educational content, tutorials, and starter templates to support the open-source community.
- Advocate for responsible AI development and mentor early-stage builders with hands-on guidance.
- Actively contribute to documentation, GitHub issues, and feedback for core LangChain features.

Lead AI Engineer (Contract) | Thumbprint Consulting *Nov 2024 - March 2025*

- Designed a multi-agent grant writing system using LangGraph and FastAPI, optimising workflow by 40%.
- Built a grant-writing assistant using LLMs and RAG to automate intelligent document processing of grant calls - extracting eligibility, summarising requirements, and drafting tailored proposals.
- Developed a human-in-the-loop system for strategic decision validation.
- Implemented PostgreSQL-based persistent memory for enhanced contextual awareness.
- Integrated Tavily search for real-time internet access and RAG using MongoDB as the vector database.
- Deployed the agent in Dockerised environments with monitoring tools (LangGraph Studio, LangSmith).

Committee Member & IT Consultant (Volunteer) | Agriculture Society of Kenya *Feb 2023 - Present*

- Lead technical infrastructure for the Nairobi Show, optimising event technology and data analysis.
- Manage judging applications and ensure seamless system performance.
- Enhance transparency by integrating data-driven selection systems.

Back-End Developer (Full-Time) | Payecards *Jan 2023 - May 2024*

- Developed Laravel-based APIs for fintech applications, ensuring secure and efficient data handling.
- Improved database performance by 30% through query optimisation and caching mechanisms.
- Built a robust authentication and authorisation system, strengthening security for sensitive financial transactions.
- Collaborated with frontend teams to integrate Vue.js and React-based applications seamlessly.
- Designed and maintained RESTful APIs to support multi-platform fintech solutions.

Full-Stack Web Developer (Full-Time) | Greenbear Technologies *Jan 2019 - Jan 2023*

Projects: Hillane Autos, Rent Nasi, Autolink Ventures, Top Rides Motors Ltd

- Led UI/UX design for multiple clients, increasing project delivery speed by 50%.
- Led development of front-end and backend systems for multiple clients.
- Applied Agile methodologies, increasing project delivery speed by 25%.
- Secured systems with authentication mechanisms, reducing breaches by 40%.

PROJECTS

[PayeLink](#)

- Building a developer framework for agent-to-agent discovery, identity, payment, and evaluation.
- Designed a protocol that allows AI agents to find, verify, and pay other agents programmatically.
- Implemented agent-to-agent payments using the Wallet Development Kit (WDK) by Tether.
- Built agent identity using the W3C standard for generating Decentralised Identifiers (DIDs).
- Integrated M-Pesa Daraja API and Stripe for multi-provider payment support.

[Workpods](#)

- Building an AI collaboration workspace for teams - think Notion but agentic-first.
- Designed a multi-model workspace where teams can interact with different AI models in one place.
- Built with Next.js for the frontend and FastAPI for the backend.
- Focused on enabling deep research, polished output, and organised team workflows powered by AI.

ACHIEVEMENTS & AWARDS

Winner - Unstructured MCP Hackathon (March 2025)

- Developed an AI-powered financial workflow automation system, integrating M-Pesa's Daraja API with Unstructured API for seamless invoice processing and payment automation.
- Recognised for innovative use of multi-agent AI to streamline financial transactions.
- Blog Post: [Read more](#) | GitHub: [Project Code](#)

EDUCATION

BSc in Computer Science

Multimedia University of Kenya - Nairobi, Kenya

- **Research Project:** Investigated the application of computer hardware and software to mitigate traffic congestion in Kenya. Explored cost-effective technological interventions including CCTVs, drones, lidar, satellites, V2I, Weigh-in-Motion (WIM), and smart parking technologies, shown to reduce congestion by up to 68%. [Details here.](#)

CERTIFICATIONS

- **Introduction to LangGraph (LangChain Academy)** - No expiry date
- **HCIA-Datacom (Huawei)** - Valid through 2026
- **HCIA-Security (Huawei)** - Valid through 2026
- **Python Programming Basic (Huawei)** - Permanent

REFEREE

Amos Wanene

Lead AI/ML Engineer | Bayes Consulting

Email: waneneamos@gmail.com Phone: +254 717 978 440

Capacity statement:

I work directly under Amos at Bayes Consulting, where he led the AI/ML engineering team. He supervised my work building AI solutions for enterprise clients using LangGraph, LangChain, and Anthropic tools, and can speak to my technical skills, work ethic, and ability to deliver production-quality AI systems.

Alvin Otuya

Lead Engineer | Thumbprint Consulting

Email: otuyaalvin@gmail.com Phone: +254 748 755 840

Capacity statement:

Alvin was the Lead Engineer at Thumbprint Consulting during my contract there. He oversaw my work designing and deploying a multi-agent grant writing system using LangGraph and FastAPI, and can speak to my ability to architect complex AI pipelines, work independently, and deliver end-to-end solutions under timelines.

Jose Gitonga

Board Chairman | Agriculture Society of Kenya

Email: josegitonga@yahoo.com Phone: +254 722 31573

Capacity statement:

I have been working alongside Jose in a volunteer capacity at the Agriculture Society of Kenya since February 2023, where I serve as IT Consultant and Committee Member. He can speak to my commitment to mission-driven work, reliability, and ability to apply technical skills in non-profit and social sector settings.