Emmanuel Makau

Nairobi, Kenya | **emmanuelmakau90@gmail.com** | 0793472960 **LinkedIn | GitHub | Portfolio**

Dedicated Full-Stack Software and AI Engineer

Passionate Junior Full-Stack Developer skilled in building scalable and responsive web applications using Next.js 14, Django, PostgreSQL, MySQL, MongoDB, Python, and JavaScript. Experienced in REST API development, DevOps (CI/CD), and machine learning with TensorFlow. Adept at problem-solving and delivering impactful software solutions. Proficient in leveraging Agentic AI workflows with LangGraph, Ollama, Lang Chain, and RAG (Retrieval-Augmented Generation) to build intelligent, adaptive, and context-aware applications. Experienced in fine-tuning Large Language Models (LLMs) from Hugging Face, where millions of pre-trained models are available, to optimize performance for real-world use cases.

Work Experience

Backend Software Engineer (Internship)
Upnxy Innovative Solutions, India

February 2025– July 2025

- Developed RESTful APIs and integrated payment gateways using Django, Python, and PostgreSQL.

- Collaborated closely with the frontend team to ensure seamless backend-frontend integration using React and Tailwind CSS.

- Integrated Web Sockets into marketing automation software for real-time communication across large socket loads.

- Researched server management techniques to handle large socket connections without downtime.

- Explored DevOps practices including docker for container, Azure LLMs for intelligent data scraping, Selenium for automation, Beautiful Soup for data extraction, and data management with NumPy and Pandas. And scraped datasets, converting them into spreadsheets and csv files for data analysis.

- Collaborated closely with the frontend team to enhance user experience by guiding API integration and improving interface intelligence. Helped ensure seamless data flow and smart interactions between the frontend and backend systems. Also worked alongside the data science team to support automated task execution aligned with the AI automation software's goals, including marketing functionality and database connectivity.

- Contributed to the Data Science team by integrating Multi-Agent AI through Autogen AI into the AI-driven marketing automation system. Improved user experience by guiding API integration and strengthening interface intelligence, ensuring seamless data flow between frontend and backend.

Full-Stack Developer
Open GitHub Contributions

January 2024 – February 2025

- Contributed to open-source projects to enhance code quality and collaboration.

- Gained experience in production environments, working closely with senior engineers, writing production-level code, and organizing codebases following best practices.

- Improved accessibility, performance, and scalability across projects by solving real-world issues, debugging, and optimizing systems.

- Languages & Frameworks used: React, Next.js, Django, JavaScript, Tailwind CSS, Python, MySQL, MongoDB. *View my GitHub*

Education

Dedan Kimathi University of Technology, Nyeri, Kenya

Bachelor of Science in Mathematics and Computer science –
2023   GPA: 3.85

Skills & Technologies

- **Backend**: Python, Django, Node.js, REST APIs, Next.js, JSON

- **Frontend**: HTML, JavaScript, TypeScript, React, Tailwind CSS, CSS5

- **Tools**: AWS, Git, VS Code, Postman, Thunder client, courser ai

- **Machine Learning & AI:** TensorFlow, LLMs (GPT-4, Gemini, Llama), Hugging Face (fine-tuning), Lang Chain, Lang Smith, LangGraph, Ollama, RAG

- **Database**: MongoDB, PostgreSQL, MySQL

- **DevOps**: CI/CD, GitHub actions, Jenkins, Azure, Docker

- **Languages**: English (Fluent)

Career Goals

To remain adaptable in the ever-evolving world of technology by embracing internships as opportunities to learn, contribute, collaborate, and innovate. Focused on continuous growth through hands-on experience in Full-Stack Software Engineering, Machine Learning, and Agentic AI workflows (Lang Chain, Lang Smith, LangGraph, Ollama, RAG, and Hugging Face fine-tuning). Committed to advancing my capabilities, exploring cutting-edge solutions, and building impactful, intelligent software that addresses real-world challenges.