

# John Mwangi Kiprotich

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## PROFESSIONAL SUMMARY

Results-driven Software Engineer with 5+ years of experience building scalable backend systems, cloud-native applications, and AI-driven business solutions. Strong background in Python, Node.js, microservices, and distributed systems. Adept at building clean architectures, designing maintainable APIs, and collaborating in fast-paced engineering environments. Passionate about automation, DevOps, and improving engineering velocity.

## CORE SKILLS

**Languages:** Python, JavaScript (Node.js), TypeScript, Go

**Frameworks:** FastAPI, Django, Express.js, React

**Databases:** PostgreSQL, MySQL, MongoDB, Redis

**Cloud & DevOps:** Docker, Kubernetes, AWS (EC2, S3, Lambda), CI/CD (GitHub Actions)

**AI & Data:** OpenAI APIs, TensorFlow, PyTorch, LangChain

**Tools:** Git, Linux, Grafana, RabbitMQ, Celery

**Soft Skills:** Problem-solving, clear communication, leadership, mentorship, cross-team collaboration

## PROFESSIONAL EXPERIENCE

### Software Engineer — KiliTech Solutions, Nairobi

Jan 2022 – Present

- Designed and implemented a **microservices architecture** that improved system scalability and reduced deployment conflicts by 40%.
- Built internal developer tools using Python + FastAPI, reducing onboarding time for new engineers by 30%.
- Led the development of a real-time reporting module using WebSockets, serving 50,000+ monthly active users.
- Integrated AWS services (S3, Lambda, SES) to automate report generation and notifications.

- Collaborated with the DevOps team to set up CI/CD pipelines using GitHub Actions, reducing deployment time from 15 minutes to under 3 minutes.
- Mentored two junior engineers and conducted internal API design workshops.

## **Backend Developer — EastData Labs, Nairobi**

**Aug 2019 – Dec 2021**

- Developed RESTful APIs in Python and Node.js powering fintech and logistics applications.
- Implemented caching strategies using Redis, improving API performance by up to 50%.
- Built ETL pipelines in Python for analyzing customer transaction patterns.
- Migrated legacy monolith services into modular microservices, improving maintainability and testability.
- Worked closely with frontend teams to define stable contract-first API specifications.

## **Software Engineering Intern — Safaricom PLC, Nairobi**

**Jan 2018 – June 2018**

- Assisted in building internal monitoring dashboards using React and GraphQL.
- Automated routine data analysis tasks with Python scripts, saving the engineering team ~8 hours weekly.
- Contributed to API documentation and created internal learning materials for new interns.

## **EDUCATION**

### **Bachelor of Science in Computer Science**

University of Nairobi, 2015 – 2019  
Graduated with Second-Class Upper Division

## **CERTIFICATIONS**

- AWS Certified Solutions Architect – Associate
- Google Professional Cloud Developer

- Meta Backend Developer Professional Certificate

## PROJECTS

### AI-Powered CV Analyzer

A cloud-based service that extracts, cleans, and analyzes CVs using OCR, NLP models, and a custom skill-matching engine. Built using Python, FastAPI, Tesseract OCR, and AWS Lambda.

### Kubernetes Deployment Manager

CLI tool for automating deployment of microservices to Kubernetes clusters. Supports blue/green deployments and rollback. Built in Go.

### Smart Delivery Routing System

An ML-based routing algorithm integrated into a logistics application used in East Africa. Reduced delivery travel time by ~18%.

## ACHIEVEMENTS

- Awarded **Employee of the Quarter (Q2 2023)** for leading the company's backend modernization initiative.
- Speaker at **Nairobi DevCon 2022** on "Designing Scalable Microservices in Python."
- Open-source contributor to multiple FastAPI extensions and utilities.

## TECHNICAL STRENGTHS

- Strong understanding of distributed systems & API architecture
- Clean, maintainable code following SOLID & clean architecture principles
- Experience with high-availability and high-traffic systems
- Skilled in debugging, profiling, and optimizing backend services

## PERSONAL INTERESTS

- AI/ML research
- Developer community mentorship

- Open-source contributions
- Long-distance running