

# Stephen Kioni Mwangi

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## WORK EXPERIENCE

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**Canonical** January 2024 - Present  
*Software Engineer* *Remote*

**Savannah Informatics** June 2022 - December 2023  
*Software Engineer* *Nairobi, Kenya*

- Led the design and development of the backend of an Electronic Medical Records and Patient Engagement system (*Python, Django, Django Rest Framework, Kubernetes, GCP, Docker, RabbitMQ, Redis, Go, GraphQL*)
- Implemented and designed the company's SMS and USSD API gateway and integrated it with a major Kenyan telecommunications provider, reducing comms costs by  $\approx 40\%$  (*Python, Django, Django Rest Framework, GCP, RabbitMQ, Redis, Swagger/OpenAPI documentation*)
- Participated in re-platforming existing backend infrastructure from Google Cloud Run to use Google Kubernetes Engine which reduced the company's infrastructure cost by  $\approx 55\%$
- Implemented an event-driven usage-based billing module that integrated with prepaid wallets on an internal ERP system
- Optimized existing APIs through application-level caching and query optimization which reduced p95 latency by  $\approx 80\%$  ([Talk given on Django performance](#))
- Setup observability to collect metrics and logs using Telegraf, InfluxDB, Grafana, and Sentry for monitoring and error-reporting
- Guided and coached new hires and interns

**Savannah Informatics** June 2021 - May 2022  
*Software Engineer Intern* *Nairobi, Kenya*

- Maintained and developed the Slade360 Electronic Data Interchange system (*Python, Django, Django Rest Framework*)
- Wrote unit, integration, and end-to-end tests

## EDUCATION

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**University of Nairobi** September 2018 - September 2022  
*BSc. Computer Science* *First Class Honours*

**Relevant coursework:** Software Engineering, Distributed Systems, Data Structures and Algorithms, Design Thinking, Systems Analysis and Design, Artificial Intelligence, Machine Learning, Compiler Construction

## OPEN SOURCE PROJECTS

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**Obsidian Spaced Repetition** ([link](#)) April 2021 - Present  
Spaced Repetition plugin written in TypeScript for the note-taking tool [Obsidian](#). It has been downloaded over 350,000 times and translated into 10+ languages by a global community of users.

**Impulse** ([link](#)) December 2022 - Present  
Impulse is a distributed key-value store written in Go. It implements various storage engines (Hash Maps, LevelDB, LSM Trees, B Trees), replication, range queries, chaos testing, and data sharding.

**Elixir** ([link](#)) December 2021 - May 2022  
Elixir is a distributed electronic health records system written in Python/Django and JavaScript/Svelte.

## SKILLS

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**Programming:** Python (Django, DRF, Celery), Go, GraphQL, SQL, TypeScript, JavaScript, HTML/CSS, Rust

**Infrastructure:** Kubernetes, Google Cloud Platform, Docker, PostgreSQL, Redis, RabbitMQ

**Observability:** Grafana, Telegraf, InfluxDB, Sentry

**CI/CD:** Gitlab CI/CD, GitHub Workflows, Helm, Ansible