

Joseph Kariuki

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EXPERIENCE

Freelancer

UpWork

July 2021 – Present

- **GeoServer Expert** – Administered configuration of data analytics using shell scripting and Linux cron jobs facilitating adding optimization by 25% in publishing and serving geospatial data.
- **GeoNode Developer** – Collaborated with the frontend team to design and implement efficient REST APIs for seamless spatial data exchange, achieving 40% improvement in the user experience from the default system.
- **GIS Backend and DevOps** – Managed containerized deployment, integration testing, and scaling the spatial data platform to accommodate over 500 concurrent requests through data uploads and publishing using micro services in Docker.

Back end Developer

Map For Future

Rome, Italy January – March 2023

- Achieved a 40% reduction in response times and eliminated system downtime during peak traffic, resulting in a better user experience and improved customer and client satisfaction on the geospatial data infrastructure.
- Spearheaded scaling of the data infrastructure platform to handle a 300% increase in concurrent users, enabling the client to accommodate significant business growth.

Full Stack Engineer

Spatial Collective

Nairobi, Kenya October – December 2022

- Lead the deployment of enterprise-level micro-services applications using Python, Django, React.js and NodeJS, incorporating open-source libraries saving the client approximately \$7000 per year.
- Implemented caching mechanisms and optimized database queries to reduce server load and response times by 60%.

Software Engineer

GeoSolutions

Massarosa, Italy May – June 2022

- Enriched GeoNode spatial data infrastructure based on Python's metrics by integrating with telemetry, facilitating logging, and increased efficiency by 20% and integrating with data and front-end APIs.
- Employed load testing tools to identify bottlenecks and conducted performance tuning to enhance system by 30%.
- Contributed to the non-technical descriptions of operations and workflows in system documentation to enable non-technical teams to function with reduced interruption by at least 40%.

You Tuber

YouTube

September 2020 – Present

- Managed 70+ videos with a focus on Web and GIS Development using Python, JavaScript, and Django.
- Championed user feedback from an audience of over 900 subscribers in insights to optimize video. performance, engagement rates and further engaging with the community through comments and social media.

Software Developer

UN-Habitat

Windhoek, Namibia March 2019 – May 2021

- Established a full-stack web and desktop API code in Python and PyQt facilitating digitization and generation of title deeds that accelerated efficiency by 60%.
- Supervised the automation and optimization of the business logic for the core components of the land information system, database functions, and integrating third-party systems that facilitate record storage and retrieval thus improving title deed production business process by 20%.
- Mentored 5 team members to achieve professional and technical growth in Python programming and geo-spatial analysis.

EDUCATION

Bachelor of Science

University of Nairobi

September 2011- September 2016

Geospatial Engineering: Informatics, Geographic Information Systems

OPEN SOURCE PROJECTS

[Health Facilities Map](#) - Interactive and scalable web app using Node.js, React.js Django REST API and Docker, visualizing crowd-sourced MPESA locations in Kenya useful to fin-tech using containerization and load-balancing reducing lag by 40% and adding security.

[MPESA Locations Web App](#) - Interactive and scalable web app using Node.js, React.js Django REST API and Docker, visualizing crowd-sourced MPESA locations in Kenya useful to fin-tech using containerization and load-balancing reducing lag by 40% and adding security.

[Website and Blog Template](#) – Full stack website and blog template project that anyone can download, add functionality and use. Built using Django and jQuery, unit testing using pytest, performance testing using Faker, linting using Black, and continuous integration/deployment using Docker, with 40% improved performance and code coverage.

SKILLS

Languages: Python, JavaScript, SQL, Bash, HTML/CSS

Databases: PostgreSQL, MySQL, MongoDB

Frameworks: Django, Flask, jQuery, Bootstrap, Node.js, React.js, PyQt

Tools / Technologies: AWS, Microsoft Azure, Google Cloud, JIRA, GitHub, Atlassian, Docker, Jenkins, RabbitMQ