Kennedy Mwavu

Software Developer

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Software developer specializing in the R ecosystem. I build production software, develop open-source R packages, and maintain the Ambiorix web framework. My work focuses on the intersection of R, data systems, and web infrastructure.

EXPERIENCE

Sigflux – Founder

March 2025 – Present

R, SQL, JavaScript

- Software for data systems.

Actuarial Services (EA) Ltd — Software Developer

July 2021 – March 2025

R, Shiny, data engineering, reporting systems

- Built **GenVal**, an actuarial valuation platform used for insurance reserving, reporting, and analytical workflows.
- Optimized actuarial computations, reducing runoff triangle processing from approximately two hours to ten seconds using R and data.table.
- Developed IFRS 17 reporting modules, reserving models, REST APIs, and automated data processing pipelines supporting actuarial and insurance operations.
- Mentored junior developers, reviewed code, and contributed to the architecture of production R applications.

Seven Skies Information & Research — Software Developer

June 2020 – July 2021

R Shiny, Docker, CI/CD, Google Cloud Platform

- Built a famine early warning dashboard for Kenya, visualizing forage conditions, climate indicators, and food security metrics across county, sub-county, and ward levels.
- Developed interactive geospatial visualizations using Leaflet, Mapbox, and shapefiles to support monitoring of forage conditions, trigger levels, and population-at-risk estimates.
- Integrated multiple environmental and food security datasets, implementing automated validation and ETL workflows for Excel, CSV, and SQLite data sources.

OPEN SOURCE

Ambiorix — Maintainer

Present

R web framework

- Core maintainer of the Ambiorix R web framework.
- Added framework features, improved routing and middleware, fixed bugs, expanded documentation, and wrote production-ready examples.
- Awarded an R Consortium Infrastructure Steering Committee grant to advance development of Ambiorix.
- Co-author of *Ambiorix, R, and the Web.*
- github.com/ambiorix-web/ambiorix

hypertext — Author

Present

R package for HTML generation

- Designed and maintain an open-source R package for building HTML using a declarative domain-specific language.
- Supports custom elements, server-side rendering, raw HTML injection, and deterministic HTML generation.
- github.com/sigflux/hypertext

EDUCATION

University of Nairobi — BSc Actuarial Science

2018 – 2022
