Kennedy Mwavu

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Experienced software developer specializing in R and full-stack development, known for creating highly functional, user-friendly Shiny applications. Skilled in building reliable R packages and developing efficient APIs with Plumber for seamless software integration. Committed to transforming complex data into compelling visualizations and delivering scalable, customized solutions.

Work Experience

Software Developer

Actuarial Services (EA) Ltd - Nairobi

January 2022 to Present

- Revolutionized the efficiency of runoff triangle processing by implementing an advanced actuarial valuation system using R and JavaScript, slashing the processing time dramatically from 2 hours to just 10 seconds. This breakthrough not only expedited data handling but also significantly boosted overall analytical productivity and accuracy for client projects.
- Addressed the challenge of handling large datasets split across multiple files by creating an R Shiny application to automate excel-to-csv conversion, and seamlessly merge related datasets into a single consolidated file.

Assistant Software Developer

Actuarial Services (EA) Ltd - Nairobi

July 2021 to December 2021

- Enabled effortless and quick performance evaluation of the various classes of the insurance industry by architecting a web application that offers interactive analysis and visualization capabilities.
- Optimized the performance of R Shiny applications through deployment using Docker and ShinyProxy. This enabled the apps to scale to tens of thousands of users without compromising performance.

R & Shiny Developer

Freelance

May 2020 to June 2021

- Built interactive data visualization applications for clients from diverse industries, including finance, healthcare, and e-commerce.

Education

BSC in Actuarial Science

University of Nairobi - Nairobi

September 2018 to September 2022

Second Class Honours, Upper Division

High School Diploma

Alliance High School - Kiambu

January 2014 to November 2017

A-, 80 points

Skills

• R (4 years)	• JavaScript (2 years)	• HTML, CSS, Bootstrap (3 years)	• SQL (3 years)
• Git & GitHub (3 years)	• REST APIs (2 years)	• Docker (2 years)	• Linux (2 years)
• Bash (1 year)			

Open-source Contributions

- 'micromodal' R package

  - Contribution: Author, maintainer
  - Description: An R package for creating simple and elegant modal dialogs in Shiny.
  - Link: kennedymwavu/micromodal

- 'polished' R package

  - Contribution: Improved UI interaction in the 'polished' package.
  - Description: Enhanced user interface elements by updating label 'for' attributes for better namespace management and adding 'control-label' classes to label elements, ensuring consistent margin alignment with `email_input()` elements. This contributed to a more intuitive and user-friendly experience in the package.
  - Link: Tychobra/polished/pull/218

- 'ChainLadder' R package

  - Contribution: Identified and reported a critical bug in the `glmReserve()` function.
  - Description: Noticed and reported a typo in the function's source code, which was promptly acknowledged and fixed by the package maintainers. This contribution helped enhance the accuracy and reliability of the package.
  - Link: mages/ChainLadder/issues/79

Projects

- Shiftmaster

  - Overview: An innovative R and Shiny-based tool for optimizing employee shift scheduling.
  - Description: As the sole developer, I was responsible for designing and implementing the system's core functionalities, including the algorithm for shift optimization, leave management for administrators, and a user-friendly interface for employees to download schedules and apply for leave.
  - Impact: The system significantly improved operational efficiency by streamlining the scheduling process and reducing the time spent on scheduling by 90%.
  - Link: shiftmaster.mwavu.com

- Spent

  - Overview: A personal finance tracking app using R and Shiny, designed to manage and analyze expenses from receipts.
  - Description: As the sole developer, I created a system enabling CRUD (Create, Read, Update, Delete) operations on expense records. The app features advanced analytics with visualizations, including monthly expenditure trends, item purchase frequencies and costs, and store visit patterns, displayed through various charts and graphs.
  - Impact: This tool aids in detailed financial tracking and planning by providing insights into spending habits and patterns.
  - Link: mwavu.shinyapps.io/spent

Referees

Available upon request.