Robert Kimutai

Data Scientist | Software Developer | Environmental Specialist

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Contact Information

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Professional Summary

An accomplished **Data Scientist**, **Software Developer**, and **Environmental Specialist** with a proven track record in developing data-driven solutions at the intersection of sustainability and technology. Experienced in managing complex projects, including zero-grazing dairy management systems and solar cooker performance analysis. Adept at extracting actionable insights to enhance business efficiency and decision-making processes. Deeply passionate about environmental sustainability and highly proficient in R, QGIS, SQL, and more.

Core Competencies

- **Data Science**: Statistical analysis, machine learning, data visualization
- **Software Development**: R programming, Shiny apps, web development
- **Environmental Statistics**: Ecosystem, health, and social benefit analysis
- **Project Management**: Systems thinking, Agile methodologies
- **Technical Expertise**: R, SQL, Arduino, QGIS, Proteus, MATLAB, MySQL
- **Soft Skills**: Critical thinking, problem-solving, leadership, communication

Education

MSc in Environmental and Biosystems Engineering University of Nairobi, Kenya 2021 – Present
Thesis: Solar Cooker Test Protocol Development based on ASAE S580.1 Standards

BSc in Agricultural Engineering Jomo Kenyatta University of Agriculture and Technology, Kenya 2013 – 2018 *Thesis: Automated Irrigation Scheduling for Small-Scale Farmers*

Diploma in Machine Learning with R Studio Alison June 2023

Certifications

- **Statistical Data Analysis using R Programming** | RUFORUM, February 2022
- **Machine Learning with R Studio** | Alison, June 2023

Research Experience

Researcher | Kenya School of Revenue Administration (KESRA) March 2021 - Led a study titled "The Effects of Tax Reforms on Income Distribution in Kenya" for the Department of Tax Administration. - Analyzed 15 years of data from the Kenya Revenue Authority, World Bank, and Kenya National Bureau of Statistics. - Utilized R and statistical models to assess correlations between tax reforms and income distribution, providing policy recommendations for equitable distribution.

Graduate Research Assistant | University of Nairobi 2021 – Present - Researched solar cooker performance and the environmental, health, and social impacts of solar cooker adoption. - Developed an ASAE S580.1 compliant test protocol, collecting and analyzing data using Arduino and R. - Presented findings at national conferences and contributed to policy briefs promoting solar cooker adoption.

Projects

Zero-Grazing Dairy Management App | Freelance 2021 – Present - Created a web-based system for optimizing dairy farm operations, with modules for herd management, feed monitoring, and financial tracking. - Leveraged R Shiny and SQL to build interactive dashboards, resulting in a 25% productivity increase for clients.

Solar Cooker Performance Analysis | Freelance 2021 – Present - Designed a standardized test protocol using Arduino and Proteus to evaluate solar cooker performance. - Conducted ecosystem, health, and social benefit analyses, contributing to national-level policy discussions.

Automated Irrigation System for Small-Scale Farmers | BSc Project 2018 - Developed an automated irrigation system using Arduino and R to optimize water use efficiency for small-scale farmers. - Designed control algorithms to improve water distribution and crop yield.

Skills and Tools

- **Programming Languages**: R, SQL, HTML, CSS, JavaScript, Arduino
- **Web Development**: R Shiny, Quarto, Git
- **Data Analysis**: R, QGIS, ggplot2, dplyr, Shiny dashboards
- **Simulation & Modeling**: Proteus, MATLAB
- **Database Management**: RSQLite, MySQL

Personal Interests

Outside of work, I am deeply passionate about health and fitness, actively participating in swimming, Taekwondo, chess, table tennis, and snooker. I also take pride in leading Church-infused Youth Centres that focus on the holistic development of young people, integrating physical, psychological, and spiritual growth.

References

Available upon request.