

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
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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
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Certifications

- **Statistical Data Analysis using R Programming**
RUFORUM, February 2022
 - **Machine Learning with R Studio**
Alison, June 2023
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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 the Kenya National Bureau of Statistics, focusing on tax reforms.
 - 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.
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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.
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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:** SQLite, MySQL
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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.