



CHRISTOPHER MARONGA

Statistics, Data Management & R Programming

SKILLS



EDUCATION

Sep 2019 - Dec 2021

MSc. in Statistical Science
Strathmore University

May 2009 - Jun 2013

B.Sc. in Mathematics
Jomo Kenyatta University of
Agriculture and Technology

PROFILE

Experienced Data Analyst with demonstrated history of working with Health Research Data, Real World Datasets and Genomic data.

Long run experience in data mining and model exploration tools, designing of data products in Rshiny and Rmarkdown and a seasoned R instructor.

Knowledgeable in designing of database and data collection tools in REDCap and selected RDMS; and survey authoring & management in ODK.

WORK EXPERIENCE

Senior Data Manager

May 2023 - Present

University of Oxford

Provide data management and scientific computing capabilities to support IMCM projects. Apply informatics and data management skills to help identify underlying mechanisms and translate knowledge into development of new, precision therapeutics in neurodegenerative diseases.

- Develop and use novel methodologies for storing information and datasets along with their metadata.
- Ensure datasets are appropriately annotated and made available in a FAIR (Findable, Accessible, Interoperable, Reusable) manner.
- Develop and implement operational procedures that underpin Information Governance policies, working closely with the NDM & GSK IG teams.
- Produce end-user documentation and training on data management processes.
- Provide data management input into outline and full grant proposals, as co-applicant.
- Work with GSK teams to ensure that data sets are made available in a timely and self-documenting fashion.

Technologies:

- Cloud computing in Terra.Bio
- R/Python/Linux/Docker

Achievements:

CONTACT

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Data Analyst (R Programmer) University of Oxford

Jun 2021-Apr 2023

Working with the Health Economics and Outcome Research Group to develop and apply innovative algorithms/systems to extract knowledge and insights from health care data

- Extract, clean, validate, investigate, prepare, and report healthcare-related data using R
- Responsible for developing and maintaining common library of R functions for team collaboration
- Responsible for researching & applying statistical methods, build models when needed.
- Contribute in developing manuscripts for publication.
- Contribute in developing joint R packages specific to health economics
- Build interactive web apps and dashboards using R-Shiny for dynaming reporting and data curation
- Responsible for reviewing code written by other researchers, help troubleshoot and suggest efficient ways of coding

Technologies:

- Rshiny
- Rmarkdown

Achievements:

- Built a fully automated reports aggregation for a micro-simulation model using Rshiny & Rmarkdown

Clinical Data Manager KEMRI-Wellcome Trust Research Programme,

Oct 2017-May 2021

The CHAIN Network is a large multi-continent, multi-country cohort study with a total of 9 sites across Africa and South Asia

- Coordination of data discrepancy checking, cleaning, validation, data retrieval, organizing, and transferring between systems across all the 9 sites
- Liaison with data management teams across all sites to oversee rapid resolution of data queries
- Generation of standardized quarterly and annual reports for sites' Principal Investigators and Network lead scientists
- Play a central role in ethical data sharing within the network researchers
- Data systems infrastructure maintenance and troubleshooting
- Perform data analysis

Technologies:

- Rshiny
- Tidyverse
- Rstudio Server

- Shiny Server
- Git for collaboration and documentation versioning

Achievements:

- Conceived and developed a robust Shiny application for automated data cleaning, query resolution, report authoring, routine statistical analysis and visualizations.
- Boosted data managers productivity through hosting automated customized sites weekly reports on Shiny dashboard

Technical Advisor – Data Management

Jan 2017-Sep 2017

Partners PrEP Scale-Up Project (KEMRI CCR Project)

An implementation project to scale-up delivery of antiretroviral-based HIV-1 prevention methods to serodiscordant couples in 24 public HIV-1 care centers in central and western Kenya

- Provide technical advise to HIV care clinics in all aspects of data management and collection, including regular trainings on data collection practices
- Prepare and submit to coordinating centre a cumulative report of selected clinics' indicators on a monthly basis for evaluation of project progress
- Conduct monthly conference with donors for update on study progress and advise on technical issues that may arise
- Capacity building of Project Research assistants and data staff on offsite clinics
- Monitor study accrual rates and generate QC reports for the 13 participating sites and follow up to ensure a timely resolution of the data queries

Technologies:

- SurveyCTO
- R software

Achievements:

- Harmonized and centralized key indicator reporting for clinics using SurveyCTO and automatically aggregate the reports for consumption.

Assistant Data Manager

Jul 2014-Jan 2017

KEMRI-Centre for Clinical Research (KEMRI CCR)

Environment of multi-Clinical Trials and Research studies and involved in over 5 clinical trials data management activities

- Designing of REDCap databases for participants data storage
- Preparation of daily, weekly and monthly study data summaries to track and inform the trials' progress

- Perform data entry of participants' records into REDCap data base
- Configure the SCIP application on tablets for SCIP Msurvey trials
- Design of data capturing systems/tools, development of SOPs for data recording and entry, and case report forms for data collection.
- Data QA/QC review on REDCap, validation and discrepancy checking
- Perform regular cloud data backup for the study, develop comprehensive system logs in excel to track data query work flow
- Co-ordinate ordering/procuring and distribution of both hardware & software and keep up to date the site's inventory for IT equipment
- Maintain and update on a daily basis participant's master data base, which contains client's details, progress through the trial, adverse events and other relevant research related information
- Closely working with study monitor to oversee quality assurance and quality control procedures for the clinical trial
- Training and supervising of research assistants, interns and data entry clerks at the Thika site
- Maintain systematic data storage of participants' data (both electronic and binder files) as per Good Clinical Practice(GCP).

Technologies:

- Ms Access
- REDCap
- R for reporting and data management

Achievements:

- Developed a robust system using Ms Access and Ms Excel for automated patient follow up tracking and report generation on missed appointments and lost to follow up
- Design over 6 usable databases both in REDCap and Ms Access

**Research Assistant(Intern)
KEMRI-Centre for Clinical Research (KEMRI CCR)**

Oct 2013-Jun 2014

A project to evaluate feasibility and potential impact of text messages on HIV awareness in young women in rural Kenya. Tasks included

- Study coordinator, strategic planning of participant recruitment into the study and short messages schedules with msurvey Kenya, performed data cleaning and preliminary data analysis and report generation using SPSS
- Designed storage data base and managed data entry, data cleaning and regular survey data back-up
- Assist t2t PI in drafting project proposal, abstracts, publications and budgets
- Responsible for confidential storage and documentation of study data and link logs according to GCP
- Preparations of bi-weekly and weekly data summaries as required for study retention and follow up to assess and inform status/progress of t2t study project

- Perform any duty as assigned by t2t Principal Investigator, Site coordinator and Lead Clinician.

Technologies:

- Ms Access
- SPSS for reporting

Achievements:

- Oversaw data management for the study from start to successful completion with a high quality data output

Publications

[Expected Benefits and Budget Impact From a Microsimulation Model Support the Prioritization and Implementation of Fracture Liaison Services](#)

[Primary care consultations and pain medicine prescriptions: a comparison between patients with and without chronic pain after total knee replacement](#)

[Childhood mortality during and after acute illness in Africa and south Asia: a prospective cohort study](#)

[A systematic review of the quality of conduct and reporting of survival analyses of tuberculosis outcomes in Africa](#)

[The Effect of Human Immunodeficiency Virus Prevention and Reproductive Health Text Messages on Human Immunodeficiency Virus Testing Among Young Women in Rural Kenya](#)

[The Incremental Cost of Delivering PrEP as a Bridge to ART for HIV Serodiscordant Couples in Public HIV Care Clinics in Kenya](#)

Talks & Workshops

[NHS-R Workshop: Working with databases in R](#)

[Innovative open source approaches to automating clinical data management for a large multi-centre cohort study - REDCap & RShiny](#)

[satRday Nairobi - Introduction to Data Management in R](#)

[NairobiR & R-Ladies Webinar - Working with databases in R](#)

Hobbies and Interests

- I love listening to music
- R computing at free time is my safe haven
- Mentoring aspiring data Scientists

References

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