

DAVID GITHAIGA MAINA

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EDUCATION

BSc. Biology, University of Nairobi.	2014
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HONOURS AND AWARDS

Title of Award

Best Committee– Council of Governors • Health Committee at the Council of Governors (CoG) was voted and awarded Best Committee 2016 during my tenure.	2016
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Certificate of Leadership – Nairobi University Microbiologists Students Association • Recognized for leadership as a member of the Organizing Committee.	2013
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Title of Fellowship

Young Africa Leadership Initiative - Regional Leadership Center, East Africa	2019
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University of Nairobi Innovation Fellowship	2018
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RESEARCH AND DEVELOPMENT EXPERIENCE

Research Consultant (01/2020 – Present | Remote)

- Completed 50+ projects in tailored research, data analysis, and bioinformatics support.

Moringa Capstone Project – Cancer Prediction Using Behavioural Health Factors (2024 | Moringa School)

- Developed a machine learning model (XGBoost) to predict cancer risk based on behavioural health factors.
- Analysed the CDC's BRFSS dataset to identify correlations between lifestyle choices and cancer risk.
- Deployed the model as a Flask-based web application for public access.
-  [Live Web App](#)

Innovation Fellow – Maternal Health Project (10/2018 – 06/2019 | University of Nairobi, Kenya)

- Applied Problem-Based Learning & Design Thinking to a maternal health project aimed at reducing maternal mortality in Kenya.
- Project funded by Philips & UNICEF under the University of Nairobi & University of Helsinki Innovation Fellowship.

WORK EXPERIENCE

Technical officer, Research & Disease Surveillance Analytics (Volunteer) – Powered by Health Initiative (03/2025 – Present | Remote)

- Assist in the design and implementation of research methodologies;
- Conduct data analysis for public health assessments;
- Generate evidence to inform policy and health systems interventions.

Program Assistant – Health Committee, Council of Governors (04/2016 – 07/2017 | Nairobi, Kenya)

- Contributed to Health Bill 2018 & Universal Health Coverage (THS-UC) framework.
- Planned & led capacity-building forums for county health staff.
- Conducted county performance assessments on Managed Equipment Services (MES) & DANIDA funds.
- Interim Assistant Coordinator for the THS-UC World Bank project.
- Coordinated Medical Waste Management Phase I across 8 counties.

Research Assistant – Kenya Institute of Bioinformatics (10/2014 – 01/2016 | Nairobi, Kenya)

- In-silico drug designing for potential therapeutic targets.
- Developed a MySQL database for managing laboratory equipment records.
- Scripting: Wrote scripts in PHP for database interaction and automation.

Molecular Biology & Lab Work:

- Bacterial culture growth & maintenance.
- Antibiotic resistance testing using the disk diffusion technique.
- DNA sequencing (Sanger technique – Ben Coulter platform).
- PCR and Electrophoresis for genetic analysis.

PROFESSIONAL DEVELOPMENT TRAINING

- Leadership & Entrepreneurship Capacity Building – YALI, East Africa (2019)
- Human Dignity Curriculum Training – World Youth Alliance Africa (2018)
- Machine Learning & Data Science Training – Moringa School (2024)

PROFESSIONAL AFFILIATIONS

- Member, Bioinformatics Hub of Kenya Initiative (BHKi) (Since 2023)
- Alumni, Young African Leaders Initiative (YALI), East Africa Regional Leadership Centre

LANGUAGES

- English – Fluent (Listening, Speaking, Reading, Writing)
- Swahili – Fluent (Listening, Speaking, Reading, Writing)

OTHER SKILLS AND COMPETENCES

Laboratory Techniques

- Electrophoresis | PCR | Sanger Sequencing
- Bacterial Culture Maintenance | Antimicrobial Susceptibility Testing | Microscopy

Programming & Bioinformatics Skills

- Python | R | Bash | Git | PySpark | AWS
- Data Wrangling | Statistical Analysis | Data Visualization | Machine Learning
- Neural Networks | LLMs

Program Management

- Program Management & Policy Analysis
- Stakeholder Engagement & Capacity Building

OTHER INTERESTS

- Traveling | Reading | Watching Documentaries | Sports

REFERENCES

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