

# MALAMBO MUTILA

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## PROFESSIONAL SUMMARY

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Malambo Mutila is a Full-stack Data Scientist with a Master's degree in Computer Science, a Bachelor's Degree in Mathematics and over five (5) years of experience collecting, analysing and managing data. Demonstrated experience includes data analysis using Python and SPSS, data visualization using Tableau and QGIS, relational database management using MySQL, software engineering and survey data management using XLSForms, SurveyCTO, KoboToolBox, and ODK.

## PROFESSIONAL QUALIFICATIONS

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2022 – 2023	<b>Masters of Science in Computer Science</b>	ZCAS University - Zambia
2023 – 2023	<b>Google Advanced Data Analytics (Certificate)</b>	Google - USA
2021 – 2021	<b>Applied Data Science I: Scientific Computing and Python (with honors) (Certificate)</b>	WorldQuant University - USA
2021 – 2021	<b>Excel Skills for Business (Certificate)</b>	Macquarie University - Australia
2020 – 2021	<b>Epidemiology in Public Health Practice (Certificate)</b>	Johns Hopkins University - USA
2013 – 2017	<b>Bachelors of Science in Mathematics Education</b>	The Copperbelt University - Zambia

## RESEARCH INTEREST

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- Distributed Information Management Systems
- Natural Language Processing (NLP) and Large Language Models (LLM)
- Predictive Analysis and Mathematical Modelling
- Health Informatics and Medical Statistics
- Bayesian Statistics and Neural Networks
- Linear Algebra and Machine Learning

## RESEARCH WORK (UNPUBLISHED)

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- **MSc:** Predicting English Premier League Match Outcomes using Machine Learning and Conditional Probability
- **BSc:** Using Cooperative Learning in the Teaching and Learning of Matrices at Secondary School Level

## WORK EXPERIENCE

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<b>FOUNDATION FOR INNOVATIVE NEW DIAGNOSTICS (FIND)</b>	Geneva, Switzerland
Consultant – Digital Health Technical Associate	June 2024 – Present

- Support the scoping, development, testing, and implementation of One Health Antimicrobial Resistance Surveillance (OHAMRS) system in collaboration with FIND's project team, software partners, and AMRCC.
- Provide technical assistance in developing and implementing change management and transition plan to ensure sustainable transition of the project.
- Support end user training and system deployment. This will include interfacing with relevant ICT authorities as required.

<b>EMPOWERMENT AND RESILIENCE NETWORK (EaRN)</b>	Lusaka, Lusaka
Co-Founder/Full-stack Data Scientist and Information Manager	July 2023 – Present

- Designed and developed an interactive Tableau dashboard for the 2023-2024 cholera outbreak in Zambia. | [View dashboard here.](#)
- Providing technical assistance in developing and implementing mathematical modelling projects.
- Developing IT & Data Science training curriculums for public health professionals.
- Developing and managing information systems, NoSQL and SQL databases.

## ZAMBIA NATIONAL PUBLIC HEALTH INSTITUTE (ZNPHI)

Lusaka, Lusaka

Public Health Analyst & IT Associate

July 2022 – April 2024

- Collaborated on ZNPHI's DISA and eIDSR/DHIS2 system integration using Python and Apache Kafka.
- Used JavaScript and OJS to develop a new manuscript management system for ZNPHI's "The Health Press." | [View here](#).
- Contributed to the system design and TORs for PATH's Zambia Electronic Immunisation Registry system.
- Developed a research manuscript on AMR titled, "*Prevalence of Key Antimicrobial-Resistant Organisms in Zambia from 2020 to 2022: A Laboratory Surveillance Study*."

## DRAFTSLINK LIMITED

Lusaka, Lusaka

Data Scientist

August 2020 – October 2021

- Offered technical support for smooth operationalisation and use of information systems and data integration.
- Led DHIS2 training for public health clients.
- Used MySQL and machine learning with Python to increase profits by 3.5%.
- Managed projects using Asana and Excel to organise and track progress across three teams.

## MADESH INVESTMENTS LIMITED

Lusaka, Lusaka

Data Scientist

January 2018 – February 2020

- Collaborated with developers using Git and GitHub.
- Managed client and employee databases using MySQL while adhering to security and privacy guidelines.
- Developed a healthcare client management system for dentists and private specialist healthcare providers.
- Collaborated with project coordinators to use data to streamline implementation activities.

## PROJECT-BASED RESEARCH EXPERIENCE

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### Malaria – Climate Study (Falcon Awards, ZNPHI & Climate Justice Foundation)

Team Lead

17 September 2023 – 23 September 2023

- Supervised and led my research team in qualitative data collection in Lusaka, Copperbelt, North-western, Luapula, and Central province.
- Directly engaged with Provincial and District Health Officers to organise key informant interviews and focus group discussion at rural and urban health facilities.
- Managed both data collection and transcription of key informant interviews and focus group discussions, ensuring that all transcripts were ready by the last day of data collection.

### Rapid Assessment on the Prevalence of Measles in Mushindamo District (ZNPHI and Africa CDC)

Data Manager/Data Analyst

11 September 2022 – 17 September 2022

- Developed three questionnaires using Excel XLSForms and KoboToolBox and deployed them to android tablets.
- Led a team of ten research assistants and community mobilisers in organising and conducting key informant interviews and focus group discussions.
- Managed both data collection and transcription of key informant interviews and focus group discussions.
- Led the development of two research manuscripts using the data collected from the study.

### Lifetime Consulting - Lusaka, Lusaka, Zambia

Lead Research Assistant (Impact Evaluation of Build it International)

8 November 2021 – 19 November 2021

Research Assistant (First Impact Evaluation of Build it International)

22 March 2019 – 29 March 2019

Research Assistant (Impact Evaluation of Afya Mzuri)

28 January 2019 – 1 February 2019

- Spearheaded training, led research teams and supervised fellow research assistants.
- Used Formyoula to collect qualitative data through key informant interviews, focus group discussions and significant change stories using local languages and English.
- Transcribed key informant interviews, focus group discussions and significant change stories.

TECHNICAL PROJECTS

<b>Employee Retention at Airtel Zambia</b> <ul style="list-style-type: none"><li><b>Description:</b> Testing Reproducibility of SPSS survey results with Python</li><li><b>Tech Stack:</b> Git, GitHub, Jupyter, Python, Pandas, SciPy, Matplotlib, Git, GitHub.</li></ul>	2024 <a href="#">View on GitHub</a>
<b>Zambia Cholera Dashboard 2023 – 2024</b> <ul style="list-style-type: none"><li><b>Description:</b> Real-time tracking and information dissemination.</li><li><b>Tech Stack:</b> Tableau and Google Sheets.</li></ul>	2024 <a href="#">View Dashboard</a>
<b>Party Room</b> <ul style="list-style-type: none"><li><b>Description:</b> A Web App That Allows a Host to Play Music for a Virtual Room of Guests</li><li><b>Tech Stack:</b> Python, Django, React.js, JavaScript, JSON, Git, GitHub.</li></ul>	2024 <a href="#">View on GitHub</a>
<b>AI Weather App</b> <ul style="list-style-type: none"><li><b>Description:</b> A Desktop Python Weather App with an AI Voice Assistant.</li><li><b>Tesch Stack:</b> Python, TKinter, Openweathermap API, ElevenLabs API, JSON, Git, GitHub.</li></ul>	2024 <a href="#">View on GitHub</a>

TECHNICAL SKILLS & EXPERTISE

<ul style="list-style-type: none"><li>Data and Information Management</li><li>MySQL</li><li>Python, C</li><li>Django</li><li>Distributed Database Systems</li></ul>	<ul style="list-style-type: none"><li>DHIS2</li><li>Digital Health</li><li>System Design</li><li>Data Visualisation</li><li>Cloud Computing</li></ul>	<ul style="list-style-type: none"><li>Software Development</li><li>Computer Security</li><li>HTML, CSS</li><li>Machine Learning</li><li>Networking</li></ul>
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