

VINCENT ONDENG

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Education

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|---|-------------------|
| African Institute for Mathematical Sciences | Kigali, Rwanda |
| M.sc. Mathematical Sciences | 09/2024 - Present |
| <ul style="list-style-type: none">• Thesis: Use of landscape epidemiology and network models to assess disease spread and potential interventions• Relevant Coursework: Statistical Regression, Statistical Machine Learning, Big Data Analysis with Python, Database and Data Management, Statistical Methods for Malaria, Data Structures and Algorithms | |
| University of Nairobi | Nairobi, Kenya |
| B.sc. Geospatial Engineering. GPA 3.62/4 | 09/2018 - 09/2023 |
| <ul style="list-style-type: none">• Thesis: Mapping Malaria Distribution in Kisumu County, Kenya• Relevant Coursework: Digital Image Processing, GIS, Geospatial Data Infrastructure, Remote Sensing Systems, Geospatial Statistics, Spatial Planning and Design, Remote Sensing Applications | |

Experience

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| Center of Epidemiological Modelling and Analysis (CEMA - UON) | Nairobi, Kenya |
| Intern | 04/2025 - Present |
| <ul style="list-style-type: none">• Evaluated the impact of case management practices in retail outlets (pharmacies and chemists) on malaria treatment outcomes and disease transmission.• Investigate key parameters influencing malaria case management, including diagnostic test accuracy, treatment access, and patient adherence to antimalarial drug regimens.• Assess the proportion of treated malaria cases that adhere to prescribed treatment guidelines to identify gaps in treatment adherence and potential drivers of non-compliance.• Conduct simulations using OpenMalaria to model the impact of varied case management practices on malaria prevalence, incidence, and clinical cases averted. | |
| African Population and Health Research Center (APHRC) | Nairobi, Kenya |
| Research intern | 04/2024 - 09/2024 |
| <ul style="list-style-type: none">• Contributed to the Integrated Deprived Areas Mapping System (IDEAMAPS) by integrating geospatial and statistical data to map informal settlements and assess urban inequalities• Conducted spatial analysis and geoprocessing using ArcGIS, Python, and R, leveraging GIS techniques for mapping WASH facilities in informal settlements in Nairobi• Developed proposals on flood modeling and urban heat resilience, applying geospatial intelligence to inform policy and urban planning• Designed and facilitated GIS training workshops for APHRC staff and external partners, improving capacity in geospatial data analysis and decision-making• Led Focus Group Discussions (FGDs) and Participatory Action Mapping (PAM), ensuring community engagement and inclusive data collection for slum upgrading initiatives | |
| Widacom Technologies Limited | Nairobi, Kenya |
| GIS Intern | 06/2023 - 03/2024 |
| <ul style="list-style-type: none">• Performed data processing, reformatting and spatial analysis to support different business activities and programs• Designed and produced maps and offered related cartographic support using QGIS and Python• Proposed innovative ideas and concepts on the application of Geographic Information Systems to complement water engineering services offered by the company | |

- Attended external meetings with clients to discuss project requirements and provide technical insights

Ministry of Lands and Physical Planning- Survey of Kenya

Nakuru, Kenya

Survey Assistant

06/2022 - 09/2022

- Conducted boundary reestablishment and topographic surveys for large-scale land parcels
- Reviewed and verified mutation forms to ensure compliance with land registration requirements
- Attended dispute resolution to resolve land disputes between community members amicably
- Streamlined coordinate transformation using QGIS to increase accuracy and save time

Skills

Technical: : Big Data Analysis, Python for data science, Statistical Analysis with R, Apache Spark, Database Design and Management, Research Planning

Research Skills: Spatial analysis, Survey Design and Data Cleaning, Report Writing, Presentation

Personal: Adaptable to different work environments, problem solving, emotional intelligence, team player, innovative and critical thinker, effective communication

Language: English, Kiswahili

Volunteering

African Institute for Mathematical Sciences - Rwanda

Kigali, Rwanda

Community Giveback

09/2024 - 10/25

- Participated in a school outreach activities that involved talking to secondary school students in Rural Rwanda on the importance of STEM.
- Online training for 300 + participants on Python and R intermediate.

Midrift Hurinet

Nakuru, Kenya

Volunteer

06/2022 - 09/2022

- Data collection and Analysis
- Utilized Excel to process field data and to identify trends and patterns
- Organization and completion of documents to ensure accuracy and compliance with established protocols.



Training/Courses



- **Introduction to Research Ethics**
African Population and Health Research Center | May 2024
Covered foundational principles of ethical research conduct, including informed consent, data confidentiality, and research integrity.
- **Software Engineering**
African Leadership X | March 2023
Focused on software development life cycles, programming fundamentals, and practical applications in team-based projects using Agile methodology.

Awards and Scholarships

- **Bill and Melinda Gates Foundation Scholarship (2024)**- Awarded to pursue a Masters in Mathematical Sciences at the African Institute for Mathematical Sciences.
- **Institute of Engineers of Kenya Best Final Year Project in Geospatial Engineering (2023)** – Recognition for an outstanding research project utilizing geospatial engineering technologies for Malaria risk mapping.
- **RCMRD International Conference – Best Poster Presentation Award (2024)**: Improving the Analysis of Harmful Algal Blooms along the Kenyan Coast using Machine learning and deep learning techniques for accelerated Satellite Image Processing.

Relevant Links

 : [Personal Website](#)
 : [Github](#)

 : [Medium](#)
 : [LinkedIn](#)

 : [Kaggle](#)
 : [ORCID](#)

References

Prof. Faith Karanja
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