

KANGWA MUKUKA

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EDUCATION

BSc. Computer Science (Major: Computer Systems Engineering)

Feb 2022 - Oct 2025

University of Zambia (UNZA) | Lusaka, ZM

Honours: Undergraduate Student Innovator of the Year Award (2025), 1st place: UNZA Student Innovation Challenge (2025), AFRICAI Mentorship Award (2025), 3rd place: IEEE IAS IPCSD Engineering Design Contest Africa (2024), 3rd place: Zambia@60 National ICT Hackathon (2024).

COURSEWORK

Computer Programming, Numerical Analysis, Algorithms and Complexity, Fundamentals of Artificial Intelligence, Wireless and Mobile Communication Networks, Cloud and High Performance Computing, Data Mining and Warehousing.

SKILLS

Technical Skills: Python, JavaScript, Java, C++, Flask, React, CSS, Bootstrap, MySQL.

Tools: Git, GitHub, Firebase, Google Colab.

Soft Skills: Research Methods, Requirements gathering, Teamwork, Collaboration, Troubleshooting, Public speaking.

EXPERIENCE

Undergraduate Research Assistant

Mar 2025 - Present

DataLab Research Group | Lusaka, ZM

- Developing software solutions to enhance radiology workflows at the Cancer Diseases Hospital (CDH) in Zambia.
- Researching the use of Vision Language Models to semi-automate cervical cancer report generation at CDH.

Web Developer

Feb 2024 - Oct 2024

Engineering Institution of Zambia (EIZ) UNZA Student Chapter | Lusaka, ZM

- Developed the first official website for the Student Chapter at the University of Zambia.

Chairperson

Dec 2024 - Nov 2025

Vice-Chairperson

Dec 2023 - Dec 2024

Institute of Electrical and Electronics Engineers (IEEE) UNZA Student Branch | Lusaka, ZM

- Spearheaded and oversaw technical activities for students interested in STEM by facilitating educational talks, industrial trips, project proposals and leading the Student Branch Executive Team.

Technical Lead

Sep 2023 - Jun 2024

Google Developer Student Club (GDSC) UNZA Student Chapter | Lusaka, ZM

- Guided the technical aspects of the club's projects and initiatives, ensuring their successful implementation at the University of Zambia Student Chapter.

FEATURED PROJECTS

Enterprise Medical Imaging in Zambia (EMI x Z) [emi.org.zm]

Mar 2025 - Present

- This project seeks to investigate the challenges resulting from the shortage of radiologists and to investigate the feasibility of implementing efficient and effective medical imaging workflows using enterprise imaging techniques.

Reviza [reviza.info]

Aug 2024 - Mar 2025

- Reviza is a mobile/web application designed to facilitate the sharing and access of past papers and other academic resources specifically for university students.

EIZ-UNZA-SC Website [eiz-unza.onrender.com]

Jan 2024 - Jun 2024

- Gathered requirements and developed the official website for the University of Zambia Student Chapter

POLYGON: Clinic Database & Information Management System

Apr 2023 - Jun 2023

- A full-stack web app that allows a user to add, delete and edit records of the database from the front-end UI.

PUBLICATIONS

Design and Prototyping of a Remote Livestock Monitoring Device for Low-Resource Settings

- M. M. Makumba, J. C. Moya, D. Banda and K. E. Mukuka, IEEE International Humanitarian Technology Conference (IHTC), Edmonton, AB, Canada, 2025, pp. 44-48, doi: 10.1109/IHTC65087.2025.11216306.

Design of a Low-Cost Smart Solar-Powered Irrigation System

- K. M. Makasa and K. E. Mukuka, IEEE PES/IAS PowerAfrica Conference (PAC), Johannesburg, South Africa, 2024, pp. 1-5, doi: 10.1109/PowerAfrica61624.2024.10759498.

INVOLVEMENT

Member: Dept. Computing and Informatics Innovation Hub, UNZA (2025) | Finalist: IEEEDuino Hardware Design Contest EMEA (2024) | Student Ambassador: IEEEXtreme 17.0 (2023) | 2nd place: AICCRA Lightning Design Jam (2022).