

# ALINANI SIMUKANGA

(+260) 979 647 010

alinani10@gmail.com

alinani.simukanga@cs.unza.zm

<http://alinani.github.io>

## LECTURER

---

### CAREER

**University of Edenberg, Lusaka, Zambia** | Lecturer B 08/07/2024 - Present

- Taught CSE111 - *Introduction to Information Technology*, CSE113 - *Computer Architecture and Organization*, CSE114 - *Programming with Python*, CSE122 - *Object-Oriented Programming with C++*, CSE124 - *Operating Systems* and CSE125 - *Data Structures and Algorithms*.
- Currently lecturing CSE114 - *Programming with Python*, CSE122 - *Object-Oriented Programming with C++*, CSE124 - *Operating Systems* and CSE125 - *Data Structures and Algorithms*.
- Held the role of Program Coordinator for Undergraduate and Postgraduate programs under the School of Computer Science & IT.

**ZCAS University - Lusaka, Zambia** | Part-time Lecturer 28/02/2024 - 03/01/2025

- Taught *Cyber Security Operations (CIT4351)* to full-time, part-time, and distance students (21). Organised and conducted laboratory sessions to familiarise students with commonly used tools in cybersecurity.
- Taught *Component and Connection Security (CIT3362)* and *IoT Fundamentals: IoT Security (CIT3352)* to full-time, part-time, and distance students (18).

**EQUIP - Lusaka, Zambia** | Application Developer 2020

- Assisted in developing the Project SEARCH application on the Android platform.
- Worked closely with personnel in Boston to analyse data, interpret analysis, and incorporate changes into the app.
- Worked with Dimagi to ensure smooth integration between the CommCare and SEARCH applications.

**Project SEARCH - BU & UNZA** | Researcher/Application Developer 2018 - 2023

- Worked with a multi-disciplinary team from Boston University and the University of Zambia to develop and refine a biometric tool targeting infants.
- Conducted tests on the longitudinal ear dataset to demonstrate application performance with growth as a factor.
- Formulated experiments to benchmark the performance of the matching algorithm.
- Authored a paper on the growth study results.

**University of Zambia** | Part-time Tutor 2017

- Provided support during the laboratory sessions of the Electronics course.
- Assisted in the supervision of a few undergraduate capstone projects.

### EDUCATION

**Department of Computer Science, School of Natural Sciences, University of Zambia**  
Lusaka, Zambia

*Master of Science in Computer Science* 2019

- Supervisor: Dr. Jackson Phiri & Dr. Mayumbo Nyirenda
- Topic: "Automation of the Grain Purchasing Process for Zambia's Food Reserve Agency"
- Research area: ICT4D and Remote Sensing

**Department of Computer Science, School of Natural Sciences, University of Zambia**  
Lusaka, Zambia

*Bachelor of Science (Software Engineering)* 2015

- Classification: Merit

PUBLICATIONS	1. Qin Wenda, Etter Lauren, <b>Simukanga Alinani</b> , Gill Christopher, & Betke Margrit. Age-constrained Ear Recognition: The EICZA Dataset and SASE Baseline Model. <i>2023 IEEE International Joint Conference on Biometrics (IJCB)</i> , 2023. <a href="https://doi.org/10.1109/IJCB57857.2023.10448594">https://doi.org/10.1109/IJCB57857.2023.10448594</a>		
	2. Kawesha Francis, Phiri Jackson, & <b>Simukanga Alinani</b> . A Predictive Model to Support Decision Making for the Accreditation of Learning Programmes using Data Mining and Machine Learning. <i>Pan African Conference on Science, Computing and Telecommunications (PACT) 2023</i> , 2023. <a href="https://ictjournal.iciict.org.zm/index.php/iciict/article/view/286">https://ictjournal.iciict.org.zm/index.php/iciict/article/view/286</a>		
	3. <b>Simukanga Alinani</b> , Etter Lauren, Qin Wenda, Pieciak Rachel, Betke Margit, Macleod William, Phiri Jackson & Gill Christopher. Ethical issues associated with the development of an ear biometric tool for patient identification in Zambia. <i>Global Forum for Bioethics in Research (GFBR)</i> , 2022. <a href="https://www.gfbr.global/wp-content/uploads/2022/12/Alinani-Simukanga_GFBR-2022_Theme-2.pdf">https://www.gfbr.global/wp-content/uploads/2022/12/Alinani-Simukanga_GFBR-2022_Theme-2.pdf</a>		
	4. <b>Simukanga Alinani</b> , Kobayashi Misaki, Etter Lauren, Qin Wenda, Pieciak Rachel, Albuquerque Duarte, Chen Yu-Jen, Betke Margrit, Macleod William, Phiri Jackson, Mwananyanda Lawrence & Gill Christopher. The impact of ear growth on identification rates using an ear biometric system in young infants. <i>Gates Open Research</i> , 2021. <a href="https://doi.org/10.12688/gatesopenres.13459.1">https://doi.org/10.12688/gatesopenres.13459.1</a>		
	5. Etter Lauren, <b>Simukanga Alinani</b> , Qin Wenda, Pieciak Rachel, Mwananyanda Lawrence, Betke Margrit, Phiri Jackson, Carbo Caroline, Hamapa Arnold & Gill Christopher. Project SEARCH (Scanning EARs for Child Health): validating an ear biometric tool for patient identification in Zambia. <i>Gates Open Research</i> , 2020. <a href="https://doi.org/10.12688/gatesopenres.13197.1">https://doi.org/10.12688/gatesopenres.13197.1</a>		
	6. <b>Simukanga Alinani</b> , Phiri Jackson, Nyirenda Mayumbo, & Kalumbilo-Kabemba Monica. ICT in Governance Systems: A Case Study of the FISP Farmer Registration System. <i>ZAPUC</i> , 2018. <a href="https://scispace.com/pdf/e-governance-systems-a-case-study-of-the-development-of-a-1k42n7edea.pdf">https://scispace.com/pdf/e-governance-systems-a-case-study-of-the-development-of-a-1k42n7edea.pdf</a>		
	7. Chihana Sipwe, Phiri Jackson, Kunda Douglas, & <b>Simukanga Alinani</b> . Securing Grain in Transit for the Food Reserve Agency Based on the Cloud Model. <i>ZAPUC</i> , 2018.		
	8. <b>Simukanga Alinani</b> , Phiri Jackson, Nyirenda Mayumbo, & Kalumbilo-Kabemba Monica. E-Governance Systems: A Case Study of the Development of a Small-Scale Farmer Database. <i>Zambia Information Communication Technology (ICT) Journal</i> , 2018. <a href="https://doi.org/10.33260/zictjournal.v2i1.41">https://doi.org/10.33260/zictjournal.v2i1.41</a>		
	9. <b>Simukanga Alinani</b> , Muhone Madaliso, Mulenga Joseph, Phiri Jackson, & Nyirenda Mayumbo. Creation of an Agricultural Geographical Information System. <i>Zambia Information Communication Technology (ICT) Journal</i> , 2018. <a href="https://doi.org/10.33260/zictjournal.v2i2.57">https://doi.org/10.33260/zictjournal.v2i2.57</a>		
CERTIFICATIONS	• <b>Introduction to Cybersecurity</b> , Cisco Networking Academy		2022
AWARDS AND HONORS	• <b>Best Poster Award</b> , IEEE International Joint Conference of Biometrics (IJCB)		2023
	• <b>Best Graduating Male Student in the School of Natural Sciences</b> , University of Zambia		2015
	• <b>Dean's Prize - Best Overall Third-Year Student</b> , University of Zambia		2014
SKILLS	<b>Programming:</b> Python, C++, Java, Embedded System Development.		

PROFESSIONAL  
MEMBERSHIP

- **Professional Engineer**, the Engineering Institution of Zambia (EIZ)

REFERENCES

References can be provided on request.