

# ALINANI SIMUKANGA

## LECTURER

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### CAREER

<b>University of Zambia, Lusaka, Zambia</b>   Lecturer II	15/12/2025 - Present
<ul style="list-style-type: none"><li>Teaching CSC 2101 - <i>Computer Systems</i> and CSC 3600 - <i>Software Engineering</i>.</li><li>Supervise final year student projects CSC 4004 - <i>Project</i>.</li><li>Assist in the coordination of student internships CSC 3009 - <i>Industrial Training</i>.</li></ul>	
<b>University of Edenberg, Lusaka, Zambia</b>   Lecturer B	08/07/2024 - 12/12/2025
<ul style="list-style-type: none"><li>Taught CSE111 - <i>Introduction to Information Technology</i>, CSE113 - <i>Computer Architecture and Organization</i>, CSE114 - <i>Programming with Python</i>, CSE122 - <i>Object-Oriented Programming with C++</i>, CSE124 - <i>Operating Systems</i> and CSE125 - <i>Data Structures and Algorithms</i>.</li><li>Held the role of Program Coordinator for Undergraduate and Postgraduate programs under the School of Computer Science &amp; IT.</li></ul>	
<b>ZCAS University - Lusaka, Zambia</b>   Part-time Lecturer	28/02/2024 - 03/01/2025
<ul style="list-style-type: none"><li>Taught <i>Cyber Security Operations</i> (CIT4351) to full-time, part-time, and distance students (21). Organised and conducted laboratory sessions to familiarise students with commonly used tools in cybersecurity.</li><li>Taught <i>Component and Connection Security</i> (CIT3362) and <i>IoT Fundamentals: IoT Security</i> (CIT3352) to full-time, part-time, and distance students (18).</li></ul>	
<b>EQUIP - Lusaka, Zambia</b>   Application Developer	2020
<ul style="list-style-type: none"><li>Assisted in developing the Project SEARCH application on the Android platform.</li><li>Worked closely with personnel in Boston to analyse data, interpret analysis, and incorporate changes into the app.</li><li>Worked with Dimagi to ensure smooth integration between the CommCare and SEARCH applications.</li></ul>	
<b>Project SEARCH - BU &amp; UNZA</b>   Researcher/Application Developer	2018 - 2023
<ul style="list-style-type: none"><li>Worked with a multi-disciplinary team from Boston University and the University of Zambia to develop and refine a biometric tool targeting infants.</li><li>Conducted tests on the longitudinal ear dataset to demonstrate application performance with growth as a factor.</li><li>Formulated experiments to benchmark the performance of the matching algorithm.</li><li>Authored a paper on the growth study results.</li></ul>	
<b>University of Zambia</b>   Part-time Tutor	2017
<ul style="list-style-type: none"><li>Provided support during the laboratory sessions of the Electronics course.</li><li>Assisted in the supervision of a few undergraduate capstone projects.</li></ul>	

## EDUCATION

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

*Master of Science in Computer Science*

2019

- Supervisor: Prof. 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. Wenda Qin, Lauren Etter, **Alinani Simukanga**, Christopher Gill, & Margrit Betke. Age-constrained Ear Recognition: The EICZA Dataset and SASE Baseline Model. *2023 IEEE International Joint Conference on Biometrics (IJCB)*, 2023. <https://doi.org/10.1109/IJCB57857.2023.10448594>
2. Francis Kawesha, Jackson Phiri, & **Alinani Simukanga**. A Predictive Model to Support Decision Making for the Accreditation of Learning Programmes using Data Mining and Machine Learning. *Pan African Conference on Science, Computing and Telecommunications (PACT) 2023*, 2023. <https://ictjournal.icict.org.zm/index.php/icict/article/view/286>
3. **Alinani Simukanga**, Lauren Etter, Wenda Qin, Rachel Pieciak, Margrit Betke, William Macleod, Jackson Phiri & Christopher Gill. Ethical issues associated with the development of an ear biometric tool for patient identification in Zambia. *Global Forum for Bioethics in Research (GFBR)*, 2022. [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)
4. **Alinani Simukanga**, Misaki Kobayashi, Lauren Etter, Wenda Qin, Rachel Pieciak, Duarte Albuquerque, Yu-Jen Chen, Margrit Betke, William Macleod, Jackson Phiri, Lawrence Mwananyanda & Christopher Gill. The impact of ear growth on identification rates using an ear biometric system in young infants. *Gates Open Research*, 2021. <https://doi.org/10.12688/gatesopenres.13459.1>
5. Lauren Etter, **Alinani Simukanga**, Wenda Qin, Rachel Pieciak, Lawrence Mwananyanda, Margrit Betke, Jackson Phiri, Caroline Carbo, Arnold Hamapa & Christopher Gill. Project SEARCH (Scanning EARs for Child Health): validating an ear biometric tool for patient identification in Zambia. *Gates Open Research*, 2020. <https://doi.org/10.12688/gatesopenres.13197.1>
6. **Alinani Simukanga**, Jackson Phiri, Mayumbo Nyirenda, & Monica Kalumbilo-Kabemba. ICT in Governance Systems: A Case Study of the FISP Farmer Registration System. ZAPUC, 2018. <https://scispace.com/pdf/e-governance-systems-a-case-study-of-the-development-of-a-1k42n7edea.pdf>
7. Sipiwe Chihana, Jackson Phiri, Douglas Kunda, & **Alinani Simukanga**. Securing Grain in Transit for the Food Reserve Agency Based on the Cloud Model. ZAPUC, 2018.
8. **Alinani Simukanga**, Jackson Phiri, Mayumbo Nyirenda, & Monica Kalumbilo-Kabemba. E-Governance Systems: A Case Study of the Development of a Small-Scale Farmer Database. *Zambia Information Communication Technology (ICT) Journal*, 2018. <https://doi.org/10.33260/zictjournal.v2i1.41>
9. **Alinani Simukanga**, Madaliso Muhone, Joseph Mulenga, Jackson Phiri, & Mayumbo Nyirenda. Creation of an Agricultural Geographical Information System. *Zambia Information Communication Technology (ICT) Journal*, 2018. <https://doi.org/10.33260/zictjournal.v2i2.57>

**RESEARCH  
ARTIFACTS**

1. Alinani Simukanga and Wenda Qin. SEARCH Software. 1, Zenodo, 11 Nov. 2021, <https://doi.org/10.5281/zenodo.5676294>.
2. Alinani Simukanga and Lauren Etter. Ear Datasets - Longitudinal. 1, Zenodo, 11 Nov. 2021, <https://doi.org/10.5281/zenodo.5676103>.
3. Alinani Simukanga, Lauren Etter, Misaki Kobayashi and Wenda Qin. Extended Data. 1, Zenodo, 11 Nov. 2021, <https://doi.org/10.5281/zenodo.5675940>.

**CERTIFICATIONS**

- **Introduction to Cybersecurity**, Cisco Networking Academy 2022
- **Introduction to Modern AI**, Cisco Networking Academy 2026

**AWARDS  
AND  
HONORS**

- **Best Poster Award**, IEEE International Joint Conference of Biometrics (IJCB) 2023
- **Jain Association Prize - Best Graduating Male Student in the School of Natural Sciences**, University of Zambia 2015
- **Dean's Prize - Best Overall Third-Year Student**, University of Zambia 2014

**SKILLS**

**Programming:** Python, C++, Java, Embedded System Development.

**PROFESSIONAL  
MEMBERSHIP**

- **Professional Engineer**, the Engineering Institution of Zambia (EIZ)  
EIZ No.: SMENG2025014377
- **Registered Engineer**, the Engineering Registration Board (EngRB)  
EIZ No.: SMENG2025014377
- **Full Member**, the ICT Association of Zambia (ICTAZ)  
Membership No.: FM003860

**REFERENCES**

References can be provided on request.