KALINDA SIAMINWE

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github.com/kalindasiaminwe

EDUCATION

UNIVERSITY OF ZAMBIA   Lusaka, ZAMBIA
Bachelor of Computer Science   2022
Major in Software Engineering
Cumulative GPA: 3.23 /4.00

PROJECT & RESEARCH EXPERIENCE

UNIVERSITY OF ZAMBIA, Department of Computer Science   Lusaka, ZAMBIA
Zambezi Voice Project   2022 - 2023
- Collaborated on the collection of textual and spoken data for underrepresented languages in Zambia, while taking the lead in managing data for a specific language.
- Conducted thorough data exploration, cleaning, and validation processes to ensure the highest data quality standards.
- Established comprehensive speech corpora for each low-resource language.
- Participated in fine-tuning and evaluating various pretrained models, optimizing their performance for these languages.
- Assisted lead researcher, actively contributing to the production of reports detailing the outcomes of diverse experiments.

UNIVERSITY OF ZAMBIA , Capstone Project   Lusaka, ZAMBIA
Automatic Speech Recognition (ASR) for Chitonga   Mar. 2022 - Nov. 2022
- Led the collection of text and speech data, forming a speech corpus vital for the project.
- Explored and fine-tuned state-of-the-art models, namely the Wav2Vec2.0 model and OpenAI Whisper model, utilizing the speech corpus to elevate ASR capabilities for a low-resource Zambian language.
- Constructed a user-friendly ASR demonstration system using Streamlit, enabling seamless conversion of speech into text and showcasing the practical utility of the developed ASR technology.

RELEVANT PROFESSIONAL EXPERIENCE

QuantStack Technologies   Lusaka, Zambia
Software Engineer   Dec. 2024– Present
- Collaborated with a team of developers to deliver new features and resolve production issues.
- Optimized database queries and structures, reducing data retrieval times by 20–40%.
- Develop and manage database systems, including schema design, queries, and optimization for performance and scalability.
- Wrote and updated technical documentation and user manuals, improving onboarding efficiency for new users and developers.
- Conducted unit and integration testing, increasing overall system reliability and reducing post-release defects.
- Refactored legacy code to improve readability, maintainability, and performance.
- Assisted in migrating parts of the system to more modern technologies and best practices.
- Provided ongoing support and troubleshooting for live applications, ensuring consistent system performance.

Ipahive Inc.   Remote
Software Engineer   Sept.2023 – Jun. 2024
- Enhanced code architecture and documented the application, optimizing overall efficiency.
- Teamed up with developers to innovate and develop a cutting-edge payment API.

Institute for Health Measurement(IHM) Southern Africa   Lusaka, ZAMBIA

Software Engineer Intern Jan. 2023 – Jul. 2023

- Collaborated with a dynamic team of developers in the development and construction of software, aligning closely with software requirement specifications and design documents for the SmartCare+ eHealth record system, contributing to the advancement of healthcare technology.
- Played an integral role in upholding the highest standards of code quality and readability within IHM's system development framework, ensuring a robust and maintainable software environment.
- Assisted in the preparation of comprehensive test cases and participated in thorough unit testing, fortifying the reliability and functionality of the SmartCare+ 2.0 system.
- Contributed to the creation of detailed system documentation for SmartCare+ 2.0, facilitating seamless knowledge transfer and system comprehension among stakeholders.
- Provided essential technical support to healthcare facilities leveraging SmartCare, enhancing the system's operational efficiency, and contributing to improved patient care.

Innovage Investment Ltd Lusaka, ZAMBIA

FullStack Developer Intern Feb. 2022 – Jul. 2022

- Assisted in defining software requirements, identifying system features, functional and non-functional requirements, and customer use cases, contributing to the development of software solutions.
- Conducted research to gain expertise in embedded application (IoT) development, leading the creation, testing, and deployment of applications on custom hardware, enhancing proficiency in cutting-edge technology.
- Collaborated within a team to perform thorough testing on software development projects, ensuring robust and reliable software solutions.

SKILLS & INTEREST

Technical: JavaScript, ReactJS, NextJS, Tailwind, SQL, PostgreSQL, Python, Kotlin, Machine Learning(foundational)

Tools: MS Office, Git, Jupyter notebook/Colaboratory, Linux

LEADERSHIP/TEAMWORK EXPERIENCE

IEEE UNZA Student Branch Lusaka, ZAMBIA

Secretary Feb. 2022 - Nov. 2022

- Scheduled and organized meetings and events in collaboration with industry professionals, drawing participation from over 30 students and fostering valuable connections between academia and industry.
- Managed and maintained critical student organization data throughout the academic year, ensuring efficient operations and the successful execution of initiatives.

University of Zambia Computer Society Lusaka, ZAMBIA

Webmaster Mar. 2021 - Dec. 2021

- Coordinated the regular updating and maintenance of the club's website, ensuring it remained a dynamic and informative platform for the organization's activities and engagement.

PUBLICATIONS

Sikasote, C., **Siaminwe, K.**, Mwape, S., Zulu, B., Phiri, M., Phiri, M., ... & Anastasopoulos, A. (2023). Zambezi Voice: A Multilingual Speech Corpus for Zambian Languages. arXiv preprint arXiv:2306.04428.

CERTIFICATIONS

- **CISCO,** *CCNAv7: Introduction to Networks (2020)*
- **CISCO,** *IT Essentials: PC Hardware and Software* (2019)