Simangolwa Lifwatila simangolwalifwatila99@gmail.com

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Technical Skills

Programming languages: C++, Python | **Database:** Oracle, Postgres, MongoDB | **Web Development:** HTML, CSS, JavaScript | **Tools/Frameworks:** Git, GitHub, Flask | **Familiar:** Java, Rest API's, Node.js, React.js, computer networks, Docker

Experience

Research

September 2022 - May 2023

Saint Cloud State University

Preservation of Endangered Languages

- Developing a Text-to-speech synthesis to help revitalize Betine an endangered language from Côte d'ivoire.
- Working with the PSOLA analysis-synthesis to merge different wav files and to figure out ways of returning a high level naturalness in those sound files using python programming.

Visualization Laboratory Intern

May 2023 - August 2023

- St Cloud State University
 - Created new and or optimize 3D models for real-time virtual reality use as well as working with Unity Game Engine.
 - Create and or modifying UV wrapping of 3D models in Blender as well as augmented reality experiences.

Projects

Energy Trading System

- Created an equal access energy trading market system simulation that follows FERC regulations of 100kw per tariff.
- Implement a system users can buy and sell solar energy and wind energy using python.
- Created a data storage system in Excel and worked in panda library to read and write data to it per transaction.

Speech Recognition and Translation System

- Developed and implemented a cross-lingual speech recognition and translation system using python.
- Created a simulation environment to test and evaluate the systems performance under various conditions.
- Conducted experiments to identify the impact of linguistic differences between source and target languages.

Task Management Application

- Implemented backend logic for user authentication, folder management, task management, and database integration using Python and Flask.
- Successfully integrated PostgreSQL and MongoDB databases ensuring data consistency and seamless retrieval of user-specific information.

Education

St. Cloud State University, St. Cloud, MN

January 2020 - December 2023

B.A Computer Science

Program nationally accredited by the Engineering Accreditation Commission of ABET.

GPA: 3.22

Activities and Honors

St Cloud State University

• Computer Science club member

January 2020 - May 2022 April 2023

HACKATHON 3rd Place position

Worked within a group of 4 teammates to build an Energy Trading System program using python programming

Residence Hall Association

- Leadership Pin
 - Helped aid on-campus Residence Hall Associations by providing programming, recognition of others, and serving the campus community.