RAYMOND LEMAYANA LESIYON

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EDUCATION

Michigan State University-East Lansing, MI.   Expected May 2023
- M.Eng in Computational Mathematics Science and Engineering (CMSE)   GPA: 3.94/4.0
- B.S. Biosystems Engineering | Minor in CMSE   GPA: 3.92/4.0
- MasterCard Foundation Scholar Program Recipient | MSU Dean's List   Fall 2017 – May 2021
- **Key coursework:** Statistical Genetics (Analysis done in **R**), Genomic Data Handling: **Unix** and **Python,** Genomics and Sequencing Analysis, RNA-Seq Data Analysis, Data Mining, Mathematical Foundation for Data Science, Numerical Linear Algerbra, and Numerical Methods in Differential Equations

Technical SKILLS

Python, R, Working with HPCC clusters, Linux, Object-oriented programming, C++, Git

Machine Learning (*Linear and Logitstic Regression, SVM, Decision Trees and Bayes Classifiers*), Deep Learning (*TensorFlow, Neural Networks, Transformers (BERT)*), Dimensional Reduction (*Principal Component Analysis*), Data analysis (*Pandas, Polars, tidyverse and Numpy*) and Visualization (*ggplot2, matplotlib, and seaborn*)

WORK EXPERIENCE

Graduate Teaching Assistant at MSU– East Lansing, MI   Aug 2021 – Present
- Assisted students in developing a basic understanding of programming concepts like conditional statements, loops, object-oriented programming, and collaborative tools like Git.
- Led students through the feature engineering, training, testing, and evaluation of their Machine Learning systems resulting to comprehensive experience in performing Machine Learning.

Software Development Engineering (SDE) Intern at Amazon – Seattle, WA   May 2022 – Aug 2022
- Collaborated with my team and project managers to develop a comprehensive design document for assigned feature that utilizes existing team's infrastructure and service.
- Developed a single page application using React and Typescript to consolidate a feature into one page rather than multiple pages across the website.
- Implemented graphql schema and data resolvers for querying and retrieving data from OpenSearch.

Technical Aide at Steibel Juan Lab – East Lansing, MI   June 2021 – Aug 2021
- Used Slurm workload manager to submit bash scripts for run deep learning algorithms (LSTM) in high-performance computing clusters.
- Performed hyper-parameter optimization to find optimal parameters for deep learning LSTM algorithm.

Biosensor Intern at Fraunhofer USA Inc. – East Lansing, MI   Aug 2020 – Apr 2021
- Implemented data visualization dashboard using tkinter and Pandas libraries in python to quickly analyzing 37 different experiments
- Utilized matplotlib for plotting graphs in tkinter GUI data visualization dashboard
- Functionalized antibody biosensor using NHS chemistry immobilization technique for the purpose of detecting COVID-19 spike protein
- Involved in testing immobilized antibody biosensor using electrochemical techniques to ascertain detection of the antigen

Undergraduate Research Assistant at MIDI Lab - East Lansing, MI   Sept 2019 – Aug 2020
- Performed single feature classification on 400 Ovarian torsion datasets using decision trees classifiers, random trees and logistic regression through Sci-kit learn library in python
- Employed ROC curve, accuracy, specificity, and sensitivity methodology to access the performance of ovarian data classification model

BIOINFORMATICS PROJECTS

Heritability Estimation (https://gitlab.msu.edu/lesiyonr/heritabillity_estimation)   Nov 2021 – Dec 2021
- Estimated Broad, and narrow sense heritability using Genome-Wide Association Study Summary Statistics for Bipolar Disorder Disease.
- Technologies: ***R-Languages, regression***

Megahit Software Benchmarking (https://gitlab.msu.edu/lesiyonr/cmse401-project)   Apr 2021 – May 2021
- Installed Megahit software in MSU HPCC clusters and ran benchmarking study on different inputs parameters of the software.
- Technologies: ***Bash script, sbatch, slurm, jupyter notebook and Megahit***

LEADERSHIP

Maji Safi ni Uhai (Clean Water Equals Life) – Bomet, Kenya   Oct 2019 - Present
- Co-founded Maji Safi ni Uhai initiative for bringing water to communities with insufficient water
- Secured a funding of $4000 to drill the first borehole at Kapkures community