Irene Safoa

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PROFESSIONAL SUMMARY

A diligent, capable, resolute, and ambitious B.Sc. Mathematics first class graduate enthusiastic about things related to academia and improving the lives of people with in-depth knowledge in mathematics because mathematics is indeed the basis of all creation. A confident presenter at conferences, teacher in classrooms, able to break down complex information to audiences in all levels. I believe in leadership, team building, fast learning, human-centred nature, and persistence because they have provided me with exceptional innovative skills. Earlier academic and work experience have enabled my development in communication skills and appreciation for all cultures.

Career Objective

To leverage my skills and knowledge as a researcher who aims to find lasting solutions to Ghana's major problems which include disease outbreaks and flooding and integrate my passion for teaching as a lecturer at a research university.

Research Interests

- Partial Differential Equations
- Mathematical Biology
- Machine Learning
- Fluid Dynamics

Education

Kwame Nkrumah University of Science and Technology   **Sep 2019 - Sep 2023**
Degree: Bachelor of Science in Mathematics (First class)   **Kumasi, Ghana**

St. Martins Senior High School   **Sep 2015 - June 2018**
Option: *West African Senior School Certificate Examination (WASSCE) General Science*   **Nsawam, Ghana**
Electives: *Elective Mathematics, Biology, Chemistry, Physics*

Mioga School Complex   **Sep 2012 - June 2015**
Option: *Basic Education Certificate Examination (BECE)*   **Nsawam, Ghana**

Relevant Coursework

- Calculus
- Real Analysis
- Abstract Algebra
- Numerical Analysis
- Complex Analysis
- Topology
- Linear Algebra
- Partial Differential Equations
- Optimization
- Scientific Computing
- Probability and Statistics
- Dynamical Systems

Research Experience

Final Year Thesis, Department of Mathematics, KNUST   **May 2023 - Sep 2023**
Machine Learning Methods with Application in Pharmacokinetics

- Formulated compartmental model using systems of differential equations to analyze the movement of drug compounds in an organism.
- Incorporated three machine learning algorithms (Random Forest, Support Vector Machine and Linear Regression model) to predict ADME (Absorption, Distribution, Metabolism, and Excretion) parameters.
- Predicted new compounds using results from the machine learning algorithms.
- Random Forest Model performed the best due to the robust nature of the algorithm.

Volunteering/Leadership Experience

E-Learning International Conference, KNUST July, 2024
Usher

- Greeted guests in a friendly and welcoming manner, assisted with ticket scanning, and directed them to their seats.
- Maintained cleanliness and orderliness of seating areas.
- Provided information about the event, venue layout, facilities and and amenities to guests.

Kwame Nkrumah University of Science and Technology, KNUST Jan 2023 - Sep 2023
Undergraduate Mentor

- Mentored and guided a group of 5 undergraduate students in Mathematics.
- Organized and facilitated group study sessions and workshops on relevant courses to enhance learning and understanding.
- Provided academic guidance, including course selection and study strategies, resulting in improvement of mentee's overall grades.

Kwame Nkrumah University of Science and Technology, KNUST Jan 2023 - Sep 2023
Class Representative for Women's Commissioner's Office

- Ensured that, the right and needs of students especially ladies in my class are protected and respected.
- Helped to organize skills fair such as bead making and soap making to enhance their hands-on-skills which makes them more efficient outside school.
- Assisted in conducting surveys and collected feedback to access program effectiveness and recommended improvements.

Professional Experience

National Service Personnel Nov 2023 - Present
Department of Mathematics, Kwame Nkrumah University of Science and Technology Kumasi, Ghana

- Conducting one-on-one or group tutorial sessions to help students understand and excel in mathematics topics.
- Building strong rapport with students and also monitoring students' progress through conducting assignments, quizzes, and tests via the Moodle management system provided by the school and providing constructive feedback to help them improve.
- Helping my supervisor to plan learning activities and grading of students.

Mathematics Teacher Sep 2018 - Aug 2019
Mioga School Complex

- Developed curriculum materials by creating lesson plans and instructional materials tailored to the needs of the students
- Explained mathematical concepts in easy and understandable terms to the students.
- Used real-life examples to teach geometrical concepts.
- Developed students interest in mathematics.

District Clerk Sep 2018 - Aug 2019
The Church of Pentecost - Nsawam Area

- Managed records for easy accessibility.
- Prepared income and expenditure cash books.
- Filed relevant documents for future use.
- Recorded and updated databases.

Membership Affiliations

- Women in Science, WISE KNUST
- The Mathematics Community, TMC KNUST

Conferences

- E-Learning International Conference (KNUST), 2024
- CV writing skill seminar–KNUST Career Service Centre, 2023.
- Entrepreneurship and career guidance summit–Leadership Empire, 2022.
- Career Summit–KNUST, College of Science, 2021.

Skills

Languages
English Native Proficiency
Twi Native Proficiency

Technical
Python, C, Machine Learning Libraries, Latex/Overleaf, Microsoft Office Application

Soft Skills
Self-motivated, analytical, and able to work under pressure
Good verbal and written communication skills
Good interpersonal relationship
Team player with good time management skills
Taking instructions from superiors

References

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