FREDERICK SENYA

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EDUCATION

The University of Vermont, Burlington, VT

- *Ph.D.* in *Mathematical Science*   *January 2022– Present*

Kwame Nkrumah University of Science & Technology, Kumasi, Ghana

- *Bachelor of Science in Mathematics*   *August 2011 – June 2015*
- *Master of Philosophy in Scientific Computing*   *August 2016 – June 2019*

RESEARCH INTEREST

- Differential Equations, Numerical Analysis, Biomathematical Modeling, Data Science, Machine Learning

TEACHING EXPERIENCE

Graduate Teaching Assistant, Department of Math & Stats, University of Vermont, USA

- MATH 010: Pre-Calculus   *Current Semester*
- MATH 019: Fundamentals of Calculus I   *Fall 2022 Semester*
- MATH 020: Fundamentals of Calculus II   *Spring 2022 Semester*

Lecturer, Cape Coast Technical University, Ghana   *July 2021 – Oct 2021*

- CLT 101: Computer Literacy
- URC 105: Digital Literacy

OTHER RELEVANT EXPERIENCE

Howe Library, The University of Vermont, USA   *Feb 2021 – June 2021*
Part-Time Staff

- Supervised the Circulating desk. This involved providing customer service and directional assistance as well as working with student employees and other staff.
- Occasional troubleshooting with equipment such as printers and scanners
- Helped maintained the physical collections in the library (Shelving books and other materials)
- Helped supervised the building and informed users of policies related to noise, safety protocols and other matters
- Assisting with opening and/or closing the building

Ghana Statistical Service, Central Region, Ghana   *Feb 2021 – June 2021*
Contract Staff

- Served as Regional trainer for Ghana's 2021 Population and Housing Census, conducting effective training of over 40 field officers.
- Planning and supervision of field practice
- Reviewing household data collected and providing daily reports and feedback to the DDQMT team
- Create awareness of the 2021 Population and Housing Census through community engagement
- Managing logistics

University of Ghana, Greater Accra Region, Ghana   *September 2019 – May 2020*
Research Assistant

- Research in mathematical biology under the tutelage of US Fulbright Scholar Prof. Daniel Bentil
- Served as Computational Mathematics Teaching Assistant at the Department

University of Education, Winneba, Department of Math Education, Winneba, Ghana   *September 2015 – August 2016*
National Service Person
- Served as Teaching Assistant in the Mathematics Department
- Assist with logistics of Departmental Seminars, Meetings, and Examinations
- Provide a full range of office support services to the Departmental Office
- Collaborated with a team of two other staff to track office supplies and related office needs

GCB Bank Limited, Cape Coast, Ghana   *July 2014 – August 2014*
Intern
- Manage ATM Transactions
- Processing of Customer's ATM application forms and expired ATM cards for renewal
- Perform "Call Over" after every close of transactions

SICLIFE Insurance Company Limited, Cape Coast, Ghana   *June 2014 – July 2014*
Intern
- Worked with a team of four other interns to ensure proper filing and jacketing of insurance claim forms
- Data entry of insurance claim forms in an online system
- Auditing sales records of 'SIKAPLAN' marketing representatives.
- Assist with other duties as needed.

SKILLS

- Programming Languages: Python, R
- Other Software: Microsoft Office (Word, PowerPoint, Excel), LaTeX, Beamer, RStudio, MATLAB, Mathematica.
- Research, Teaching, Mathematical Modeling & Simulations, Data Analysis & Visualization

ARTICLES AND PRESENTATIONS

- A Concise Mathematical Model for Schistosomiasis Infection – A presentation to graduate student, Department of Mathematics, University of Ghana. (2019)
- A Bioenergetics growth model with water Quality variable for predicting Tilapia weight in a caged Pond (Master's Thesis) 2019
- Modeling Traffic Flow-Density Using Partial Differential Equation, Undergraduate project 2015

AWARDS & CERTIFICATIONS

- January 22 - Present: Graduate Teaching Assistantship / Department of Mathematics Summer funding
- August 08, 2020:   Intro to Time Series Analysis in R Certificate – (Coursera Project Network)
- August 03, 2020:   R Programming Certificate – (Johns Hopkins University authorized course offered through Coursera)
- July 31, 2020:   Crash Course on Python – (Google-authorized course offered through Coursera)
- October 2016 – June 2019: National Institute for Mathematical Sciences Graduate Scholarship, Ghana.