

SARAH FOBI MENSAH

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EDUCATION

Ph.D. Statistics Montana State University, Bozeman, MT	August 2024
M.S. Statistics , GPA: 3.89 Montana State University, Bozeman, MT	May 2024
B.S. Actuarial Science , GPA: 3.89 Kwame Nkrumah University of Science and Technology, Kumasi, Ghana	September 2021

RESEARCH INTERESTS

Dimensionality reduction techniques for high dimensional data (application on health-related data), Regression analysis, Machine learning.

RESEARCH EXPERIENCE

Graduate Research Assistant , Advisor: Mark Greenwood Montana State University, Bozeman, MT Sparse Contrastive PCA and its Feasibility for Metabolomics Data. Funded by: National Institute of Arthritis and Musculoskeletal and Skin Diseases (1R01AR081489-01A1)	December 2023 – May 2024
Research Assistant , Advisor: Alexander Boateng Kwame Nkrumah University of Science and Technology, Kumasi, Ghana Predictive Analysis of misuse of alcohol and drugs using machine learning algorithms: The case of using an imbalanced dataset from South Africa.	October 2021 - July 2022

TEACHING EXPERIENCE

Graduate Teaching Assistant Montana State University, Bozeman, MT	August 2022 – December 2023
Courses <ul style="list-style-type: none">STAT 216 -Introduction to StatisticsSTAT 337 – Intermediate Statistics with RSTAT 216 – Introduction to statisticsSTAT 216 – Introduction to statistics	Summer 2024 Fall 2023 Spring 2023 Fall 2022
Undergraduate Teaching Assistant Kwame Nkrumah University of Science and Technology, Kumasi, Ghana	October 2021 – July 2022
Courses <ul style="list-style-type: none">STAT 371– Regression AnalysisSTAT 153 – Statistical Methods I	Spring 2022 Fall 2021

RELATED WORK EXPERIENCE

Data Analytics Intern KPMG, Australia (Remote)	July 2020 – August 2020
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- Identified data quality issues with the dataset presented by the Sprocket Central company and visualized the data to help the company visualize its customers.
- Analysed the company's dataset using RMF (Recency, Frequency and Monetary) analysis to help the company determine which customers it should target to increase its revenue and value.

PUBLICATIONS

Odoom, Christopher, Alexander Boateng, **Sarah Fobi Mensah**, and Daniel Maposa. "Modeling of the Daily Dynamics in Bike Rental System Using Weather and Calendar Conditions: A Semi-Parametric Approach." *Scientific African* (2024): e02211.

Boateng, Alexander, Christopher Odoom, Eric Teye Mensah, **Sarah Mensah Fobi**, and Daniel Maposa. "Predictive Analysis of Misuse of Alcohol and Drugs using Machine Learning Algorithms: The Case of using an Imbalanced Dataset from South Africa." *Appl. Math* 17, no. 2 (2023): 261-271.

CERTIFICATIONS

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|---------------------------------------------------------------------|---------------|
| • Biomedical Responsible Conduct of Research Course | January 2024 |
| • IRB Social and Behavioral Research | January 2024 |
| • Git (Simplilearn) | November 2023 |
| • Data Visualization in R with ggplot2 (LinkedIn) | November 2021 |
| • The Data Scientist's Toolbox (Coursera) | March 2021 |
| • SQL for Data Science (Coursera) | December 2020 |
| • Excel/VBA for Creative Problem Solving, Part 1 (Coursera) | November 2020 |
| • Python Data Structures (Coursera) | November 2020 |
| • Programming for Everybody, Getting Started with Python (Coursera) | October 2020 |

PROFESSIONAL ASSOCIATIONS

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|----------------------------------|------------------------|
| American Statistical Association | March 2024 - present |
| Royal Statistical Society | January 2024 - present |

HONOR SOCIETY

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| The Honor Society of Phi Kappa Phi | February 2024 - present |
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AWARD

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| Scholarship recipient, Ghana Scholarship Secretariat | May 2021 |
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LEADERSHIP EXPERIENCE

Judicial Committee Chair

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| Actuarial Science Students' Association-KNUST Chapter | September 2020 – August 2021 |
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Deputy Finance Chair

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| Actuarial Science Students' Association of Ghana | September 2019 – May 2020 |
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