

RAPHAEL ODURO BOAFO

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EDUCATION

Kwame Nkrumah University of Science & Technology (KNUST) - Kumasi, Ghana

Bachelor of Science Mathematics, First Class | November, 2022

CWA: 89.07/100

Key Coursework: Numerical Methods & Computations, Probability & Statistics, Differential Equations, Partial Differential Equations, Time Series Analysis, Application Development for Mathematics

Kumasi Technical University, Kumasi, Ghana

Diploma in Computerized Accounting, August, 2018

GPA: 2.9/5.0

RESEARCH EXPERIENCE

Areas of Interest: Statistics | Machine Learning | Mathematical Modeling | Numerical Analysis | High-Performance Computations

My research interests lie in statistical analysis, machine learning, mathematical modeling, numerical analysis, and high-performance computations. I am particularly focused on the application of these methods in economic forecasting, optimization, and predictive analysis, utilizing tools such as regression analysis, time series analysis, and machine learning algorithms. My goal is to enhance data interpretation and computational efficiency to drive decision-making in fields like finance and operations.

Undergraduate Research Project

KNUST – Kumasi, Ghana | 2022

Application of Mathematical Models in Economics

- Developed and applied differential equations and statistical analysis in economic forecasting.
- Used regression analysis and machine learning techniques to model economic trends, achieving a project evaluation of 88%.

Research Assistant

University of Cape Coast, Ghana | 2023

- Contributed to a project focusing on the application of statistical and machine learning methods for economic prediction.
- Used R and SPSS for large dataset analysis, implementing regression and time series models to derive insights into economic behavior.

Diploma Research Project

Adoption and Impact of Accounting Software in SMEs

Kumasi Technical University – Kumasi, Ghana | 2018

- Conducted surveys and data analysis to examine the influence of accounting software on SME business practices.
- Applied statistical methods to identify adoption patterns and impact, enhancing understanding of technology use in SMEs.

PROFESSIONAL EXPERIENCE

Quantitative Analyst

Apex Financial Solutions – Kumasi, Ghana | June 2022 – Present

- Develop predictive models using statistical and machine learning methods for financial forecasting and risk management, increasing portfolio performance by 20%.
- Apply Monte Carlo simulations and regression analysis to enhance model precision by 25%.
- Collaborate with data scientists and financial analysts to optimize investment strategies based on data-driven insights.

Mathematical Consultant

TechSolve Innovations - Kumasi, Ghana | Feb. 2021 – May 2022

- Designed mathematical models using numerical analysis and optimization techniques for technology and engineering projects.
- Utilized MATLAB and Python for high-performance computations, resulting in a 25% improvement in project outcomes.

Research Intern

Ghana Statistical Service - Accra, Ghana | June 2020 – Dec. 2020

- Assisted in data analysis and statistical modeling for national demographic studies.
- Applied statistical tests and time series analysis using SPSS and R, providing insights that supported policy decisions.

Teaching Assistant (Department of Mathematics)

KNUST - Kumasi, Ghana | Feb. 2019 – March 2020

- Conducted tutorials in Probability, Statistics, and Differential Equations, emphasizing applications in predictive modeling and analysis.
- Developed supplementary materials to support students in understanding statistical and computational concepts.

PROJECTS

Predictive Stock Price Modeling: Built Python-based machine learning models for stock price forecasting, applying time series analysis and neural networks.

Optimization in Supply Chain Resource Allocation: Developed linear programming models to optimize resource allocation, improving efficiency by 30%.

CERTIFICATIONS

- **Certified Data Analyst (CDA)**, International Association for Statistical Computing (IASC)
- **Certified Financial Modeling & Valuation Analyst (FMVA)**, Corporate Finance Institute (CFI)
- **Microsoft Certified:** Data Science Associate

TECHNICAL SKILLS

Programming Languages: Python, Java, C++, SQL

Mathematical and Statistical Tools: MATLAB, Mathematica, R, SPSS

Data Analysis: Proficient in statistical modeling, regression analysis, and time series forecasting

Research Tools: LaTeX, MATLAB

Web Development: HTML, CSS, JavaScript