FRANCIS BOATENG

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OBJECTIVE

I am a data enthusiast proficient in analytical tools, statistical programming, machine learning, and data visualization. I seek opportunities to leverage my skills to extract meaningful insights from data and contribute to data-driven decision-making in a dynamic environment.

EDUCATION

Master of Science in Mathematics [Expected May 2024]
Florida Atlantic University, Boca Raton, FL
Cumulative CGPA: 3.74/ 4.0

Bachelor of Science in Actuarial Science [September 2021]
Kwame Nkrumah University of Science and Technology, Kumasi, Ghana
Cumulative Weighted Average: 76.65/ 100

RELEVANT WORK EXPERIENCE

Graduate Research and Teaching Assistant, *Florida Atlantic University*, Boca Raton, FL [August 2022 – Present]
- Under Dr. Li's supervision, the head circumference of babies in pregnant women was analyzed using multiple linear regression, resulting in 89.54% predictability with a low infant birth weight dataset.
- Instructs Methods of Calculus (MAC 2233-16B) to 45 undergraduate students, emphasizing a comprehensive understanding of mathematical concepts focusing on practical business applications.
- Conducts tutoring sessions at the Math Learning Center, providing additional support and guidance to enhance students' proficiency in calculus.

Graduate Actuarial Trainee, *StarLife Assurance*, Accra, Ghana [October 2021 – July 2022]
- Retrieved, reviewed, cleaned, transformed, and modeled data for experience analysis. The findings showed pricing and valuation adjusted mortality rate at 65% and AIDS rate at 10% for fiscal year 2022.
- Prepared data for assessing the company's actuarial liabilities and generated a premium summary by products, distribution channels, and regions, revealing that 55% of premium revenue stemmed from endowment products.
- Utilized Basys, an in-house actuarial software, to accurately calculate a competitive premium rate for an innovative insurance product tailored to market women.

Data Analyst Intern, *StarLife Assurance*, Accra, Ghana [July 2019]
- Assisted in data cleaning, preprocessing, and analysis using Excel and Basys and created visualizations and reports to communicate findings to stakeholders.

RELEVANT PROJECTS AND RESEARCH EXPERIENCE

Stroke Data Analysis with R-Shiny
- Performed in-depth exploratory data analysis on a stroke dataset, crafted a predictive machine-learning model, and designed an interactive R-Shiny app with three tabs: one for dataset statistics, another for custom visualizations and inferences, and a third for predicting stroke occurrence using a generalized linear model (GLM). Explore the Shiny app here (Stroke Dataset Analysis (shinyapps.io)).

Dimensionality Reduction
- Applied principal component analysis (PCA) to an NBA dataset in R, revealing insights through data investigation. I utilized a biplot that visually demonstrated that 90% of players with the same position clustered at the same point and that players with different positions were dispersed.

Data Analysis of Diamond Attributes: Cut, Carat, and Price
- Analyzed intricate links among diamond qualities: cut, carat, and price. Utilized regression and visuals to unveil critical trends. Results highlighted carat weight and cut's significance in pricing. The model's R-squared of 0.8565 showed 85.65% predictability in diamond prices via carat and cut.

TECHNICAL SKILLS

Programming: Python (NumPy, Pandas, Scikit-learn, Matplotlib), R (dplyr, tidyr, ggplot2, caret, Shiny, rmarkdown), SAS, PostgreSQL, SQL
Business Analytics: Databases, Business Intelligence, Statistical Analysis, Data Visualization, Tableau, Power BI
Office Suite: Proficient in Microsoft Office Suite, especially Excel, including VBA, PowerPoint, and Word
Others: Communication, Critical Thinking, Problem Solving, Attention to Details