Brian Chege

Actuarial analyst | Data Scientist

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SUMMARY

Detail-oriented Actuarial Analyst and Certified Data Scientist with a strong foundation in statistical modelling and risk analysis. Proficient in data analysis, data visualization, predictive modelling and web interface development. Expert at transforming complex financial datasets into actionable, data-driven risk management solutions. Dedicated to continuous learning, currently specializing in building intelligent Android applications using Kotlin.

SKILLS

- **Data Science & Machine Learning:** Machine Learning, Natural Language Processing (NLP), Deep Learning, Financial Modelling, Predictive Modelling.
- **Programming Languages:** Python, R, Kotlin, SQL.
- **Data Analysis & Visualization:** Power BI, Tableau, Advanced Excel.
- **Web Development:** HTML, CSS, JavaScript.

Projects

Historical Aviation Accidents Analysis - https://github.com/BC-254/Historical_Aviation_Accidents_Analysis

This project identified the risks associated with different aircraft by analysing historical aviation accident data and consequently provided insights into the most viable aircraft options based on frequency of accidents occurrence. Identifying the patterns, trends, and risk factors that influence such accidents facilitated the determination of the lowest risk venture aircraft for purchase by the company and how viable the operation of the aircraft would be for commercial and private enterprises. The dataset used consisted of approximately 24,000 aviation accidents worldwide that occurred between 1919 and 2023.

Terry Stops-to-arrest Prediction - https://github.com/BC-254/analyzing-reasonable-suspicion

Built binary classifiers using Regression Models, Random Forests, Decision Trees and Gradient Boosting algorithms to predict whether a police stop would result in an arrest. Handled class imbalance and performed extensive feature engineering. This project leveraged over 65,000 records from the Seattle Police Department. The final model serves to assist law enforcement agencies in making informed decisions during traffic stops hence ensuring that adequate resources have been allocated effectively and that officers are better prepared for potential outcomes. Nonetheless, the model also seeks to enhance transparency and accountability within law enforcement by providing insights into the factors that influence arrest decisions.

EXPERIENCE

Underwriting Intern | Majani insurance Brokers Limited

June 2024 – September 2024

Partnered with underwriting and claims teams to drive data-driven risk assessments and operational efficiency.

Key Achievements:

- **Process Automation:** Migrated manual pricing and computing tasks from Excel to R hence reducing calculation time by 40% and significantly minimizing human error in policy pricing.

- **Claims Optimization:** Analyzed historical claims data to identify loss trends and fraud patterns, resulting in an estimated 15% improvement in processing speed and settlement accuracy.
- **Compliance & Audit:** Executed rigorous compliance reviews for ~500 insurance policies, ensuring complete adherence to regulatory standards and reducing liability exposure.
- **Stakeholder Engagement:** Acted as the technical bridge between actuaries and clients, translating complex mortality tables and risk data into clear, strategic insights that increased client retention by approximately 5%.

Claims and Policy review Intern | **Clarkson Insurance Brokers Limited**
May 2023 - August 2023

Supported the Claims and Underwriting departments by applying actuarial principles to evaluate risk exposure and policy accuracy.
Key Achievements:

- **Quantitative Risk Analysis:** Conducted detailed risk profile evaluations for 20+ corporate and individual clients, providing data-backed recommendations that supported accurate underwriting decisions.
- **Policy Audit & Compliance:** Audited 100+ insurance policies for coverage accuracy and regulatory compliance, identifying key discrepancies that mitigated potential legal risks.
- **Claims Data Analytics:** Analyzed historical claims datasets to identify emerging patterns and loss ratios, directly assisting the team in processing settlements faster.
- **Underwriting Support:** Collaborated with senior underwriters to assess risk exposure and calculate premiums, drafting competitive quotations that contributed to the team's monthly targets.

EDUCATION

Catholic University of Eastern Africa | Bachelor of Science in Actuarial Science September 2021-October 2025

- **Grade:** Second Class Honours, Upper Division.
- **Relevant Modules:** Financial Mathematics, Stochastic Processes, Risk Models, Time Series Analysis, Linear Algebra.
- **Key Achievement:** Successfully bridged Actuarial theory with modern data science techniques in final year research.

Moringa School | Certificate in Data Analysis June 2025-September 2025

- **Focus:** Business Intelligence, Data Visualization and Statistical Analysis.
- **Tools:** Advanced Excel, Power BI, Tableau and SQL.

Moringa School | Certificate in Data Science October 2025-February 2026

- **Focus:** Machine Learning, Predictive Modelling, NLP and Deep Learning.
- **Tech Stack:** Python (Scikit-Learn, Pandas, NumPy), TensorFlow and NLTK.
- **Capstone:** Developed end-to-end machine learning models for real-world prediction scenarios.