BRIAN KOMEN

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EDUCATION

Columbia University, New York City, NY   Expected Dec 2025
- Master's of Science: Actuarial Science

Hamilton College, Clinton, NY   May 2021
- Bachelor of Arts Degree: Quantitative Economics

RELEVANT COURSES

● Introduction to the Math of Finance	● Probability Theory	● Statistical Inference	● Statistical Methods in Finance	● Options and Futures	● Data Science in Finance

ACADEMIC PROJECTS

Quantitative Analysis of Short-Rate Models Research, *Columbia University*   Nov 2024 - Dec 2024
- Conducted an evaluation of interest-rate models (Vasicek, Cox-Ingersoll-Ross, Hull-White) using Python to assess their predictive accuracy, stability, and accuracy under varying economic conditions.
- Utilized historical treasury yields (2-year, 5-year, and 10-year) across different periods to test model performance.

Advanced Portfolio Construction and Risk Assessment Project, *Columbia University*   July 2024 - Dec 2024
- Constructed a diversified portfolio and performed descriptive statistical analysis (beta, skewness, and kurtosis).
- Estimated VaR and Expected Shortfall using normal and non-parametric methods.
- Used principal component and factor analysis to assess correlations and diversification potential among assets.

RELEVANT EXPERIENCE

Allianz Global Risks US Insurance Company   July 2021 - July 2024
Actuarial Analyst - Process development, Chicago
- Ran, maintained, and improved loss forecasting models such as the firm's time series model and Loss Development Triangles.
- Processed monthly financial data, prepared, and updated actuarial models.
- Designed prototypes in python and R, and documented assumptions and results.
- Developed checks and controls in key processes to support troubleshooting.
- Presented newly developed functionalities to stakeholders, globally and across functions in the CFO department.
- Collected and reconciled cash flow data.
- Prepared model governance reports for external regulators.

Casualty Actuarial Society (CAS) Summer Program   June 2020 - Aug. 2020
Student Intern
- Trained on pricing methods.
- Built models to forecast the sale price of a house.
- Measured the fit of models by producing Relative Net Lift graph and Decile graph.
- Presented on projects using data visualization.

Hamilton College   May 2019 - Aug. 2019
Emerson Research Award Recipient
- Collected data of tens of thousands of Small and Medium Enterprises (SMEs) across three cities in Kenya.
- Evaluated the relationship between the rate of growth of SMEs and the increased accessibility of banking services in the country using linear regression models.

SKILLS

- Coding skills in Python (including use of Numpy, Pandas, Scikit-learn, and Arima packages)
- Understanding of Machine learning concepts (Linear regression, Logistic regression, Decision Trees, and KNN)
- Time Series Analysis and Model validation in python
- Knowledge of Mean-Variance Portfolio Theory, Monte-Carlo simulation, Black-Scholes Option pricing Model, and Delta Hedging.
- Excel

VOLUNTEER EXPERIENCE

Project Sunshine, Utica, NY   Feb. 2019 - March 2019
Volunteer Income Tax Assistance (VITA) Program Volunteer
- Filed tax returns for low-income earners.
- Advised seniors on ways to reduce tax liability.

Lutheran Home, Clinton, NY   Feb 2019
Nursing Home Volunteer
- Organized games, dances, and other fun activities for the residents.
- Served meals to the residents.

Community Collaborations International, New Hanover, NC   Dec. 2018 - Jan. 2019
Hurricane Relief Volunteer
- Sorted out items from damaged houses and cleaned wreckage from affected compounds.
- Repaired and reconstructed homes for 4 families.

ACTIVITIES & LEADERSHIP

AFRICON President, Hamilton College   May 2019 - June 2020
- Coordinate with the college administration to organize events for African students on and off campus.

INTERESTS & HOBBIES

● Badminton	● Soccer	● Running