

Lucas Ben

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Toronto, ON

647-967-9276

EDUCATION

York University – Schulich School of Business

Toronto, ON

Master of Business Analytics Candidate

- Relevant coursework: Predictive Modeling, Artificial Intelligence Fundamentals, Databases, Management of Risk in Financial Institutions

Dalhousie University

Halifax, NS

Bachelor of Science; Statistics

- Relevant coursework: Applied Multivariate Analysis, Statistical Learning with Python, Regression Analysis, Probability, Statistical Theory, Experimental Design, Money and Banking, Macroeconomics

TECHNICAL SKILLS

Languages Python, R, SQL, HTML/CSS

Libraries PyMC, PyTorch, Prophet, Scikit-learn, statsmodels, Matplotlib, Pandas

Statistics Statistical Modeling, Bayesian Modeling, Stochastic Processes, Optimization, Data Mining, GLM, Unsupervised Learning

PROJECTS

Bayesian Analysis of Whiff %

- Applied a Bayesian Beta-Binomial model to estimate rookie pitcher Anthony Veneziano's true whiff rate using small-sample data, improving interpretability over traditional metrics and quantifying uncertainty with a 95% credible interval.

Understanding the Relationship between Volatility and the S&P 500

- Quantified negative correlation between SPX and VIX using statsmodels, later adapting the framework to analyze pairs trades during market downturns
- Developed forecasting pipeline with Prophet to predict VIX spikes two weeks ahead

Using Cluster Analysis to Uncover a Pattern of World Series Winners

- Identified era-specific team archetypes using PCA and Gaussian mixture models, revealing five distinct clusters that aligned with MLB rule change epochs
- Developed feature importance framework via PCA loadings, identifying variables that correlated with team success

EXPERIENCE

Dalhousie Investment Society

Halifax, NS

Quantitative Risk Analyst

- Developed predictive models in Python, leveraging ARIMA, GARCH, and neural networks to analyze historical market trends and advise investment positions

SKILLS & INTERESTS

- Varsity baseball catcher throughout my bachelor's degree
- Completed SABR Analytics I and follow current research
- Enjoy learning about quantitative finance and portfolio theory