

Technical Skills

Technology:

- R - Data cleaning, database querying, and classification algorithms.
- Excel - Proficiency with array formulas, index, and offset functions.
- SQL Server - Wrote and modified queries to draw data from company databases.

Background:

- Data cleaning and validation.
- Hypothesis testing and econometrics.
- Visualization of data analysis.

Experience:

Quantitative Risk Analyst
BNY Mellon
September 2017 - Present

- Employ knowledge of statistics and exploratory data analysis to test assumptions in mathematical models and identify their weaknesses.
- Evaluated suitability of a behavior model used to estimate prepayments in \$ 50 billion mortgage portfolio using back-testing and bench-marking against alternative models.
- Replicate and compare regression models used to measure deposit rate sensitivity to the market rate by replicating model results.

Junior Business Analyst
Forensic Economics
January 2016 - August 2017

- Initiate securities fraud investigations by collecting, cleaning, and validating financial data from Bloomberg, Capital IQ, SEC EDGAR, and other sources.
- Assist expert witnesses in econometric analysis by using R to fit and compare statistical models for stock return behavior.
- Contribute to arguments in expert reports by summarizing statistical and econometric conclusions using data visualizations.

Teaching Assistant
Rochester Institute of
Technology
September 2013 - May 2015

- Ensured student understanding of course material by assisting in instruction and consulting with Professors regarding class progress.
- Contributed to classroom experience by overseeing project and class work and offering individual tutoring.

Graduate Researcher
Rochester Institute of
Technology
November 2013 - May 2014

- Evaluated effectiveness of kidney failure treatment by conducting hypothesis testing in R.
- Aided in research presentation by conveying data requirements, and meaning of statistical tests.

Projects and Presentations

An Introduction to R

St.Bonaventure University, 2016

- Delivered presentation and led discussions on uses of R for research and in the classroom.
- Discussed using exploratory data analysis, regression and plotting to generate demonstrations for class.

A Comparison of Optimization Methods for Elliptic Inverse Problems

Joint Mathematical Meeting, 2015

- Conducted convergence and performance analysis of optimization algorithms for parameter identification in second and fourth order elliptic partial differential equations.

An Introduction to R Programming for Financial Analysis

St.Bonaventure University, 2015

- Demonstrated the use of statistical programming by writing scripts analyzing commodity price movements to evaluate market entry opportunities.

Excel Instructor

Citigroup, 2013

- Presented tutorials on basic and intermediate Excel skills for securities processing analysts and management.
- Acted as a resource for other employees in the time saving uses of Excel and VBA.

Education:

Rochester Institute of Technology, Rochester, NY
Master's Degree in Applied and Computational Mathematics

St. Bonaventure University, Allegany, NY
Bachelor's in Business Administration in Finance, *Magna cum Laude*