John Bentley

Data scientist and financial analyst with a Yale Math and Philosophy degree and 3 years of modeling and data mining experience. SQL, R, Python, Excel.

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WORK EXPERIENCE

Product Data Analyst
Betterment

New York, NY   04/2019 – present

- Pull and analyze data to create research reports and models. Recommended improvements to cashflow product estimated to help save $4m per year.
- Develop webapp and analysis code for AB testing tool. Developed a proprietary algorithm to statistically compare highly skewed, bi-model distributions.
- Work closely with finance and data engineering to build SQL scripts and dashboards to make monthly board reporting more efficient.

Data Scientist Teaching Assistant

NYC Data Science Academy

New York, NY   01/2019 – 03/2019

- Led coding courses on techniques and tools including machine learning, web scraping, R, Python, Git, advanced SQL, and statistical theory.

Financial Analyst

Brownson, Rehmus & Foxworth

Menlo Park, CA   07/2017 – 12/2018

- Employed modern portfolio theory to fit investment recommendations to client needs. Analyst responsible for re-derivation of practice-wide fixed-income targets due to shifts in corporate bond market. Reduced credit risk exposure by an average of 50% on $3 billion in advised-upon assets.
- Leveraged SQL database of holdings and Excel and VBA skills to improve efficiency. Cut time for one critical report from over an hour to five minutes.
- Planned and led segments of meetings and addressed questions from clients. Direct point of contact for certain clients.

Flight Analyst Intern

NASA Goddard Space Flight Center

Greenbelt, MD   05/2016 – 01/2017

- Processed terabytes of magnetometer time-series data using PCA and regression techniques. Developed algorithms that remain in use.
- Determined statistical significance of unexpected readings from onboard sensors. Findings helped save thousands by discouraging further experimentation.
- First author: Bentley J, Chu D, Loto'aniu P, Redmon R, Rich F, Sheppard D. Exploring the use of Alfvén waves in magnetometer calibration at geosynchronous orbit. American Geophysical Union. 2016.

Research Assistant

Yale Department of Political Science

New Haven, CT   06/2014 – 10/2014

- Researcher credit: Debs A, Monteiro N. Nuclear Politics: The Strategic Causes of Proliferation. Cambridge University Press. 2016.

EDUCATION

Data Scientist Certification

NYC Data Science Academy

New York, NY   09/2018 – 12/2018

- Constructed explanatory models using ARIMA techniques and spectral analysis. Verified effectiveness of crime reduction initiative affecting city of 130,000.
- Built ensemble model using KNN, Lasso, and Gradient Boosting to predict home sale prices. Achieved .126 root mean squared logarithmic error.
- Created R Shiny webapp to model data on extra-solar planets, including Flash visualization of orbital paths.
- Scraped data from popular project-hosting hub using Python and analyzed success factors using correlation analysis and regression.

B.A. with Distinction: Mathematics and Philosophy

Yale University

GPA: 3.66 (Major 3.82)

New Haven, CT   08/2013 – 05/2017

- Data Mining and Machine Learning
- Linear Algebra
- Multivariable Calculus
- Intermediate Microeconomics

SKILLS

- Machine Learning: Generalized Linear Regression, Trees, Ensembles, PCA, SVMs, Cluster Analysis, Neural Networks, Time-Series Analysis
- Programming: Python (7 years), R (2 years), SQL (1 year), Bash (1 year), MATLAB (3 years), Java (7 years), Excel (3 years), VBA (3 years)
- Data Engineering: Spark, AWS, Hadoop
- Analysis: Statistics, Financial Modeling, Signal Processing, Economic and Political Research
- Communications: Client-Relations, Team-Coordination, Presentation
- Project Management: Staging, Resource-Management
- Leadership: Eagle Scout, Yale Freshman Counselor
- Music: Banjo, Guitar