

Andrew Freeman

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Education

Stanford University

Master of Science in Data Science

GPA: 4.00

Stanford, CA

June 2022

Northeastern University

Bachelor of Science in Mathematics, Chemistry

GPA: 3.94 (Summa Cum Laude)

Activities: Northeastern Playing Card Club - Co-founder, Treasurer (2016-19), President (2019-20)

Boston, MA

May 2020

Skills and Qualifications

- Python (Advanced), SQL (Advanced), KDB/Q (Experienced), VBA (Experienced), C++ (Exposure), R (Exposure)
 - Options pricing (Black-Scholes and empirical pricing) and trading strategies (Exposure)
 - Machine learning in Python with standard libraries (scikit-learn, TensorFlow/Keras, LightGBM) and with custom algorithms (Experienced)
 - Visualization in Tableau (Advanced), Plotly/Dash (Advanced), and SPSS (Exposure)
 - Microsoft Suite (Advanced; including Access)
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Professional Experience

Quantitative Trading Intern

June-August 2021

Wolverine Trading, Chicago, IL

- Researched and designed a strategy to use ETF options to reduce positional PNL variance by 20%
- Developed and implemented a theory-based approach to decorrelate returns of stocks in a sector from each other and a relevant ETF
- Leveraged options knowledge and critical thinking to quickly adapt markets in a simulated trading environment

Trade Strategy Co-op

January-June 2019

Grantham, Mayo, Van Otterloo, and Co., LLC, Boston, MA

- Conducted and presented individual research on the effect of economic events on the trading of various securities, including identification of correlative events, development of a predictive model, and production of a dashboard to display real-time data, upcoming events, and predicted effects
- Implemented cleaning and analyzing rules for daily trade data from 30+ global stock exchanges using KDB/Q and Python
- Designed and created an interactive dashboard to track tick data quality using Plotly for Python with custom HTML/CSS

Analytical Chemistry Co-op

January-June 2018

Takeda Pharmaceuticals, Cambridge, MA

- Analyzed large samples of raw analytical data from various instruments to determine physicochemical properties of small molecules and biologics
 - Tracked and analyzed short- and long-term errors on lab instrumentation over several months
 - Fixed and expanded a dashboard-generating script to remotely provide real-time updates on instrument statuses with Python and HTML to improve analytic efficiency
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External Projects

- Scraped and analyzed MLB data to produce a dashboard of every double play in MLB history (2020)
 - Produced and evaluated a new metric to improve fairness in [NFL playoff standings](#) (2020)
 - Published in the *Journal of The Electrochemical Society* (2021) as a laboratory researcher in NUCRET (2017-2020)
 - Designed and implemented a music visualizer utilizing a Raspberry Pi and LEDs (2019)
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Relevant Coursework

Data-Driven Financial Econometrics (STATS 241), Introduction to Time Series Analysis (STATS 307; current), Deep Learning (CS 230), Modern Applied Statistics: Learning (STATS 315A)