

Jacob Kulik

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Education

Northeastern University, Khoury College of Computer Sciences, Boston, MA Sep 2021 – May 2025
Candidate for Bachelor of Science in Data Science and Business Administration, Concentration in Finance GPA: 3.99/4.00
Relevant Coursework: Machine Learning 1 & 2, Advanced Programming with Data, Information Visualization, Database Design, Foundations of Data Science, Portfolio Management, Financial Data Analytics, Copenhagen Business School - Investments

Work Experience

Arrowstreet Capital, Portfolio Management Co-op, Boston, MA Jul 2024 – Present

- Estimate stock loan fees and compare with prime broker IOA data to analyze shorting costs using Scikit-learn and PySpark
- Construct fee schedule model with K-means clustering to classify broker tiers and explain routing behavior using Scikit-learn
- Develop model to estimate trading fees across brokers and venues using liquidity tags and trade sizes with PySpark MLlib
- Optimize minimum portfolio cash levels by performing OLS regressions to predict overdraft probabilities using Statsmodels
- Automate trading venue classification process based on fill behavior to feed into broker ranking pipeline using PySpark

Credit Suisse, HOLT Portfolio & Quantitative Strategy Co-op, New York, NY Jul 2023 – Dec 2023

- Launched portfolio analysis tool leveraging HOLT factor library to improve client prep workflow using Plotly Dash and SQL
- Engineered interactive dashboards to analyze HOLT and traditional quality alpha factors across stock baskets with Dash
- Enhanced ML model, achieving 91% accuracy in classifying management incentive plans across sectors with Sklearn
- Deployed chatbot to answer HOLT framework questions by conducting transfer learning on BERT model with HuggingFace
- Analyzed 25+ equity portfolios for institutional PMs, applying factor framework to construct opportunity and risk screens

Chess.com, Partner Twitch Streamer, Remote Nov 2020 – Present

- Develop educational channel focusing on Blitz and Bullet chess with over 4k followers and 900k total views across platforms
- Produce video content, consistently rank in the top 50 English chess channels on Twitch for viewership and growth
- Host Chess.com/tv programs for thousands of viewers, creating video content that is promoted on Chess.com site

Khoury College of Computer Sciences, Data Science Undergraduate Teaching Assistant, Boston, MA Dec 2021 – Apr 2023

- Facilitated discussion through weekly office hours and Piazza threads for 500 students in DS2000: Programming with Data
- Instructed 50 students in 2 CS practicum sections, grading and providing individualized feedback on homework and projects
- Collaborated with professors to develop visualization projects and quizzes covering introductory programming concepts

Leadership Experience

TAMID Group - Tech Consulting, Director of Tech Consulting (Lead Developer), Spring 2024), Boston, MA Sep 2022 – Present

- Drive team of 3 developers in the construction of codebase for Alia, a startup replacing traditional e-commerce pop-ups
- Enhance AI-generated lesson pop-ups using TypeScript and GPT-3.5 to improve conversion rate with customer education
- Present CEO with innovative prompt engineering and lesson creation code to enhance the Shopify merchant experience

Disrupt - The FinTech Initiative, VP (Finnovate Co-Director), Spring 2022), Boston, MA Dec 2021 – May 2023

- Led executive board of 22 students to execute 20+ speaker events and develop financial literacy mobile application
- Designed and taught 3-part Python workshop series covering Pandas library and Yahoo! Finance API for 200+ total students
- Restructured curriculum for 8-week FinTech venture-building program to funnel directly into venture accelerator IDEA

Projects

FinViz - Balance Sheet Visualizer Jan 2023 – Apr 2023

- Engineered interactive tool visualizing 10-K line item trends using CSS and D3.js for students in introductory finance classes
- Implemented time-series and cross-sectional analysis with filters and tooltips to allow for comparisons across firms and years

ReceiptTrack - Receipt Image Processing Oct 2022 – Dec 2022

- Developed dashboard web app tool in team of 4 that analyzes receipt images using OCR to produce shopping habit insights
- Incorporated object-oriented design and Plotly Dash to visualize spending trends over time and across food groups

Additional Information

Additional Activities: Dean's List, Collegiate Chess League Division 3 Champion (NEU A Board 1), Chess.com Ambassador, Hillel
Skills: Python, SQL, Git, Pandas, NumPy, Scikit-learn, Statsmodels, PySpark, AWS Glue, Flask, MongoDB, R | Fluent in Russian
Interests: Soccer, National Parks, Fantasy Premier League, Spikeball, Cycling, Billiards, DJing, Backgammon