

# Jacob Kulik

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## Education

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**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

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

- Construct fee schedule model with K-means clustering to classify broker tiers and explain routing behavior using Scikit-learn
- Estimate stock loan fees using price and alpha forecast data to analyze portfolio shorting costs with PySpark and Statsmodels
- Develop regression model to estimate venue trading fees using liquidity tags, achieving 96% R-squared 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

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**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

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**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

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**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