Danyil Blyschak

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Education

Macaulay Honors College, CUNY Baruch College — Expected May 2023
Bachelor of Science in Financial Mathematics — Minor in Computer Science (GPA: 4.0) — *New York, NY*

Hunter College High School — Jun. 2020
New York, NY

Coursework: Linear Algebra, Probability Theory, Algorithms, Putnam Problem Solving

Experience

PageSage | *Sole Developer* — Jul. 2021 – Present
pagesage.xyz — *New York, NY*

- Developed and deployed a web app using a React frontend and Django backend on a Linux server environment
- Technologies used: Django, Django REST, React, JWT, PostgreSQL, Nginx, Gunicorn, ImageMagick, Bash, Systemd

Discrete Math REU | *Researcher* — Jun. 2021 – Aug. 2021
Baruch College — *New York, NY*

- Researched discrete fractional calculus: proved the existence, uniqueness, and Hyers-Ulam stability of solutions to boundary value problems involving a coupled system of Caputo fractional difference equations
- Coauthoring results in a research paper with two mentors and a colleague
- Presented findings at the Young Mathematician's Conference 2021 and gave multiple presentations to fellow researchers
- Wrote and optimized a Python library to compute solutions to aforementioned boundary value problems

Computer Science Consortium | *Teaching Assistant* — Oct. 2019 – Jun. 2020
Hunter College High School — *New York, NY*

- Teaching assistant for a 9th grade computer science class: lectured on RSA cryptography and hand-written digit recognition and helped students with fundamentals of computer science and Python programming
- Coached a group of students in computer programming to prepare them for programming competitions

Extracurricular Activities

Traders of Baruch — Aug. 2020 – Present
Baruch College — *New York, NY*

- Designing and deploying quantitative trading strategies in simulated environments to be used in competitions
- Optimized market-making algorithms that competitively priced equities on several exchanges and exploited arbitrage
- Programmed spreadsheets that identified option mispricings and optimal straddle positions to trade volatility

Awards & Achievements

Traders@MIT, Derivatives Live Trading Case | *Quarterfinalist* — Sep. 2021

- Programmed spreadsheets to calculate the fair value of various contracts using information from news updates
- Strategies included market-making around the fair value price and exploiting market-taker activity in illiquid books

UChicago Trading Competition, Multi-Class Portfolio Allocation Case | *Finalist* — Apr. 2021

- Analyzed a decade's worth of price data from over a dozen fictional securities with Pandas, NumPy, and SciPy
- Wrote a dynamic asset allocation algorithm in Python that yielded the second highest Sharpe ratio in the competition

Traders@MIT, High Frequency Trading Case | *Quarterfinalist* — Nov. 2020

- Analyzed price data from a simulated exchange using Pandas and Scikit-learn to design a market-making algorithm that also identified opportune price signals
- Implemented the strategy outlined above in C++ through the exchange API and optimized code to be low-latency

Cornell University High School Programming Contest | *Quarterfinalist* — Apr. 2019

- Used Python to tackle a programming problem-set as part of a three person team in a single-day competition format

Skills

Programming Languages: Python, C++, Javascript, Java
Software: Django, React, Pandas, NumPy, SciPy