Jiaqi (Dylan) Ding

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EDUCATION

Cornell University, College of Engineering, Ithaca, NY
Master of Engineering in Financial Engineering, **GPA: 4.13/4.3**   **Expected Dec. 2023**

The Chinese University of Hong Kong, Hong Kong
Bachelor of Science in Mathematics, minor in Finance, **Summa Cum Laude, GPA: 3.7/4.0**   **Jul. 2022**
Awards: **Dean's List, Head's List Merit, Undergraduate Mathematics Scholarship**

University of Washington, Seattle, WA
Exchange Student, **Dean's List, GPA: 3.94/4.0**   **Dec. 2019**

Selected Coursework: Algorithmic Trading Strategy, Fixed Income Securities, Derivatives, Machine Learning, Data Structure, Optimization, Stochastic Process, Numerical Analysis, Monte Carlo Method, Big Data Technology

SKILLS

Technical: Python, C/C++, MATLAB, and SQL

EXPERIENCE

Quantitative Investment Intern, *Dongguan Securities,* Shanghai, China   **May to Aug. 2022**
- Backtested dual thrust and R breaker trading strategies on 40 Chinese futures and improved basic strategies by adding new exiting indicators, which generated 60% return at best over 5 years.
- Exploited potential trading signals on index futures and found signals such as "One-minute movement" and "Overnight movement," which achieved a Sharpe ratio of 1.2.
- Created a technical indicator trading strategy independently profiting from consistent growth and volume change, which achieved a return of 130% over 5 years and a Sharpe ratio over 1.5 on stock futures.

Quantitative Analyst Intern, *Gugnir & Partners,* New York, NY   **Jul. to Sep. 2020**
- Conducted quantitative trading strategies like the "Resistance Support Relative Strength Index" and backtested it on past S&P 500 index prices from 2005 to 2017, which achieved a 14% of annual return.
- Applied the Dickey-Fuller test to study the property and strength of the relationship between Bitcoin and Ethereum based on the past historical data from 2017 to 2019.

PROJECTS

American Options Pricing Using Monte Carlo Method, *Cornell University*, Ithaca   **Aug. to Dec. 2022**
- Implemented three Monte Carlo simulation methods for American option pricing in Python, which computed the dual problem, linear regression, and upper/lower boundaries, respectively.
- Applied the Richardson Romberg method on the three methods to get more accurate estimations, which achieved mean absolute error of 0.029, 0.104, and 1.386 by the three methods subsequently.

Various Machine Learning Algorithm Programming, *Cornell University*, Ithaca   **Aug. to Dec. 2022**
- Implemented all kinds of machine learning algorithms in Python, including Neural Networks, Random Forest, Kernelized SVM, and so on, to accomplish the tasks of regression and classification.
- Built a spam filtering system using Naïve Bayes, SVM, and Random Forest with feature selection and extraction, which achieved 97% accuracy at its best.

Dynamic Parameterization in Pairs Trading, *The Chinese University of Hong Kong*, Hong Kong   **Sep. to Dec. 2021**
- Performed Kalman filter to dynamically adjust pairs trading selection threshold and calculate the long-short ratio for the targeted pair, as well as validated the effect of the stochastic discount factor on the ADF threshold.
- Introduced dynamic conditional correlation into pairs trading and used it with smart beta as well as entropy function to improve portfolio return, which achieved 6% annualized return for 4 years compared with 5.28% of the basic strategy.

INTERESTS & CERTIFICATES

Interests: Board & Strategies games; Running; Hiking
Certificate: Baruch C++ Programming for Financial Engineering Program with Distinction