

YUAN (LEO) ZHAO

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EDUCATION

- Expected 12/23 **NEW YORK UNIVERSITY** New York, NY
The Courant Institute of Mathematical Sciences
M.S. in Mathematics in Finance
- **Coursework:** risk management (VaR, CDS), portfolio theory, Monte Carlo, Black-Scholes, Fama French, Brownian motion, Ito's Lemma, behavioral driven development
- 09/18 - 05/22 **NEW YORK UNIVERSITY** New York, NY
B.A. in Mathematics, Minor in Computer Science & Business Studies
- **Honors/Awards:** Cum Laude University Honor Scholar (Top 15%)

EXPERIENCE

- 06/23 - 08/23 **EY** New York, NY
Quantitative Trading Book Intern (Python)
- Conducted firmwide stress testing capabilities for credit valuation adjustment with a top global investment bank client, optimizing accuracy and migrating to strategic infrastructure
 - Developed quantitative risk analysis models to assess a crypto protocol's resilience to large asset price volatility under stressed market environment
- 06/21 - 08/21 **INDUSTRIAL SECURITIES** Shanghai, China
Capital Markets Intern (Python)
- Performed time series analysis for Alibaba stock by fitting ARIMA-GARCH
 - Constructed 95% forecast interval; analyzed 85% low accuracy backtesting results from Ant Group's IPO failure; improved model by adding 3 more years' data to increase accuracy
 - Researched 5 key differences (e.g., tax and exit policies) for IPO listings on China A-Shares versus Hong Kong Stock Exchange, streamlining client communication process

PROJECTS

- 01/23 - 03/23 **NEW YORK UNIVERSITY** New York, NY
Pairs Trading (Python)
- Conducted Engle-Granger residual-based cointegration test to validate long-term relationship between Brent Crude (RBOB) and West Texas Intermediate (WTI)
 - Designed pairs trading strategy with RBOB and WTI futures contracts, using data from prior 13 years; achieved Sharpe ratio of 0.86
- 11/22 - 12/22 **NEW YORK UNIVERSITY** New York, NY
Contract Pricing (Python)
- Applied GBM and Vasicek models to fit Nikkei-225 spot price and 3-month USD LIBOR rate; performed Monte Carlo to generate predictions, and converted back to present value
- 03/20 - 04/20 **NEW YORK UNIVERSITY** New York, NY
University Course Registration System (Java)
- Leveraged OOP (inheritance, encapsulation, abstraction, polymorphism) to make multipurpose academic and administrative platform for professors and students

COMPUTATIONAL SKILLS / OTHER

Programming Languages: Python, Java, C, MATLAB, R, HTML5, SQL

Interests: NYU Ultimate Frisbee Varsity Team (won 7th place in East Coast competition)