

ZELIN DING

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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
- **Expected Coursework:** object-oriented programming (Java), Black-Scholes, decision trees, linear regression, stochastic processes, Monte Carlo method, data-driven modeling
- 08/18 - 05/22 **PENN STATE UNIVERSITY** University Park, PA
Dual B.S. in Computational Statistic and Applied Mathematics
- **Coursework:** calculus III, linear algebra, probabilities, ordinary differential equations, partial differential equations, real analysis, time series analysis, Bayesian statistics, programming in R, Python, Java and C++, data structure and algorithms, dynamic programming
 - **Honors/Awards:** Dean's List for 7 semesters

EXPERIENCE

- 06/21 - 07/21 **CHINA SECURITIES** Beijing, China
Investment Banking Intern
- Conducted enterprise risk assessments for clients of Nanjing Metro from qualitative and quantitative perspectives
 - Performed due diligence to obtain comprehensive understanding of Nanjing Metro's capital structure and credit risk
 - Calculated credit rating scores with China Securities' model, using financial statistics such as quick and working capital ratios for client companies
 - Developed KMV rating model, calibrated by historical default data of Chinese corporate bonds over prior 5-year period; estimated probability of defaults and mapped to ratings buckets
- 03/21 - 06/21 **HUAXI SECURITIES** Shanghai, China
Industry Research Intern
- Monitored Chinese electronics industry business and financial news; produced daily reports by quantifying effect of industry events on financial markets
 - Wrote reports after completing in-depth analysis of semiconductor and electronics industry, including deep dive into its current state and future trends
 - Led company and industry analysis for Chinese GPU sector; compared profitability and market shares of leading companies; generated graphs to visualize research conclusions

PROJECT

- 09/21 - 11/21 **MORGAN STANLEY** New York, NY (remote)
Quantitative Research (Python)
- Analyzed SPY and risk-on/risk-off US sector ETFs' correlations and dynamic co-movements using Pearson and Spearman correlations and ML algorithms (linear regression, cluster analysis)
 - Evaluated risk attributes of selected ETFs by studying their historical volatility
 - Designed quantitative trading strategy that used risk attributes of each selected ETF by allocating to different sectors under various market scenarios and volatile regimes
 - Backtested strategy over 20 years of data; achieved 7.2% annualized return and 0.4 Sharpe ratio, benchmarked against SPY

COMPUTATIONAL SKILLS / OTHER

Programming Languages: Python (Numpy, Pandas, Statsmodels, Sklearn, Tensorflow), R, Java, C++

Languages: English (fluent), Mandarin (native)

Interests: Honor of Kings multiplayer online battle arena game (ranked top 10 of 100M contestants in Season 11)