

SHUO QI

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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 and portfolio management, financial securities and markets, stochastic calculus
 - **Expected Coursework:** fixed income derivatives, sell-side modeling: XVA, credit derivatives
- 09/18 - 07/22 **BEIJING UNIVERSITY OF TECHNOLOGY** Beijing, China
B.S. in Information and Computing Science and B.Mgmt. in Accounting
- **Coursework:** linear algebra, regression analysis, data structures, probability theory
 - **Honors:** top 5% in university

EXPERIENCE

- 06/23 - 08/23 **CITIBANK** New York, NY
Quantitative Analyst Intern, Risk Management Department (Python, SQL)
- Developed DRM models and scorecards for credit ratings of several companies and loans
 - Spearheaded research initiatives using Markov Chain Models to forecast and analyze default probabilities for upcoming periods, enhancing accuracy of risk assessments
 - Applied researched default probabilities to price Credit Default Swaps (CDS), supporting traders with up-to-date and precise CDS prices
- 12/21 - 06/22 **SAS SOFTWARE BEIJING BRAND CO., LTD.** Beijing, China
Quantitative Analyst Intern, Investment and Advisory Department (Python)
- Developed trading strategies focused on commodity stocks and options after analyzing moving average of N-period closing prices of adequate stocks with team leader and members
 - Backtested trading strategies on historical datasets, achieving noteworthy enhancements in performance as evidenced by Sharpe ratio's rise from 0.97 to 1.34
 - Participated Alpha Research to analyze portfolio's excess return, successfully identifying and incorporating novel variables that significantly influenced excess return outcomes
- 01/21 - 02/21 **FOUNDER SECURITIES CO., LTD.** Beijing, China
Quantitative Analyst Intern, Trading and Derivatives Business Department (Python)
- Addressed tailored investment requests from clients, offering curated selections of stocks to align with their unique investment objectives
 - Strategized and executed hedging solutions, integrating options into client portfolios to safeguard against potential market uncertainties
 - Employed Monte Carlo simulation methodology for precise pricing of simple options for traders

PROJECTS

- 02/23 - 05/23 **NYU COURANT** New York, NY
Two-step Pair Trading Strategy For WTI-RBOB Futures (Python)
- Calculated z score with rolling mean and standard deviation of WTI-RBOB spread for n days
 - Regressed RBOB daily P&L on WTI daily P&L to get coefficient as hedging ratio; then hedged according to trading signals (short or long)
 - Added 2 small thresholds around z score, enabling strategy to do opposite pair trading in this new range, which increased Sharpe ratio from 0.71 to 1.04
- 02/23 - 05/23 **Numerical Valuation of European and American Options (Python)**
- Divided model into 2 parts, since European option price v satisfied PIDE equation; one part was spatial derivatives and the other part an integral under Kou's Jump-Diffusion model
 - Performed finite difference discretization for spatial derivatives and recursion formulas for approximating integrals; then did several iterations to compute option price v

COMPUTATIONAL SKILLS / OTHER

Programming Languages: Python (Numpy, Pandas, Scikit-learn), SQL, Excel (VBA), Java, R, MATLAB, C
Languages: English (fluent), Mandarin (native)