

XINQIAO (RINSTER) TONG

(929) 777-0935 // xinqiao.tong@nyu.edu // [linkedin.com/in/xinqiao-rinster-tong/](https://www.linkedin.com/in/xinqiao-rinster-tong/)

EDUCATION

- Expected 12/24 **NEW YORK UNIVERSITY** New York, NY
The Courant Institute of Mathematical Sciences
M.S. in Mathematics in Finance
- **Coursework:** derivatives valuation and hedging, bonds and MBS, machine learning, deep learning
- 09/19 - 06/23 **XI'AN JIAOTONG - LIVERPOOL UNIVERSITY** Suzhou, China
B.S. in Applied Mathematics with Honors (First Class)
- Dual degree from University of Liverpool
 - Ranked #1 (out of 144); Best Overall Academic Performance Award
 - National Scholarship, Provincial Outstanding Student
 - **Coursework:** real and complex analysis, probability and statistics, ODE and PDE, optimization

EXPERIENCE

- 06/24 - 08/24 **GAOHUA SECURITIES** Beijing, China
Quantitative Research Intern (Python)
- Applied CNN-LSTM on limit order book to predict milli-second level price movements (3-category classification) with 57% accuracy; customized loss function to improve precision of up/down to 68%
 - Constructed 236 features by volume clock from time, volume, size, and active/passive transaction using transaction messages from exchange
 - Used attentive LSTM structure on level 2 features to pick stocks and added adversarial training; attained 16.7% annual excess return and 2.69 IR against CSI 1000 (long top 10%)
 - Estimated SDF with GAN using weekly macroeconomic and company accounting data and fitted exposure to SDF; attained 36.3% annual excess return and 2.73 IR against CSI 1000 (long top 10%)
- 06/22 - 08/22 **RUISENG INVESTMENT** Qingdao, China
Quantitative Research Intern (Python, MATLAB)
- Designed sell put strategy: chose strike based on VIX, used Greeks to calculate return-risk ratio as trading signal, attaining 8.7% annual return, 3.5% maximum drawdown, and 90.3% winning rate
 - Hedged with calendar spread based on support levels to reduce maximum drawdown, with 2:1 spread achieving 8.9% annual return, 3.0% maximum drawdown and 83.9% winning rate
 - Backtested and selected double moving averages for 40+ commodities at daily level for CTA, with 8 selected commodities realizing 15.7% annual return and 4.9% maximum drawdown

PROJECTS

- 09/22 - 06/23 **XI'AN JIAOTONG-LIVERPOOL UNIVERSITY** Suzhou, China
Kou's Jump Diffusion Model for Option Pricing (MATLAB)
- Added jump part to geometric BM where jump sizes follow log double exponential distribution; derived pricing formula (Kou, 2002) through risk-neutral pricing method
 - Calibrated Kou's model against options on S&P 500 via fixing maturity and fixing option contracts
 - Reduced prediction errors by 50.3% under Kou's model when fixing option contract
- 06/22 - 11/22 **PURDUE UNIVERSITY** Suzhou, China (Remote)
Research Assistant (Python)
- Studied LassoNet to select among 63 factors from dataset of 150+ stocks since 1963; fitted another DNN using selected factors and formed long short portfolio based on predicted excess returns
 - Rolled over dataset with window length of 5 years and attained portfolio monthly return and Sharpe ratio on test sets; experimented with different window lengths to study changes in selected factors
 - Refitted DNN using all factors and constructed similar portfolios as benchmark, discovered that top 5 factors explained over 75% of return generated by all 63 factors

COMPUTATIONAL SKILLS / OTHER

Programming Language: Python (Numpy, Pandas, Scipy, Sklearn, Pytorch), MATLAB, Java, SQL

Deep Learning Toolkits: CNN, LSTM, GRU, Attention, Transformer, VAE, GAN