

XINQIAO (RINSTER) TONG

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EDUCATION

Expected 12/24	NEW YORK UNIVERSITY The Courant Institute of Mathematical Sciences M.S. in Mathematics in Finance • <i>Coursework:</i> derivatives valuation and hedging, bonds and MBS, machine learning, deep learning	New York, NY
09/19 - 06/23	XI'AN JIAOTONG - LIVERPOOL UNIVERSITY 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 • <i>Coursework:</i> real and complex analysis, probability and statistics, ODE and PDE, optimization	Suzhou, China

EXPERIENCE

06/24 - 08/24	GAOHUA SECURITIES 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%)	Beijing, China
06/22 - 08/22	RUISHENG INVESTMENT 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	Qingdao, China

PROJECTS

09/22 - 06/23	XI'AN JIAOTONG-LIVERPOOL UNIVERSITY 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	Suzhou, China
06/22 - 11/22	PURDUE UNIVERSITY 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	Suzhou, China (Remote)

COMPUTATIONAL SKILLS / OTHER

Programming Language: Python (Numpy, Pandas, Scipy, Sklearn, Pytorch), MATLAB, Java, SQL
Deep Learning Toolkits: CNN, LSTM, GRU, Attention, Transformer, VAE, GAN