JIAHAO (NICK) REN

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EDUCATION

NEW YORK UNIVERSITY New York, NY

The Courant Institute of Mathematical Sciences

MS in Mathematics in Finance (Expected December 2019)

- ***Coursework:*** OOP in Java, Stochastic calculus, Black-Scholes model, PCA, Monte Carlo simulation, Market microstructure, VaR, Data Structure. Greeks, Derivative hedging
- ***Future Coursework:*** Interest rate & FX models, Time Series Analysis & statistical Arbitrage, Continuous Time Finance, Machine learning

UNIVERSITY OF CALIFORNIA SAN DIEGO San Diego, CA

BS in Joint Major Mathematics & Economics (2014-2018)

- ***Coursework*:** Numerical methods, OOP in Java, Probability and statistics, Linear algebra, Calculus, Regression analysis in econometrics, Vector calculus

EXPERIENCE

CONSTELLATION CAPITAL MANAGEMENT LLC New York, NY

Analyst, Summer Intern (June 2019 – August 2019)

- Implemented annual default probability calculation algorithm for EM Govt bonds that with same seniority to assist trader in bond selection work
- Studied and built the Ukraine GDP warrants' valuation using Monte Carlo method with CEE peer group comparison and macro outlook
- Conducted equity research on NYSE: MDR, with a stock pitch presentation to PM
- Automated prices updating process for trading information system

CITIC SECURITIES Beijing, China

Alternative Investment Division Summer Intern (June 2017 – August 2017)

- Built regression models to analyze market sentiment in Short-Term uptrend and downtrend market
- Specified the best condition to use Short-Term Reversal factor for A-shares
- Applied Roll model and tick test algorithm in Java to test stocks spread

CHINA GALAXY SECURITIES Beijing, China

Investment Management Division Summer Intern (July 2016 – September 2016)

- Researched on Event-leading abnormal returns of stocks, and summarized 16 types of events
- Categorized types into 5 groups by evaluating abnormal returns of 20 trading days before and after each event using T-test in R
- Built Event-driven strategy with 19.4% average annual excess return and 2.36 average annual IR ratio during 2011 to 2016 (use CSI 500 SSE Stocks Index as benchmark)

PROJECTS

NEW YORK UNIVERSITY New York, NY

Short-term Course Projects

- **Rolling Futures Strategy in Excel:** Used CME WTI future data to replicate USO using a rolling strategy that rolls at the middle of the month; Compared the roll yield and WTI spot return
- **Option Pricing with Monte Carlo Simulation in Java:** Valued European and Asian options with decorator pattern and GPU computing technique
- **K-Means Clustering in Java:** Implemented Lloyd's algorithm in standard rule and fixed-size cluster rule and compared efficiencies graphically using Python matplotlib

UNIVERSITY OF CALIFORNIA SAN DIEGO San Diego, CA

Gambling Strategy research

- Analyzed "Beat the Dealer" and other counting strategies through collecting game data in Excel
- Developed new counting strategy with 0.993 betting correlation (BC), 0.567 playing efficiency (PE) and 0.745 insurance correlation (IC) based on logical reasoning

COMPUTER SKILLS/OTHER

***Computer*:** proficient in Python / Java / Excel / R / SQL

Interests: Snowboarding, Reading, Board Games, Cooking