YI QIN

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EDUCATION

NEW YORK UNIVERSITY New York City, NY
The Courant Institute of Mathematical Sciences
M.S. in Mathematics in Finance (expected Dec 2022)

- ***Completed Coursework:*** data cleaning, Black-Scholes formula, linear regression, risk-neutral valuations, risk measures (VaR and expected shortfall), portfolio optimization, Monte Carlo simulation
- ***Current Coursework:*** Runge Kutta and collocation methods, risk-neutral valuations, Time Series analysis, dynamic asset pricing, gradient descent, bootstrap bagging, random forest, neural network

THE OHIO STATE UNIVERSITY Columbus, OH
B.S. in Mathematics (Aug 2016-May 2020)

- ***Coursework:*** Calculus, differential equations, linear algebra, probability and statistics, real analysis, binomial asset pricing model, measurement of interest, Markov Process, Red-Black Tree, data structure
- ***Achievements:*** 3-year Dean's List, Merit and Need-based Awards in 2019, Latin Honors, magna cum laude

EXPERIENCE

THE AMERICAN COLLEGE OF FINANCIAL SERVICE King of Prussia, PA
Quantitative Research Intern (Jun 2022-Sep 2022)

- Generated the transition matrix of ten states based on a decade of data using R; ran the Markov Chain model to estimate the future market share of titles; traced career progression for selected top broker dealer firms
- Performed the exploratory analysis on market data using Python; analyzed the distribution of important fields; conducted the statistical inference
- Chose indicative factors, created segments and grouped the clients data to find the most promising group; estimated the potential revenue

DACHENG FUND CO., LTD Beijing, CN
Quantitative Research Intern (Jun 2019-Jul 2019)

- Managed SQL database; built simulated portfolio model using Java; evaluated results with net value charts; annualized Sharpe ratio and maximum drawdown to generate best-performing portfolios
- Conducted research on 10 financial firms' AI investment algorithms; wrote report demonstrating trend of AI assisting and even replacing portfolio managers

AVIC SECURITIES CO., LTD Zhengzhou, CN
Investment Analysis Intern (Jun 2018-Aug 2018)

- Analyzed daily financial news reports with investment consultants; liaised with high-net-worth clients to communicate investment recommendations
- Monitored total assets and liabilities of clients' margin trading; calculated maintenance guarantee ratio and ensured it stayed above 130%

PROJECTS

NEW YORK UNIVERSITY New York City, NY
Portfolio Construction Using Graph Theory - Cointegration (Sep 2022)

- Calculated cointegration of selected 200 stocks from S&P 500; Created MST (Minimum Spanning Tree) and PMFG (Planar Maximally Filtered Graph) based on absolute value of t-statistics of cointegration
- Combined some measures like centrality and subgraph sampling methods to select several stocks from graphs
- Constructed equal weight, low volatility, and Markowitz min-variance portfolios; Tracked performances with cumulative return of S&P 500 from 06/2019 to 06/2022; Replicated S&P 500 with 0.0012 tracking errors

NEW YORK UNIVERSITY New York City, NY
Systematic Energy Trading Strategy for WTI (Mar 2022)

- Conducted systematic carry-momentum strategy in python; combined exponential moving averages based on WTI futures and SPY index to build signal of trading
- Built pipeline of data preprocessing; performed long-term backtesting of strategy; achieved 16% average annualized excess returns and 0.76 annualized Sharpe ratio

THE OHIO STATE UNIVERSITY Columbus, OH
Media Manager Database System for Local Library (Oct 2019-Dec 2019)

- Mapped enhanced entity relation model to relational schema
- Collaborated with team to build SQL database system

COMPUTATIONAL SKILLS/OTHER

Programming Languages: Java, Python, R, SQL
Languages: Mandarin (native), English (fluent)