# MINGSEN (MASON) WANG

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## EDUCATION

**BARUCH COLLEGE, CITY UNIVERSITY OF NEW YORK** 07/22–Present
Master of Science in Financial Engineering, expected December 2023
Ercalano Award for Best Student of the Year 2023
Jim Gatheral Academic Excellence Scholarship 2023

**PEKING UNIVERSITY** 09/18–07/22
Bachelor of Economics; Major: Economics, National Development

## FINANCIAL EXPERIENCE

**AXQ CAPITAL**, Jersey City, NJ 06/23–08/23
*Quantitative Research Intern*

- Constructed multiple original metrics for factor crowding calculated from daily aggregated order flow data and market-wide short interest data, applicable to Barra-MSCI regional equity risk factor models and other customized risk factor models
- Developed a factor tilting strategy from the metrics with consistent out-of-sample performances and high adaptability to multiple markets and customized factors
- Replicated and generalized equity risk factor crowding metrics from academic papers and data vendors

**AXIOMQUANT**, Beijing, China 02/22–05/22
*Quantitative Research Intern*

- Built a web scraping tool to retrieve and parse public holding xml report through the SEC archive and an RSS feed using Python and the BeautifulSoup package
- Devised and formulated a clustering scheme and a family of features based on holding reports from hedge funds
- Developed a strategy based on said factors neutralized against market, sector, and style risk factors; a three-year out-of-sample backtesting based on a subset of Russell 3000 yields a Sharpe ratio of 1.60

**BANK OF CHINA INTERNATIONAL**, Shanghai, China 07/21–09/21
*Macro and Strategy Analyst Intern, Asset Management Department*

- Conducted literature review on the impact of foreign exchange market shocks on the local stock market
- Investigated how the Chinese stock market responds to dynamic impulses in exchange rates with VAR models

## ROTMAN INTERNATIONAL TRADING COMPETITION

- Member of the 1st place Baruch MFE team (out of 43 teams)
- Designed an options trading strategy to capture market-maker mispricing and volatility news shifts
- Analyzed market impact and liquidity through limit order books for energy commodities
- Developed automatic trading algorithms using Python and manual trading interfaces using Excel and VBA
- Cases: Commodities, Liquidity Risk (Equities), Options, Algorithmic Trading

## FINANCIAL MODELING SKILLS

- Feature development and evaluation; stock trading strategy backtesting and robustness analysis
- Market microstructure: bid-ask spread analysis, market impact models, optimal liquidation strategies
- Data science: MCMC (Metropolis-Hastings, Gibbs sampler, Hamiltonian MC), time series analysis (ARIMA and variants, spectral analysis, VECM, GARCH), Bayesian analysis, graphical lasso
- Machine learning: hyperparameter tuning, kernel machines, random forest, boosting, cluster analysis (kNN, Gaussian mixture), pre-trained neural network
- Empirical research strategies: regression discontinuity/kink design, synthetic controls, instrument variables, quantile regression, and propensity score matching

## PROGRAMMING AND COMPUTING SKILLS

C++, Python (NumPy, pandas), Stata, Excel, PowerPoint

## AWARDS & CERTIFICATIONS

Baruch MFE Alumni Excellence Prize 04/23
Advanced C++11/C++14 and Multidisciplinary Applications Certificate with Distinction, QuantNet 03/22

## ACTIVITIES AND INTERESTS

Backpacking (4 days in the John Muir trail before summitting Mt Whitney, the highest point in the contiguous US), Sailing