HAOTIAN ZHANG

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EDUCATION

Columbia University: Columbia Engineering & Columbia Business School **New York, NY**
Master of Science in Management Science and Engineering, GPA 3.8/4.0 *Oct 2020 - Dec 2021(Expected)*

University of Pennsylvania **Philadelphia, PA**
Master of Computer and Information Technology (online), GPA 4.0/4.0 *Aug 2019 - Dec 2021(Expected)*

Northeastern University **Shenyang, CN**
Bachelor of Management in Industrial Engineering, 85.5/100 *Sep 2015 - Jun 2019*

- Selected Coursework: Regression, Machine Learning, Optimization, Statistical Inference, Multivariate Statistics, Financial Math, Quantitative Finance, Python, Java, Computer System (C), Data Structure, Algorithms, Artificial Intelligence in Trading, (in progress) Neural Network, Reinforcement Learning, Investment.
- 2018 Workshop in Hong Kong: Financial Engineering - pricing and data analysis of derivatives.

SKILLS

Programming: Python, PyTorch, R, Java, C/C++, MATLAB, Databases, Excel-VBA, Data Visualization, Bloomberg.
Knowledge: Regression Analysis, Machine Learning, Statistical Modeling, Backtesting, Object-Oriented Programming.

PROFESSIONAL EXPERIENCE

Imperative Fund **New York, NY**
Part-time Student Consultant *Nov 2020 - Present*

- Lead a team of 8 in formulating investment strategy for a $25M social impact investment fund.

ABC-CA Fund Management Co., Ltd. (AUM: 200Billions+) **Shanghai, CN**
Intern, Portfolio Analyst *Aug 2020 - Oct 2020*

- Conducted research and developed strategies on smart automatic investment plans with Python, increased the product annual return by 0.86% on multiple periods, and presented to sales managers.
- Analyzed current research on global ESG investment strategies, and summarized for managers' review.

Lian Hai Capital Asset Management LLC **Beijing, CN**
Intern, Quant Researcher *Dec 2019 - Jun 2020*

- Created and tested 10+ alpha factors on latest sell-side and academic research papers, applied machine learning techniques such as Decision Tree algorithm for mining patterns and weekly presented results to portfolio managers.
- Dozens of original technical factors such as spread bias and periodicity factor with Fourier transfer with Sharpe Ratio 2+ in back testing were newly constructed into factor library and used for constructing trading models.
- Performed data cleaning, stock pool screening and assisted stock timing and risk management within research group.

Star-win Fintech **Shanghai, CN**
Intern, Quant Researcher *Mar 2019 - Jun 2019*

- Led the research on smart beta trading strategy of hedge funds, established Barra factor risk model, scrutinized return of each factor with a regression model, tested in historical intervals, and wrote reports for trade execution.
- Completed new back-test systems with Python, and created databases of equity assets of company together with CTO manipulating SQL, achieved over 200 factor portfolios with best 4x yields during 5 years in back tests.

PROJECTS

Research Assistant with Prof. Michael Robbins (Columbia University: MATLAB) *Jan 2021 - Present*

- Determine best fee structures & run simulations for PM's investment performance using stochastic programming.

Quantitative Trading, *supervised by Goldman Sachs manager director* *Jan 2019 - Mar 2019*

- Designed fresh trading strategies such as calendar spread, inter-commodity spread and stock pairs trading, market making arbitrage and optimized carry trade strategies, achieved a best yield of 23.23% in back testing.

Quantitative Risk Analysis, *supervised by MSCI vice president* *Sep 2018 - Dec 2018*

- Scrutinized risks of equities traded on NYSE and NASDAQ, conducted a comparison of historical, parametric and Monte-Carlo methods of calculating 95% VaR and Expected Shortfall.
- Performed Markowitz Mean Variance Optimizing Analysis on equities and increased Sharpe Ratio by 50%.
- Built a bond pricing model, investigated VaR and payoff profile to evaluate investment opportunities on bond.

ADDITIONAL INFORMATION

- **Certificates**: CFA level 1 pass, Bloomberg, Artificial Intelligence in Trading from Udacity, CQF delegate.
- **Interests**: badminton, soccer, read investment books, proprietary trading (FOF: 14.41%, Equity: 15.02%).