Jasper(Taoyi) Chen

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EDUCATION

University of Michigan - Ann Arbor **Aug 2024 - Dec 2025**
Master of Science in Quantitative Finance and Risk Management GPA:4.0 *Ann Arbor, US*

Wuhan University **Sep 2020 - Jun 2024**
Bachelor of Science in Mathematics& Bachelor of Arts in Finance GPA:3.65 *Wuhan, China*

SKILLS & COURSEWORK

Mathematics: Linear Algebra, Calculus, Real Analysis, Dynamic Optimization, Numerical Analysis
Statistics: Statistics, Probability, Stochastic Process, Time Series Analysis, Statistical Learning
Programming: Data Structure, Algorithm, Machine Learning, Python (pandas, numpy, scikit-learn), R, MatLab
Finance: Microeconomics, Econometrics, Behavioral Economics, Investments, Corporate Finance

PROFESSIONAL EXPERIENCES

RiceQuant Technology (Top quant platform in China) **Shenzhen, China**
Quantitative Researcher Intern(Python), Alpha Research Team *Jul 2023 - Oct 2023*

- Developed a strategy integrating the factors constructed by myself through solving an optimization problem (max IC, max ICIR) and using compression estimates to obtain a more accurate covariance matrix.
- The strategy reached a 29.61% annualized return, excess return of 30.1%, and 1.41 Sharpe ratio
- Conducted research on the relationship between mutual information(MI) and return, distribution of different category's factors' MI, stability of MI, and etc, which showed MI is a valid index on testing factors
- Synthesis of non-linear factors using machine learning methods, resulting in a strategy constructed using the XGBoost method with a Sharpe ratio of 5.71 and an annualized return of 18.06% on a long position

RESEARCH EXPERIENCES & Competition

Research with Prof Bernadro Modenesi **University of Michigan-Ann Arbor-MIDAS**
Matrix Learning, a New Tool in the Causal Inference Toolkit *Oct 2024 - now*

- Using FACE and EXPLORE method to learn a matrix in data that can partial out any variation in the covariates that is related to the confounding variable, leading to unbiased estimates
- Do some Monte Carlo simulation to verify how it works in RCT and Observational example and now trying to adjust the methods to measure what we want with the simulated data

Research paper with Prof Ji Feng **Wuhan University**
Attention and sentiment spillover in A-share market *Dec 2023 - Jul 2024*

- Studied stock relation networks, sentiment spillover, spatial analysis, and factor investment.
- Explored the overnight price behavior of stocks and use cosine similarity to construct stock relation networks.
- Finding significant spillovers of investor sentiment in groups of highly correlated stocks and developed two factors that have been proven valid through some tests.
- Using the spatial panel model(SAR, SDR) to analyze spillover effect and find it is significant.

Core Member, Research Group of Prof. Qian Lin **Wuhan University**
Research training *Oct 2022 - Aug 2023*

- Read Chinese and foreign papers on return probability, machine learning approaches, as well as their applications on asset pricing and investor behavior
- Using LightGBM to predict stock price(mid-price) change, where I construct more than 200 features with Limit Order Book data.
- Built a loss function based on the Focal Loss Function to solve unbalanced problem and developed a generalizable trading strategy to predict stock price's movement with an accuracy of 70% in all price changes from 10-60 tick