ZHU HAOQI

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Education

The Hong Kong University of Science and Technology **Sep. 2022 – Jan. 2024**
Master of Science in Financial Mathematics *Hong Kong*

Sun Yat-sen University **Sep. 2018 – Jun. 2022**
Bachelor of Science in Mathematics and Applied Mathematics *Guangzhou, China*

Relevant Coursework

- Quantitative Modeling of Derivative Securities
- Asset Allocation Optimization
- Statistical Methods In Quantitative Finance
- Machine Learning and Deep Learning

Experience

ExodusPoint Capital Management **Sep 2023 – Dec 2023**
Quantitative Trader Intern *Hong Kong*

- Developed pairs trading strategies for forward swap rates. Identified pairs with high correlation from historical data of different forward swap rates and tested for cointegration and half-life.
- Utilized Kalman-filter to dynamically adjust hedge ratios and employed cointegration, correlation, and spread z-score for trade analysis and decision-making.
- Built a backtesting framework and incorporated trading costs.
- Determined the optimal parameter combinations by experimenting different rolling periods and entry/exit thresholds on historical data, with the goal of maximizing cumulative PnL.
- Achieved a win rate of 79.1% during out-of-sample backtesting from Jan 2021 to Nov 2023, with a cumulative PnL of 9564.42 basis points. The conditional expected return was 153.28 basis points, and the conditional expected loss was 77.46 basis points. A total of 91 trades were executed.

QuantHill Capital Management **May 2023 – July 2023**
Quantitative Researcher Intern *Shenzhen, China*

- Developed timing sub-strategies based on the original tracking strategy of public mutual fund holdings.
- Divided the original strategy's portfolio into leading and common groups based on the trading volume over the past n days. Constructed a relative traction factor and generated timing signals based on this factor.
- Built a timing backtesting framework and conducted parameter optimization through in-sample backtesting experiments.
- Achieved a win rate of 71% during out-of-sample backtesting from Jan 2021 to Mar 2023, with 31 timing signals generated, while the excess Sharpe ratio increased from 0.93 to 1.42.

Competitions

PetFinder.my - Pawpularity Contest(Kaggle) | *Kaggle Master Rank: 351/200000* **Sep 2021 – Dec 2021**

- Responsible for transforming label distribution from a 0-100 interval to a 0-1 interval, effectively converting it into a classification problem.
- Utilized the bin-division method based on label distribution and implemented stratified k-fold to ensure balanced cross-validation.
- Completed loss modification by incorporating Smoothing Loss to mitigate the impact of image noise and prevent overfitting.
- Collaborated in the fusion of different versions of Swin-Transformer models. Extracted embeddings from the last feature map of the output model and combined them with metadata.
- Utilized Support Vector Regression (SVR) for prediction. Integrated the predictions of Swin-Transformer and SVR models to achieve improved accuracy.
- Achievements: won gold medal (ranking: 15/3537). RMSE Metric : 16.94135.

Skills

Languages: Mandarin, English
Programming Languages: Python, R, MATLAB, C++, SQL