HO YIN KIAT

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WORK EXPERIENCE

Incoming Quantitative Research Intern, Tokka Labs, Singapore **Aug 2024**

Quantitative Analyst Intern, Phillip Securities, Singapore **May 2024 - Aug 2024**

- Leveraged BERT-based Large Language Models to conduct sentiment analysis with over 92% classification accuracy on news headlines from Reuters, integrating these sentiment scores into systematic trading strategies for the SGX stock universe.
- Enhanced the internal Python backtesting framework to support multi-factor models, enabling researchers to input customized asset factors for streamlined and efficient multi-factor backtesting.
- Constructed numerous multi-factor model-based systematic trading strategies with Sharpe Ratios exceeding 1.5, employing portfolio optimization, reinforcement learning, and various evaluation techniques.

Quantitative Research Consultant, WorldQuant, Singapore **Aug 2023 - Present**

- Conducted independent financial market analyses and quantitative research on equities portfolio trading strategies, developing over 20 technical and fundamental based alphas hypotheses.
- Built an Alpha Generation Engine in Python, algorithmically searching and constructing alpha expressions based on research insights.
- Automated simulation and backtesting on the BRAIN platform with web scraping, attaining performances of Sharpe Ratios over 1.5 and fitness over 1.

Data Analytics and Visualization Intern, United Overseas Bank, Singapore **May 2023 - Aug 2023**

- Transformed over millions of rows of financial data for sales performance data analysis with Microsoft Power BI and Python Pandas.
- Constructed multiple end-to-end Power BI data models for the Business Management team, streamlining and automating monthly financial reporting process of data cleaning, data aggregation and dashboard building.
- Utilized data visualization tools in Power BI to generate monthly dashboards for performance tracking across both individual and organisational level.

EDUCATION

National University of Singapore **Expected May 2026**

Bachelor of Science in Business Analytics, Minor in Quantitative Finance

- Achieved an overall GPA of 4.78.
- Relevant Coursework: Database Management, Statistical Analysis, Econometrics Modelling, Object-Oriented Programming, Data Structures and Algorithms, Quantitative Finance, Optimization Techniques, Bayesian Networks, Markov Models.
- Participated in the Huawei-NUS Innovation Challenge, developing scripts to complete stock trades in real-time with Python and Machine Learning.
- Achieved Top 8 in the NUS Fintech Summit, crafting quantitative strategies for hedging impermanent loss and optimising fee returns in Uniswap V3.

PROJECTS

Developer, Hedging IL and Optimising Fee Returns with ARIMA-GARCH, Singapore **Dec 2023**

- Formulated a quantitative strategy for providing liquidity in Uniswap V3 pools (ETH/WBTC) by applying a combination of options, futures and machine learning.
- Designed a hybrid ARIMA-GARCH model in modelling Uniswap V3 pool prices, forecasting prices and volatility by deploying the Walk-Forward Validation technique, accomplishing high accuracy with roughly 1% in mean absolute percentage error.
- Established a delta-neutral options hedging strategy, along with a fee optimisation strategy utilising forecasted volatilities and Futures data to create price boundaries for Liquidity Providers, attaining annual percentage yields of over 10% and beating the HODL 50-50 portfolio.

Developer, Portfolio Optimization using Random Forest Selection, Singapore **Oct 2023**

- Developed an ensemble machine learning model using Random Forest Regressor, Multi-Layer Perception Regressor, stacked with Gradient Boosting Regressor in Python, enhanced using Grid-search cross validation and Walk-Forward Validation methods.
- Utilised top stocks with highest predicted returns as monthly inputs into a portfolio, optimizing using Mean-Variance Optimization and Hierarchical Risk Parity methods.
- Visualised the portfolio performances using data visualisation methods on Stream-lit, with portfolios performing over Sharpe Ratio of 2.

EXTRA-CURRICULAR ACTIVITIES

Quartermaster, NUS Varsity Canoeing, Singapore **Aug 2022 - Present**

- Achieved multiple podium finishes in marathon and sprint competitions across the national level
- Contributed to team's overall second place achievement in Inter-Tertiary Canoe Championships through mentorship and individual achievements
- Appointed as the team's quarter-master, responsible for management of team's equipment as well as coordinating with other stakeholders to execute 100 man strong team-wide activities.