HO YIN KIAT

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WORK EXPERIENCE

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 Ratio over 2 and fitness over 1.

Full Stack Developer Intern, Azendian Solutions, Singapore   **Aug 2023 - Present**
- Revamped Azendian Estate's Dashboard Management System for Keppel, developing key features on both the frontend and backend in a Sprint team, applying Agile Methodologies across 3 sprints
- Implemented multiple scalable RESTful APIs on Express.js server-side applications, integrating with Azure and PostGreSQL database
- Developed and implemented responsive user interface designs for Azendian's Real-Time Dashboard using React.js, working cross-functionally using Git and Jira

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
- Achieved an overall GPA of 4.77.
- Relevant Coursework: Database Management, Statistical Analysis, Econometrics Modelling, Object-Oriented Programming, Data Structures and Algorithms, Quantitative Finance, Optimization Techniques
- 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