Hae Kim

XXXX-XXX-XXX | haeohreum.kim@student.unsw.edu.au | LinkedIn | GitHub

Education

University of New South Wales — Sydney, Australia
Bachelor of Science (Computer Science) — *Feb. 2023 – Dec. 2025*

- WAM: 89.85
- 2025 Computer Science and Engineering Society (CSESoc) Media Director.
- 2023 School of Engineering Dean's Honours List.
- Notable courses: Linear Models, Theory of Statistics, Networks, Object Oriented Programming, Databases.

Experience

Quantitative Analyst Intern — Jan. 2025 – Present
Macquarie Group — *Sydney, Australia*

- Researching low-touch trading algorithms for institutional flow.
- Rebuilt an order book using Refinitiv DataScope exchange message data, utilising Python.
- Handling and cleaning large-scale datasets with irregular structures and inconsistencies, containing millions of rows.
- Analyzed tick data to optimize execution performance following events like large-volume prints.
- Extensive use of Python and SQL.

Quantitative Equity Research Intern — Dec. 2024 – Jan. 2025
Macquarie Group — *Sydney, Australia*

- Independently researched sector dynamics in the ASX 100 and implemented a generalised pairs trading model.
- The model systematically found correlated hedges, and increased fundamental investment alpha.
- Gained experience in implementing vectorised backtesting, feature selection and regression techniques such as LASSO.
- Conducted bespoke research, such as analyzing the impact of the NVIDIA sell-off on different investment styles.
- Published two notes on the model (Australia and Japan), attracting interest both internally and externally.
- Extensive use of Python and SQL, as well as R.

Research and Trading Intern — Mar. 2024 – Nov. 2024
Exponential Trading — *Sydney, Australia*

- Interning for the ADR arbitrage desk.
- Improved earnings T+1 performance, approximately doubling backtested edge by adjusting for increased volatility.
- Gained experience in execution trading for position flattening and the use of order management systems.
- Developed a transaction cost analysis tool implementing a modified Almgren (2005) market impact model.
- Identified significant underperformance in broker algos, which led to a review and increase of performance.
- Various ad hoc research tasks: volatility forecasting, events trading feature selection, and more.
- Extensive use of Python and SQL.

Casual Academic — May 2024 – Oct. 2024
UNSW — *Sydney, Australia*

- Tutor for COMP3121: Algorithm Design and Analysis.
- Marking and explaining various common algorithms topics.

Technical Skills

Languages: Java, Python, C/C++, SQL, R
Developer Tools: Git, Microsoft SQL Server, JupyterLab
Libraries: pandas, numpy, matplotlib, plotly