

TONY WANG

☎ 0403 725 801 ✉ tonywang205@yahoo.com.au
@ Homepage in LinkedIn 🐙 GitHub

EDUCATION

University of New South Wales

Master of Mathematics.

WAM: 93.2

Thesis: Theoretical Results for the Lasso and a New Root-Log Regulariser in High-Dimensional Linear Regression.

Relevant coursework: Machine Learning, Neural Networks, Bayesian Inference, Statistical Inference, Time Series.

University of Sydney

Bachelor of Science (Advanced), Honours in Pure Mathematics.

First Class Honours: 92.0

Thesis: Existence of Solutions to Anisotropic Elliptic Partial Differential Equations.

University of California, Berkeley

Exchange student.

GPA: 3.9/4

CAREER

Quantium

February 2023 - Present

Graduate Data Analyst in the Product Analytics vertical.

Winning team in Quantum's 2023 GenAI Hackathon, with a submission based off using Large Language Models for transaction data labelling.

Q.Refinery Analytics

- Q.Refinery is Quantum's banking product, producing highly accurate transactions labelling and customer attribution. Responsibilities included customer analytics for feature builds, data validation checks after production changes and scoping out future applications of GenAI.

Snowflake Cost Optimisation

- Achieved \$500,000 in projected annual cost savings in 6 months by conducting exploratory data analysis to identify beneficial Snowflake configuration changes which maintain performance and client satisfaction while also reducing spend. This included suggesting and evaluating rules for a query re-routing strategy. Analysed cost savings and performance impact after configuration changes were pushed to production.

ETL Migration

- Worked in a 2-man team to scope out and migrate an ETL process from our decommissioned on-prem cluster to Snowflake. This reduced a 10-hour, manual and unstable Spark-based ETL to a one-click Snowflake SQL script, with outputs feeding into a dashboard used by Woolworth's media advertising arm.

Research Projects

Anomaly Detection in Structural Sensing Data

- Used matrix profiling techniques to identify regime changes in noisy sensor data, with real world applications in detecting major structural damage automatically.

- Created a streaming data solution for regime change detection, removing the need for slow, batch processing. (Online): See my blog post.

SKILLS AND TECHNOLOGIES

Tech: Python, Spark (Scala, PySpark), Snowflake, SQL, Excel. Built my blog with NextJS and TailwindCSS.

Languages: English, Mandarin