

Jonathan Tan

Data Scientist

+61450787453

jtsw1990@gmail.com

jtsw1990

<https://jonathantansw.com>

Sydney, NSW

Skills & Stack

Statistical modelling, Pricing, Financial modelling, Data visualisation, Data analytics, Machine learning, MLOps, CICD, Reporting, A/B Testing, Web scraping

Python, R, Excel, Vba, SQL, Snowflake, Databricks, PySpark, Buildkite, AWS, Git, Javascript, NodeJS, Postman, React, NGINX, MongoDB, JIRA, Confluence

Stakeholder management, Project management, Leadership, Creative problem solving, Adaptability, Team player

Education

2015-2017 M. Actuarial Science
Australian National University

2012-2014 B. Accountancy
Royal Melbourne Institute of Technology

Awards &

Certifications

2022 nib FACS recognition winner
2018 Part 2 Actuarial papers
2017 Part 1 Actuarial CT papers
2014 Awarded CPA scholarship

Publications

[2021 Actuaries digital - Explainable ML: A peek into the black box through SHAP](#)

[2019 Actuaries digital - Version control, because the Recycle Bin doesn't count](#)

[2018 Actuaries digital - Natural Language Processing, text classification](#)

Experienced data scientist and actuary (AIAA) with proven ability to lead and implement end-to-end data driven solutions and products. Skilled with statistical modelling, programming, ML ops and stakeholder management.

Experience

Data Science Lead @ Certain cryptocurrency project

May 2022 - Present

- Managed a data team of 4 and implemented development process for MVP build
- Designed and built backend ETL architecture and analytics API from 7 difference source systems using FastAPI/EC2/Postgres/Python

Senior Data Scientist @ nib Health Funds

May 2021 - Present

- Developed and implemented COVID pricing strategy through Delta and Omicron waves resulting in a 40% improvement to portfolio performance
- Lead development in end-to-end inhouse technical travel insurance pricing models
- Delivered commercial models and financial projections for multiple RFPs totalling an estimated \$80m GWP
- Developed data science strategy and architecture for actuarial team

Pricing Engine Lead @ IAG Ltd

February 2021 - May 2021

- Lead development and launch of niche portfolio (Caravan, Trailer, Strata) worth \$50m GWP
- Sprint planning and resource allocation for a development team of 4 under AGILE framework

Pricing Analyst @ IAG Ltd

May 2020 - February 2021

- Built pipeline to optimize rate setting process by 60% using Python/R scripting
- Collaborated with business API team to develop ingestion schema for conversion between flat and JSON data
- Owned deployment workflow and integration testing for Home/Motor pricing algorithms using Postman and R

Actuarial Analyst @ nib Health Funds

July 2018 - May 2020

- Developed earnings model with MLE and goodness of fit tests using Scipy/statsmodels
- Built and implemented travel alerts and embargo decision chatbot using Slack RTM API
- Developed and maintained recurring ETL processes in SQL Server/ Snowflake/ Python for reporting requirements
- Modelled and launched new rating factor for direct brand worth \$120m GWP annually and improved portfolio performance by 10%

Other interests/ projects

2022 Developing an NFT project with an open-source team
2022 Full stack [insurance pricing engine](#) built from scratch in Python/Flask/Nodejs/React
2021 Text analytics consulting project for marketing firm
2019 Grab AI Challenge: Safety with telematics