

# Harry Zhong

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## EDUCATION

### Curtin University

*Bachelor of Science (Actuarial Science) (Honours), CWA: 84%*

Bentley, WA

Feb 2019 – Jun 2023

### Actuaries Institute

*Actuary Program (AIAA)*

Perth, WA

Jul 2023 – Oct 2023

## EXPERIENCE

### Analyst | Risk Analytics Strategic Initiatives

*Commonwealth Bank*

Aug 2024 – Present

Perth, WA

### Data Analyst

*EBM Insurance & Risk*

Nov 2022 – Jul 2024

Perth, WA

- Gained a strong understanding of data analysis principles (relational databases, query languages, modelling) and applied them to a broad range of financial and insurance applications (financial reporting, scenario analysis, cashflow projection).
- **Development:** Contributed to income forecast project which used statistical techniques in *R* to predict future income for financial reporting. Key contributor to the internal development of data analysis applications using *SQL* and *R*. Introduced the use of *Shiny* applications for data visualisation, and *Git* for version control.
- **Automation:** Delivered monthly income reports using *VBA* to automate repetitive tasks, resulting in a 70% reduction in report generation time. Implemented *Microsoft365R* and *SQL* to fully automate distribution of scheduled reports, resulting in a 50% reduction in report distribution time.
- **Reporting:** Conducted ad hoc data analysis based on stakeholder needs. Modelled annual income of client portfolios in *Microsoft Excel* for discounted cash flow valuations.

## PROJECTS

### Gender Prediction - PyTorch | Python, PyTorch

2024

- Used PyTorch to define and implement custom residual neural network used to classify facial features using the CelebA dataset.
- Tuned hyperparameters (batch size, kernel sizes, and layer composition) to optimise convergence speed and loss measure.
- Achieved 95% accuracy in training and testing splits of dataset.
- Published code and results on personal website.

### Spotify Track Clustering | R, Spotify API

2024

- Used R to extract Spotify streaming history along with Spotify's developer API to query track features.
- Used Spotify track features to apply k-means clustering algorithm to tracks in streaming history.
- Implemented brute force method of feature selection and parallel processing to optimise computation time.
- Visualised clustering results and streaming trends using Shiny applications.
- Published code, results, and interactive Shiny applications on personal website.

### Honours Dissertation - Stochastic Volatility | R

2023

- Used stochastic modelling to compare constant and stochastic volatility under geometric Brownian motion based on independent research.
- Used R to optimise parameterisation and simulation via parallel processing.
- Completed written research report and presented seminar presentation to supervisors.

## TECHNICAL SKILLS

**Languages:** R, Python, SQL, Visual Basic

**Software:** Excel, Power BI

**Developer Tools:** Git, GitHub, VS Code, R Studio

**Libraries (R):** ggplot2, dplyr, tidyr, purrr

**Libraries (Python):** pandas, NumPy, Matplotlib, PyTorch