Harry **Zhong**

Actuary (AIAA) · Data Analyst

Perth WA

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Work Experience

EBM Insurance & Risk — *Perth*

Data Intelligence Analyst — *Nov 2022 - Present*

- 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).
- Managed 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 report distribution, and **Git** for version control in **R**.
- Modelled annual income of client portfolios in **Microsoft Excel** for discounted cash flow valuations.
- Delivered monthly income reports using **VBA** to automate repetitive tasks.

Education

Actuaries Institute — *Perth (Online)*

Actuary Program — *Jul 2023 - Oct 2023*

- Obtained **Associate Actuary (AIAA)** designation in December 2023.
- Passed **Asset Liability Management** and **Communication, Modelling and Professionalism**.

Curtin University — *Bentley Campus*

Bachelor of Science (Actuarial Science) (Honours) — *Feb 2019 - Jun 2023*

- 84% Course Weighted Average.
- 82% Dissertation Grade.
- Completed **Data Analytics Principles** and **Actuarial Control Cycle** subjects as part of the Actuaries Institute Actuary Program.
- Obtained all Actuaries Institute **Foundation Program** exemptions.
- Recipient of the Curtin Excellence Scholarship.

Projects

Training a convolutional neural network to classify facial features using PyTorch — *Personal Project*

Python — *2024*

- Used PyTorch to define and implement custom convolutional 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.

Analysis of my Facebook Messenger chat history using latent Dirichlet allocation to identify topics within conversations — *Personal Project*

Python — *2024*

- Used Python to extract Facebook Messenger chat data stored as JSON files.
- Implemented latent Dirichlet allocation (LDA) using the gensim module.
- Tuned the 3 hyperparameters of LDA using coherence score as a measure of model performance.

Analysis of my Spotify streaming history using k-means clustering to categorise tracks — *Personal Project*

R (Programming Language) — *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.

Comparing stochastic and constant volatility returns distributions using the Heston model (Actuarial Science Honours Dissertation) — *Curtin University*

R (Programming Language) — *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.