Harry Zhong

+61403041075 | h.zhong2687@gmail.com | linkedin.com/in/harry2687 | github.com/harry2687 | harryz.netlify.app

Education

Curtin University — Bentley, WA
Bachelor of Science (Actuarial Science) (Honours), CWA: 84% — *Feb 2019 – Jun 2023*

Actuaries Institute — Perth, WA
Actuary Program (AIAA) — *Jul 2023 – Oct 2023*

Experience

Data Analyst — Nov 2022 – Present
EBM Insurance & Risk — *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).
- 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.

Projects

Gender Prediction - PyTorch | *Python, PyTorch* — 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.

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.

Messenger Chat Clustering - Gensim LDA | *Python, Gensim* — 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.

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