James Liang

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EDUCATION

Monash University

Bachelor of Computer Science and Commerce, Major in Data Science and Econometrics • GPA: 4.0/4.0, WAM: 88.609

EXPERIENCE

Undergraduate Vacation Scholar

CSIRO's Data61

- Researched the use of large language models to improve existing topic modelling methods.
- Accurately extracted research topics from academic papers using Python and OpenAI API.
- Demonstrated improvements to F1 Micro, F1 Macro, recall and precision against competing research papers.

Project Consultant

180 Degrees Consulting — with Red Nose Australia

- Improved user experience in the Red Nose App by creating intuitive designs with HTML/CSS.
- Prepared presentation materials, slides, reports, and deliverables, ensuring clarity and professionalism.
- Delivered a tangible product with high social impact to client. Awarded Best Content and Best Speaker.

Programming Tutor

Monash University Bootcamp

- Delivered modules covering fundamental Python concepts and best coding practices to undergraduate students.
- Collaborated with fellow tutors to exchange ideas, share resources, and enhance the overall program.

Finance Manager

Monash Human Power

- Communicated with various stakeholders, including supervisors and leads. Implemented finance system redesign.
- Automated various budgeting workflows, including the preparation of the end of year financial report.

Community & Leadership

Publications Director

Computing Commerce Association (CCA)

- Executed strategies that promoted club publicity, increasing member base by 15%, through leading initiatives such as the Newsletter Relaunch and First Year Guide.
- Cross collaborated across team portfolios to further club agendas, whilst fostering a fun team culture.

Projects

TopicGemini | Python, Topic Modelling, Langchain, Embeddings, Kmeans Clustering

- Developed a novel approach to topic extraction, by integrating LLMs into existing research paper methodologies.
- Implemented Retrieval Augmented Generation (RAG) for extracting detailed topics from text.

Project-Water | *R*, *Data Analysis*, *Predictive Modelling*

- Developed a model for predicting water availability at select locations, based on geospatial and nominal data.
- Conducted exploratory data analysis and fine-tuned various ensemble models, achieving a Kaggle competition rank in the top 10% for accuracy.

Animal-Crossing-Sentiments | R, Sentiment Analysis, Text Analysis, Statistics

- Implemented Bag of words-based approach for sentiment analysis into Nintendo's Animal Crossing game.
- Revealed insights into contradicting game review scores through wordCloud visualisations and statistical analysis.

Technical Skills

Languages: Python, SQL, R, HTML/CSS Libraries: Scikitlearn, Pandas, NumPy, NLTK, Gensim Feb 2023 – Jul 2023

Jul 2022 - Jun 2023

Aug 2023 - Sep 2024

Github

Github

Github

With Dr Hui Zheng

Nov 2023 – Feb 2024

Melbourne, Vic

Expected 2025

Jul 2022 – Jul 2023