

James Liang

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EDUCATION

Monash University

Bachelor of Computer Science and Commerce, Major in Data Science and Econometrics

Melbourne, Vic

Expected 2025

- GPA: 4.0/4.0, WAM: 88.609

EXPERIENCE

Undergraduate Vacation Scholar

Nov 2023 – Feb 2024

CSIRO's Data61

With Dr Hui Zheng

- Natural language processing using python, Langchain, Scikit-learn and NumPy for topic taxonomy construction
- Implemented tests enabling iterative improvements to F1 Micro, F1 Macro, recall and precision
- Explored methods to minimise computation costs with TF-IDF and batch processing in OpenAI API

Project Consultant

Feb 2023 – Jul 2023

180 Degrees Consulting — with Red Nose Australia

- Designed and implemented style features into the Red Nose Australia Mobile App with CSS and HTML
- 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

Jul 2022 – Jul 2023

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

Jul 2022 – Jun 2023

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

Aug 2023 - Sep 2024

Computing Commerce Association (CCA)

- Planned and executed strategies to promote club publicity, increasing member base by 15%, through leading new 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*

[Github](#)

- Utilised Python with Gemini API to improve existing cluster based approaches to topic modelling
- Implemented Retrieval Augmented Generation (RAG) for finer granularity topic extraction
- Developed a novel framework for recursive topic discovery, by integrating LLMs for k-cluster determination, and merging topic clusters

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

[Github](#)

- Implemented Bag of words-based approach for sentiment analysis into Nintendo's Animal Crossing
- Tokenised user reviews and matched sentiments through applying various JOIN operations
- Utilised wordClouds and other visualisation tools to reveal explanations behind the contradictory review scores given by professional critics and casual gamers

TECHNICAL SKILLS

Languages: Python, SQL, R, HTML/CSS

Libraries: Scikitlearn, Pandas, NumPy, NLTK, Gensim