TREVOR YIP

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EDUCATION

University of Southern California September 2024-Present
Master of Science
Computer Science (Scientists and Engineers)

- Degree in progress, 3.67 GPA

University of California, San Diego September 2020-June 2024
Bachelor of Science
Cognitive Science (Specialization in Machine Learning and Neural Computation)

- Graduated, 3.8 GPA

SKILLS

- Languages
  - English (Fluent), Cantonese (Fluent), Mandarin Chinese (Fluent)
- Programming Languages
  - Python (Advanced), Java (Advanced)
  - Swift (Intermediate)
  - C/C++/C# (Beginner), Assembly Language (Beginner)
- Tools
  - Pytorch, Tensorflow, Docker, Git, Ant, Valgrind, GDB, Android Studio, XCode, PyCharm, IntelliJ, Vim, JupyterHub, Huggingface, Pandas, Seaborn, Scikit-learn, Unity

WORK EXPERIENCE

Artificial Intelligence Intern, Group Functions June 2025-August 2025
Jebsen Group

- Built an internal RAG (Retrieval-Augmented Generation) LLM chat agent from the ground up within 2 months
- Integrated agent with both frontend (Microsoft Teams, Web) and backend (Supabase) services in an end-to-end process
- Contributed to document management guidelines for AI Agents, and worked with business users to highlight the importance of AI-friendly content
- Researched, compared, and tested new technology solutions, and reached out to colleagues with the right expertise when needed

Data Science Intern, JC STEM Lab of Data Science Foundations July 2023-August 2023
Hong Kong University of Science and Technology

- Developed a web crawler to collect big data for a Large Language Model across 10+ sources
- Built and deployed a customizable template of Python code for data mining and data cleaning
- Conducted a literature review across 7 academic papers in the field of Large Language Models; developed a presentation and presented findings comparing and contrasting different models
- Explained and instructed a colleague on how to operate existing programs for performance improvements in data collection and cleaning, as well as possible additions for future data sources

Software Engineering Intern, Customer Digital Experience Division July 2022-August 2022
Hong Kong Jockey Club

- Built an initial sentiment analysis pipeline for processing spoken Cantonese via collaboration with another intern, leveraging Python and Huggingface to construct a machine learning model
- Produced Python programs to process and transform data in Excel spreadsheets
- Utilized Jupyter Notebooks within an internal server environment to write Python code
- Performed human data annotation and data cleaning to prepare training data for a machine learning model

PROJECTS

Minerunner: A Puzzle-Strategy Game (made with Unity) May 2025

- https://github.com/theTY2002/CSCI-526-minerunner
- Led a team of 6 in developing a puzzle-strategy game using Unity, driving the entire process from researching innovative game mechanics to analyzing user feedback data to enhance gameplay experience.
- Coordinated cross-functional communication among team members to clarify roles and responsibilities, resulting in improved collaboration, stronger team cohesion, and consistent on-time delivery of project milestones.

Computer Play of Mahjong through Adversarial Deep Learning March 2024

- https://github.com/theTY2002/COGS-188-Final-Project
- Designed and trained an artificial intelligence agent comprised of multiple neural networks to play a simulated game of Mahjong.
- Utilized Deep Q-Learning as a learning strategy in the training process.

Interpreting Vector Representations of Words in LLMs March 2024

- https://github.com/theTY2002/COGS_118B_Project
- Collaborated with 3 other group members to write a report investigating the relationships between vector representations of semantically related words.
- Applied dimensionality reduction techniques to cluster and visualize results.

Binary Classifier Comparison & Evaluation December 2023

- https://github.com/theTY2002/COGS-118A-Final-Project
- Conducted an empirical investigation comparing the performance and algorithm design of 3 different machine learning classifiers on 3 binary classification problems.

Correlation Between Tweet Sentiment and Stock Prices December 2023

- https://github.com/theTY2002/COGS-108-Final-Project
- Collaborated with other group members to produce a data science report investigating the relationship between the sentiment of 3 million tweets and stock prices of 5 major tech companies from January 2015 to December 2019.
- Leveraged different Python libraries such as Pandas and Seaborn to perform data analytics.

Web Crawler + Data Cleaning August 2023

- https://github.com/theTY2002/web-crawling
- Adopted Python to create a template for web crawling, as well as useful functions for data cleaning.