Rui A. Wang

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Diligent and experienced at implementing machine learning, deep learning and data science solutions to solve problems. Passionate about machine learning and innovative research/technology that improves the lives of people and business. Experienced in AI/ML tools (TensorFlow, PyTorch, Scikit-learn, LLMs/GPT, Yolo, Detectron2) with real-life data/use.

Education

University of Chicago *September 2023 - exp. 2024*

M.S. Computational and Applied Mathematics - Specialization: Machine Learning, Data Science

University of California, Los Angeles *October 2020 - March 2023*

B.S. Applied Mathematics / GPA: 3.87

Skills and Certificates

- Python - 5 years
  - **ML**: TensorFlow, PyTorch, Scikit-learn
  - Flask, Asyncio, Selenium, Discord.Py
  - Natural Language Processing, Large Language Models
  - Reinforcement Learning
  - Computer Vision, Object Detection
- DeepLearning.AI TensorFlow Developer Professional Certificate
- Google Advanced Data Analytics Professional Certificate

- SQL - 3 years
- R, Tableau - 1 year
- Languages: Java - 4 years, C++ - 2 years, Swift - 1 year
- MATLAB - 1 year
- Google Cloud Platform, AWS Sagemaker - 6 months
- Git, Docker - 1 year, Kubernetes - 3 months

Work, Research, and Project Experience

Graduate Researcher, CHAI Lab at UChicago *September 2023 - Present*

- Researcher with Dr. Chenhao Tan's Chicago Human + AI (CHAI) Lab researching the capability of LLaMA and other Large Language Models at analyzing and understanding language features on the LIWC-22 dataset.

Data Science Intern, Farmers Insurance Exchange *June 2022 - August 2022*

- Implemented and analyzed 12 classifier models using NLP techniques such as tokenization, embedding, sentiment analysis, and tf-idf to predict customer satisfaction and promoter likelihood from auto insurance claims.
- Engineered data processing pipeline for 750,000-row large, feature-oriented datasets from production servers and MS SQL Server databases for model training/testing.

Research Intern, Harvey Mudd College *May 2019 - August 2019*

- Implemented an LSTM Recurrent Neural Network utilizing a sliding window to predict human state of motion off of cell phone accelerometer and gyroscope data; trained under the public 1-million row WISDM dataset, under the supervision of Dr. Weiqing Gu.

Reinforcement Learning Wuziqi

- Trained and deployed an AI agent to play variations of the game Wuziqi entirely through reinforcement learning and self-play by implementing the AlphaZero Reinforcement Learning algorithm using Monte Carlo Tree Search.

Divvy Bikes Classifiers

- Built, tuned, and tested 9 classifier models, including Logistic Regression, Decision Trees, Random Forests, and Gradient Boosted learning models to predict membership status, trained on 6 million rows of ride data between 2022 and 2023, with data processing and feature-engineering.

OptionsBot

- Discord bot that visualizes options trading information using data from TDAmeritrade, Yahoo! Finance, and CBOE.