

YIAN WONG

Austin, TX | Houston, TX

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SKILLS

Programming Languages: Python, C++, C, Java, Scala, SQL

Libraries: PyTorch, TensorFlow, Pyro, Sci-kit Learn, NumPy, Pandas, OpenCV, OpenAI Gym, Weights & Biases

EDUCATION

The University of Texas at Austin	Master of Science, Computer Science	May 2024
	Bachelor of Science, Computer Science	May 2023
	Minor: Business	

Relevant Coursework:

Data Structures, Discrete Math, Computer Architecture, Operating Systems, Algorithms, Probability and Statistics, Linear Algebra, Neural Networks, Natural Language Processing, Reinforcement Learning, Computer Vision, Theoretical Statistics

EXPERIENCE

UT Austin Good Systems Initiative - *NLP Research Assistant*; Austin, TX April 2022 - Present

- Research of novel white-box models that can clearly explain their decisions to curb misinformation on social media.
- Designed and implemented scalable training framework, for 2.3x speed up in training on the TACC supercomputer.
- Generated models and created representative visualization graphs highlighting important results for weekly meetings.

Terra Cover, Inc. - *Machine Learning Intern*; Remote September 2021 - April 2022

- Created a Bayesian probabilistic model to predict flooding events with accurate model uncertainty.
- Prototyped physics-based architecture which reduced labeled data needed by 80% by encoding informative priors.
- Coded novel data labeling software to efficiently segment floods in satellite images, cutting time spent on labeling by 50%.

WiSilica, Inc – *Machine Learning Intern*; Irvine, CA May 2018 - August 2018; August 2019 - June 2020

- Wrote clean, clear, and well-tested code that used a computer vision object detector to rapidly detect people in real-time.
- Used wireless lighting with object detector to optimize office space lighting, saving over 50% in energy consumption.
- Led a team of 4 interns to clean data for the ML model, introducing them to basics of the ML development process.

PROJECTS

Research Publication Summer 2022

Yian Wong, Sau-Wai Wong “*Exploring Advanced Neural Network Architectures for Synthetic Well Log Generation*”

- Published and presented paper to the 2022 American Rock Mechanics Symposium.
- Implemented and surveyed state-of-the-art sequence classification methods (LSTM, MLP, Random Forests).
- Pioneered novel 1D CNN architecture with accurate uncertainty estimation via Monte-Carlo dropout.

Reinforcement Learning in Connect Four, Personal Project Summer 2021

- Designed and implemented custom RL methods to solve Connect Four through self-play using PyTorch.
- Integrated agents with Monte-Carlo tree search (MCTS) to refine predictive policies by looking ahead of the game.
- Showed that RL + MCTS achieves perfect play with 80% less future variations considered on average compared to mini-max.

TwitchMoji, Academic Project Spring 2022

- Analyzed user sentiment using by mapping chat instances to emotes used on the popular game streaming platform, Twitch.
- Used transfer learning on the NLP model to achieve 6% higher accuracy on sentiment analysis tasks than a BART model.
- Concluded that twitch emotes can capture an increasingly wide range of conventional sentiment across the platform.

ADDITIONAL INFORMATION

Work Eligibility: U.S. Permanent Resident (Eligible to work in the U.S. with no restrictions)

Interests: Chess, eSports, Reinforcement Learning