JIAXUAN WANG

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EDUCATION

Ph.D. at the University of Michigan, Ann Arbor

Sep 2017-April 2022

Computer Science and Engineering

Advisor: <u>Jenna Wiens</u> GPA: 4.00 / 4.00

<u>Research interests</u>: Model interpretability; Alignment; Time-series analysis; Transfer/multitask learning; Non convex optimization; Temporal conditional shift; Computer vision; Deep reinforcement learning;

Causal inference; Basketball analytics

Technical skills: PyTorch; Python; C++; Javascript; Matlab; R; Langgraph; AWS

Bachelors of Science in Engineering, Ann Arbor

Sep. 2013 - Dec. 2016

Computer Science major and Mathematics minor

GPA: 3.96 / 4.00

Directed research: Computer vision; Basketball analytics

EMPLOYMENT

Senior AI research scientist, GE Healthcare

April 8 2024 - Present

Developing AI algorithms to improve perinatal care.

Owning the development of AI agents that utilizes multimodal data (real time time-series data from medical devices and textual input from users) to assist clinicians during labor monitoring sessions (perinatal care). My work is showcased in the HLTH conference (2025 press release, multimodal agentic AI vision).

Research scientist in machine learning, Meta

Jun. 6 2022 - April 1 2024

- Key contributor in developing a reinforcement learning system to deter malicious actors from stealing user data on Facebook and Instagram.
- Proposed and implemented a feature attribution framework to debug and monitor distribution shift for the reinforcement learning agent used in production.
- Developed the duo-llama system that utilized a fine-tuned large language model (LLM) to save human labeling cost while enhancing LLM's ability on low resource languages through machine translation. The resulting system significantly outperformed the production classifier on 4 already supported languages, while enabling the new classifier to handle 17 languages.

Research Intern, Adaptive Systems and Interaction Group, Microsoft Research Jun. 1 - Aug.21 2020

Mentor: Scott Lundberg

Proposed a novel explanation method, Shapley Flow, that unifies and avoids the pitfall of 3 previous methods.

Software Engineering Intern, NLP group, Bloomberg L.P. (New York)

Jun. 7 - Aug. 19 2016

Mentors: Konstantine Arkoudas and Srivas Prasad

Algorithms for natural language parsing in financial chart domain: C++; SVM; PCFG

Research Assistant, Computer vision lab, University of Michigan

Oct. 2014 - Jan. 2016

Advisor: Jia Deng

Focus: Human action dataset collection; Amazon Mechanical Turk; Feature extraction; Rotation equivariant network

PUBLICATIONS (* denotes equal contribution)

1. Learning Concept Credible Models for Mitigating Shortcuts

Jiaxuan Wang, Sarah Jabbour, Maggie Makar, Jenna Wiens

Proceedings of the 36th Conference on Neural Information Processing Systems (NeurIPS), 2022

2. Shapley Flow: A Graph-based Approach to Interpreting Model Predictions

Jiaxuan Wang, Jenna Wiens, Scott Lundberg

Proceedings of the 24th International Conference on Artificial Intelligence and Statistics (AISTATS), 2021

3. AdaSGD: Bridging the gap between SGD and Adam

Jiaxuan Wang, Jenna Wiens

arXiv preprint, 2020

4. Relaxed Parameter Sharing: Effectively Modeling Time-Varying Relationships in Clinical Time-Series

Jeeheh Oh*, **Jiaxuan Wang***, Shengpu Tang, Michael Sjoding, Jenna Wiens In Proceedings of the 4th Machine Learning for Healthcare Conference, 2019

5. Learning Credible Models

Jiaxuan Wang, Jeeheh Oh, Haozhu Wang, Jenna Wiens ACM SIGKDD Conference on Knowledge Discovery and Data Mining, 2018

6. The Advantage of Doubling: A Deep Reinforcement Learning Approach to Studying the Double Team

Jiaxuan Wang*, Ian Fox*, Jonathan Skaza, Nick Linck, Satinder Singh, Jenna Wiens MIT Sloan Sports Analytics Conference, 2018

7. Learning to Exploit Invariances in Clinical Time-Series Data using Sequence Transformer Networks

Jeeheh Oh, Jiaxuan Wang, and Jenna Wiens

In Proceedings of the 4th Machine Learning for Healthcare Conference, 2018

8. HICO: A Benchmark for Recognizing Human-Object Interactions in Images

Yu-Wei Chao, Zhan Wang, Yugeng He, **Jiaxuan Wang**, Jia Deng International Conference on Computer Vision (ICCV) 2015

9. Predictive Response Optimization: Using Reinforcement Learning to Fight Online Social Network

<u>Abuse</u>

Garrett Wilson, Geoffrey Goh, Yan Jiang, Ajay Gupta, **Jiaxuan Wang**, David Freeman, Francesco Dinuzzo

USENIX Security 2025

TECHNICAL REPORTS

1. <u>Using feature attribution to debug and monitor distribution shift for a production ML system</u>

Jiaxuan Wang

2023

SERVICES

Reviewer @ MLHC 2023

Reviewer @ NeuRIPS 2022

Reviewer @ AISTATS 2022

Reviewer @ ICLR 2022

Reviewer @ AISTATS 2021

Reviewer @ NeuRIPS 2020

Reviewer @ NeuRIPS 2019

Reviewer @ MLHC 2021

Reviewer @ MLHC 2020

Volunteer @ Michigan AI symposium 2020

Reviewer @ SSAC 2020

Reviewer @ MLHC 2019

Reviewer @ SSAC 2019

Volunteer @ Michigan Al symposium 2019