Yifan Jiang

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EDUCATION

University of Waterloo Sep 2023 – Present
Doctor of Philosophy in Computer Science
Advisor: Yang Lu

University of Texas at Austin Aug 2021 – Present
Master of Science in Data Science CGPA: 4.00/4.00

University of Washington Sep 2021 – Jun 2023
Master of Science in Computational Linguistics CGPA: 3.99/4.00
Thesis: The Weighted Möbius Score: A Unified Framework for Feature Attribution
Committee: Shane Steinert-Threlkeld (chair), Yonatan Belinkov

University of Toronto Sep 2016 - Jun 2021
Honours Bachelor of Science with High Distinction CGPA: 3.67/4.00
Double specialists in Computer Science and Mathematics & Philosophy

PUBLICATIONS & PREPRINTS

Yifan Jiang and Shane Steinert-Threlkeld "The Weighted Möbius Score: A Unified Framework for Feature Attribution, " Preprint under review, doi:10.48550/arXiv.2305.09204.

Pangbo Ban, Yifan Jiang, Tianran Liu and Shane Steinert-Threlkeld "Testing Pre-trained Language Models' Understanding of Distributivity via Causal Mediation Analysis, " BlackboxNLP @ EMNLP 2022

RESEARCH EXPERIENCE

Graduate Research Student Apr 2022 - Jun 2023

University of Washington – Computation, Language, and Meaning Band of Researchers

- Completed a thesis project that aims to provide a theoretical framework unifying feature attribution, cooperative game theory and causal mediation analysis.
- Collaborated with a team of researchers to publish a paper at BlackboxNP@ EMNLP 2022, demonstrating the effectiveness of causal mediation analysis on testing language model's linguistic ability.

Undergraduate Research Assistant May 2019 - Apr 2021

University of Toronto - Munk School of Global Affairs & Public Policy

- Led a team in creating datasets to extract insights and trends from news data and developing tools and procedures for automated data collection.
- Applied machine learning and natural language processing techniques, including text classification and sentiment analysis, to enhance data accuracy and relevance for research purposes.

PROJECT EXPERIENCE

Multi-task Learning for Emotion Recognition in Conversation

- Designed and implemented a multilingual machine learning model for emotion recognition in dialogues, achieving top 10 on the leaderboard of the MELD dataset.
- Developed a multi-task learning framework compatible with the Hugging Face Transformers, enabling simultaneous training of the model on multiple datasets.

TECHNICAL SKILLS

Programming: Python, R, SQL, JavaScript, Java, C

ML & NLP: PyTorch, Scikit-Learn, NLTK, Transformers

Data Analytics: NumPy, Pandas, Matplotlib, ggplot2

Tools: Hadoop, Spark, Linux, Git, Shell Script, Excel