Zining (Annie) Wang

Master's Student in Computer Science, University of British Columbia

Research Interests

My research focuses on building **human-centered, socio-technical AI systems** that support **epistemic equity** and human well-being. I investigate how multilingual models can surface underrepresented knowledge across languages, addressing the limitations of current systems that privilege dominant perspectives and languages. At the same time, I explore how AI can engage people through **emotionally expressive, adaptive interactions**, re-framing AI not just as a computational tool, but as a medium for **cultural inclusion, transparency and empathy**.

Publications

Ain't Misbehavin' – Using LLMs to Generate Expressive Robot Behavior

Zining Wang, Paul Reisert, Eric Nichols, Randy Gómez
ACM/IEEE International Conference on Human Robot Interaction (HRI), 2024.

WikiGap: Promoting Epistemic Equity by Surfacing Knowledge Gaps Between English Wikipedia and other Language Editions

Zining Wang, Yuxuan Zhang, Dongwook Yoon, Nicholas Vincent, Farhan Samir, Vered Shwartz
Under review at ACM Conference on Computer-Supported Cooperative Work and Social Computing (CSCW), 2026.

Are Neural Representation Learning Methods a Viable Alternative to TMLE for Causal Estimation?

Mohammad Ehsanul Karima, Zining Wang
Accepted at Journal of Data Science in Science.

Experience

UBC NLP Lab and Vector Institute of AI, Vancouver, BC

Graduate Student Researcher with Prof. Vered Shwartz Jan 2025 – Present

- Creating a large-scale benchmark to assess multilingual LLMs' ability to generalize facts across languages, using causal inference methods to identify and measure cross-lingual knowledge gaps.
- Developed WikiGap, a system that surfaces factual gaps between English and other Wikipedia editions via a traceable, minimally disruptive interface, enabling cross-cultural awareness and knowledge transparency.

Honda Research Institute Japan Co., Ltd, Saitama, Japan

Natural Language Processing Researcher Intern May 2023 – Dec 2023

- Collected a 160K-sample dataset from peer-reviewed articles on emotion recognition to train NLP models, achieving a 76% F1 score (+20% over baseline).
- Designed customized emotion labels tailored to social robot behavior, improving human-robot emotional alignment.

Faculty of Medicine, University of British Columbia, Vancouver, BC

Data Scientist Intern Jan 2022 – Mar 2023

- Constructed knowledge graphs and streamlined online survey workflows, reducing daily tasks by 15%.
- Prepared actionable analysis reports to improve clinical survey designs.

Digital Solutions, Faculty of Medicine, University of British Columbia, Vancouver, BC

Database Developer Sep 2021 – Dec 2021

- Developed an automated data pipeline and web interface to support metadata sharing across 2,000+ clinical studies.
- Built a JavaScript and SQL based productivity dashboard for fundraising analysis, enhancing data-driven decisions by 80%.

Additional Projects

LLM-based Chatbot for Stress Detection and Regulation

Course Project – Applied NLP and Cognitive Behavioral Therapy Sep 2023 – Dec 2023

- Built an LLM-powered chatbot to detect user stress levels and simulate adaptive mental health support, grounded in cognitive behavioral therapy principles.

Differentially Private Synthetic Data Generation for Time Series

Course Project – Privacy-Preserving Machine Learning Jan 2024 – Apr 2024

- Developed a method to generate realistic synthetic time-series data while protecting individual privacy, by combining deep learning with differential privacy techniques.

Teaching

University of British Columbia (UBC), Vancouver, BC

Undergraduate Teaching Assistant – Natural Language Processing Sep 2023 – Dec 2023

- Led weekly office hours to support 80+ students in understanding core NLP concepts and implementing algorithms for tasks such as classification, sequence tagging, and question answering.
- Contributed to exam design and grading, offering constructive feedback to reinforce learning outcomes.

Women in Data Science Association at UBC, Vancouver BC

Technical Director (Pro Bono) May 2022 – Jan 2023

- Led bi-weekly workshops on data science, applied math, and visualization for 200+ participants, promoting technical learning and STEM engagement.
- Mentored 10+ students in STEM by providing academic guidance and supporting their career development in data science.

Education

University of British Columbia (UBC), Vancouver, BC

Master of Science in Computer Science Sep 2024 – Present
Bachelor of Science in Computer Science & Statistics Sep 2019 – May 2024
GPA: 4.0/4.0

Technical Skills

Programming Languages: Python, MATLAB, R, C++, Java.
Software & APIs: TensorFlow, PyTorch, AWS, MySQL, REDCap.
Specialized Skills: deep learning, natural language processing, causal inference.