

Y. Carolyn Wang

carolyn.wang@uwaterloo.ca · +1 (437) 551-7808 · carowang.me

Education

MMath Data Science

2024 - Present

Faculty of Mathematics, University of Waterloo (ON, Canada)

- Thesis: Implications of AI (il)literacy on participatory methods in human-AI research for mental health technologies. (In progress).
- Supervisors: Dr. Dan Brown & Dr. Maura Grossman
- CGPA: 4.0/4.0

BMath (Hons.) Statistics, Computing Minor, Co-op Integrated Program

2018 - 2023

Faculty of Mathematics, University of Waterloo (ON, Canada)

- Class of 2023 Valedictorian
- Exchange program Aug 2022 - Feb 2023
Institute of Mathematics, École Polytechnique Fédérale de Lausanne (VD, Switzerland)
- CGPA: 3.6/4.0

Research Experience

- **Graduate Researcher, University of Waterloo** Sept 2024 - Present
 - Conducted comprehensive literature review to identify gaps in existing literature.
 - Defined research objectives, planned and scoped a study to investigate the research questions. Performing the planned experiment (in progress).
 - Currently conducting a mixed-method study evaluating the effect of an educational intervention on mental health practitioners' perceptions of AI to examine the need for tech- and AI-literacy in participatory and cross-disciplinary research.
- **Research Assistant, AI4Abolition** June 2024 - Present
 - Working with a group of transformative justice (TJ) practitioners to investigate the possibilities at the intersection of TJ and technology, with an emphasis on artificial intelligence.
 - Developed a value-aligned LLM evaluation protocol in collaboration with TJ facilitators.
 - Drafted, published, and presented a paper documenting preliminary learnings from the LLM evaluation project at a conference workshop.
 - Reviewed literature and assisted with data analysis on the current state of technology use in TJ practise and perceptions of TJ practitioners towards emerging technologies.
 - Developed and co-led an AI literacy workshop for TJ practitioners.
- **Undergraduate Research Assistant, University of Waterloo** Jan - Dec 2021
 - Developed CNNs to inpaint medical vascularity scans from a novel imaging technology and a preprocessing pipeline using deterministic interpolation methods.
 - Worked on a project to determine risk factors for acute kidney injury using sex-specific models of kidney function.

Teaching and Mentorship Experience

- **Graduate Mentor**, *University of Waterloo, Directed Research Program* Jan 2026 - Present
 - Co-mentoring undergraduate students through a research creation project
 - Scoping, structuring, and performing preparatory literature review for a 10-week program with weekly meetings and asynchronous collaboration guiding mentees through the research process, beginning with a directed literature review through conceptualizing and executing the project.
- **Undergraduate & Graduate Teaching Assistant**, *University of Waterloo*
 - Databases Applications for Business (CS-338) - Spring 2025, Fall 2025
 - Social Implications of Computing (CS-492) - Winter 2025
 - Principles of Computing (CS-114) - Fall 2024
 - Statistics (STAT-231) - Fall 2020
- **Project Mentor**, *Measurement4Change, Food Bank of Waterloo* Jan 2025 - May 2025
 - Assisted with the development of a validation process to ensure food distribution efficacy to partner programs through the Measurement4Change program.

Publications

My name is in bold. * denotes equal contributions.

1. Epps, A.*, Ferrari, T.*, **Wang, C.***, & Ames, R. [Redacted Title]. In preparation.
2. **Wang, C.** (2025). *The Risks and Potential of Large Language Models in Mental Healthcare: A Critical Analysis through the Lens of Data Feminism*. (Un)Disturbed: A Journal of Feminist Voices, 2 (2): 41-52. <https://doi.org/10.15353/un-disturbed.v2i2.6652>
3. **Wang, C.**, Epps, A., Ferrari, T., & Ames, R. (2025). *AI for Abolition? A Participatory Design Approach*. Proceedings of Workshops at the Fourth International Conference on Hybrid Human-Artificial Intelligence (HHAI), Pisa, Italy, June 9–13, 2025. <https://ceur-ws.org/Vol-4074/paper7-2.pdf>
4. Leete, J., **Wang, C.**, López-Hernández, F. J., & Layton, A. T. (2022). *Determining risk factors for triple whammy acute kidney injury*. Mathematical Biosciences, 347, 108809. <https://doi.org/10.1016/j.mbs.2022.108809>

Talks and Presentations

- **Wang, C.**, Grossman, M., & Brown, D. (2025). *Measuring LLM Bias in Mental Health*. 2025 ACM Conference on Knowledge Discovery and Data Mining. Toronto, Ontario, Canada, August 5, 2025. Poster presentation.
- **Wang, C.**, Grossman, M., & Brown, D. (2025). *Measuring LLM Bias in Mental Health*. ACM Conference on Knowledge Discovery and Data Mining 2025. Toronto, Ontario, Canada, August 5, 2025. 3 Minute Thesis Talk.
- Ferrari, T., Epps, A., Ames, R., & **Wang, C.** (2025). *Participatory AI Research and Development to Support Transformative Approaches to Justice and Community Safety*. ACM Collective Intelligence Conference 2025, La Jolla, CA, USA, August 4, 2025. Poster presentation.

- **Wang, C.**, Epps, A., Ferrari, T., Ames, R. (2025). *AI for Abolition? A Participatory Design Approach*. Mind the AI-Gap Workshop at the Hybrid Human Artificial Intelligence Conference 2025, Pisa, Italy, June 9, 2025. **Oral Presentation.**
- **Wang, C.** (2025). *Introduction to Product Ideation*. Technovation Waterloo 2025, Remote, January 29, 2025. Guest Speaker.

Skills and Qualifications

Programming Languages: Python, R, HTML/CSS, SQL, L^AT_EX

APIs & Packages: PyTorch, Tensorflow, Pandas, Numpy, Anthropic, OpenAI, Matplotlib, Keras, SKLearn, Seaborn, Gensim, Scipy

Selected coursework: Data Analysis, Experimental Design, Data Structures, Computational Statistics, Databases, Data Engineering, Forecasting, Deep Neural Networks.

Graduate Seminars: Natural Language Processing & Generative AI, Human Computer Interaction - Designing Value-Driven Technology, Affective Computing

Awards

- | | |
|--|----------------|
| • Domestic Graduate Student Award (\$3000) | 2024 - Present |
| • Vector Institute Scholarship in Artificial Intelligence (\$17,500) | 2024 - 2025 |
| • University of Waterloo International Travel Award (\$1000) | 2023 |
| • NSERC Undergraduate Student Research Award (\$6000) | 2022 |
| • University of Waterloo President's Research Award (\$3000) | 2021 |
| • University of Waterloo President's Scholarship of Distinction (\$2000) | 2019 |
| • First place in the International Mathematical Competitive Game (€500) | 2019 |
| • Professional Institute Legacy Foundation Scholarship (\$1500) | 2018 |
| • Ottawa Kiwanis Club Rick Barrigar Scholarship for Exemplary Citizenship (\$3000) | 2018 |

Service & Volunteer Work

- | | |
|---|-----------------------|
| • Technovation Mini-Hackathon, <i>outreach program for girls in tech</i>
Volunteer, <i>coaching participants, judging final projects, and assisting with event logistics</i> | November 29, 2025 |
| • University of Waterloo Women in Computer Science
Graduate Student Representative | Sept 2025 - Present |
| • Panelist at Graduate Visit Day for incoming math graduate students | March 3, 2025 |
| • Technovation Waterloo, <i>outreach program for girls in tech</i>
Mentor, <i>advising participants on HCI methods for project development</i> | Jan 2025 - Feb 2025 |
| • University of Waterloo Awards Committee
Graduate Student Representative. | Sept 2024 - Sept 2025 |

- University of Waterloo Undergraduate Mathematics Society
 - Vice President of Internal Affairs Jan 2022 - Apr 2022
 - First Year Mentor & Orientation Leader Sept 2019 - Dec 2020
 - Events Director Jan 2019 - Sept 2019

Relevant Industry Experience

- **Data Science Intern, Noom Inc.** New York City, NY — May - Aug 2022
 - Prototyped a recommendation model (sklearn) for unhealthy food alternatives using Word2Vec food embeddings (gensim) using over 2 million rows of text data (SQL)
 - Planned, spearheaded, and executed a segmentation project to identify user personas, and areas for further product development/experimentation (SQL, Python - sklearn)
 - Conducted analyses and visualizations of user behaviour by querying and analyzing 1,000,000+ rows of user data
- **Data Engineering Intern, Innovapost, Inc.** Remote — May - Aug 2020
 - Implemented ETL pipeline to extract data from XML files in PySpark
 - Oversaw production of and presented proof of concept for crowdsourced application delivery to senior business leaders
- **Data Analyst Intern, Cineplex Ltd.** Waterloo, ON — Sept - Dec 2019
 - Forecasted sales with time series model (R) for ROI validation on data-driven initiatives
 - Collaborated on algorithm design for a recommendation engine using various machine learning techniques to target advertisements more effectively