

Kieran Henderson

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WORK EXPERIENCE

Master's Student

Sept. 2025 – Present

University of Toronto

Toronto, ON

- First author of the paper “Characterizing regularity in semantic shift of individuals” accepted for CogSci 2026.
- Research the change of word meaning and contextual word use in personal lexicons over time using word embeddings, neural networks, and other NLP and AI techniques.
- Lead research on the analysis of population level emotions overtime using AI.
- Act as session chair of EACL 2026 presentation session.
- Conduct literature reviews to ensure academic rigor.
- Lead bi-weekly tutorials for 10 to 30 students, 12 midterm exams and one final exam.
- Complete course work for the master's level Computational Linguistics and Computational Social Science courses that I'm enrolled in.

Undergraduate Researcher

May 2023 – Present

McMaster University and IBM

Hamilton, ON

- First author of the paper “Examining the Utility of Self-disclosure Types for Modeling Annotators of Social Norms” published in EACL findings.
- Presented my research at both the CASCON 2024 and IBM TechXchange 2024 conferences.
- First author of the paper “Power Efficient, Accelerated, Exponential-Based Activation Functions” published at the CASCON 2024.
- Extracted self-disclosure statements from Reddit posts and clustered data using kmeans, LDA, and regex, to group the data based on types of phrases and posts to train annotator models.
- Trained annotator models using self-disclosure phrases to investigate their impact for acc and F1.
- Created AI models in TensorFlow to find and test new approximations of activation functions to accelerate evaluation by **21%** without hardware support, and up to **100%** with hardware support.
- Produce and present a research poster for the 2023 McMaster undergrad research poster session.
- Lead a research team on the IBM Coconut project consisting of 5 undergraduate researchers.

Teaching Assistant for ‘Intro to Software Design Using Web Programming’

Jan. 2023 – Apr. 2023

McMaster University

Hamilton, ON

- Evaluated **20** students on their semester long lab projects.
- Supervised and mentored **60** students during labs twice a week.

EDUCATION

University of Toronto – Master of Science (MSc)

Sep. 2025 – Dec. 2026

- Specializing in personal lexicon and word sense evolution

McMaster University – Honours Computer Science, summa cum laude

Sep. 2021 – Apr. 2025

- 3.83 GPA with courses in Computer Science, Algorithms, Machine Learning

SKILLS & INTERESTS

- **Languages:** Fluent in French (spoken/written), intermediate Mandarin Chinese (spoken/written).
- **Interests:** Learning, personalized NLP, emotions, Artificial Intelligence, HCI, rock climbing, languages.