

Katie Warburton

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Education

Ph.D. in Cognitive Science

2021 - present

University of Melbourne; University of Toronto

Melbourne, Australia; Toronto, Canada

- **Supervisors:** Charles Kemp, Yang Xu, Lea Frermann
- Jointly awarded degree from the UofT-UoM International Research Training Group

B.Comp (Hons) with a Specialization in Cognitive Science

2017 - 2021

Queen's University

Kingston, Canada

- GPA: 4.2
- Received the medal in computing which is awarded to the student who has achieved the highest standing in a plan offered by the awarding department.

Research Experience

UofT-UoM International Research Training Group

Sept. 2021 - Present

Doctoral Candidate

- **Thesis:** A Computational Analysis of the Structure and Evolution of Hierarchical Category Systems
- **Supervisors:** Charles Kemp, Yang Xu, Lea Frermann
- Previously developed computational methods for quantifying biases in hierarchical category systems, using library classification systems and subject headings as case studies
- Currently combining computational and experimental methods to explore sequence effects in the evolution of hierarchical category systems

Queen's School of Computing

May 2020 - April 2021

Undergraduate Thesis

- **Title:** Using Correlations of Word Frequency to Find Clusters in Unstructured Radiology Reports
- **Supervisor:** Randy Ellis
- Researched and implemented methods for the natural language processing of lung cancer radiology reports
- Applied topic modeling and clustering algorithms to aid in report processing
- Funded by an NSERC Undergraduate Student Research Award

Dept. of Languages, Literatures and Cultures, Queen's University

June 2019 - Aug. 2019

Undergraduate Research Assistant

- **Supervisors:** Nathan Thanyehténhas Brinklow, Lorena Jessop
- Assisted with the development of an automatic speech recognition model for Kanyen'kéha, a polysynthetic language

Publications

Warburton, K., Kemp, C. & Frermann, L. (2025). Scientists & Women Scientists: Exploring Gender Biases in Institutional Category Systems. *Proceedings of the Annual Meeting of the Cognitive Science Society*, 47.

Warburton, K., Kemp, C., Xu, Y. & Frermann, L. (2024). Quantifying Bias in Hierarchical Category Systems. *Open Mind: Discoveries in Cognitive Science*, 8, 102-130.

Warburton, K., Kemp, C., Xu, Y. & Frermann, L. (2023). Quantifying Bias in Library Classification Systems. *Proceedings of the Annual Meeting of the Cognitive Science Society*, 45.

Presentations _____

Warburton, K, Kemp, C., & Frermann, L. (July, 2025). *Scientists & Women Scientists: Exploring Gender Biases in Institutional Category Systems*. Annual Meeting of the Cognitive Science Society, San Francisco CA, United States. Conference Poster.

Warburton, K. (July, 2025). *Categorization in Practice: Insights from Library Classification Systems*. Lupyan Lab, Madison WI, United States. Presentation.

Warburton, K, Kemp, C., Xu, Y. & Frermann, L. (July, 2023). *Quantifying Bias in Library Classification Systems*. Annual Meeting of the Cognitive Science Society, Sydney, Australia. Conference Poster.

Teaching Experience _____

University of Melbourne Academic Tutor • PSYC30013: Research Methods for Human Inquiry (Semester 1 2024)	Melbourne, Australia 2024
University of Toronto Guest Speaker • Title: Quantifying Biases in Library Classification Systems • Course: Data, Computation, and The Mind (COG260).	Toronto, Canada November 2022
University of Toronto Teaching Assistant • CSC199: Intelligence, Artificial and Human (Fall Term 2022) • CSC2611: Computational Models of Semantic Change (Fall Term 2022) • CSC110: Foundations of Computer Science (Fall Term 2021)	Toronto, Canada 2021-2022
Queen’s University Teaching Assistant • CISC352: Artificial Intelligence (Winter Term 2021) • COGS201: Cognition and Computation (Fall Term 2019; 2020) • COGS100: Introduction to Cognitive Science (Summer Term 2019; Winter Term 2020) • CISC121: Introduction to Computer Science (Fall Term 2018)	Kingston, Canada 2018-2021

Awards _____

2023- 2026	Melbourne Research Scholarship , University of Melbourne
2021	Medal in Computing , Queen’s University
2020	NSERC Undergraduate Student Research Award , Queen’s University
2018-2021	Dean’s Honour List , Queen’s University
2018	Queen’s Appeal Undergraduate Scholarship , Queen’s University
2017	Principal’s Scholarship , Queen’s University

Outreach & Professional Development _____

PEER REVIEW
Annual Meeting of the Cognitive Science Society

SERVICE & OUTREACH		
2024 - 2025	Graduate Researchers in Psychological Sciences (GRiPS) , President	<i>University of Melbourne</i>
2023	Science Rendevous UofT , Volunteer	<i>University of Toronto</i>
2019 - 2020	Computing Students Association , Governance & Internal Affairs Director	<i>Queen's University</i>

ASSOCIATION MEMBERSHIPS

Cognitive Science Society

Skills

Programming Languages: Python, Javascript, R, MATLAB, Prolog, Java, Haskell.

Other: \LaTeX , HTML/CSS, SQL, and Markdown.