# ERIKA RUMBOLD

erikajrumbold@gmail.com | Website | Google Scholar | GitHub | LinkedIn

## RESEARCH INTERESTS

Music Information Retrieval, Automatic Music Transcription, Audio Source Separation, Score-Informed Source Separation, Machine Learning, Music

## EDUCATION

**University of Victoria**, Victoria, BC, Canada — *expected 2028*
Ph.D. in Computer Science

**Northwestern University**, Evanston, IL — *2022*
Master of Science in Computer Science
Thesis: A Critical Analysis of Objective Evaluation Metrics for Music Source Separation Quality
Committee: Bryan Pardo (advisor), Han Liu

**Ithaca College**, Ithaca, NY — *2018*
Bachelor of Arts in Computer Science
Minor studies in Audio Production, Music

## PUBLICATIONS

2. **Erika Rumbold** and George Tzanetakis. QuartSet: A String Quartet Dataset for Transcription and Source Separation of Real Instrument Recordings. *17th International Symposium on Computer Music Multidisciplinary Research* (CMMR), 2025.
1. **Erika Rumbold**, George Tzanetakis, Bryan Pardo. Correlations Between Objective and Subjective Evaluations of Music Source Separation. In *Proceedings of the Sound and Music Computing Conference (SMC)*, 2024.

## PRESENTATIONS

Measuring Prefrontal Cortex Activity during Passive and Active Movement. Melody Wallace, **Erika Rumbold**, Sharon Stansfield, Helene Larin, Carole Dennis. *Rehabilitation Engineering and Assistive Technology Society of North America Conference (RESNA)*. New Orleans, LA. June 2017. Poster.

## TEACHING

**Workshop Designer** and **Head Lecturer** — Victoria, BC, Canada
*Women in Engineering, Science, and Technology (WEST)* — 2024
WEST x Redbrick Python Fundamentals Workshop

**Teaching Assistant**
*University of Victoria*
CSC 503 – Data Mining — Summer 2026, Spring 2027
CSC 475/575 – Music Retrieval Techniques — Spring 2024, Spring 2025
CSC 421 – Introduction to Artificial Intelligence — Fall 2024
CSC 349A – Numerical Analysis — Fall 2025, Spring 2026, Fall 2026
CSC 110 – Fundamentals of Programming I — Fall 2023

*Updated November 2026*

*Northwestern University*

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|---|---|
| COMP_SCI 349 – Machine Learning | Winter 2022 |
| COMP_SCI 348 – Introduction to Artificial Intelligence | Spring 2021, Fall 2021 |
| COMP_SCI 396 – AI and Experimental Narrative | Spring 2022 |

*Ithaca College*

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|---|---|
| COMP 17100 – Principles of Computer Science I | Fall 2016, Spring 2017, Fall 2017 |
| COMP 17200 – Principles of Computer Science II | Spring 2017 |
| COMP 20500 – Advanced Web Programming | Fall 2017 |
| TVR 10500 – Introduction to Audio Production | Fall 2015, Spring 2016 |

## PROFESSIONAL EXPERIENCE

**University of Victoria** — Victoria, BC, Canada
*Research Assistant* — *2022 - Present*
Advisor: George Tzanetakis

**Northwestern University** — Evanston, IL
*Student Researcher* — *2020 - 2022*
Interactive Audio Lab
Advisor: Bryan Pardo

**Empower AI** — Reston, VA
*Software Engineer* — *2018 - 2020*

**Ithaca College** — Ithaca, NY
*Research Assistant* — *2017*
Tots on Bots
Advisor: Sharon Stansfield

**Dana Internship Program** — Ithaca, NY
*Research Intern* — *2017*
Advisor: John Barr

## HONORS & AWARDS

**Upsilon Pi Epsilon** — 2017
*International Honor Society for the Computing and Information Disciplines*

**Dean's List** — Fall 2014, Spring 2015, Fall 2015
*Ithaca College*

## SERVICE

**Treasurer** — *2016 - 2017*
*Ithaca College Women in Computing*

## SKILLS

**Programming Languages:** *Expert:* Python, *Past Experience:* Java, C++
**Machine Learning:** *Expert:* PyTorch, Tensorflow, NumPy, SciPy, Scikit-learn
**Music Information Retrieval:** *Expert:* Librosa, Humdrum, MusicXML, Verovio, music21
**Data:** *Expert:* Pandas, *Past Experience:* SQL