

ERIKA RUMBOLD

erumbold@uvic.ca | [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 2027*
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 *2017*
Bachelor of Arts in Computer Science
Minor studies in Audio Production, Music

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 475/575 – Music Retrieval Techniques Spring 2024, Spring 2025
CSC 421 – Introduction to Artificial Intelligence Fall 2024
CSC 110 – Fundamentals of Programming I Fall 2023

Northwestern University
COMP_SCI 349 – Machine Learning Winter 2022
COMP_SCI 348 – Introduction to Artificial Intelligence Spring 2021, Fall 2021
COMP_SCI 295/396/496 – AI and Experimental Narrative Spring 2022

Ithaca College
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

Research Assistant

Advisor: George Tzanetakis

Victoria, BC, Canada

2022 - Present

Northwestern University

Student Researcher

Interactive Audio Lab

Advisor: Bryan Pardo

Evanston, IL

2020 - 2022

Empower AI

Software Engineer

Reston, VA

2018 - 2020

Ithaca College

Research Assistant

Tots on Bots

Advisor: Sharon Stansfield

Ithaca, NY

2017

Dana Internship Program

Research Intern

Advisor: John Barr

Ithaca, NY

2017

HONORS & AWARDS

Upsilon Pi Epsilon

International Honor Society for the Computing and Information Disciplines

2017

Dean's List

Ithaca College

Fall 2014, Spring 2015, Fall 2015

PUBLICATIONS

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.

SERVICE

Treasurer

Ithaca College Women in Computing

2016 - 2017

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

Web: *Past Experience:* JavaScript, HTML, CSS, Flask, Django, AWS, Spark

Data: *Expert:* Pandas, *Past Experience:* SQL

SELECT MUSIC CREDITS

I have performed as a professional violinist in pit orchestras, wedding ensembles, and rock bands. I've also arranged pieces for orchestras, chamber ensembles, and choirs.

Super Mario 64 Medley 2016

Arrangement for Ithaca College Gamer Symphony Orchestra

Spamalot 2015

Delaware All State Theatre

Violin

Titanic: A New Musical 2014

Delaware All State Theatre

Violin I

Miracle on 34th Street 2013

Wilmington Drama League

Violin II

Into the Woods 2013

The Tatnall School

Violin I

Jekyll & Hyde 2013

Delaware All State Theatre

Violin II

The Sound of Music 2012

The Tatnall School

Violin I