

Choenden Kyirong

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RESEARCH INTERESTS

Generative Models, Multimodal AI, Computational Creativity, Human-Centered AI

EDUCATION

Current **M.Sc. in Sound & Music Computing**, Universitat Pompeu Fabra, *Music Technology Group*
2023 **B.Sc. in Computer Science**, Simon Fraser University
2023 **B.Sc. in Statistics**, Simon Fraser University
2016 **Music in Performance (Jazz)**, University of Toronto

PUBLICATIONS

**Indicates equal contribution.*

Peer Reviewed

2026 Vohra, A. *, **Kyirong, C. ***, Ibañez, L., Rocamora, M. (2026). Ghost in the Encoder: Decodable Artist Identity Representations in Lyrics-to-Song Generation. *International Society for Music Information Retrieval*
2026 Pereira, A., **Kyirong, C.**, Lucena, R., Ramirez, R. (2026). Designing Emotionally Navigable Harmonic Spaces for Interactive Music Generation. *International Conference on Computational Creativity: Computational Design and Computer-aided Creativity Workshop*

Other

2026 **Kyirong, C. ***, Burkett, Z. * Inside the 2-5-1: A Pedagogy-Grounded Corpus Study of 2-5-1 Resolution Across Jazz Eras
2026 **Kyirong, C. ***, Duart, Z. *, Puerto, G. * Score-Conditioned Guitar Duet Separation via Misaligned Data Augmentation
2025 Gyetvay, S., Plotkin, P., **Kyirong, C.** Algorithmic v.s. Human Bias in Hiring

PROFESSIONAL EXPERIENCE

Essentia, Music Technology Group, *Research Intern*

2026 - Audio machine learning, deep learning models, and quantization

BetterCart Analytics, Core Data Team, *Machine Learning Engineer*

2022 - Led the Information Retrieval System that includes over 60,000,000 new records per week across 6,000+ stores and 100+ retailers, Data orchestration and deployment for offline processing and end-to-end ML pipelines, Named Entity Recognition solutions

Samsung Research Canada, Knox Analytics, *Data Engineer Intern*

2022-2023 Led a Data Retention Policy that reduced data storage cost by writing python scripts to analyze and report data usage, ETL Pipeline in airflow to automate an 8hr/week business task, CI/CD Pipeline that reduced development time of specific processes by containerizing and streamlining workflows

WorkSafe British Columbia, Innovation Team, *Data Scientist Intern*

2021-2022 Developed a document classification system by automating the identification and categorization of salient terms using spaCy and the MeSH ontology

Canada Border Services Agency, Research & Development, *Data Scientist Intern*

2020-2021 Contributed to SIR modeling of COVID-19 infection spread

PROJECTS

MoodSwing: Mood-based Controllable Music Generation

2026 A real-time controllable music generation tool where freehand drawing controls harmonic mood, steering a fine-tuned DistilGPT2 model to generate expressive, harmonically-constrained MIDI melodies over a quantized beat grid

Harmony & Improvisation Visualizer

2024 Visualizing harmony, melody, and improvisation through connected graphs of chord tones + shared notes, bi-gram frequency arcs, and an interactive playground using MIDI and D3.js

Classical Piano Generator

2023 Generating classical piano lines using a Bi-Directional LSTM with Attention using midi classical piano music

AWARDS AND HONORS

2026 Institution of Engineering and Technology (IET) Best Research Project Finalist

2025 British Columbia Arts Council Individual Arts Grant

2021 Vancouver DataJam 3rd Prize

2020 SFU Business Analytics Case Competition 2nd Prize Technical Solution

2014 University of Toronto Moe Koffman Memorial Jazz Scholarship

2014 University of Toronto Entrance Scholarship

2014 Music Festival Canada CORUS Outstanding Jazz Musician

SERVICE

Reviewer

2026 *International Society for Music Information Retrieval*

Mentor

- 2022 SFU School of Computing Science peer mentor
 2021 SFU Department of Statistics and Actuarial Science peer mentor

Instructor

- 2019 Illuminate Object Oriented Programming in Java workshop instructor

Organizer

- 2018 Design Lab Live Virtual Reality Workshop organizer

PERFORMANCES, STUDIO WORK, AND OTHER HIGHLIGHTS

- 2026 Sounds of Summer Festival with *The Woodlands Septet*
 2026 Music Technology Group Showcase: Co-Creative Improvisation Performance with *MoodSwing*
 2026 Music Technology Group Showcase with *Andreas Papaeracleous and Olly Flaig*
 2025 Vancouver International Jazz Festival with *Amphibioux*
 2025 Vancouver International Jazz Festival with *The Daniel Deorksen Group*
 2025 Daniel Deorksen Album Recording with *Demitone Productions*
 2024 The Fox Cabaret with *Amphibioux*
 2024 Vancouver International Jazz Festival with *Igneous*
 2024 Frankie's Jazz Club with *Amphibioux*
 2024 Tyrant Studios with *Amphibioux*
 2024 Tyrant Studios with *The Daniel Deorksen Group*
 2024 Tofino Jazz Festival with *Amphibioux*
 2023 Tyrant Studios with *Thomas Houlden Sextet: A Booker Little Tribute*
 2023 Vancouver Show with *The Empanada Ilegales*
 2023 Tyrant Studios with *Amphibioux*
 2023 Innovate Music Festival *Amphibioux*
 2023 Tofino Jazz Festival with *The Linaldo Sans Group*
 2023 Vancouver Island Tour with *Amphibioux*
 2023 Guilt & Co with *Midnight Boogaloo*
 2022 Tyrant Studios with *Amphibioux*
 2022 Michael J. Fox Theater with *The Simon Fraser University Orchestra*

SELECTED COURSEWORK

Machine Learning for Sound & Music, Generative Models for Symbolic & Audio Representations, Digital Signal Processing, ML w/ Big Data, Data Visualization, Bayesian Statistics, Statistical Learning & Prediction, Statistical Design & Analysis of Experiments, Linear Algebra, Algorithms & Data Structures

Updated August 2026