

# ANNIE CHU

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## TL;DR

I am a researcher at the intersection of audio, machine learning, and human-centered design. My work centers on (1) developing innovative and inclusive audio models & interfaces for creative audio design, with a parallel focus on (2) investigating how audio technologies shape and are shaped by cultural practices, user perceptions, and broader societal contexts.

*Research interests:* practioner-centric audio models, HCI, music information retrieval, ethical & social implications of new audio technologies

## EDUCATION

**Northwestern University, PhD** Evanston, IL  
*Technology & Social Behavior (Dual CS + Communications)* 2023 - Present (expected 2028)

**Olin College of Engineering, B.S.** Needham, MA  
*Major: Electrical Engineering, Focus: Media Arts* 2018 - 2022

## RESEARCH

**Northwestern University** Sep 2023 – Present  
*Interactive Audio Lab, Advisor: Bryan Pardo*

**Adobe Research** Summer 2025  
*Research Intern, Mentors: Prem Seetharaman, Oriol Nieto, Justin Salamon*

**Northwestern University** Sep 2024 – Present  
*Other Research Collaborations*

- Music Cognition & Perception Lab (collaboration with Dan Shanahan)
- Lu Lab (collaboration with Yingdan Lu, Summer/Fall 2024)

**Music and Audio Research Lab (MARL) – New York University** Summer 2022  
*Research Assistant, SONYC*

**DSP Research – Reverb Algorithms** 2021 – 2022  
*Undergraduate Researcher, Advisor: Andrew Davis*

## PUBLICATIONS

1. **A. Chu**, H. Flores García, O. Nieto, J. Salamon, B. Pardo, and P. Seetharaman. Mix2morph: Learning sound morphing from noisy mixes. In *ICASSP 2026*
2. **A. Chu**, P. O'Reilly, J. Barnett, and B. Pardo. Text2fx: Harnessing clap embeddings for text-guided audio effects. In *ICASSP 2025*
3. P. O'Reilly, J. Barnett, H. Flores García, **A. Chu**, N. Pruyne, P. Seetharaman, and B. Pardo. The rhythm in anything: Audio-prompted drums generation with masked language modeling. In *ISMIR 2025*
4. W. Agnew, J. Barnett, **A. Chu**, R. Hong, M. Feffer, R. Netzorg, H. H. Jiang, E. Awumey, and S. Das. Sound check: Auditing audio datasets. In *AIES 2025*
5. J. B. Smith, **A. Chu**, N. Alben, S. Ding, K. Gautier, S. Garrett, B. Magerko, J. Freeman, B. Pardo, S. Ludi, T. Lee, and T. McKlin. Using co-design to investigate affordances of an expressive cs learning environment for students who are bvi. In *ASSETS 2025*
6. J. Barnett, P. O'Reilly, J. B. Smith, **A. Chu**, and B. Pardo. Ethics statements in AI music papers: The effective and the ineffective. In *NeurIPS 2025 AI for Music Workshop*
7. **A. Chu**, H. Flores García, P. O'Reilly, B. Pardo. "Text2EQ: Human-in-the-Loop Co-Creation Interface for EQ." *Accepted Late-Breaking Demo (LBD), ISMIR 2024*

## TEACHING & SERVICE

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<b>Student Volunteer Co-Chair — CHI 2026</b> <i>with Tzu-Sheng Kuo, Yuki Onishi, Esen Tütüncü</i>	2026
<b>Teaching Assistant — Northwestern University</b> <i>CS352: Machine Perception of Music and Audio</i>	Spring 2025 & Winter 2026
<b>Instructor — Northwestern University</b> <i>Generative Modeling (with Julia Barnett)</i>	Winter 2025
<b>Workshop Instructor — OCMC 2024</b> <i>Faces to Soundwaves: Unpacking Organizational Communication through Computational Multimodal Analysis (with Dr. Yingdan Lu)</i>	Sep 2024
<b>Instructor — Northwestern University</b> <i>Human-Computer Interfaces for Musicking (with Hugo Flores García)</i>	Spring 2024
<b>Teaching Assistant — Olin College</b> <i>Introduction to Sensors, Instrumentation, and Measurement</i>	2018 & 2019
<b>Reviewer</b> <ul style="list-style-type: none"><li>• NeurIPS 2025, AI for Music Workshop</li></ul>	

## TALKS

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<b>Leveraging ML to Understand the Digital Soundscape of Social Movements on TikTok</b> <i>NSF Sound Travels</i>	Sep 2024
<b>Algo-Rhythms: How Music Recommendation Systems Keep You in Tune</b> <i>Scientists for Migrant Learning &amp; Education</i>	May 2024

## HONORS AND AWARDS

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<b>NSF Graduate Research Fellowship Program Honorable Mention</b>	2025
<b>WiMIR Conference Grant</b>	2022
<b>National Merit Scholarship</b>	2018–2022
<b>Olin College Merit Tuition Scholarship</b>	2018–2022

## SKILLS

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- **Programming Languages** - Python, MATLAB
- **Machine Learning** - PyTorch, Scipy, Numpy, Scikit-learn, TensorFlow
- **Audio Production** - Logic Pro X
- **Design Methods & Prototyping Tools** - Figma, Adobe XD, Wireframing, User Journey Mapping, Participatory Design, Speculative Design, Usability Testing
- **Qualitative Research Methods** - Grounded Thematic Analysis, Interview Coding, Survey Design