

JEREMY J.X. HSIAO

Dependable, Efficient, and Organized Critical Thinker
Highly Values Collaboration, Conversation, and Creativity

*Driven by the fusion of technology and sound,
with a focus in computational systems for artistic expression.*

EDUCATION

STANFORD UNIVERSITY | BA, MA | CUM GPA: 3.667

Sept 2021 - Jun 2026 (Expected)

- Bachelor of Arts in Communications
- Double Minors: Computer Science, Music

EXPERIENCE

STUDENT RESEARCH | Remote + Stanford, CA

Aug 2024 - Apr 2025

Center for Computer Research in Music and Acoustics (CCRMA) under Adjunct Prof. Malcolm Slaney

- Translated and optimized Loudness Model for Time Varying Sounds with Binaural Inhibition from MATLAB to Python using NumPy, JAX, and SciPy. Added tests, demos, and vectorization.
- Auditory Attention Decoder: Implements Backward TRF model to predict and evaluate listeners' attention toward attended versus unattended musical instruments with existing EEG data.

Communication Capstone Project under Prof. Nilam Ram

Mar 2025 – Jun 2025

- Developed a web-app visualization platform after collecting data from 197 experimental conditions across 44 studies in EEG and music, enabling detailed filtering with an accompanying research paper.

COURSE PROJECTS | Stanford, CA

Sept 2022 - Present

- Wildfire Data Sonification: Transformed NASA wildfire and wind data from the 2025 LA wildfires into compelling musical performances.
- Sound Installation Final Project: Projection Mapping, Sound-Generation and Reactive MAX Patch
- Huffman Encoding: Huffman Encoding Tree, Map, Decoding, Handled I/O Streams
- Memory Heap Allocator: Implicit Free List Allocator and Explicit Free List Allocator
- MovieBot: Used Machine Learning to Recommend Movies + Alternative MovieBot Using OpenAI's API

PERSONAL PROJECTS

Jan 2024 - Present

- Quantum Computer Music Program:** Analyzes short input, generates one minute of quantumly random harmonic ambient music with Qiskit, audio programming, algorithms, and visualization.
- Email Bot:** Automated mass personalized email marketing for a small e-commerce business using Google Cloud Console's Gmail API, reaching 22,000 potential clients
- N-Back Position Test Application:** A comprehensive, configurable web application for administering the N-Back position cognitive task to measure working memory performance. <https://n-back-nine.vercel.app/>
- Word Hunt Solver:** A fast and intuitive solver for a 4x4 Word Hunt game. With DFS, it quickly finds and highlights English words within the grid and draws lines with arrows between the letters.

SKILLS

Programming Languages:	Python, C++, C, Java, R, MATLAB, Chuck, JavaScript
Libraries & Frameworks:	NumPy, SciPy, PyTorch, JAX, Matplotlib, React, Qiskit, D3.js
Audio Systems and DSP:	FFmpeg, MAX/MSP, Logic Pro X, Chuck, Spatial Audio
Research Methods:	Experimental Design, Data Analysis, Statistical Methods
Tools:	GitHub, Colab, Visual Studio, Xcode, Web Development
Writing & Communication:	Creative Writing, Copywriting, Science/Entertainment Journalism
Languages:	Chinese (A2), Spanish (A1), German (B1), English (Native)

WORK EXPERIENCE

- **AUDIO COMMUNICATION RESEARCH** | Technische Universität Berlin **June 2025 – Sept 2025**
Joining the Audio Communication Department at TU Berlin to work with PhD candidates on the Somunicate project. The project investigates functional sounds in human-technology interaction, developing neural network models to predict perceived communication goals and formulate design recommendations for sound designers.
- **STANFORD MUSIC LIBRARY WORKER** | Stanford, CA **Jan 2022 - Present**
Managed library database and operations. Processed books, sheet music, vinyl's, CDs, headphones, returns, checkouts, arrivals, transfers, etc.
- **YUNUS & YOUTH FELLOWSHIP WRITER** | Remote **June 2024 – Dec 2024**
Conducted 13 interviews to write engaging, in-depth narrative articles and profiles about social entrepreneur fellows and the story of their social enterprise for the Y&Y Fellowship.
- **WARNER BROS. PICTURES MUSIC INTERN** | Burbank, CA **Jun 2022- Aug 2023**
Automated compilation of 500+ music industry contacts, reducing manual processing time by 80%
Managed and updated music cue data, script breakdowns, production schedules, licensing data
- **WARNER BROS. TV PUBLICITY INTERN** | Burbank, CA **Jun 2021 - Aug 2021**
Weekly management for 10+ WB entities' social media accounts.
Overall management of 100+ accounts. Increased TikTok followers on @warnerbrostv by 22%. Produced up to 20 posts a week.

ACTIVITIES

- STANFORD CONCERT NETWORK** | Stanford, CA **Sept 2021 - Mar 2022**
 - Successfully negotiated contracts with venues and an artist's management team to organize SCN's New Member Showcase concerts with a \$2500 budget
- LIVE SOUND TECHNICIAN** | Vineyard of Hope Church | Walnut, CA **Jul 2021 - Jan 2022**
 - Live mixing of drums, keyboard, guitars, bass, and vocals
 - Set up and operation of audio equipment (mics, 32 input Yamaha live mixer, etc.)
- STANFORD SIGMA CHI ALPHA OMEGA CHAPTER** | Stanford, CA **Sept 2022 - Present**
 - Historian: Responsible for collection and protection of the Chapter history through social media, scrapbooks, organized documentation and events.

HONORS AND AWARDS

2020 Elks Scholar - Most Valuable Student Scholarship
2020 Coca-Cola Scholars Semifinalist
2019 826 National's Poets in Revolt. Poet for anthology created with Amanda Gorman and Kate Decicchio.
2019 14th Eugene O'Neill Theater Center Young Playwrights Festival Semifinalist
2018 National Student Poets Program Semifinalist (1 of 35 out of 23,000)