

**TECHNICAL
EXPERIENCE**Recurse Center - Software Developer in Residence

Aug-Oct 2023

- A self-directed retreat for programmers where I:
 - Created my own projects (below), gave and received code review, and collaborated and pair-programmed daily with a vibrant community
 - Organized workshops on developer tooling, Accessibility, and music software
- **rhythmonics**: Interactive GUI visualizing the relationship between polyrhythms and harmony
 - Written in **Python** using the pygame library, sound design from scratch
 - Designed, coded, and documented from scratch to be graphically intuitive, aesthetically pretty, and educational
- **waveformr** (**demo**): GUI playground to shape soundwaves in time domain or frequency domain
 - Developed with the **React** framework in **JavaScript**, using the **WebAudio** and **WebMIDI** APIs
 - Can draw arbitrary waveforms in time domain or frequency domain to loop at arbitrary pitches (controllable by the GUI or a MIDI keyboard)
- **chordinate** (**demo**): Communal virtual keyboard for remote piano tutoring using WebSockets
 - Developed with **Express.js** for a **Node.js** backend using the **socket.io** library. Frontend with **React** and the **WebAudio** and **WebMIDI** APIs
 - Talk music theory and tutor piano with this visual chatroom for MIDI data

Consultant and Researcher, ERC-funded **COHUBICOL** Project

May-Dec 2020

- Helped Lawyers understand Machine Learning (ML) models to collaboratively interrogate ML's integration into legal systems and its effect on legal outcomes
- Explained ML concepts and paradigms to non-technical Legal Philosophers and collaborated to create legal vocabularies for ML-based Legal Tech

Mentorship Roles and Graduate Student Instructor (GSI), UC Berkeley 2014-2020

- Taught high schoolers an Introduction to Python course I created, mentored undergraduate CS students on research projects, and **extensive** outreach
- GSI for Intro Statistics, Upper Div Complexity Theory, Grad Cryptography, and prominently featured in **a short pop-sci film** about Complexity Theory

**ACADEMIC
EXPERIENCE**PhD UC Berkeley, *Computer Science*

2014-2020

- Organized workshops and presented my research that achieved **new results** in Learning Algorithms, Cryptography, Pseudorandomness, and Complexity Theory published in my field's top conferences
- Presented my work at Theory seminars at MIT, Stanford, UCSD, etc., and collaborated with professors and students there to publish new results

BA CSU Sacramento, *Math & Computer Science, minor in Statistics*

2009-2014

- Coursework primarily in **Java**, with specialized courses focusing on, e.g., **C**, **Octave/MATLAB**, **R**, and **Scheme**
- Graduated with Highest Honors, Commencement Speaker