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TECHNICAL EXPERIENCE

Recurse Center - Software Developer in Residence — Aug-Oct 2023

- A self-directed retreat for coders 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** (**demo**): 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 intuitive, pretty, and educational
- **waveformr** (**app**): GUI playground to shape soundwaves in time domain or frequency domain
  - Developed with **React/JavaScript/CSS**, using the **WebAudio** and **WebMIDI** APIs
  - Draw arbitrary waveforms in the time or frequency domain to play with a MIDI keyboard!

ML Consultant and Researcher, ERC-funded *COHUBICOL* Project — May-Dec 2020

- Consulted on modern ML-based Legal Tech for non-technical Lawyers and Legal Philosophers
- Mentored CS PhD student and co-created legal vocabularies for core ML concepts/paradigms

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

- Created/taught Introductory Python course on Object-Oriented physics simulations for high schoolers (2023), mentored CS undergrads 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

PERSONAL PROJECTS

FlowForm (**app**): Multi-step user sign-up flow. Accessible, responsive, delightful.

- Developed with **React/JavaScript/Sass(SCSS)**
- Made from scratch to match JPEG screencaps of a design for a challenge from Front End Mentor

chordinate (**app**): 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 keyboards, plug-and-play

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