Will Rinkoff

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EDUCATION

- **California Institute of the Arts** — *Masters of Music Technology, 2024-2026*
  - DSP, Creative AI Pipelines, Music Information Retrieval, Neural Audio Synthesis, Interface Design

- **Carnegie Mellon University** — *Bachelor of Computer Science and Music Technology*
  - Software Engineering, Databases, Algorithms, Low Level Computer Systems, Linear Algebra, DSP, Machine Learning, Audiovisual Composition, Experimental Data Capture

SKILLS

Linux: 5+ years daily use, regularly assisted/debugged the systems of my peers
Languages: Javascript/Typescript, Python, C/C++, Java, Lua, Haskell, Rust, Bash
Developer Tools: Git, Vim, Make, gdb, Valgrind, Stack + Cabal
Frameworks: React, Vue.js, Node.js, Firebase, Amazon Web Services, Pandas, Godot
Software: Comfy UI, Max/MSP, Touchdesigner, Puredata, Adobe Suite, Ableton

EXPERIENCE

- **The Builders Association (Award Winning Theater Company)** — *May-October 2024*
  Fullstack Developer — New York City
  - Built a twitter clone in React for use in a live theater production
  - Created cueing system to alter the app over the course of the play
  - Worked under extremely tight deadlines in a live rehearsal setting to appease directors

- **Penrose** — *February-July 2021*
  Software Engineer — Pittsburgh, PA
  - Extended feature set of a web-based mathematics visualization tool in React
  - Designed, proposed and implemented interfaces for a domain specific programming language
  - Implemented components of compilation process from user code to SVG diagrams

- **Neort.io** — *July-August 2020*
  Frontend Developer — Japan (Remote)
  - Proposed, developed and deployed a non-trivial website feature in just over a month
  - Used Vue.js, Webgl, and Axios to develop a glsl texture loading/managing system
  - Communicated with developers across both language and timezone barriers

- **Resonant Cavity** — *May-August 2019*
  Audio Processing / Machine Learning Intern — Minneapolis MN
  - Developed tools for deep-learning audio analysis/synthesis inside Python with keras
  - Implemented/worked with vocal-analysis and synthesis machine learning architectures
  - Developed documentation for in-house tools

SELECTED PROJECTS

- **lua_tidavim** — *Laptop Performance Interface*
  - Designed a Dynamic Performance Interface for Sequencing Language Tidalcycles
  - Invited to perform at creative technology events/conferences around United States and Europe
  - Tech used: Neovim, Lua, Tidalcycles, Supercollider

- **'Look Closely'** — *Web-Based Experimental Installation Work*
  - Web-based artwork involving a digital synth made in controlled using iris movement, with reactive visual elements made in Three.js and WebGL
  - Created a system to design performant web-based synths/instruments around hand and face gestures
  - Tech used: Media Pipe, Three.js, Web Assembly, Faust Audio, Html, Javascript

- **Lissajous A/V Synth** — *Software Audio Synthesizer*
  - Designed real-time audio synthesis pipeline that transforms video data to audio that resembles the original video data when viewed via Lissajous Oscilloscope
  - Tech used: Python, Pandas, XServer, C, Ffmpeg, OBS

AWARDS

- **International Conference on Live Coding**
  Utrecht, Netherlands, 2023 Shanghai, China, 2024

- **Grants** — *BXA Grant (*2), CFA Grant, Undergraduate Research Grant, School of Music Travel Grant*