

EXPERIENCE

- **Superhuman (funded by Andreessen Horowitz, First Round Capital)** San Francisco, California
Software Engineer May 2018 - Aug 2019
 - Email client for Electron / iOS. Team of 4 (12-ish engineers total). Mostly worked on the iOS client (UIKit/Swift). Occasionally contributed to the Electron app (React).
- **Cydia**
Vendor Feb 2014 - Dec 2018
 - Sold software through Cydia Store, an app store for jailbroken iOS devices. See CYDIA PRODUCTS. Mostly solo, with occasional collaboration with community members and users.
- **Quixey (funded by Alibaba, SoftBank, Goldman Sachs)** Palo Alto, California
Software Engineer (Intern) Jan 2012 - July 2012
 - Quixey Challenge (recruiting tool). Team of 3. Used Meteor (JavaScript framework).

CYDIA PRODUCTS

- **EQE (released 2017) / EqualizerEverywhere (released 2014)**: About 8K weekly active users. <https://eqe.fm>
EQE has two components. A system-wide parametric equalizer (the only of its kind on iOS) and a Last.FM-like service that lets users create a profile, track their playback history, post on a message board, and keep a backup of their presets online. The iOS side required reverse engineering, audio DSP, app development, and low-level iOS systems engineering. Server-side, I used OpenResty (an nginx distribution) for the application, with Postgres for persistent storage and Redis as a message broker. It can handle about 2K requests per second on a cheap \$3.50 VPS (FreeBSD).
- **Cylinder (released 2014)**: Exposes a subset of Core Animation APIs to a beginner friendly Lua-based platform for scripting icon animations on the home screen. Over 2.5 million total downloads and probably more than 50K active users currently.
Review: [youtube.com/watch?v=Y-Pk-XDVj-o](https://www.youtube.com/watch?v=Y-Pk-XDVj-o)
Source: github.com/rweichler/cylinder

OPEN SOURCE CONTRIBUTIONS

Non-exhaustive.

- **Zebra**: Initial R&D and localization support. <https://github.com/wstyres/zebra>
- **Cylinder**: Author / Maintainer. <https://github.com/rweichler/cylinder>
- **gmusicapi**: Reduced network usage for certain types of tracks. <https://github.com/simon-weber/gmusicapi>

OTHER PROJECTS

Non-exhaustive.

- **Meatpick**: Basic Calendly clone. <http://meatpick.com>
- **gbrc**: Gameboy emulator, written from scratch in C. Runs Pokemon Red.
- **Lucy**: Lua / Objective-C bridge and runtime analysis/debugging tool for iOS. <https://github.com/rweichler/lucy>
- **jjjj**: GUI package manager for iOS (based on dpkg, similar to Cydia). <https://github.com/rweichler/jjjj>
- **Aite**: Custom build system used to develop software for Cydia. <https://github.com/rweichler/aite>
- **Sunnyveil**: 3D game engine written in C and LuaJIT. Has Lua bindings to Bullet (physics engine) and OpenGL.
- **Wuigi**: Mario clone (kind of like Mario Maker), written in Java. <https://github.com/rweichler/wuigi>
- **Luna Roja**: Edit of mGBA, giving online multiplayer to Pokémon Red. <https://hax.iimarckus.org/topic/7112/>

SKILLS

- **Languages**: C/C++, Lua/LuaJIT, Objective-C, Swift, JavaScript, Python, Go
- **Tools / Software**: SQLite, C FFIs, dpkg/APT (Debian/Ubuntu package management), OpenGL, Git, Vim, devKitARM (Nintendo 3DS toolchain)
- **Backend / Infra**: OpenResty (nginx "distribution"), Postgres, FreeBSD, Redis, dpkg (Debian)
- **iOS**: Core Audio, Core Animation, Xcode, build systems, Objective-C / LuaJIT interop, Realm, IDA, cycript, MobileSubstrate, Objective-C runtime, inter-process communication, ReactiveSwift

EDUCATION

- **Recurse Center**: Jan 2020 - March 2020
- **UC Davis**: Computer Science, Class of 2017
- **Homestead High School**: Cupertino, California