

EXPERIENCE

- **Superhuman** San Francisco, California
Software Engineer May 2018 - Aug 2019
 - Email client with much of the heavy lifting done on the client-side. Lot of hype in Silicon Valley. Users included (at one point or another) Steve Huffman (Reddit), Michael Lopp (Apple/Slack), Nat Friedman (Github).
It was a small startup. 6 engineers (including me) + 2 engineering managers when I joined. I worked with a team of 4 on the iOS app (Swift, Objective-C, C++, JavaScript). I also occasionally contributed to the web frontend (Electron / React) and the backend (Go / Postgres / Redis / GCP).
On the iOS side I fixed many crashes/bugs that affected thousands of paying users, added UI/UX improvements to make navigating the app easier and more pleasant, automated the build system to tag the git repo for easier debugging, reduced a significant amount of tech debt, and more.
- **Cydia** Feb 2014 - May 2018
Indie iOS Developer
 - I made EQE (EqualizerEverywhere) and Cylinder. See "Cydia Products" section for more details. Search Google for something like "cylinder jailbreak". When jailbreaking was at its peak I had about 2M active users.
I also contributed the developer community such as writing documentation on iphonedevwiki.net, doing research (APT/dpkg clients, Lua/Objective-C interop, SpringBoard alternatives), and helping out on IRC/Discord.
If I were to estimate, in total, my products are used by about 20% of active jailbreak users. See install counts here: apt.thebigboss.org/stats.php?dev=rweichler
- **Quixey** Palo Alto, California
Software Engineer (Intern) Jan 2012 - July 2012
 - Helped build the Quixey Challenge (recruiting tool) using the Meteor framework (JavaScript).

CYDIA PRODUCTS

- **EQE (released 2017) / EqualizerEverywhere (released 2014)**: About 8,000 weekly active users. EQE has two components. A system-wide parametric equalizer (the only of its kind) and a Last.FM-like service that lets users create a profile, track their playback history, and keep a backup of their presets online. The iOS side required reverse engineering, audio DSP, app development, and low-level iOS system engineering. The backend is written in Lua using OpenResty (an nginx distribution), using Postgres for persistent storage and Redis as a message broker. It can handle about 10K requests per second on a cheap \$3.50 VPS. It used to be a commercial product until Cydia Store shut down in December 2018. Now it's free. More info: eqe.fm/about
- **Cylinder (released 2014)**: Over 2.5 million total downloads and probably more than 100,000 active users (I have no metrics other than download counts/dates). Animation "platform" that exposes a Lua API for cool icon animations when swiping on the home screen. Large install base (~1M when jailbreaking was more popular, ~100K nowadays).
Review: [youtube.com/watch?v=Y-Pk-XDVj-o](https://www.youtube.com/watch?v=Y-Pk-XDVj-o) Source: github.com/rweichler/cylinder

OTHER PROJECTS

- **Meatpick**: Basic Calendly clone. <http://meatpick.com>
- **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**: OpenResty (nginx "distribution"), Postgres, SQLite, FFIs, Redis, OpenGL, FreeBSD, Git, Vim, Xcode, devKitARM (Nintendo 3DS toolchain)
- **iOS**: Core Audio, app development, build automation, Objective-C / LuaJIT interop, Realm, SQLite, reverse engineering (IDA, cycrypt), MobileSubstrate (jailbreak only), Objective-C runtime, inter-process communication (jailbreak only), RxSwift

EDUCATION

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