

EXPERIENCE

- **Superhuman** San Francisco, California
Software Engineer May 2018 - Aug 2019
 - Email productivity startup. 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 company, 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)**: 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, 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 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. About 8,000 weekly active users. More info: eqe.fm/about
- **Cylinder (released 2014)**: Animation "platform" that exposes a Lua API for cool icon animations when swiping on the home screen. Over 2.5 million total downloads and probably more than 100,000 active users (I have no metrics other than download counts/dates).
Review: 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**: SQLite, C FFIs, OpenGL, Git, Vim, devKitARM (Nintendo 3DS toolchain)
- **Backend / Infra**: OpenResty (nginx "distribution"), Postgres, FreeBSD, Redis
- **iOS**: Core Audio, Xcode, build automation, Objective-C / LuaJIT interop, Realm, IDA, cycript, MobileSubstrate, Objective-C runtime, inter-process communication, RxSwift

EDUCATION

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