

SKILLS

- **Languages:** Lua/LuaJIT, Objective-C, C/C++, Swift, JavaScript, Python, Go
- **Tools / Software:** OpenResty (nginx "distribution"), Postgres, SQLite, 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, Realm, SQLite, inter-process communication (jailbreak only), RxSwift

EXPERIENCE

- **Superhuman** San Francisco
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 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, 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. Search Google for something like "cylinder jailbreak". When jailbreaking was at its peak I had about 2M active users. See "Cydia Products" section for more details.
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*
 - Made HTML templates for marketing emails and helped build the Quixey Challenge (recruiting tool) using the Meteor framework (JavaScript).

CYDIA PRODUCTS

- **EQE / EqualizerEverywhere:** System-wide parametric equalizer, the only of its kind. 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:** Animation "platform" that exposes a Lua API for cool icon animations when swiping the home screen.
Review: youtube.com/watch?v=Y-Pk-XDVj-o
Source: github.com/rweichler/cylinder

OTHER PROJECTS

- **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/>

EDUCATION

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