

## SKILLS

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- **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

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- **Recurse Center** New York City  
*Participant* Jan 2020 - March 2020
  - Self-directed, community-driven educational retreat for programmers. I'm only in my first week, but so far I'm working on a toy GameBoy emulator (in C) and have paired with someone else on a toy DAW written in Elm.
- **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.js) and the backend (Go / Postgres / Redis / GCP). Standard run-of-the-mill bug fixes, feature work, and occasional cleanup/refactoring you'd expect at a startup.
- **Cydia** Feb 2014 - May 2018  
*Indie 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](http://apt.thebigboss.org/stats.php?dev=rweichler)
- **Quixey** Palo Alto, California  
*Software Engineer (Intern)* Jan - July 2012
  - Low-pressure intro to the industry. Learned about the whole Silicon Valley VC scene, and standard development practices at the time (CoffeeScript and MongoDB were the hyped-up frameworks during this time).

## CYDIA PRODUCTS

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- **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](http://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](https://youtube.com/watch?v=Y-Pk-XDVj-o)  
Source: [github.com/rweichler/cylinder](https://github.com/rweichler/cylinder)

## SIDE PROJECTS

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- **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:** GameBoy emulator (based on mGBA) giving online multiplayer to Pokémon Red.  
<https://hax.iimarckus.org/topic/7112/>

## EDUCATION

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- **UC Davis:** B.S. Computer Science, Class of 2017
- **Homestead High School:** Cupertino, California