

School & Work

University of California, Santa Cruz 2010 - 2014

B.S. Physics, Math minor

- Researched in a biophysics lab, studying protein folding kinetics using **MATLAB**.
- Studied abroad in Sweden for one semester. Classes taken includes **Artificial Neural Networks**.

X2Engine August 2014 - May 2015

Full Stack Engineer

- Developed core features of an open source CRM platform, written using the **Yii PHP Framework**.
- Designed the back and front-end of a drag-and-drop charts interface using **D3.js**.
- Overhauled the look and feel of the app, introducing the **Sass templating framework**.

Gravity Current Inc Dec 2015 - Present

Senior Software Developer

- Designed and constructed music visualization software for **MacOS** with a small team.
- Engineered major components of the app, implementing and using technologies such as **C++**, **Objective-C**, **ES2015**, **Webpack**, **React**, **Redux**, **OpenGL**, and **OpenCV**.
- Created a public API for user made extensions for the software—advanced users can combine **JSON**, **Javascript**, and **GLSL** to create their custom visualizations for the software. Implementation included introducing a Javascript engine with custom bindings to our software.
- Introduced and built a full testing suite, that included unit tests in multiple languages, a **Selenium** bridge to automate GUI testing, and proper automation for all the tests.

Projects

I have created hundreds of self-motivated projects since I taught myself to program in middle school. This is a very small sample of a large portfolio of projects I am very proud of.

Senior Thesis

- Calculated and analyzed orbits of a particle orbiting the sun with the subtle effects of Jupiter's gravity.
- Wrote **python** code, which utilized **MatPlotLib** and **SciPy**.

EvoJS

NPM Package

- Authored a genetic algorithm module using **Coffeescript** that makes running evolution simulations quick to set up.
- Wrote a proper README and examples to accompany the packages API.

Tinder for Pebble

Pebble Watch App

- Cloned an outdated public repository for a Tinder app for the pebble watch.
- Improved the app to be in full color, where as before it was in greyscale, among other new features.
- Re-released the MIT-licensed software in the Pebble app store, attributing the original author.

Achievements

UCSC Hackathon, 2014 and 2015

- Placed 2nd place in the UCSC Hackathon in **both 2014 and 2015**.
- 2015 Project used a pebble watch to send alerts to and from a **Ruby on Rails** web app.