

Experience

Software Engineering Intern - NASA Jet Propulsion Laboratory

June 2015 - August 2015

- Member of the Orbiting Carbon Observatory - 2's Science Data Operations System team.
- Developed and deployed a realtime data visualization and search platform using Elasticsearch, Logstash, and Kibana (ELK) which processed software logs produced from OCO-2's telemetry data pipeline.
- Published an exhaustive user manual of the ELK project in NASA's document archive to assist engineers in expanding the platform to other agency projects.
- Created automation tools with Python to scrape product download statistics and visualize the data with D3.

Undergraduate Researcher - UC Berkeley

September 2014 - May 2015

- Member of the Bribecaster research group sponsored by the Computer Science & Public Policy Department.
- Coordinated research project with Professor Jennifer Bussell to create a dashboard interface that tracked government corruption in India by crowdsourcing information from local citizens through automated messages and phone calls.

CS170 (Algorithms) Reader - UC Berkeley

August 2015 - Present

- Graded problem sets and held office hours for UC Berkeley's upper division course on computer science theory and algorithms.

CS61BL (Data Structures) Lab Assistant - UC Berkeley

June 2014 - August 2014

- Provided class instruction, assisted students, and graded assignments during labs for UC Berkeley's course on data structures.
- Created web application (<http://beautifulsearchtrees.herokuapp.com>) to help students learn the insertion, deletion, and search methods of popular tree data structures through animation done in D3.

Cofounder - California Records

May 2013 - March 2015

- Founded an independent record label with two other Berkeley students and managed bookings and production sessions.
- Established Youtube channel (<https://www.youtube.com/c/CaliforniaRecords>) with over 250,000 views and 1,700 subscribers.

Education

University of California, Berkeley

Expected Graduation December 2016

B.A. in Computer Science & B.A. in Statistics

Relevant Coursework: CS164 (Compilers & Programming Languages), CS188 (Artificial Intelligence), CS170 (Algorithms), CS162 (Operating Systems), CS186 (Databases), CS189 (Machine Learning)

Skills

Proficient in: Python, Django, HTML, CSS, Javascript, jQuery, Java, Android **Experience in:** C, C#, SQL, Elasticsearch, Logstash

Projects

SeedIt - Android Mobile Application

Website: <http://getseedit.com>

- Led the development of the Seedit Android gardening application for the Citris Mobile App Challenge.
- Developed backend models for the app's plant database with Parse and designed the app's UI using Material Design patterns.
- Built recommendation and notification system that uses on location, time, and weather data to help optimize harvest yields.
- Prototyped hardware sensors connected to a Raspberry Pi that relayed soil nutrition and soil moisture updates to mobile app.

Bribecaster - Django Web Application

Repo: <http://github.com/jeffzheng1/Bribecaster>

- Created backend models for storing Indian citizen data and a dashboard interface with various data visualization packages.
- Programmed a communications network using Twilio to send robocalls and SMS messages to collect personal information.

Festiv - Django Web Application

Website: <http://festiv.me>

- Developed web application using the SoundCloud API to deliver curated playlists to users by learning their music preferences.

Algovision & the 164 Language - Node.js Web Application

Repo: <http://github.com/jeffzheng1/algovision>

- Built web application using Node.js to visualize the call stack of algorithms written in 164, an object oriented programming language my team developed throughout the entire Fall 2014 semester at UC Berkeley.
- Used the Wolfram API to analyze the approximate runtime of a function from the structure of the call stack and plot the runtime function on a graph using D3.