

## EDUCATION

University of California, Berkeley | Fall 2013 – Fall 2017 (expected) | Computer Science, B.A. and Cognitive Science, B.A.

Selected Coursework (Completed | In Progress):

The Structure and Interpretation of Computer Programs (CS 61A), Discrete Math and Probability Theory (CS 70), Data Structures (CS 61B), Linear Algebra and Differential Equations (MATH 54), Great Ideas in Computer Architecture (CS 61C), Introduction to Artificial Intelligence (CS 188), *Efficient Algorithms and Intractable Problems* (CS 170), *Introduction to the Internet: Architecture and Protocols* (CS 168)

## PROJECTS

**Track 158: Taxis** (Python, Max) [repo: <https://github.com/emilytsai/track158-taxis>]

- Created a program that plays unique sequences of sounds to represent the taxi's path over the course of 24 hours by sending timed OSC bundles of polyline-decoded taxi trip data to Max Cycling '74 and manipulating the dataset information to direct alterations in frequency, waveform, and amplitude.

**Cal Day Scheduler** (Ruby on Rails) [repo: <https://github.com/emilytsai/project-calday>]

- Designed and developed a model website for student organizations to easily create and share events, and for students and visitors to view, save, and organize their own personalized schedules for Cal Day events.

**Gitlet—CS 61B** (Java)

- Built a mini version-control system based on Git that saves backups of files and enables users to view, edit, and restore different versions of saved files using basic commands: commit, checkout, log, branch, and merge.

## EXPERIENCE

Computer Science Department, UC Berkeley

**Undergraduate Student Instructor, CS 61A** 08/2016 – Present

- Teach discussions, lab sections, and hold office hours for students in an introductory programming course, covering a range of topics including abstraction, recursion, OOP, and data structures.

Computer Science Department, UC Berkeley

**Tutor & Mentor, CS 61A** 06/2015 – 05/2016

- Strengthened student understanding of core programming concepts and technical skills by providing individualized guidance, conducting weekly tutoring sessions, and offering academic support.
- Improved student performance on their implementation of fundamental algorithms and code-writing efficiency by assisting students with debugging their homework/projects and by grading students' project compositions.

The Berkeley Project

01/2016 – 05/2016

**Web Committee Member**

- Collaborated with team members to establish the online presence of The Berkeley Project: a student organization that aims to connect the students and residents of Berkeley through hands-on community service.

The Daily Californian

**Online Developer**

02/2016 – 05/2016

- Created new web pages for and provided upkeep on the existing framework of the [dailycal.org](http://dailycal.org) to establish, equip, and enhance the online platform of *The Daily Californian* newspaper.

## LEADERSHIP

REACH! Asian/Pacific Islander Recruitment and Retention Center

**Program Coordinator** 09/2013 – 05/2015

- Organized mentorship events dedicated to providing traditionally under-represented students with resources to higher education for over 200 high school students from low-income, under-resourced communities.
- Trained and developed skills in the intern and mentor cohorts. Increased organizational efficiency, collaboration, and productivity by effectively delegating/overseeing responsibilities and fostering teamwork.

## SKILLS

**Languages** Python, Java, HTML, CSS, (Knowledge of: C, JavaScript, PHP, Ruby, SQL)

**Frameworks** Ruby on Rails

**Tools/Technologies** Git, Max, LaTeX, Lightroom