# Matthew Jeng

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## EDUCATION

**University of California, Berkeley**                                    *Expected Graduation: May 2020*
B.S. Electrical Engineering and Computer Science                                    *GPA: 3.8 / 4.0*
(Relevant Coursework)

- Efficient Algorithms and Intractable Problems
- Great Ideas in Computer Architecture (Machine Structures)
- Data Structures and Algorithms
- Introduction to Artificial Intelligence
- Probability and Random Processes
- Designing Information Devices and Systems (EE)

## TECHNICAL SKILLS

*Proficient:* Python, Java, Scheme
*Familiar:* Git, C, SQL, HTML/CSS, Javascript, Objective-C

## WORK EXPERIENCE

**CS 61A Undergraduate Student Instructor (TA)**                          *June 2017 – present*

- Third semester advising, writing exam questions, and teaching ~35 students(/semester) for a core Berkeley CS class
- Partake in weekly meetings to assess and adjust the course to fit student needs and to improve it for future semesters
- Guest lectured a class of 400 students on the structure of Scheme, one of the three major languages used in the class

**Schlumberger Internship Project Lead**                                  *January 2017*

- Programmed and developed operating procedures for an instrument used in the assembly of a proprietary product
- Contacted prospective partners of Schlumberger regarding the automation of common assembly-line procedures

**Eye Level Tutoring Center**                                            *June 2016 – August 2016*

- Taught math and english five days a week to 15 children ranging from ages 5 to 13
- Graded students' quizzes, yielding an average 20% improvement in quiz score from the start to the end of the program

## PROJECTS

**Jukebox Control System (Python)**                                      *February 2017 – May 2017*

- Constructed from scratch a jukebox that could play music from a customizable playlist preloaded on the memory card of a Raspberry Pi or using a Bluetooth/AUX connection to compatible devices implemented using Python on the RPi
- Acted as the project lead, coming up with the overall design then compartmentalizing the work and assigning teams
- Programmed the built-in music functionality on the Raspberry Pi and patterns into the jukebox's lights using an Arduino

**Bear Maps (Java)**                                                     *April 2017*

- Developed a small-scale version of Google Maps for the Bay Area, including zoom and route-mapping functionalities
- Parsed XML data files to retrieve location information used to autocomplete user input and tag specified locations
- Rendered map image tiles efficiently in correspondence to user queries, minimizing lag for zoom in/out functions

**Database Management System (Java)**                                    *February 2017 – March 2017*

- Developed a small-scale relational database management system like SQL, queried using domain specific language
- Used Java to design database implementation, leveraging different packages to parse user input and query database
- Utilized test-driven development using JUnit to refactor code for efficiency and to ensure working progress

**Tab Manager (HTML/CSS, Javascript)**                                   *June 2017 – July 2017*

- Created a Google Chrome tab manager extension with tab and window storage functionality using Google's API

## ORGANIZATIONS/LEADERSHIP

**Eta Kappa Nu (HKN) Industrial Relations Chair**                        *January 2018 – present*

- Member of the EECS honor society at Berkeley, which accepts the top quarter of students who have declared the major
- Contact companies to schedule info sessions and organize the largest STEM on-campus career fair held each semester

**Theta Tau Emerging Events Chair**                                      *January 2018 – present*

- Organize the Western Regional Conference which brings over 18 different Theta Tau chapters to one campus to mingle
- Contact keynote speakers, alumni panelists, other chapter executives, and campus supervisors to create the event