

Alexander Xu

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Education

University of California - Berkeley, *B.A. Computer Science*

Spring 2023

- **GPA:** 3.57
- **Classes:** Data Structures, Interpretation of Programs, Designing Information Systems, Foundations of Data Science

Skills

Python (*Flask, NumPy, gspread, OpenCV*), **Java, SQL, Linux** (*Ubuntu, Fedora*), **Git, HTML/CSS/Bootstrap, Swift**

Leadership and Experience

Software Team for CS61A, *Developer*

Jan 2020 – present

- Developing software and resources for Berkeley's introductory CS class (over 1500 students).
- Implementing new features for CS 61A's office hour help queue, like student grouping and tracking.
- Tools: Python, HTML/CSS, Javascript, Java.

Course Staff for CS61A, *Academic Intern*

Jan 2020 – present

- Tutored a class of ~20 students in CS 61A lab sessions and office hours.
- Concepts included: recursion, functional programming, trees, linked lists, SQL, etc.

Technical Projects

Hype Man @ LA Hacks, *computer vision with Raspberry Pi*

Mar 2020

- Designed and built a personal theme song machine; it recognizes your face, then plays your set theme song.
- Leveraged OpenCV to recognize faces, then hooked into a music player daemon, with SQL to track user profiles.
- Tools: SQL, OpenCV, Python, Mopidy, Raspbian.

Fifteen @ TreeHacks, *connecting strangers with machine learning*

Feb 2020

- Built a website and matching algorithm to help individuals with social anxiety form lasting friendships.
- Features live chat functionality with socket, and real-time user profile matching with NP and SQL.
- Tools: Python, Flask, HTML/CSS/JS, Socket, NumPy, SQL, Firebase. github.com/alegg/fifteen.

Enigma, *simulated encryption machine*

Feb 2020

- Recreated the WW2 encryption machine, capable of handling all possible rotor and plugboard configurations.
- Tools: Java, HashMaps, ArrayLists, Scanners, string hacking

SSD Bot, *scraping and parsing data from r/buildapcsales*

Dec 2019 – Jan 2020

- Wrote a Python bot that scrapes information about the latest SSDs and ranks comments for informative value.
- SSD Bot automatically posts its results to over 600,000 users.
- Tools: Python, PRAW, gspread, oauth2, SQL. github.com/alegg/reddit-bots.

Data Science Society, *Is This Headline Sarcastic?*

Sep 2019 – Dec 2019

- Employed three classifiers (naive Bayes, k-nearest neighbors, and multilayer perceptron) to determine whether a news headline was likely to be sarcastic, as part of Data Science Society's Fall 2019 General Membership program.
- Tools: Python, pandas, scikit-learn, numpy. github.com/alegg/dss-2019.

Arugula @ Cal Hacks, *Tinder for language learners*

Oct 2019

- Created an iOS app designed to match beginners trying to learn a language with peers of their level.
- Tools: Swift, Python, Flask, Firebase. github.com/alegg/arugula.