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

Leadership and Experience

CS 61A Software Development Team, *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.

CS 61A Course Staff, *Academic Intern*   Jan 2020 – present
- Tutor students in CS 61A lab sessions and office hours.

OC Science, *President*   2015 – 2019
- Led 200+ volunteers to spread interest in STEM among underserved communities in Orange County.
- Created hands-on workshops, such as dry ice comet building and elephant toothpaste, for hundreds of kids.
- Received President's Volunteer Service Award three years in a row for over 500 hours of work.

Technical Projects

Fifteen @ TreeHacks, *connecting strangers with machine learning*   Feb 2020
- Built a website to help individuals with social anxiety form lasting friendships, especially for college freshmen.
- Rewrote frontend for Flask and used socket.io to adapt a live chat feature.
- Dynamic pages for friend matches regularly updated based on backend SQL.
- Tools: Python, Flask, HTML/CSS/JS, Socket, NumPy, SQL, Firebase. Link: *github.com/aleggs/fifteen.*

Enigma, *simulated encryption machine*   Feb 2020
- Built simulator that could handle all possible initial configurations of the machine and message formats
- 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 from Google Sheets and Reddit comments.
- Ranked the relevance of scraped comments and compiles them in a SQL database.
- SSD Bot automatically posts its results to over 600,000 users.
- Tools: Python, PRAW, gspread, oauth2, SQL. Link: *github.com/aleggs/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. Link: *github.com/aleggs/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. Link: *github.com/aleggs/arugula.*

Skills

Python *(Flask, NumPy, WTForms, PRAW, gspread)*, **Java**, **SQL**, **Linux/Unix** *(VMWare)*, **Git**, **HTML/CSS/Bootstrap**, **Swift**