



bren-a.github.io

#### Contact Information

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#### Address

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#### Programming Languages

- Python
- C/C++
- HTML/CSS
- Lisp
- Haskell
- OCaml
- Java

#### Skills

- Bash Scripting
- UNIX/LINUX
- LaTeX
- MS Office

#### Languages

- English
- Tagalog
- French

# Brendan Alger

## Student

## Education

**Graduation Jun, 2019: University of California, Los Angeles**

Bachelors in Linguistics and Computer Science

## Projects

### 2019, *Reddit Bot*

Created a bot for social media site Reddit.

Project Details:

- Discovered that Reddit has no simple way to follow posts about a specific topic.
- Solved this problem by creating a program in Python using Reddit's API
  - The API allows easy interaction and data manipulation of Reddit's website.
  - User gives bot a list of subreddits and key words that they want to track.
  - Bot will periodically call the Reddit API and collect data from the given subreddits.
  - Python then parses and filters the data based on the keywords.
  - Bot will then send a message to the user notifying them of the posts.

### 2018, *Cesar Cipher*

Designed a program in C++ that can crack a Caesar Cipher.

Project Details:

- Finds isomorphs using a Dictionary list.
- Saves matches into a hash map to that uses a dynamically allocated array of node pointers to a binary search tree.
  - Shortened insertion and search to  $O(1)$  in most cases using a hash map.
  - Uses a binary search tree instead of a linked list to speed up search to  $O(\log N)$

### 2018, *NachenBlaster*

Developed an object-oriented 2D space-shooter game in C++

Project Details:

- Uses FREEGLUT for graphics.
- Uses polymorphism to combine all game objects into a linked list.
- Using a linked list allows items from list to be deleted in  $O(1)$ .
  - Every object is checked each frame, so linked list does not decrease access efficiency.

## Experience

### Jun 2017 - present: UCLA Recreation

*Head Lifeguard*, Apr 2018 - present; *Lifeguard*, Jun 2017 - Apr 2018

Job Details:

- Develop and lead employee training exercises once a month.
- Work in small groups during high pressure situations.
- Assess situational risk and manage it accordingly.
- Mediate disputes and listen to the concerns of patrons and staff.
- Observe hundreds of people concurrently and proactively scanning the environment to ensure everyone's safety.