

# Alexander Lee

San Diego, CA | (510)379-8091 | alexanderlee014@gmail.com

## EDUCATION

---

### University of California, San Diego

Major in Mathematics - Computer Science

Cumulative GPA: 3.81

Relevant Coursework: Data Structures and Algorithms, Software Tools

San Diego, CA

Expected June 2024

## PROJECTS

---

### Graph Representation(C++)

- Given a Graph API, represent undirected weighted graphs
- Uses various data structures including priority queues, queues, tuples, hashmaps, to document information about graphs including shortest path both unweighted and weighted (Dijkstra's Algorithm), connected components.

### Wordle Game(C)

- Built a Wordle Clone in C that generates a random 5-letter word given a list of them and that gives five chances for the player to correctly guess the word
- Uses pointers, string buffering, malloc functions to develop core algorithmic logic to detect user input and reveal correct letters from the selected word

### Basic File System Structure (Java)

- Designed and implemented a **HashMap** data structure to store data for a basic file system
- Developed a custom File System object that adds, reads,removes, and finds files in our file system based on their file name, date, and directory of file

### Image Filters (Python)

- Built a blending filter that combines two images rgb values together
- Developed a mirror filter which flips the given image horizontally
- Worked with Python using numpy and pillow packages

### Personal Portfolio Website(Unfinished)

- Designing and developing a personal **responsive** website using HTML, CSS, and JS
- Displays responsiveness through media queries and Flexbox

## ADDITIONAL

---

**Technologies:** VSCode, Java(Proficient), Python(Proficient), HTML(Proficient), CSS(Proficient), JavaScript(Beginner), Git/Github(Proficient), MATLAB(Beginner), C(Proficient), C++(Proficient), Assembly(Proficient), GO(Beginner)