

Alexander Lee

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EDUCATION

University of California, San Diego

B.S Computer Engineering

Cumulative GPA: 3.81

San Diego, CA

Expected December 2024

Relevant Coursework: Data Structures and Algorithms, Software Tools, Introduction to Software Engineering, Computer Architecture, Introduction to Parallel Programming, Principles of Operating Systems, Database Systems Principles

PROJECTS

Recipe Application(Java)

- Utilized OpenAI's **APIs** including ChatGPT's and Whisper's API to incorporate voice recognition into application
- Used a local server as the backend to store data in a **MongoDB** Cluster, to save recipes for the application and a user login process
- Worked in a team of 6 in an **AGILE** environment to plan and build the application
- Implemented **Continuous Integration** using Gradle, automating the build and unit tests, to ensure consistent and reliable software delivery

Graph Representation(C++)

- Extracted and processed large dataset files to be used in a developed Graph API to construct undirected graphs of the dataset.
- Employed various data structures, including priority queues and hashmaps, to track computation of shortest paths (Dijkstra's Algorithm) of a given dataset
- Represented a HIV Dataset in the form of undirected graphs that replicated how researchers studied the spread of HIV in populated cities.

Wordle Clone(C)

- Designed Wordle Clone in C that generates a random 5-letter word
- Detected user input and managed core algorithmic logic to reveal correct answers to simulate a Wordle Clone game

Personal Portfolio Website

- Developed a personal **responsive** website using HTML, CSS, and Vanilla JS
- Displays responsiveness through CSS Grid, Flexbox, and Media Queries

SKILLS

Languages: Java, Python, C++, C, HTML, CSS, JavaScript, GO, MATLAB, NoSQL(MongoDB),

Frameworks: React

Tools & Technologies :Git, Github, Github Project CI, Web API's , JUnit,

Design Patterns: Strategy, Observer, MVP, Builder, Mediator, Abstract Factory, Adapter,

Techniques: Agile Software Process, BDD, SRP, Dependency-Inversion, OCP