

# Olivia Du

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## EDUCATION

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**University of Southern California (USC), Viterbi School of Engineering & Marshall School of Business** **Los Angeles, CA**  
Bachelor of Science: Computer Science/Business Administration  
GPA: 3.98  
Expected 2024

Activities & Societies: Thematic Option Honors Program, Engineers Without Borders, Association of Computing Machinery, Alpha Omega Epsilon Sorority, Oriana Choir, USC Badminton Team

Honors & Awards: Presidential Scholar (2020-...), Dean's List (F2020, S2021, F2021)

## RELEVANT COURSEWORK

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**Software Engineering** - software development tools and practices.

- Test driven development, object oriented design, agile method, projects in Android Studio.
- Group project (USCDoorDrink): Android app to search, browse, and order drinks through merchant and customer accounts.

**Intro to Algorithms and Theory of Computing** - rigorous proofs.

- Greedy algorithms, dynamic programming, divide and conquer, max flow/min cut, NP completeness.

**Principles of Software Development** - OOP, concurrent computing, networking, databases, servlets in Java.

- Final group project (SwapLists): web app to collaborate on lists in real time (built with React, Java, and SQL).

**Data Structures and Object Oriented Design** - linear structures, search structures, and graphs in C++

- Example projects: sparse matrix with linked lists, simplified microblog site (parsing, searching, and displaying "tweets"), implementing an m-ary heap, BST, AVL tree, and hash table with quadratic probing.

**Other courses:** Linear Algebra, Probability Theory, Organizational Behavior and Leadership, Business Communication

## SKILLS

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**Languages:** *Proficient:* C++, Java, *Working knowledge:* Python, *Learning:* HTML, CSS, SQL, React

**Tools:** VSCode (IDE), Android Studio (IDE), gdb (debugging), Valgrind (memory profiling), git (source code management)

**Soft Skills:** Empathy, Organization, Active Listening, Critical Thinking, Team Management, Adaptability

## EXPERIENCE

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**USC Viterbi School of Engineering** **Los Angeles, CA**  
*Course Producer(Undergraduate TA) —CSCI 104: Data Structures and Object Oriented Design* January 2022–Present

- Lab instructor: headed lab section (~35 students) to teach students new concepts and tools.
- Held office hours to individually assist students.
- Assisted in grading assignments and assessments and providing feedback between students and the professor.

*Course Producer—CSCI 102: Fundamentals of Computation* August 2021–December 2021

**CS@SC** **(Virtual) Los Angeles, CA**  
*Teaching Assistant* Summer 2021

- Lead a group of 6 to 8 students (grades K-12) through computer science summer camp curriculum and activities.
- Empowered and encouraged youth, especially underrepresented youth, to gain practical experience with the CS field.

## INVOLVEMENT

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**USC Association of Computing Machinery** **Los Angeles, CA**  
*Social Media Coordinator* February 2022–Present

- Branded USC ACM through media accounts including Facebook and Instagram.
- Promoted virtual and in-person community events.

**USC Engineers Without Borders** **Los Angeles, CA**  
*Malawi Sanitation Project Team—Research Committee Head* September 2020–Present

- Lead a committee of 7 students.
- Researched latrine options to present to the community.

**Personal Interests:** Reading, Painting, Drawing, Photography, Learning Ukulele