

WILLIAM DAI

Alameda, California, USA

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EDUCATION

University of California, Santa Cruz

August 2020 – June 2022

Bachelor of Science (B.S.) in Computer Science

Santa Cruz, CA

- **GPA:** 3.79 / 4.00
- **Honors:** Dean's Honors List, Highest Honors in Major, Cum laude
- **Relevant Coursework:** Data Structures & Algorithms, Algorithm Analysis, Computational Models, Software Engineering, Computer Architecture, Computer Systems Design, Database Systems, Web Applications, Applied Machine Learning, Natural Language Processing

Laney College

August 2018 – May 2020

Studying Computer Science

Oakland, CA

- Completed lower-division and general education requirements before transferring to UC Santa Cruz.

TECHNICAL SKILLS

Languages: C++, C, Python, JavaScript, HTML5, CSS, SQL, Bash

Technologies: React.js, React Native, Node.js, Express.js, PostgreSQL, Google Firebase, Docker, Unix, Git

WORK EXPERIENCE

University of California, Santa Cruz

March 2021 – June 2021

Computer Science Group Tutor

Santa Cruz, CA

- Organized and hosted multiple additional lectures and study sessions accessed by 20+ students every week.
- Worked with students to complete coding assignments and projects with high standards.
- Covered fundamental C topics such as data structures, algorithms, and multi-threading.
- Assisted the lead professor with grading exams, assignments, and lab reports for 200+ students.

Network Jupiter, LLC

June 2017 – May 2019

IT Technician

Alameda, CA

- Maintained company infrastructure, and identified and troubleshooted network issues.
- Provided technical training and support on software and hardware to end users.
- Performed computer repair and maintenance, including parts replacement, software management, and system backups.

PROJECTS

Music Discovery Mobile Application | Spotify GO | JavaScript, React Native, Google Firebase

- Built a music discovery mobile application to curate music for a user based on what nearby users around them are listening to on Spotify on a visual map.
- Led a team of six using Scrum methodology with four 2 week sprints, developing and maintaining code throughout.
- Developed a dynamic user interface for the application's frontend to streamline user experience using React Native components and React Native Maps API to display map data.
- Implemented a backend database interface that extracts user data from the Spotify API and local Android device data and stores data within the Google Firebase database.

Messaging Web Application | Slack-like Clone | JavaScript, React.js, Express.js, PostgreSQL, Docker, MUI

- Built a communications web application that mimics the Slack software in four days, featuring much of the same functionality, including login and authentication, users, servers, channels, and messaging.
- Implemented a backend database using PostgreSQL to process and update user information, and a database interface to retrieve query requests from the database using Express.js.
- Developed a mobile-first frontend user interface to follow the same format as Slack using MUI.

Data Compression Program | Lempel-Ziv Compression | C

- Built a data compression program that compresses a file by 30% on average using the LZ78 compression algorithm.
- Wrote an accompanying decompression algorithm to decompress any previously compressed file.
- Used bit manipulation with a buffer to read and write data and used a trie to optimize the efficiency of the program.