

# ELIJAH WILLIAMS

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## EDUCATION

University of California, Santa Barbara  
*Bachelor of Science in Computer Engineering*  
GPA 3.97

Santa Barbara, CA  
Expected March 2026

Relevant Coursework: Data Structures and Algorithms, Discrete Math, Linear Algebra, Object-oriented Programming, Logic Design

## PROJECTS

*Team Lead*, Script, Remote

August 2023-Present

- Led a team of 4 developers in the creation of a lightweight programming language using C++
- Implemented advanced data structures, including abstract syntax trees and others, to optimize the language's performance and helped reduce average run time by up to 20%
- Managed a private GitHub repository for version control for over 2 months, facilitating efficient collaboration and sustaining a clean, organized codebase by reviewing an average of 5 pull requests per day

*Developer*, Typo, Santa Barbara, California

March 2023-June 2023

- Designed and implemented a touchscreen keyboard typo corrector using C++ and Python, capable of analyzing user input data to determine the most probable words the user intended to type
- Ensured the efficient storage and retrieval of data within a custom heap data structure, maintaining the min-heap property and outperforming 5 alternative methods in word ranking speed
- Designed and executed a scoring algorithm in Python, assessing word similarity by calculating the Euclidean distances between touch points and key locations

*Team Lead*, Delicious Payload, California

August 2022-December 2022

- Built a pulley zipline system with the majority of parts 3D modeled via Autodesk Fusion 360
- Wrote code in C++ and assembled circuitry in order to make it functional and help people with disabilities easier access to food
- Recognized as the group with most complex hardware by UCBS's Electrical and Computer Engineering department due to the complex nature of having 3 parts move in harmony

## EXPERIENCE

*President of San Miguel Residence Hall*, University of California, Santa Barbara, California

August 2022-February 2023

- Demonstrated strong leadership and initiative by managing San Miguel's budget of over \$7,000, coordinating and hosting 20+ events, resulting in increased student participation of over 20% at these events
- Led weekly meetings with dorm hall residents, fostering an environment of open discourse and encouraging active participation in decision-making processes
- Organized and hosted various events, including a Halloween social and a vision board-making event, fostering a sense of community and engagement for over 50 residents attuned

*Technical Intern*, Andrew Romanoff Senate Campaign, Remote

May 2020-July 2020

- Provided technical assistance to staff and volunteers and helped troubleshoot issues to meet quota of 500 phone calls per day
- Maintained the group's computer software and hardware in order to ensure day-to-day operations which resulted in a voter turnout of over 400,000

## TECHNICAL SKILLS

Advanced: C++ | Git | Visual Studio Code | Windows | MacOS

Intermediate: Python | HTML\CSS | SQL | Solidworks | Microsoft Excel

## PERSONAL INTERESTS

Soccer, Rock climbing, Kansas City Chiefs, Video games