

# Luke Waltz

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## EDUCATION

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### California Polytechnic State University

*Bachelor of Science in Computer Science*

San Luis Obispo, CA

September 2021 – June 2025

#### Relevant Coursework:

Introduction to Object Oriented Programming, Data Structures, Introduction to Computing (Game Design), Fundamentals of Computer Science, Digital Design, Computer Design and Assembly Language Programming, Calculus 4, 3, 2, 1, Linear Analysis, Physics 3, 1, Discrete Structures, Systems Programming

#### Technical Skills:

Python, Java, C, JavaScript, HTML, CSS, Assembly, System Verilog

## PROJECTS

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### Find Stuff | C, VS Code, xUbuntu

May 2023 – June 2023

- Used parallel processing to search current working directory and/or subdirectories for files or strings of text.
- Redirects a pipe to stdout to return the filepath of all instances of the desired filename or string.
- Altered execution of "find" program depending on flags present in the command: -f.c only searches in files that end in ".c", -s searches all subdirectories, etc.

### Virtual World | Java, IntelliJ, yEd Graph Editor

September 2022 – December 2022

- Increased cohesion and loose coupling of a 5000+ line project by refactoring more than 30 methods into a class hierarchy I defined consisting of 28 classes, 3 abstract classes and 3 interfaces.
- Implemented most efficient movement for the entities using the A\* pathing strategy.
- Created 3 additional entities with unique behaviours, and implemented a world altering event upon a mouse click.
- Planned out my refactoring in a UML diagram using yEd Graph Editor.

### Ray Tracing | Python, PyCharm

January 2022 – March 2022

- Built on existing python starter files to develop a rendering software using ray tracing.
- Computed shadow and gradient values using collisions from vectors cast from a hypothetical light point and eye point.
- Rendered overlapping shapes in 3D space with accurate shadows, shine and coloring.

## LEADERSHIP AND WORK EXPERIENCE

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### Technology Intern

September 2023 – Present

*OpenPark*

*Los Angeles, CA*

- Collaborated closely with the marketing team to design and develop user-friendly, mobile-responsive landing pages using Framer.com, enhancing OpenPark's online presence and user engagement.
- Integrated branded assets ensuring consistent alignment with OpenPark's branding guidelines; applied UX principles to ensure intuitive and engaging user navigation.
- Managed tasks from scoping, feedback collection, testing/validation, to final deployment on the OpenPark website, ensuring high-quality landing pages that support the mission of promoting pet wellness.

### Camp Coach

May 2023 – September 2023

*Legacy Training Center*

*San Luis Obispo, CA*

- Coached groups of 6–10 children aged 8–12 in a gymnastics facility.
- Mentored and developed personal connections with 100+ children aged 4–12, weekly.
- Effectively instructed and disciplined problematic campers.

### Computer Engineering Mentor

October 2022 – December 2023

*California Polytechnic State University*

*San Luis Obispo, CA*

- Met with a group of 8 first year Computer Engineering students weekly.
- Informed students of upcoming opportunities and answered any questions related to the major.

### Lifeguard

June 2019 – August 2022

*Golden Community Center / Splash Water Park*

*Golden, CO*

- Performed 5 saves on active drowning victims.
- Attended weekly training sessions involving endurance swimming and CPR.
- Mentored new guards on procedures and standards at the Splash Water Park