Luke Waltz

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Education

California Polytechnic State University San Luis Obispo, CA
Bachelor of Science in Computer Science *September 2021 – June 2025*

Relevant Coursework:
Systems Programming, Introduction to Software Engineering, Design and Analysis of Algorithms, Discrete Structures Introduction to Object Oriented Programming, Data Structures, Calculus 4, 3, 2, 1, Linear Analysis, Physics 3, 1, Digital Design, Computer Design and Assembly Language Programming

Technical Skills:
Python, Java, C, JavaScript, HTML, CSS, React, Express, Node.js, Assembly, System Verilog, Git

Experience

Software 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, HTML, and CSS, 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.
- Worked with a team to mentor and developed personal connections with 100+ children aged 4-12.
- Effectively instructed and disciplined problematic campers.

Computer Engineering Mentor October 2022 – December 2022
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.

Projects

MyApp | *React, Express, Node.js, VS Code, Git* September 2023 – October 2023

- Used React to develop a frontend form to accept input data and display it in a table.
- Used Express and Node.js to build a REST API to handle HTTP requests from the front end.
- Linked the frontend to the backend/REST API so additions or deletions to the frontend form are reflected in the backend data.
- Followed industry best practices to handle version control with Git and Github.

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.

Huffman Encode / Decode | *Python, PyCharm* May 2022

- Developed a program to compress text using Huffman coding, a lossless data compression technique, by assigning variable-length codes to characters based on their frequency.
- Constructed a Huffman binary tree using ASCII values and frequency counts to determine the unique Huffman codes for characters, and traversed the tree to construct an array of Huffman codes for each character.
- Implemented functions to read input text files, encode the content using the Huffman code, and write the encoded content to output files with proper headers. Ensured robustness through comprehensive unit testing, considering edge cases and various file conditions.