Luke Waltz

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Education

California Polytechnic State University — San Luis Obispo, CA

Bachelor of Science in Computer Science — ***GPA: 3.3/4.0*** — *September 2021 – June 2025*

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

Technical Skills:
Python, Java, C, RISC-V Assembly Language, System Verilog, JavaScript, HTML, CSS, React.js, Express.js, Node.js, MongoDB, Git

Experience

Incoming Software Developer — October 2023 – Present

Hack4Impact Cal Poly — *San Luis Obispo, CA*

- Working with MongoDB, Express.js, React.js, Next.js, Node.js to develop software for local nonprofits.

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.
- Deployed 2 polished and responsive landing pages to the company website.

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

Crib App | *React.js, Express.js, Node.js, MongoDB, Git, Figma* — October 2023 – Present

- Worked with a team to develop an app to streamline task distribution and conflict resolution among roommates.
- Used React.js to develop a frontend allowing users to post tasks and polls, as well as to create, access, and delete their user accounts.
- Used Express.js and Node.js to build a REST API to handle HTTP requests for posting and deleting tasks, users and polls.
- Refactored API endpoints in the backend to use CRUD operations with our Mongo Atlas Database to store user, task and poll data.

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.