

Jonah Lavi

SOFTWARE ENGINEER · COMPUTER SCIENCE STUDENT AT UNIVERSITY OF CALIFORNIA, SANTA CRUZ

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Summary

I have been programming since 2013, starting with C++ and expanding to anywhere from assembly languages, web frameworks, native app development and more. With experience in a variety of projects, including multi-threaded systems, mobile and web applications, and hardware and software systems, I am confident in my technical abilities. I enjoy working independently on projects, but also value the opportunity to collaborate with other ambitious and intelligent engineers towards broader goals. Additionally, I have a creative side, having apprenticed for an established artist and pursuing independent creative ventures such as illustration, design, wood working and acting on occasion.

Skills

C/C++, JavaScript, Python, Chrome Extension, Swift, Java, Assembly for RISK-V and ARM, MATLAB, Arduino, HTML, CSS

Projects + Extracurriculars

Multi-Threaded HTTP Server

IMPLEMENTING COMPUTER SYSTEM DESIGN PRINCIPLES

- Implemented a client-server system in C on Linux using system calls provided by the OS.
- Designed the system with a thread pool to efficiently handle unbounded client requests simultaneously while minimizing CPU usage.
- Utilized an unbounded queue to delegate client requests to specified threads and execute commands such as PUT, GET, and APPEND.
- Successfully incorporated error handling for all commands to produce the correct HTTP Version 1.1 error output.
- Implemented PUT, GET, and APPEND commands to allow clients to store, retrieve, and append data to specified files.

WASD - The Social App for Gamers

SOFTWARE ENGINEER AND SCRUM MASTER

- Worked as a UI designer, back-end developer, and Scrum Master in a team of four following Agile and Scrum project management to develop an app connecting people with niche interests.
- Designed and developed the authentication, sign-up, and log-in pages while collaborating with front-end developers to connect their pages to the Firestore database.
- Implemented a database to track user information such as name, age, images, matches with other users, and social media links (e.g., Steam, Discord, Battle.net, Chess.com).
- As Scrum Master, ensured adherence to sprint plans and engineering practices to create quality code that all team members could understand.

Work Experience

Undergraduate R&D Program

[Remote](#)

KEYSIGHT TECHNOLOGIES

January 2022 - Present

- Collaborated with other students and senior engineers at Keysight Technologies to develop a plugin for the company's open source automated test and measurement platform, OpenTAP.
- Utilized Python, .NET, Docker, and C# to create the plugin, which serves as the foundation for testing 6G technology.
- Worked closely with other teams at Keysight to ensure seamless integration of the plugin with various technologies and tools.
- Implemented Modbus TCP communication between the plugin and a collaborative robot (cobot) to streamline the 6G testing process.
- Utilized Docker to containerize the testing environment and ensure consistency across different setups.

Sensor and Information Systems Tech

[Santa Cruz, CA](#)

UNIVERSITY OF CALIFORNIA, SANTA CRUZ

January 2022 - Present

- Led the development of a sensor system to monitor water levels, quality, and control water output based on input for a self-sufficient shipping container home encased by a greenhouse.
- Developed software to display data collected by the sensor system and monitor air quality and other aspects of the container home.
- Utilized the Arduino platform to develop the sensor system and integrated it with the hydroponics system, rainwater capture, bioreactor toilet, and solar system to ensure complete self-sufficiency.
- Collaborated with a physics professor and other researchers to ensure the sensor system met the needs of the overall project and supported the goals of sustainable living.

Software Engineer Intern

[Mountain View, CA](#)

JUSTIA

July 2022 - September 2022

- Developed internal traffic monitoring tools to assist management with their analytical data.
- Web development in JavaScript and efficiently integrating a combination of APIs.
- Utilized Google's cloud services to implement a Chrome Extension for company use.

Education

UCSC (University of California, Santa Cruz)

[Santa Cruz, CA](#)

B.S. IN COMPUTER SCIENCE

September 2021 - June 2023

- Completed courses: Software Engineering, Computer System Design, Data Structures and Algorithms, Computational Models, Discrete Math, Programming in Assembly, C, C++ and Java, Computer Architecture.
- Planned courses: Computer Networks, Web Applications, Foundations of Programming Languages, and Applied Machine Learning.