

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++, Swift, JavaScript, Python, 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 a software application 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.

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.