Aaron Steinberg

Software Engineer

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Education:

University of California — Santa Cruz
Computer Science B.S. — Graduating June 2023

Experience:

Progenabiome
Bioinformatics Software Engineer Intern
Summer 2019, Summer 2022
I helped with internal tool development to parse and analyze data from lab equipment. This gave me experience in the intersection of bioinformatics, computer science, and medical work. I developed the tools using Python with Pandas and other data science libraries.

University of California Santa Cruz IT Services
Google Workspace Subject Matter Expert
2021-present
I write technical documentation, administrate various Google Apps services, and help train first response technicians. In addition, I also create internal automation tools for administering the UCSC Google Workspace. I design and implement APIs for internal tools using OpenApi standards in Node.js and Express.

University of California Santa Cruz Baskin School of Engineering
Course Grader
Spring 2021
I graded CSE13S, Computer Systems and C Programming. My responsibilities included grading projects, essays, and exams.

University of California Santa Cruz IT Services
IT Help Desk Technician
2020-2021
I offered technical support for staff and students at the university using ServiceNow.

Projects and Research:

Locally Imagined
Locally focused art marketplace for Santa Cruz, California
Locally Imagined is a platform to break the glass ceiling of the art trade for hobbyist and professional artists alike. This application is designed to lower the "height requirement" to be a self-sustaining artist. Created using React, Go, GOA, Amazon S3, Postgresql, and Heroku. This was a group effort created using an agile workflow.
Team Members: Aaron Steinberg, Dylan Rosenthal, Jake Warsaw, Richard Zeng, Theo Ho
Locally Imagined Website

MediBill
CruzHacks 2022 Hackathon First Place Winner
MediBill is a tool to analyze your medical bills. It was made for the CruzHacks 2022 Hackathon. The frontend was done in vue.js and the backend was done using Google Cloud functions. MediBill won the three first place prizes. These included best UI/UX, best use of Google Cloud, and the QB3 sponsored prize of $2000 for the healthcare hack category.
Link to the project

A Brief Survey of Data Placement in a Geo-Distributed Storage System using Machine Learning
Authors: Aaron Steinberg and Yash Chhabria
This is a survey paper written for Professor Peter Alvaro's graduate distributed systems class. This research surveys distributed systems that use geo-distributed storage systems for optimal data placement using a machine learning model.
Link to the paper
Link to the class repository

Reverse Proxy Load Balancer
Final Project for Principles of Computer Systems Design
Written entirely in POSIX standard C, this load balancer, while rather fundamental, is multi-threaded, consistent, and *almost* fault tolerant. It estimates performance, load, health, of other web servers. It routes and balances requests across these other servers.
This project can only be viewed by request. The repo must be kept private because of plagiarism concerns held by the University of California.

Skills:

Programming Languages:
C, C++, C#, Python, Javascript, GO, Haskell, SQL, Bash

Technologies:
Node.js, Express, React, jQuery, GOA, Postgresql, OpenAPI, Heroku, Amazon S3, Google Cloud, Linux

Other Skills:
SCRUM, Teamwork, Public Speaking, Software Testing, Technical Writing, Documentation, Creative Writing, Teaching, Management, Mountain Biking

Course Work:

Computer Science:
Analysis of Algorithms, Computational Models, Distributed Systems, Full Stack Web Development, Introduction to Software Engineering, Natural Language Processing, Applied Machine Learning, Functional Programming, Principals of Computer System Design, Computer Architecture, Data Structures & Algorithms, Computer Systems & C Programming, Computer Systems & Assembly Language, Programming Abstractions in Python, Introduction to Networking, Introductio to Python

Mathematics:
Historical Mathematics, Probability and Statistics, Applied Discrete Mathematics, Linear Algebra, Vector Calculus

Other Fields of Studies:
Microeconomics, Physics, Modern European History, History of the Holocaust, Visual Art History of Africa/Oceania /Americas, Applied Ethics, Rhetoric & Inquiry, Global Action, Power & Representation, US History, Spanish