

MATTHEW BOISVERT

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EDUCATION

B.S. in Computer Science, University of California, Santa Cruz

September 2018 - December 2021

- GPA: 3.98
- Member of the UCSC College Scholars Program
- Relevant Coursework: Distributed Systems, Computer Architecture, Principles of Computer Systems Design

SKILLS

Languages

C/C++, Python, Go, Java, JavaScript

Web Development Frameworks

JSP, Flask

Additional Skills

SQL, HTML/CSS, MPI, Linux/Unix, Docker

EXPERIENCE

Undergraduate Research Assistant

Jan 2021 - Present

Storage Systems Research Center

Santa Cruz, CA

- Working with Professor Heiner Litz to implement a parallelized matrix multiplication implementation in MPI
- Benchmarking scalability of matrix multiplication implementation on a Raspberry Pi cluster (100+ cores)

Undergraduate Researcher

Oct 2020 - Present

Disorderly Labs

Santa Cruz, CA

- Working with Professor Peter Alvaro to implement a distributed version of the PageRank graph algorithm on the Twizzler operating system
- Implementing optimization techniques such as Hilbert-ordered tiling to improve the processing of large graphs
- Presented poster at the Symposium for Undergraduate Research at UCSC in December, 2020

Undergraduate Research Assistant

Oct 2019 - Dec 2020

Design and Verification Lab

Santa Cruz, CA

- Worked with Professor Luca de Alfaro to implement the WikiTrust 2.0 project, an online reputation system for Wikipedia edits and authors
- Developed a scalable storage system that batches page revisions using Google Cloud Storage (for storing compressed revisions in bulk) and SQL (for locating revisions)

Software Engineer Intern

Jun 2020 - Sep 2020

Silvaco Inc

Santa Clara, CA

- Performed full-stack development of new Silvaco web pages and debugged existing pages using JSP, JavaScript
- Added features to product management tools for DevOps team using C++, Java
- Refactored back-end SQL queries into ORM functions to improve database modularity

PROJECTS

Cruz Connections: Developed a 3D visualization tool for displaying connections between UCSC courses using Cassandra (CQL), Python, and JavaScript. Won “Best Use of DataStax Astra” and “Best Cruz Hack” at CruzHacks 2021.

Distributed KVS: Implemented a distributed, fault-tolerant key-value store using Go and Docker.

HTTP File Server: Implemented a multithreaded HTTP file server and load balancer in C.