

# ERIC HERNANDEZ

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## SKILLS

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**Programming Languages:** C, Python, TypeScript, C++, JavaScript, HTML5/CSS

**Web Technologies:** React.js, Node.js, Express.js, Next.js, Vue.js, PHP Laravel, REST APIs, GraphQL, Microservices

**Tools and Databases:** PostgreSQL, MySQL, Git, Jira, BitBucket, Docker, Unix CL, Valgrind, GDB, Agile/Scrum

**Interpersonal:** Leadership, problem-solving, time management, communication, collaboration, critical thinking

**Languages:** Spanish (Native), English (Native)

## EXPERIENCE

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**UC Santa Cruz ITS Software Engineering** | Student Software Developer Jan 2023 - Sep 2023

- Migrated a poster printing web app for 20,000+ students and faculty to a new web stack
- Enhanced payment integration error handling and presentation, streamlining the payment process for users
- Improved frontend form validation and data formatting, ensuring accurate and complete data for the backend
- Kept Product Owner/Stakeholders updated on project status and collaborated to prioritize MVP features for production
- Collaborated with service management to maintain and update documentation for web apps in our portfolio

**UC Santa Cruz Baskin Engineering** | Group Tutor Apr 2021 - Jun 2023

- Tutored 1000+ students in C Programming, Python, Computer Systems Design, and Full Stack Web Development, significantly improving their academic performance
- Provided targeted support to 5 Spanish-speaking students in the Full Stack Web Development course, boosting their retention and resulting in an 80% pass rate

**NVIDIA Corporation** | Software Engineer Intern, Core RM Team Jun 2021 - Aug 2021

- Collaborated to design and implement a Python-based Code Review Framework that detects security and styling defects in a Perforce Helix Core changelist, improving code quality for a team of 20+
- Constructed a Perforce Helix Swarm accessor library to integrate with the Code Review Framework and provide automatic feedback from the review
- Assisted in testing and debugging a security bug in the GPU's resource manager on Linux platforms

## PROJECTS

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**Baskin Marketplace** | TypeScript, Next.js, Express.js, GraphQL, PostgreSQL | [baskin.app](https://baskin.app)

- Collaborated with five developers to design, develop, containerize, and deploy a full-stack marketplace web app for our senior capstone project
- Managed version control using GitHub and provided continuous integration (CI) with GitHub Actions
- Built a backend messaging microservice using Express.js, GraphQL, and PostgreSQL
- Developed frontend messaging components with React.js and JoyUI, integrated with the messaging microservice
- Performed automated unit testing on components and microservices to ensure full functionality and code coverage

**Schmidt-Samoa Cryptosystem** | C, Python | [github.com/eric-hdez/schmidt-samoa](https://github.com/eric-hdez/schmidt-samoa)

- Analyzed publications on the Schmidt-Samoa Cryptosystem and implemented the algorithms in C and Python
- Project source code was utilized as a teaching example for 40+ students in group tutoring sessions

**Multi-threaded HTTP Server** | C, Linux | [github.com/eric-hdez/httpserver](https://github.com/eric-hdez/httpserver)

- Designed a robust multi-threaded HTTP server in C, capable of serving atomic GET, PUT, and APPEND requests
- Implemented epoll-based asynchronous IO for robust event monitoring on client connections, similar to nginx
- Conducted stress testing and fixed bottlenecks, resulting in a system run time improvement of more than 2x

## EDUCATION

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**University of California Santa Cruz** | B.S. Computer Science (Highest Honors) Sep 2019 - Jun 2023

**GPA:** 3.89

**Notable Courses:** Computer Systems Design, Computer Architecture, Compiler Design, Full Stack Web Development

## ORGANIZATIONS

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**Society of Hispanic Professional Engineers, UC Santa Cruz** | President

- Fostered and maintained vital connections between SHPE UCSC, regional SHPE chapters, and industry partners
- Led a team of 10 board members to execute events, workshops, and initiatives for the benefit of members
- Quadrupled membership attendance from 8 to 35+ by rebranding our chapter