ERIC HERNANDEZ

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EDUCATION

University of California Santa Cruz | B.S. Computer Science (Highest Honors)   Sep 2019 - Jun 2023
GPA: 3.89
Honors: Intel Undergraduate SHPE Scholarship (2020), UC Regents Scholarship (2019), Deans Honors 4x
Notable Courses: Data Structures and Algorithms, Computer Systems Design, Foundations of Programming Languages, Computer Architecture, Compiler Design (Graduate Level), Full Stack Web Development I, II (Capstone)

EXPERIENCE

UC Santa Cruz ITS Software Engineering | Student Software Developer   Jan 2023 - Sep 2023
- Migrated a web application that enhances poster design submissions and printing transactions for students and faculty to a new web stack (JavaScript, Vue.js, PHP Laravel, Apache, MySQL)
- Enhanced the handling of back-end payment integration errors and their presentation on the application's front-end
- Improved front-end form validation for certain fields and ensured proper data format for the back-end
- Updated Product Owner/Stakeholders on project status and collaborated to prioritize MVP features for production
- Collaborated with service management to maintain and update documentation for web applications in our portfolio

UC Santa Cruz Baskin Engineering | Group Tutor   Apr 2021 - Jun 2023
- Delivered effective group tutoring to 1000+ students in Python Programming, C Programming, Computer System Design, and Full Stack Web Development, significantly improving their academic performance
- Provided targeted support and tutoring to 5 Spanish-speaking students in the Full Stack Web Development course, boosting 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 results
- Assisted in testing and debugging a security bug in the GPU's resource manager on Linux platforms

PROJECTS

Baskin Marketplace | TypeScript, Next.js, Express.js, GraphQL, PostgreSQL, Joy UI | baskin.app
- Collaborated with five developers to design, develop, containerize, and deploy a full-stack marketplace web application 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 front-end user messaging components in React.js with Joy UI, integrated with the messaging microservice
- Performed automated unit testing on back-end and front-end components to ensure full functionality and code coverage

Schmidt-Samoa Cryptosystem | C, Python | 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
- 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 sockets, similar to nginx, mitigating DoS and DDoS attacks
- Conducted stress testing and fixed bottlenecks, resulting in a system run time improvement of more than 2x

SKILLS

Programming Languages: C, C++, Python, TypeScript, JavaScript, HTML5/CSS
Web Technologies: React.js, Node.js, Express.js, Next.js, Vue.js, PHP Laravel, REST, GraphQL, Microservice Architecture
Tools and Databases: PostgreSQL, Git, Jira, Docker, Unix CL, Valgrind, GDB, Agile/Scrum, Jest
Interpersonal: Leadership, problem-solving, time management, communication, collaboration, critical thinking
Languages: Spanish (Native), English (Native)

ORGANIZATIONS

Society of Hispanic Professional Engineers, UC Santa Cruz | President
- Served as a liaison, maintaining vital connections between SHPE UCSC, regional SHPE chapters, and industry partners
- Led a team of 10 executive board members to execute events, workshops, and initiatives for the benefit of members
- Quadrupled membership attendance from 8 to 35+ by rebranding our chapter