SHREYA SUNDAR

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WORK EXPERIENCE

Computer Science Tutor | Baskin School of Engineering Sep. 2023 - Mar. 2024

- Supported 50+ undergraduate students as a tutor for Data Structures and Algorithms and Machine Learning Basics
- Debugged students' code, addressed questions and clarifications, explained concepts, and provided assignment overviews

Software Developer Intern | UC Santa Cruz Genomics Institute Nov. 2022 - Present

- Developed and implemented 10+ frontend features for a genomic data visualization web application using JavaScript and React.js, optimizing data access and search, resulting in a more navigable, user-friendly platform
- Composed functions and adapted scripts to generate accurate graph visualizations and preserve data integrity by troubleshooting browser-related issues, processing data input, handling coordinates, and computing statistics
- Reconfigured server to expand user file I/O capabilities, achieving increased visualization options for node and track structures
- Constructed and executed unit tests, ensuring component functionality and computed data reliability

President | Creative Tech Design Sep. 2022 - Feb. 2024

- Led and coordinated program tasks amongst a team of 20 officers, fostering teamwork and collaboration
- Orchestrated events, fundraisers, panels, and workshops, providing valuable learning and networking for 200+ undergraduates

Web Developer | Tech4Good Research Laboratory Mar. 2022 - Sep. 2023

- Collaborated with cross-functional development teams to develop frontend and backend of 5+ applications.
- Implemented data storage and retrieval functionality through a Firestore database, allowing for user data management, accessibility throughout the application, and personalization of features to the user
- Designed and developed 15+ responsive and interactive frontend components using HTML, SCSS, and Typescript, streamlining user interactions and enhancing usability

PROJECTS

Schmidt-Samoa Cryptosystem | C, GMP | Github

- Employed Schmidt-Samoa algorithm to develop executables to maintain file privacy/security, which generate asymmetric key pairs, encrypt user-specified files, and decrypt encrypted files

Lempel-Ziv Data Compression | C | Github

- Established command line tools for data encoding and decoding, using the Lempel-Ziv compression algorithm, implementing trie, word, and word table data structures, and reading and writing bytes to and from files

Jeopardy Trivia Game Maker | React.js, Node.js, Express.js, MongoDB, Firebase | Github

- Developed a comprehensive full-stack application for users to create and manage trivia cards that can be dynamically integrated into a responsive Jeopardy board
- Integrated RESTful API calls to allow users to add, edit, and delete cards, ensuring smooth data retrieval, updates, and deletion, resulting in an enhanced user experience with real-time updates and interactions within the application

SKILLS

Programming Languages: Python, C, C++, Java, JavaScript, SQL, HTML, CSS
Frameworks and Libraries: React.js, Next.js, Node.js, Express.js, Pandas, NumPy, Scikit-Learn
Tools: MySQL, MongoDB, Git (Github), Linux, Google Suite, Microsoft Office, Figma, Jupyter

EDUCATION

University of California, Santa Cruz | Bachelor of Science in Computer Science Expected Jun. 2025

- Coursework: Data Structures and Algorithms, Analysis of Algorithms, Computer Systems and C Programming, Programming Abstractions in Python, Artificial Intelligence, Applied Machine Learning, Principles of Computer Systems Design, Database Systems, Introduction to Software Engineering