Zihao Huang

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WORK EXPERIENCE

LibreTexts Programmer

LibreTexts   **December 2020 - Present, Davis, CA**

· Used Perl, LaTeX, and MathJax to construct mathematics-based testing scripts with inputs ranging from simple integers to complex chemical equations, which are automatically evaluated then present the user their grade, used by professors of universities for thousands of students.

· Worked with the needs of team members, designing unique scripts in context of what is needed and communicating effectively to fix bugs with hotfixes to improve the client's experience.

· Used HTML, CSS, and JavaScript to design pages for the online LibreText hyperlibrary following design guidelines to maintain and expand an educational, nonprofit website.

· Trained and guided new hires into the work environment, explained and provided examples for an in-house built Perl macro library to ensure success and performance from new team members.

PROJECTS

Ichimoku Cloud Financial Analysis Bot

February 2022

· Created a Python program that pulls financial data of a stock, cryptocurrency, or other security using the Yahoo Finance API into a .csv file and conducts "one-look" analysis and assessment on it using the Ichimoku Kinko Hyo strategy.

· Automatically calculates the conversion line, the base line, leading span A, leading span B, and the lagging span of a security to predict future performance based on existing support and resistance levels.

· Removes the need for prior knowledge; a user can enter the desired analysis interval (day, week, month) and a ticker name, and have analysis done automatically without looking at any financial data or graphs.

L-Store Database

January 2022 -March 2022

· Worked in a group of four to create a durable, multithreaded relational database in Python with a SQL-like query interface and buffer pool using GitHub to collaborate and perform version control.

· Designed the implementation for no-wait 2PL (two phase locking) to allow running multiple transactions atomically and concurrently, while providing serializable isolation semantics.

· Serialized any existing tables in volatile memory using the "pickle" Python library to serialize existing data and store it to the disk to allow real-world condition usage.

EDUCATION

Bachelor of Science in Computer Science

University of California, Davis · Davis, CA · June 2022

COURSEWORK

Operating Systems, Data Structures, Object Oriented Programming, Computer Architecture, Computer Networks, Linear Algebra, Managing & Using Information Technology, Algorithm Design and Analysis

University of California, Davis · 2022

SKILLS

Programming languages and frameworks: HTML, CSS, JavaScript, Node.js, C++, Python, R, Perl, LaTeX, MathJax, Rust, React