Yuanwei "Westin" Jiang

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Education

Virginia Tech   May. 2021 – Dec. 2023
Bachelor of Engineering in Computer Science   *Blacksburg, VA*

Projects

Automated Short Answers Assessment | ⬡ *https://github.com/WestinJiang/ASSAA*   **Dec 2023**
- This project aimed at streamlining the grading process for educators, enabling them to effortlessly assess student performance. The system allows educators to upload two distinct files – one containing problems and standard answers, and another with student responses – ultimately automating the scoring process.
- Developed the front-end of a web application using React in JavaScript. Experience in making HTTP requests using Axios. Experience with asynchronous programming using async/await. Experience in handling file uploads using FormData.
- Developed the back-end of a web application using Flask in Python. Using pre-trianed DL model in a library called sentence_transformers. Experience of routing, views, and handling HTTP requests in Flask. Deployment and running of a Flask application on a local server. Implementation of a RESTful API endpoint for handling file uploads and processing
- Experience in of basic CRUD (Create, Read, Update, Delete) operations in MongoDB.

Personal Web and Video Server | ⬡ *https://github.com/WestinJiang/Personal-Server*   **May 2023**
- This project provided me with hands-on experience in applying the principles of internetwork communication in C. It encompasses functionalities such as authentication, IPv6 implementation, and file serving, MP4 streaming features.
- Developed and deployed a robust authentication system utilizing JSON Web Tokens (JWTs) with HS256 encryption for user login and session management.
- Engineered functionality for parsing HTTP request lines, managing headers, and serving various static assets such as HTML, CSS, and video files.
- Implemented essential socket operations including opening, binding, and listening, while also optimizing performance by implementing techniques like disabling Nagle's algorithm to minimize latency.

Threads Pool | ⬡ *https://github.com/WestinJiang/Threads-Pool*   **March 2023**
- This project engaged in hands-on implementation of multi-threading concepts, gaining practical experience in designing and managing concurrent execution environments.
- Utilized pthread library for multithreading capabilities. Implemented thread synchronization mechanisms using mutexes and condition variables to ensure safe concurrent access to shared data structures.
- Designed and implemented a thread pool framework for efficient task management and execution. Utilized a dynamic worker thread allocation strategy to adapt to workload variations.
- Developed a work stealing algorithm to balance task distribution among worker threads for optimal workload handling. Implemented task stealing to enable idle threads to acquire and execute tasks from other thread's queues.

Poster of festival | ⬡ *https://github.com/WestinJiang/QiXi-Poster*   **August 2022**
- Created a visually appealing holiday poster using HTML, and CSS.
- Ensuring compatibility across platforms of both mobile and desktop.
- Demonstrated creativity by using @keyframes to combine various images and GIFs to produce an engaging festival poster.
- Emphasized user experience by ensuring the poster's responsiveness on different devices.

Relevant Coursework

- Software Design & Data Structures
- Machine Learning
- Intro Computer Organization
- Data Structures and Algorithms
- Computer Systems
- Human-Computer Interaction
- Data and Algorithm Analysis
- Comparative Languages
- Multimedia/Hypertext

Technical Skills

Programming Languages: Java, C, Python, HTML, CSS, JavaScript, SQL
Developer Tools: VS Code, Eclipse
Technologies/Frameworks: Linux, GitHub, Git
Database Management: MySQL, MongoDB