

Brian Hsu

Software Engineer

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TECHNOLOGIES

Languages: JavaScript, HTML, CSS, SASS, Python, C/C++, Microsoft SQL, JSON, Java, Scala

Frameworks & Libraries: ReactJS, Bootstrap, NodeJS, EmailJS, GSAP

Database & Industry Tools: Git, GitHub, GitLab, Linux

Tools/ Software: Visual Studio Code, Android Studio, Beagle Bone Arduino board, Figma

PROJECTS

Extensible Hash Table

Jun 2023

<https://github.com/brianhsu305/ExtensibleTable>

- Designed and implemented a dynamically resizing extensible hash table in C++ that significantly improved performance by mitigating collisions and scaling gracefully.
- Enhanced C++ hash table with dynamic load balancing to ensure even distribution of keys across buckets, preventing performance degradation as the data grew.
- Optimized memory usage and resource management in the extensible hash table by implementing custom memory management in C++, minimizing fragmentation, and preventing memory leaks.

Light Dip Detector

Feb 2023

<https://github.com/brianhsu305/LightDipDetector>

- Developed a light sensor embedded system with C to analyze real-time light density data and displayed it on Zen Cape's 14-segment display hardware.
- Implemented multithreading structure in C to enable concurrency, including listening to UDP socket, data processing, and displaying updates.
- Created a command-driven system, allowing users to send commands through UDP sockets for specific action for data retrieval, enhancing user interaction and control.

Personal Portfolio

May 2021

<https://github.com/brianhsu305/portfolio>

- Designed a responsive personal portfolio using JavaScript, HTML, CSS, showcasing personal skills and projects while facilitating easy contact with visitors.
- Ensured an intuitive and responsive design, optimizing the portfolio for various devices and creating smooth navigation, resulting in an engaging and user-friendly experience.
- Integrated the EmailJS API into the portfolio's contact form, enabling secure and efficient communication with visitors, fostering inquiries about potential collaborations and job opportunities.

WORK EXPERIENCE

Service Technician – Canada Computers & Electronics

Oct 2023 – Current

- Developed a ticket management system that streamlined the customer support process, reducing average response times by 30% and increasing customer satisfaction.
- Created scripts to automate computer demo setup process, reducing preparing demo time by 20% and ensuring stable and efficient systems after setting up.

Sales Associate - Canada Computers & Electronics

Aug 2022 – Oct 2023

- Collaborated with store manager and team members to create a system to separate the workload, enhancing the efficiency of daily operations.
- Created a system to effectively use the storage space by separating categories and ranking priorities, decreasing the time front workers required to allocate products from the warehouse.

EDUCATION

Simon Fraser University, Burnaby, BC

Sep 2017 – Oct 2023

Bachelor of Computer Science

ACTIVITIES/ INTERESTS

Basketball, Fitness, Snowboarding, Tech, PC building, Puzzles