

FIONA HUALEI SUN

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Education

University of Southern California

Expected 2024

Master of Science in **Computer Science**

Coursework: OOP, System Design, Algorithms, Data Structures, Information Retrieval and Search Engines, Database Systems, Computer Networks, Mobile Games

Skills

Languages: C++, Java, Python, SQL, JavaScript, C#

Technologies: HTML, CSS, JavaScript, React.js, Spring Boot, Bootstrap, jQuery, MySQL, PostgreSQL, MongoDB, AWS, Linux, Docker, Lunr, Solr, Git, WebGL, Figma, Canva, CAD

Software: Unity, Adobe Creative Suite, Illustrator, Photoshop, Final Cut Pro

Communication: Fluent in spoken and written English

Projects

Full Stack Development – Movie Review App | Java, JavaScript May 2023 – Jun 2023

- Developed a scalable full stack movie review application utilizing **MongoDB**, **Spring Boot**, and **React**, demonstrating proficiency in backend and frontend technologies.
- Configured and managed a comprehensive range of **21 dependencies**, including Spring Boot's core libraries (such as **Spring Boot Starter Data MongoDB** and **Spring Boot Starter Web**) and frontend libraries and frameworks (such as **React Router** and **Bootstrap**), ensuring seamless integration and efficient operation of the movie review application.
- Created **RESTful** endpoints using **Spring Boot** to manage movies and reviews with seamless data retrieval and manipulation, showcasing a solid grasp of **API development** and data management.
- Implemented a loosely coupled architecture, allowing possibility for independent evolution of the client and server code. Implemented frontend interface and components using **React**, highlighting a strong ability in creating user-friendly **UI/UX** and efficient component-based design.

Game Design – Keyboard Warrior | C# Jan 2023 – Apr 2023

- Managed team dynamics, established a Game Design Document (GDD), ensured efficient team communication via Discord, maintained updated game progress in the GDD on a weekly basis.
- Led the design group and created game graphics, utilizing **Adobe software** to provide lightweight **vector-based** sprites for appealing aesthetics and optimized performance in the **Unity game engine**.
- Guided playtest sessions, collected player feedback, and updated **WebGL** builds regularly, driving iterative enhancements for optimal game performance within the Unity game engine.
- Organized the implementation of analytics in the game, justifying the relevance of statistics to game improvement along with graphical representations of game data based on real-time player data.

Socket Programming – Course Registration System | C++ Sep 2022 – Dec 2022

- Developed a **client-server** course registration system in C++, employing **Socket Programming**, enabling users to access and query varied course information.
- Implemented a sophisticated three-phase process that incorporated **TCP** for server connections, while leveraging **UDP** for the transmission of user query information, culminating in a user-friendly display of query results.
- Implemented an advanced functionality to handle concurrent queries of multiple courses, allowing users to access relevant information from **multiple backend servers** simultaneously.
- Ensured full compatibility and smooth operation of the project on an **Ubuntu** virtual machine, demonstrating proficiency in **cross-platform development**.

My Personal Website | HTML, CSS Jun 2023