Haosen Li

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EDUCATION

UNIVERSITY OF WASHINGTON
B.S. Electrical Engineering
Sep 2019 - Dec 2023 | Seattle, WA
Major GPA: 3.73

UDEMY
Web Developer Bootcamp
Jul 2022 - Sep 2022 | Online

COURSEWORK

- Data Structures and Algorithms
- Data Programming
- Programming Concepts and Tools
- Computer Programming 1 & 2
- Signal Processing
- Intro to Embedded Systems

SKILLS

PROGRAMMING

- Python
- Javascript
- Java
- C/C++
- HTML/CSS
- Git
- Bash

TOOLS

- Flask
- Node.js
- Express.js
- MongoDB
- Mongoose.js
- Linux (Ubuntu, Debian)
- Bootstrap
- Scikit-Learn
- Pandas
- Numpy

LANGUAGES

- English (Fluent)
- Mandarin (Fluent)
- Cantonese (Fluent)
- French (Basic)
- U.S. Permanent Resident

AWARDS

- UW Annual Dean's List (Sep 2021 - Jun 2022)
- WA State Honors Award (Jun 2019)
- President's Education Award (Jun 2019)

TECHNICAL PROJECTS

ANIME SEARCH WEB APPLICATION | Website, GitHub
Full-Stack: Python3, Flask, Google Cloud, Docker, HTML/CSS, Git
Aug 2022 - Present

- Conceptualized and built a responsive website to showcase Japanese animations in a team of 2 using the Kanban Agile development methodology.
- Established 6 GET routes and 2 API endpoints for users/developers to access a growing database of 6,000+ animations on-demand.
- Co-designed a relationship ranking system between any 2 animations using 7 different metrics (tags, series, score, voice actors, studio, episode count, date).

SEARCH & RECOMMEND ENGINE | GitHub
Python3, Asyncio, Multiprocessing, Git
Jul 2022 - Present

- Authored a tag-based search and recommend engine compatible with any tagged data sets in a team of 2.
- Implemented an adjacency matrix to reduce system memory usage by up to 95%, compared to NetworkX in 100% graph density scenarios.
- Applied Dijkstra's algorithm to create a recommendation engine, and used multiprocessing to increase calculation throughput by up to 2300%.
- Designed a tree-based data structure and implemented depth-first search to allow searching the entire database from a user query.

DISCORD BOT APPLICATION | GitFront
Python3, Discord.py API, Asyncio, Linode, Ubuntu, Git
Aug 2021 – Present

- Co-operated in 2 teams of 2 to build a Discord bot for artists and fans of Japanese animations using the Kanban Agile development methodology.
- Mentored and assigned 12 feature specifications to a new developer while facilitating the team's project contributions.
- Built interfaces to 4 websites (AnimeSearch, MyAnimeList, Jikan, AnimePlanet) using RESTful APIs and web scraping to retrieve the latest info on animations.

ONLINE CHAT APPLICATION | GitHub
Python3, Socket, Threading, Git
Jul 2022

- Collaborated in a team of 2 to build a command-line interface chat room app using Python socket.
- Developed a multi-threaded client-server connection system to allow users to send and receive messages simultaneously.
- Defined a data transfer protocol using UTF-8 encoding to standardize message data streaming.

MAZE GENERATOR & SOLVER | GitFront
Java, Gradle, Git
May 2022

- Employed test-driven development practices in a team of 2 to build a randomized maze generator and a maze solver.
- Deployed Kruskal's and Dijkstra's algorithms to generate 3 distinct maze types (Grid, Voronoi, Hexagonal).
- Wrote 23 unit testing functions to test for normal use cases, edge cases, and maze generator logic.