Jason Ho

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EDUCATION

University of Houston Houston, TX
B.S. Computer Science May 2023
Cumulative GPA: 3.2/4.0
Relevant Coursework: Algorithms and Data Structures, Introduction to Programming in C++, Computer Graphics, Linear Algebra, Calculus I, Calculus II, etc.

WORK EXPERIENCE

UNIVERSITY OF HOUSTON Houston, TX
Teacher's Assistant Aug 2021 – Dec 2021

- Assisted professor in evaluating and grading various student assignments, provided fair and concise feedback to help students..
- Assisted and guided first-year students in understanding new programming concepts
- Engaged in brief tutoring sessions with students, reinforcing key concepts and improving their ability to apply learned material.

UNIVERSITY PROJECTS

ROOMS - *Typescript, React, Next.js* Dec 2021
Rooms is a chat service that uses WebRTC and WebSockets to establish a peer-to-peer connection, enabling real-time communication between users. I leveraged Typescript to ensure robust coding and eliminate potential type bugs that could hinder development speed. ReactJS was incorporated as the UI library for efficient organization of client-side logic and maintenance of stateful logic. The overall project was built on the NextJS framework.

SCREENPEW - *C, X11/Linux* Feb 2022
Screenpew is a screenshot software developed specifically for X11 users. Constructed with dependencies such as X11, libpng, and XCB (X11 C Bindings), it is capable of capturing screen images efficiently.

TETRIS - *C++, SDL2* Jul 2022
Tetris is a native desktop Tetris game that loosely follows the basic Tetris guidelines. Built primarily in C++, it used the cross-platform development libraries SDL2 and GLEW for handling high-level functions such as input and viewport management.

ANDREW - *Zig/Discord API* Sept 2022
Andrew is a Zig-based Discord bot developed from scratch that acts as an HTTP web server. Despite not being RFC 7230 compliant, this bot creates a secure and efficient system for handling requests from Discord servers with an impressive response time. It is built against OpenSSL for TLS support to communicate with Discord's API.

TCAS - *Typescript, WebRTC/WebSockets* April 2022
Developed a basic Traffic Collision Avoidance System (TCAS) for a Real Time Systems class, comprising a rudimentary and visual representation of aircraft collision prevention methods. Deployed WebRTC, WebSockets, and HTMLCanvasElement for peer connectivity and trigonometry for geometric visualization. The system showcases every user's coordinate and facing angle, implements a global offset, and features a scaled-down radar representation with delay to replicate real-life radar functions. The system also offers proximity alerts with varying levels of warnings.

RCC - *Rust C Compiler* Feb 2023
Attempting to write a C17 compiler in Rust by reading the C17 spec. The preprocessor is functional and performs decently well relative to the GNU C preprocessor. Things that could be improved are error messages and diagnostics.

ADDITIONAL

Programming Languages: C, C++, Rust, Zig, Python, Javascript, Typescript, Node.js, GLSL
Technical Skills: Git, Linux, Windows, Docker, HTML, CSS, MySQL, Postgres, DynamoDB, AWS, CMake, OpenGL, Makefile