Daniel Zheng

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EDUCATION

University of Michigan Ann Arbor, MI
B.S. Computer Science, Japanese Minor | GPA: 3.6/4.00 | Honors Program Expected, May 2022
Relevant Coursework: Data Structures and Algorithms, Operating Systems, Web Systems, Advanced Discrete Mathematics, User Interface Development, Digital Product Design, Database Management Systems, Introduction to Game Development, Advanced Directed Study

WORK EXPERIENCE

JLL Technologies Tokyo, Japan
Software Engineer Intern May 2021 – Jul 2021

- Created Full Stack application for IoT data visualization/monetization platform for JLL property data
- Processed 6 billion square ft. of deployed systems data on workspace utilization time and environmental factors (carbon levels, oxygen saturation) for productivity and efficiency analysis
- Integrated self-updating tracker using Yanzi sensor data API and visualized data using chartJS accessible through paywall

Offhours Teaching Streaming Service (React/JavaScript/Python/Flask/SQL) Troy, MI
Software Engineering Project Lead May 2020 — Jan 2021

- Utilized Material-UI, NodeJS, Styled-Components, SQLAlchemy, and Bootstrap packages and did full-stack development to engineer an online streaming platform using an embedded Twitch API for teachers/tutors to stream classes online
- Developed server using Flask Python Backend along with React JS frontend, and SQL database
- Conducted 50 customer research interviews, created multi-page Figma mockups, and wrote a full-scale business plan

PROJECT EXPERIENCE

Zelda NES Recreation (C#/Unity) January 2022, Ann Arbor, MI

- Created 1-to-1 replica of 1986 NES title using original sprites, animations and gameplay mechanics
- Worked with Unity physics engine, colliders, sprite animators, and ray casts to replicate an authentic gameplay experience
- Used Jira software, sprints, and burndown charts to divide tasks and deconstruct project and timeline
- Practiced singleton design patterns, multiple inheritance and composition for code organization

Pager (C++/C) March 2021, Ann Arbor, MI

- Implemented kernel level memory manager to interact with infrastructure and manage application processes' virtual addresses
- Pager maintains pages in physical memory and uses clock eviction algorithm to maintain LRU

Threading Library (C++/C) February 2021, Ann Arbor, MI

- Implemented kernel level code to support user multithreading and thread class with join and yield functionality
- Implemented monitors by coding mutex and conditional variable classes allowing for multiple CPUs and interrupts

MapReduce Server (Python) December 2020, Ann Arbor, MI

- Created a MapReduce server using Python employing TCP/UDP connections, threading, and sockets
- Created masters and workers to simulate full-functioning map-reduce server allowing them to communicate with heartbeat messages and sockets using TCP/UDP connections

Outlaws (React/JavaScript/Python/Flask/SQL) August 2020, Troy, MI

- Programmed a two-person reaction-time based shooter game with ReactJS and Flask Backend that validated and kept track of player's income through blockchain records
- Worked with cookie and session variables to track player information
- Created all sprites/frontend visuals from the scratch, animating through Piskel/Procreate. Deployed on yeehaw-frontend.herokuapp.com

SKILLS/INTERESTS

Languages: C++, C, C#, Java, JavaScript(ES6), Python, SQL, Html, CSS
Tools: VSCode, Git, ReactJS, Flask, MongoDB, Unity, Figma, Photoshop, Procreate
Interests: Piano, Guitar, Card Magic, Art, Origami, Blogging, Augmented Reality, Machine Learning
Activities: League of Legends Varsity Team, UMich Tech Consultant, Chinese Business Club, Augmented Reality Initiative