Hudson Koyanagi

GitHub | LinkedIn | hudsonkoyanagi.github.io | hjkoyana@uwaterloo.ca

Summary

Languages: Java, JavaScript, Python, C++, HTML, CSS
Tools & Frameworks: Bash/ZSH, Git, SQL, React

Work Experience

Mesmerise Software Engineering/Data Science Intern Jul-Aug 2021
- Designed and implemented virtual reality interior design elements in Unity with the software team
- Worked alongside head of the data science team to implement a mood recognition machine learning algorithm in Python

The American School in London IT Jun-Jul 2021 & 2022
- Responsible for the organisation, quality assurance, and re-imaging of nearly a thousand laptops

London Sports Referee/Organizer 2018 - 2021
- Organised and refereed baseball, basketball and flag-football leagues for hundreds of children

Projects

Socket File Server source code

- A multi-threaded, socket, server-client program responsible for file transfers using Java
- Used Java Swing for client side GUI, while server transactions were handled in a separate thread
- Implemented a custom linked-list file tree to transfer the server side's file structure to the client as well as an RESTful API for GET, POST AND DELETE requests

P2P Pong source code

- A Multiplayer Pong game which uses Processing as graphics library with simple physics and graphics
- Custom data objects for fast serialization and transfer of game state at a high rate of delivery via a TCP connection using Java sockets

Clean New Tab Extension source code

- A minimalist replacement for the Chrome new tab page created with React and styled with Bootstrap
- Employs both IndexedDB and Chrome local storage for persistent user-side data
- Features an embedded P5.js script for graphic visuals

Facial Recognition on Raspberry PI source code

- A team project to implement a facial recognition "security system" in Python with the OpenCV and facial-recognition libraries
- Responsible for a locally hosted MariaDB SQL database for user management and logs, back end file management, facial-recognition optimizations, and GUI integration with tkinter

Education

Candidate for Bachelor of Software Engineering at The University of Waterloo 2022 - 2027
Relevant Courses: Programming Principles, Data Abstraction and Implementation, Methods of Software Engineering