Raymond Li

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Skills

Programming Languages: C, C++, C♯, Java, JavaScript, TypeScript, Python
Tools: Git, React, Next.js, Linux
Technical skills: Object oriented programming, Data structures & algorithms

Education

University of British Columbia — Vancouver, BC, Canada
Bachelor of Science, Combined Major in Computer Science and Mathematics — Sept 2022 – May 2027

Work Experience

ECSSEN Career School — Calgary, AB, Canada
Software Developer — June 2022 - December 2022, July 2023 - August 2023

- Front-end developer for decentralized and permission-less volunteer management site built in **Next.js**
- Provided technical assistance and guidance for new team members unfamiliar with the project
- Maintained Github repository for the project and managed code reviews and merging pull requests
- Overhauled and improved upon existing metadata for posts, allowing developers to create different types of posts with unique properties, with changes to the metadata handled with a versions system

iCare uCare Association — Calgary, AB, Canada
Volunteer Teacher — June 2020 - August 2020

- Taught beginner-level Python programming to twenty students in a virtual classroom setting
- Developed and implemented lesson plans that effectively conveyed programming concepts and techniques, ranging from Python syntax and standard library to basic data structures & algorithms
- Utilized coding exercises and assignments to engage students and promote learning through practice
- Adapted course material to the learning speed of the students to help them improve and succeed

Projects

olc-rts *C++, Data structures & algorithms, Object Oriented Programming*
`https://github.com/liraymond04/olc-rts`

- Used **olcPixelGameEngine** to develop a GUI application that renders a 3d-like hexagonal grid with multiple controllable player units that take the shortest path to move to a selected tile
- Demonstrated knowledge in data structures and algorithms to compute shortest path between tiles
- Learned coordinate spaces and affine transformations for converting mouse screen space coordinates to axial coordinates for user interactions with hex tiles, and transforming hex axial coordinates to isometric coordinate space for drawing a hexagonal grid with faux 3D perspective
- Applied C++ classes and the composition design pattern for developing application features such as interfaces for injecting custom player actions, and injecting custom draw calls into the render queue

modular-third-person-shooter *C♯, Object Oriented Programming*
`https://github.com/liraymond04/modular-third-person-shooter`

- Used **Unity Game Engine** and **C♯** scripting to develop a basic 3D third person shooter game, built with modular scripting components for customizability and easy implementation of new features
- Designed custom game physics for player movement and gravity, and custom Player classes
- Utilized raycasts to check for player ground checks, camera collisions and aiming in third person