

# Raymond Li

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## Technical Skills

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

## Education

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University of British Columbia | Vancouver, BC

September 2022 – May 2027

- BSc Combined Major in Computer Science, Mathematics

## Technical Projects

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[olc-rts](#) | Personal project

June 2023 – September 2023

- 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](#) | Personal project

February 2022 - February 2022

- 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

## Work Experience

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Software Developer | ECSSEN Career School | Calgary, AB

June 2022 - December 2022,  
July 2023 - August 2023,  
June 2024 - July 2024

- 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 by allowing developers to create unique post types handled with a versioning system, resulting in better productivity through enhanced iteration

## Volunteer Experience

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Programming Teacher | iCare uCare Association | Calgary, AB

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
- Promoted learning through practice by using coding exercises and assignments creating practical applications, resulting in improved student engagement and interest

