

Chris Yan



Burnaby, BC



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TECHNICAL SKILLS

Languages: C#, C++, C, Swift, Java, Python, JavaScript, HTML, XML, Linear Algebra
Frameworks/Libraries: Unity, Unreal Engine, SFML, Box2D, .NET, WPF, Avalonia, Apple SceneKit
Tools/Database: Perforce, Git, CMake, Visual Studio, XCode, SQL, Firebase, MongoDB

GAMES DEVELOPMENT PROJECTS

Project Phaser | 2D Space Shooter | SFML **May 2024 - Present**

Personal Project. To create a simple 2D game engine and a networked game on top of it.

- Goals: projectiles, collisions (Box2D), player controller, enemies, timers, particles, networking

DieRise | First Person Shooter | Unreal Engine 5 **Jan 2024 - Present**

Personal Project. Shoot zombies to get points, use points on guns and perks. Survive.

- Implemented procedural weapon sway, moving the arms in relation to camera movement
- Experimented with random spread and recoil patterns, taking advantage of timelines
- Converted blueprints into C++ and refactored code into multiple actor components
- Acquainted with Unreal best practices: base C++ class, BP event, anim BP, data table, etc.

Gouken | 3D Fighting Game | Apple SceneKit **Jan - Apr 2024**

BCIT Advanced Games Architecture Project. Focuses on using a high-level 3D graphics framework and an entity component system to architect a playable game.

- Researched how to animate skeletal meshes in SceneKit and implemented a state machine driven system to play and change animations fluidly
- Created the opponent AI that assesses player state/movement to decide its course of action

Immunity Reborn | 3D Action RPG | Unity **Sep - Dec 2023**

BCIT Introduction to Computer Games Development Project. React quickly to different enemy attacks, using the correct shield (Melee/Ranged/Magic) to block and counterattack.

- Owned the AI and state machine implementation for goblins and dragon final boss
 - Used navmesh sampling for randomizing dragon's target position when circling player
 - Used weighted randomization for deciding dragon's next action: claw, fly, fire, summon, etc.
 - Simplified features such as flying dragon by manually calculating gravity/knockback forces and syncing character controller/navmesh agent positions
 - Implemented radial (explosion), cleave (slash), and reflect (projectile) types of counterattacks
 - Led the character setup process: component settings, animations, avatar masks, ragdolls, etc.
 - Created an AI director to control whether nearby enemies should attack or circle the player
 - Implemented damage, health, consumable systems using the observer pattern
 - Designed the HUD and linked it with the game's systems, set up health bar billboards
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EDUCATION

BSc. Applied Computer Science (Games Development)

Sept 2023 - Present

British Columbia Institute of Technology

Computer Systems Technology Diploma

Jan 2020 - Dec 2022

British Columbia Institute of Technology