

# Kenneth Velasquez

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## EDUCATION

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**University of Southern California**

*BS, Computer Science*

*Minor, Video Game Programming*

**Aug 2019 - May 2024**

*Los Angeles, CA*

## SKILLS

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**Programming Languages:** C++, C#, Java, HTML/CSS, Python, JavaScript, Unreal Blueprint

**Software/Tools:** Unreal Engine, Unity, GitHub, Notion, Aseprite, Tiled

**Relevant Coursework:** Data Structures and Object-Oriented Design in C++, Linear Algebra, Video Game Programming in C++, Advanced Gameplay Programming in Unreal C++, Programming Game Engines, Professional C++, Mobile Game Development, Introduction to Algorithms and Theory of Computing

## PROJECTS

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### Tiled Arms

**Jan 2023 - May 2023**

Used Unity to build on class content by creating a self-driven mobile game during the last stage of class

- Created tile maps for each level using Aseprite and Tiled to serve as the game board.
- Built turn-based strategy movement and combat system, similar to that of Fire Emblem.
- Created an AI class for enemy movement and combat during the enemy phase.

### Multiplayer First-Person Shooter

**Aug 2022 – Dec 2022**

Utilized Unreal Engine to continue building on previous assignments and class content by creating a multiplayer first-person shooter.

- Completed weekly assignments to implement core gameplay mechanics and improvements mostly in C++, with some use of blueprints.
- Built networking functionality across all gameplay mechanics such as scoring, ammo pickups, alerts, game chat, a ready check, game save/load, Steam integration using Spacewar, and more.

### DirectX11 API Game Engine

**Aug 2022 - Dec 2022**

- Worked with DirectX11 to build multiple features in a simplified game engine with subsystems such as rendering, audio, collision, physics, game world models, and animations
- Made use of multithreading and a job manager to take care of tasks in the engine like rendering
- Created code for shaders in HLSL such as phong, half lambert, lambert, and toon.

### ITP 380 Video Game Programming Assignments

**Jan 2022 - May 2022**

- Worked with the SDL library to make games weekly based on already existing game titles such as Mario, Frogger, Pac-Man, Zelda, Star Fox, and Mario Kart.
- Developed a foundation for game physics, collisions, and other mathematical applications.