

HsiangHsuan Tung

Gameplay Programmer

236-501-4708 | Burnaby, BC (Open to relocation) | hhtung47@gmail.com |

linkedin.com/in/hh-tung | hhtung47.com

PROFESSIONAL SUMMARY

Gameplay Programmer with 3+ years of professional C++ experience developing gameplay systems and Unreal Engine tools for AAA game development. Experienced in integrating systems across client-server architectures, extending existing frameworks, and debugging large production codebases.

WORK EXPERIENCE

Heavy Iron Studios | Associate Programmer

Fortnite | *Team of 12* | *Unreal Engine 5* | C++

Oct. 2022 - Nov. 2024
Manhattan Beach, CA

- Implemented the Placeable Ledge Device in Creative, providing players with a configurable way to create new traversal experiences while maintaining compatibility with existing player-created content.
- Introduced Battle Royale's Nitro Barrel to Creative with configurable explosion and respawn behavior, implementing visual effect throttling to prevent game crashes during high-density gameplay scenarios.
- Developed custom editor widgets for Unreal Editor for Fortnite (UEFN) to help players manage gameplay asset properties and streamline content creation workflows.
- Integrated 30+ weapons, devices, and movement systems from Battle Royale into Creative, adding configurable settings to enhance the player creation experience.
- Resolved 40+ gameplay issues related to asset initialization, object lifecycle, and client-server synchronization across gameplay systems.

The Outer Worlds 2 | *Team of 3* | *Unreal Engine 4* | C++

Sept. 2021 - Oct. 2022
Manhattan Beach, CA

- Developed custom Unreal Editor tools to help designers efficiently create modular environments by automating wall and floor material tiling with configurable tile sizing, improving building placement efficiency during level design.
- Implemented a custom deep copy system leveraging Unreal Engine's reflection system to support cross-level copy and paste of custom assets while preserving their object hierarchies and relationships.
- Developed custom editor widgets and interaction tools to help designers improve the authoring workflow for modular environment assets, including configurable placement, selection, and editing controls.
- Managed synchronous and asynchronous asset loading to resolve initialization conflicts during World Partition loading of custom assets.

PERSONAL PROJECT

Daedalus | Unreal Engine 5.7.4 | C++ | Editor Plugin | 2026 – Present

Developing a custom Unreal Editor workflow to streamline modular building placement for designers, reducing repetitive manual placement. Key features include:

- Modular asset placement with grid-based snapping, configurable module patterns, gizmo interaction, and spatial placement validation.
- Data-driven structure and module representations using Unreal Engine UObject systems, supporting persistent module configurations and editor state management.
- Custom camera and viewport systems for interactive module previews and automated thumbnail generation, supporting controlled camera positioning and consistent asset presentation.
- Custom rendering and visualization systems for editor grids, module bounds, placement previews, and selection states.

TECHNICAL SKILLS

Programming Languages:

C++, Python, C#

Frameworks & Technologies:

Unreal Engine 4/5

Core Competencies:

Gameplay Systems, Editor Tool Development, Client-Server Systems (Unreal Engine), UI Development (UMG), Object-Oriented Programming (OOP), System Design & Integration, Debugging & Troubleshooting

Tools:

Git, Perforce, Jira, Visual Studio

EDUCATION

Master of Science in Cybersecurity
New York Institute of Technology

Jan. 2025 - Jul. 2026
Vancouver, BC

Bachelor of Science in Computer Science and Game Design
DigiPen Institute of Technology

Sept. 2017 - Apr. 2021
Redmond, WA

REPRESENTATIVE ACADEMIC PROJECTS

WExplosion | Team of 2 | Unreal Engine 4.25 | C++

- Designed and implemented a hierarchical system to manage game objects across multiple game modes.
- Developed UI systems handling communication between server and clients.
- Built map saving and loading tools within Unreal Engine editor.

RoboGames | Team of 5 | Unreal Engine 4.24 | C++

- Built lobby systems for player customization and game setup.
- Implemented replicated UI systems to synchronize real-time game state across clients.
- Created a scoreboard system to track player state across levels.