

HsiangHsuan Tung

Software Engineer

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PROFESSIONAL SUMMARY

Software Engineer 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

- Adapted an existing system into a user-configurable component, expanding the possibilities for user-generated content.
- Developed custom editor widgets and a custom detail panel for a user-facing editor to help users streamline complex asset configuration and content creation workflows.
- Implemented visual effect throttling under high-load conditions, preventing application crashes caused by excessive concurrent effects.
- Integrated 30+ gameplay features, devices, and movement systems into a user-generated content mode with additional configurable settings, providing more options for content creation.
- Resolved 40+ issues involving asset initialization, object lifecycle, and client-server state synchronization across production systems.

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

Sept. 2021 - Oct. 2022
Manhattan Beach, CA

- Developed custom editor tools for reusable asset creation, enabling automated and configurable workflows to improve content creation efficiency.
- Implemented a custom deep copy system to enable custom assets to be transferred across contexts while preserving their object hierarchies and relationships.
- Extended editor tooling for reusable assets with configurable controls for asset manipulation, improving authoring workflows.
- Managed synchronous and asynchronous asset loading to ensure reliable initialization of custom assets across different loading states.

PERSONAL PROJECT

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

Developing a custom Unreal Editor plugin to streamline modular content authoring and reduce repetitive manual workflows for designers. Key features include:

- Modular content authoring with configurable patterns, grid-based snapping, interactive manipulation, and spatial placement validation.
- Data-driven structure and module architecture leveraging Unreal Engine's built-in data systems, supporting reusable configurations and centralized editor state management.
- Custom viewport and camera systems for interactive previews and automated thumbnail generation, enabling consistent asset visualization.
- Custom rendering and visualization systems for spatial grids, object bounds, placement previews, and selection states.

TECHNICAL SKILLS

Programming Languages:

C++, Python, C#

Core Competencies:

System Design & Integration, Object-Oriented Programming (OOP),

Editor Tool Development, Production Systems, 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.