

Hyeonjoon Nam

Software Engineer — Systems & Performance

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SKILLS

Languages: C, C++, C#, GLSL

Engines / Frameworks: Unreal Engine 5, OpenGL, WebGL, ImGui, Unity, Custom C++ engines

Tools / Platforms: Visual Studio, Git, Perforce (Helix Core), PowerShell, GitHub Actions, Discord webhooks, Trello, Asana

Core Competencies: Systems, Performance, Architectural Patterns, Gameplay Systems, Collaboration, Leadership, QA Automation

PROJECTS

Traid of Valor | C++, Unreal Engine 5, Perforce

09/2025 – Present

Role: QA Lead (6-person team)

- A multiplayer co-op action game featuring three classes (tank, ranged, and support), built on a server-authoritative system.
- Built a PowerShell-based Perforce→Discord QA pipeline with scheduled commit detection for real-time CI notifications.
- Designed a user-mapped checkout monitor to post opened-file reports to Discord, avoiding conflicts and tracking progress.
- Implemented core gameplay and AI systems under a server-authoritative multiplayer model, integrating AnimNotify-timed hit detection and perception-based targeting for stable combat flow.

The Children Are Sleeping | C++, Unreal Engine 5, Perforce

09/2024 – 04/2025

Role: Tech Lead (4-person tech team, 13 total across departments)

- A 3D horror game where the player must escape from a monster by hiding, solving puzzles, managing stamina and sanity.
- Developed a multi-state monster AI with patrol, chase, prediction, and capture behaviors using Unreal's Behavior Tree.
- Designed a Weighted Patrol System improving AI fairness and consistency.
- Integrated a persistency framework to maintain doors, items, and interactable states across level transitions.
- Led the tech team's implementation schedule and cross-department communication with design and art.

Bastion | C++, Custom Engine (OpenGL, ImGui), Visual Studio, Git

03/2024 – 06/2024

Role: Tech Lead (5-person team)

- A top-down defense game where monsters follow a looping path, and players deploy and merge units to win.
- Built a data-driven monster and boss system with state machines and clear visual feedback.
- Expanded the unit system (melee, ranged, area, and buff units) to enhance tactical depth.
- Implemented code refactors and a file-parsing pipeline, improving maintainability and real-time balance tuning.
- Led a technical reboot, redesigning the architecture and reusing core systems efficiently.

They Are | C++, Custom Engine (OpenGL, ImGui), Visual Studio

09/2023 – 12/2023

Role: Tech Lead (5-person team)

- A top-down tower defense game. Players place, upgrade, and remove towers and obstacles while repelling enemy waves.
- Implemented real-time A* with dynamic obstacles and a monster-wide singleton cache, achieving a 99%+ speedup.
- Built core tower, monster, and wave systems, and a data-driven parsing pipeline for quick iteration.
- Designed the data-driven architecture to support future scalability and modular feature expansion within the engine.
- Maintained gameplay-side stability and led feature integration within a custom engine.

Suspense Defense | C++, Custom Engine, Visual Studio

03/2023 – 06/2023

Role: Tech Lead (4-person team)

- A 2D top-down defense/exploration game with day-night cycles and procedural maps leading to boss battles.
- Implemented random map generation using cellular automata and A*-based pathfinding for replayable AI movement.
- Built the monster system in C++ with state updates and interaction handling.
- Applied a Mediator pattern for efficient object communication under custom engine developmental limits.
- Developed tile-based collision and bounce physics, enabling lightweight wall detection and projectile reflection.

EDUCATION

B.S. in Computer Science in Real-Time Interactive Simulation

DigiPen Institute of Technology

Expected 04/2026