

Hyeonjoon Nam

Software Engineer

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SKILLS

Languages: C++, C, C#, Python, PowerShell, JavaScript, GLSL

Engines & Graphics: Unreal Engine 5, Unity, Custom C++ Engines (OpenGL), OpenGL

Tools / Platforms: Perforce (Helix Core), Git, GitHub, GitHub Actions (CI/CD), MySQL, Visual Studio, VS Code

EXPERIENCE

QA Lead / Gameplay Programmer

09/2025 – Present

Kimnap Games - Triad of Valor (3D MORPG, UE5) | [YouTube Demo](#)

- Engineered a **server-authoritative melee combat system** using **AnimNotify States** and **Server RPCs** to ensure deterministic hit registration and damage logic in networked environments.
- Implemented a **line-trace based Lock-on system** and a **guard-angle damage reduction** mechanic to enhance tactical gameplay depth.
- Developed a data-driven attack cooldown system synced with animation montage lengths, allowing designers to tune combat pacing without code changes.
- Integrated **p4bot** to resolve **exclusive-lock bottlenecks**; eliminated idle time spent waiting for file check-ins by providing real-time visibility, saving the 6-person team **10–20 minutes daily**.

Solo Developer (Tools / Automation)

09/2025 – Present

p4bot (Perforce-Discord Automation Toolkit) | [GitHub](#) | [YouTube Demo](#)

- Built a **Python** and **PowerShell**-based automation tool using the **Perforce CLI (P4)** to broadcast real-time depot activity and file-lock status to **Discord**.
- Implemented a Discord slash command system (`/canwork`) that allows team members to instantly verify file availability, removing the need to manually query the Perforce client.
- Designed a **centralized JSON configuration** and self-hosted automation via **Windows Task Scheduler** for seamless, unattended background operation.

Tech Lead / Gameplay Programmer

09/2023 – 12/2023

Exodia - They Are (2D Strategic Defense, Custom C++ Engine) | [GitHub](#)

- Optimized A* pathfinding by implementing a shared-path computation for swarm AI, reducing A* calls from **24,000 to 1** during map updates.
- Achieved stable **60 FPS with 100 monsters** by reducing CPU pathfinding time from **8.4s to 0.65ms**, identifying rendering as the primary bottleneck for 1,000+ unit scales.
- Designed the **core combat loop**, including tower management and wave spawning, with a **text-file based configuration system** for rapid balancing.

Tech Lead / Gameplay Programmer

09/2024 – 04/2025

Derpy Doggo Digital - The Children Are Sleeping (3D Horror, UE5) | [YouTube Demo](#)

- Designed a 4-stage **monster AI** (Patrol, Chase, Catch, Prediction) via **Behavior Trees**, including a line-of-sight prediction phase to maintain tension.
- Implemented a weighted patrol system that stabilized first-encounter timing to a **12–48s window**, down from a highly inconsistent **30s–100s**.
- Directed a 4-person engineering team**, managing task distribution and production schedules to ensure on-time delivery of technical milestones.
- Coordinated **weekly cross-discipline meetings** with Art and Design departments to define technical scopes and provide hands-on support for complex gameplay features.

EDUCATION

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

DigiPen Institute of Technology

Expected 04/2026

- Selected Coursework (Systems & AI):** Algorithm Analysis, AI for Games, Low-level Programming, Operating Systems, Data Structures, Advanced C/C++, Game Implementation Technique.
- Selected Coursework (Graphics & Math):** Advanced Computer Graphics I & II, Computer Graphics I & II, Linear Algebra & Geometry, Vector Calculus I & II.