Hyeonjoon Nam

Junior System Software Engineer

hyeonjoon.nam.dev@gmail.com | (206) 786-7888 | linkedin.com/in/hyeonjoon-nam | hjn.app

SKILLS

Languages: C++, C, CUDA, Python, Assembly (AVR), C#, GLSL, PowerShell

Systems & Performance: Nsight Compute, Parallel Computing, Bare-metal Programming, Win32 API, Lock-free Sync

DevOps & Tools: Docker, Jenkins, CI/CD, Perforce, Git, Jira

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

TEAM PROJECTS

QA Lead / Gameplay Programmer
09/2025 – Present

Kimbap Games - Triad of Valor (3D MORPG, UE5) | YouTube Demo

- Optimized GPU rendering time from 40ms to 23ms (42% reduction) by profiling via Unreal Insights and fine-tuning Lumen and Virtual Shadow Map (VSM) parameters.
- Architected a data-driven enemy variation system using DataTables and OnConstruction scripts, reducing manual blueprint iteration time by 90%.
- Integrated a custom Perforce-Discord automation bridge (p4bot) into the team workflow, saving each member 15+ minutes of daily idle time by providing real-time file-lock visibility.
- Resolved intermittent race condition crashes in event delegate binding through defensive coding and synchronized cleanup, ensuring high runtime reliability.

Tech Lead / Gameplay Programmer
09/2024 – 04/2025

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

- Spearheaded a 4-person engineering team in a 13s-person studio, managing technical roadmaps and cross-discipline coordination via Excel-based tracking.
- Engineered a weighted patrol system via Behavior Trees, stabilizing first-encounter timing to a 12–48s window (improved from an inconsistent 30–100s).

Tech Lead / Gameplay Programmer
09/2023 – 12/2023

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

- Led a 5-person engineering team for a custom-built C++ engine project; prioritized engineering milestones and conducted rigorous code reviews to ensure system integrity.
- Achieved stable 60 FPS with 100+ units by reducing pathfinding latency from 8.4s to 0.65ms and defining system performance ceilings through rigorous stress tests.

INDIVIDUAL PROJECTS

Individual Developer
01/2026 – Present

Heterogeneous HPC Simulation System (CUDA/AVR) | GitHub | YouTube Demo

- Engineered a real-time Boids simulation for 1.04M particles (1024x1024) at 50 FPS, achieving 85.23% Compute Throughput on an RTX 3070 via CUDA Uniform Grid partitioning.
- Developed bare-metal firmware for ATmega328P by directly manipulating AVR registers (UBRR0, ADMUX, ADCSRA) for high-speed UART, bypassing standard library overhead for sub-millisecond tactile control.
- Implemented a lock-free synchronization pipeline using std::atomic and Win32 Serial API to decouple hardware I/O from the high-frequency GPU rendering loop.

Individual Developer
09/2025 – Present

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

- Developed a real-time monitoring system for Perforce depot activity and exclusive-locks, featuring Discord integration and Slash Commands (/canwork) to eliminate collaboration bottlenecks.
- Architected a Jenkins CI/CD pipeline with automated session renewal and Docker containerization to ensure 24/7 environment-agnostic uptime.

EDUCATION

DigiPen Institute of Technology
Expected 04/2026

- B.S. in Computer Science in Real-Time Interactive Simulation (GPA: 3.67/4.0)
- Dean’s Honor List: Fall 2024, Fall 2025