

### PROFILE SUMMARY

Highly motivated C++ Game Programmer with a strong foundation in engine architecture, physics simulation, and low-level systems. Successfully built a custom DirectX 12 physics engine, editor/debug tools, and gameplay systems across Unreal and Unity. Seeking a junior gameplay/engine role where I can apply system-level problem solving and collaborate with cross-functional teams.

### PROJECTS

#### Custom Game Physics Engine (Individual Project)

Tech Stack: C++, DirectX 12

- Implemented a from-scratch impulse-based physics engine in C++ and DirectX 12 with iterative constraint solver and SAP broad-phase.
- Validated stability and performance under high-load stress, demonstrating complex interactions (chains, ragdolls, stacking) in sandbox scenes.
- Engineered an in-engine visual debugger featuring object picking, frame-by-frame rewinding, wireframe collision overlay, and real-time contact point/normal visualization.

#### Pintos Operating System Development (Individual Project)

Tech Stack: C

- Completed all four Stanford Pintos OS projects, implementing threading, virtual memory, and file systems entirely in C.
- Strengthened ability to reason about synchronization, memory layout, and OS architecture.

#### **Dark Souls-like Action RPG Prototype (Team Project)**

Tech Stack: Unity, C#

- Developed core combat systems and player interaction in a collaborative environment, leveraging Git and Slack for efficient version control and team communication.

### PROFESSIONAL EXPERIENCE

#### **Interface Developer | Siwon IT Co., Ltd**

Jan 2026 – Present

- Spearheaded the "Expert Referral & Return System" integration with HIRA/KHIS APIs to streamline inter-hospital clinical information exchange and patient transfer workflows.
- Architected a unified C++ PACS agent enabling direct NAS access via REST, utilizing asynchronous I/O to optimize DICOM retrieval and automated resource lifecycle.

#### **Application Developer | Jeonbuk National University Hospital**

Mar 2025 – Aug 2025

- Collaborated with medical staff to integrate Antimicrobial Stewardship Program (ASP) protocols into the EMR system, developing modules to regulate antibiotic usage.
- Resolved UI freezing by architecting a multiprocessing loading system using Win32 API and Named Pipes, overcoming framework threading constraints.

### EDUCATION

#### **Bachelor of Science in Computer Science**

- Academic Credit Bank System, South Korea
- Feb 2022 | 4.18 / 4.5

#### **Advanced Diploma Program in Computer Programmer Analyst**

- Fanshawe College, London, ON, Canada
- 2019 – 2020 | 4.06 / 4.2 (Dean's Honour Roll : Fall 2019, Winter 2020 )
- Completed 3 of 6 semesters; paused due to COVID-19.