# **Hyojoon Kim**

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#### STUDENT PROJECTS

08/2024 - 04/2025

## Game [Breath of the sky] | Gameplay Programmer, AI Programmer

C# , Unity

VR game where players ride dragons and use a grappling gun to soar through the skies while engaging enemies.

- Developed a **Behavior Tree** in Unity to manage complex AI decision-making.
- Implemented Behavior Tree Editor using Unity Graph View.
- Designed and integrated various types of enemy monsters using Behavior Trees.

08/2023 - 04/2024

## Game [Megalocephalo] | Gameplay Programmer

C# , Unity

C# , Unity

A 2.5D platformer shooter that challenges players with perspective switching, puzzle-solving, and obstacle navigation.

- Shaped the prototype using Unity featuring a 2.5D perspective switching system.
- Engineered physics-based interactions between the player and various moving objects.
- Implemented **object pooling** for bullets and interactable objects, significantly optimizing performance.

10/2024 - 12/2024

# Game [Punch and Run] | Technical Lead

Unity Nintendo Switch Game, A fast-paced endless runner game.

- Implemented punch attack mechanics using the Switch Joy-Con's gyroscope.
- Developed an automated monster spawning system to continuously challenge players.

03/2020 - 06/2020

# Game [Jackpot] | Technical Lead

C++

A tower defense game featuring poker cards, requiring strategic placement and combinations to boost damage and block

- Implemented an A\* pathfinding algorithm in the game.
- Developed a **custom engine** using C++.
- Implemented various components within the engine. Coached teammates how to use new components. Boosted the development speed.
- Implemented **object pooling** for bullets and monsters to resolve the game's frame drop issues.

09/2019 - 10/2019

## Master copy project [Pack-man] | Technical Lead

JavaScript

Recreated the classic arcade game using p5.js,

Implementing the classic game Pac-Man. Developed four different ghost AI based on original Pac-Man game.

# **EXPERIENCE**

01/2025 - 04/2025

# Student TA - cs170:

DigiPen Institute of Technology

#### **SKILLS**

C++, C#, C, Unity, OpenGL, JavaScript, Visual Studio, VS Code, Git, Linux

# **EDUCATION**

03/2023 - 04/2025

# **DigiPen Institute of Technology**

Redmond, WA

Bachelor of Science in Computer Science in Real-Time Interactive Simulation

03/2019 - 08/2023

#### **Keimyung University**

Daegu, Republic of Korea

Bachelor of Science in Computer Science