

Byungchan(Rex) Park

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TECHNICAL SKILLS

- **Languages:** C#, C++, C, JavaScript
- **Engine:** Unity
- **Tools/Frameworks:** Unity Editor, Visual Studio, Git, OpenGL, p5.js
- **Systems:** Enemy AI, State Machines, Hit/Hurtbox, UI/UX, Singleton Pattern, Gameplay Systems

PROJECT EXPERIENCE

- **BeatSlash** – 2D Rhythm Game with Custom Editor
Team of 3 | C++ with Doodle Engine (OpenGL-based)
Designed and implemented the rhythm system, including note spawning and beat synchronization. Developed a custom level editor for testing and debugging rhythm maps. Built using a school-provided engine with real-time audio-timing logic.
- **Blinded** – 2D Platformer / Boss Rush Game
Team of 5 | C++ / OpenGL
Implemented enemy and boss attack patterns with dynamic behavior phases and visual telegraphing. Built player control systems, including movement, jump physics, hit/hurtbox detection, and responsive collision handling. Focused on high-stakes reactive combat and satisfying moment-to-moment gameplay.
- **Megalocephalo** – 3D Unity Platformer
Team of 8 | Unity / C#
Programmed enemy AI behaviors using modular state-based logic and built key UI/UX systems, including health indicators and player feedback cues. Collaborated with level designers to maintain visual clarity and pacing across multiple stages. Contributed to overall design consistency and playability across 3D platforming mechanics.
- **Breath of the Sky** – 3D VR Game
Team of 5 | Unity VR / C#
Developed predictive turret mechanics that track and target the player based on velocity and movement patterns. Designed smooth dual-axis turret animations for realistic movement (guard: horizontal axis, barrel: vertical axis). Implemented a state machine for flying objects that dynamically changes behavior based on the player's position, enabling immersive, responsive enemy encounters. Built VR-optimized UI/UX for headset interaction and user comfort.

EDUCATION

- DigiPen Institute of Technology, Redmond, WA
Bachelor of Science in Computer Science in Real-Time Interactive Simulation
Sep 2023 – Apr 2025
- Keimyung University, Daegu, South Korea
Bachelor of Computer Science (in partnership with DigiPen Institute of Technology)
Mar 2021 – July 2023