

Yuncheng Zhang

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Education:

Master of Entertainment Technology at Carnegie Mellon University, Entertainment Technology Center
Pittsburgh, PA 2023 - Anticipated 2025

Bachelor of Science, Computer Science at Southern Methodist University, Lyle School of Engineering
Dallas, TX 2019 - 2023

Game Engines & Graph-based Scripting: Unreal Engine, Unity, UE Blueprint, Unity Visual Scripting

Programming Languages: C++, C#, Python, Java, Javascript

3D Computer Graphics: Blender, Maya, Houdini

Productivity: Google Workplace, Outlook

Languages: native Mandarin, proficient English

Past Projects:

Once A Pot In Time co-op Unity, Oculus Quest 2 09/26/2023 - 10/10/2023

- Implemented a **personalized hand-grab** interaction using Oculus hand pose recognition.
- Created an **aim assist** feature in response to playtest feedback to improve player engagement.
- Designed animation state machines for hands, vegetables, chicken, and a walking pot.
- Created **dynamic particle systems** that evolve based on game progression and the player's performance.
- Fixed device-induced game-breaking bugs with a design-focused troubleshooting method.
- Managed a team of two 3D artists, a sound designer, and two programmers to optimize game quality.
- Tested tossing mechanics with over 20 guests to ensure gameplay consistency.

Mosquito VR co-op Unity, Oculus Quest 2, Audacity 09/04/2023 - 09/18/2023

- Created a **virtual reality world** where users eliminate mosquitoes using a sci-fi bug zapper.
- Improved in-game feedback in Unity through physics simulation, haptic feedback, audio, and visual effects.
- Built mosquito entities with AI, enabling them to hover over the player and react to non-player characters
- Scripted **animation state machines** for daughter (NPC), mosquito (enemy), and zapper (weapon).
- Designed and created particle effects using both the legacy Unity particle system and VFX graph.
- Gathered playtest feedback and incorporated it into the week 2 iteration of the game.
- **Tuned game pacing** to maintain a 5-minute interest curve.

Zifeiyu solo Unreal Engine, Blender, Audacity 02/2023 - 05/2023

- Created a 3D first-person action game demo blending hack-and-slash and cooking elements.
- Brought to life a fantasy of hostile walking fish using **AI blueprints and stylized animation**.
- Crafted control rigs and animations for characters and weapons using Unreal Engine 5.1's **animation tools**.
- Incorporated diverse damage sources into a **combat system**, enabling guests to take creative approaches
- Implemented a **loot system** that rewards players based on the state of the enemy at the time of loot drop.

Momentum solo Unreal Engine, Blender, Audacity 08/2022 - 12/2022

- Implemented a Doom-style grappling system for swift map traversal.
- Increased the enjoyment of swift movement by correlating a character's attack power with movement speed.
- Implemented fundamental flying enemy perceptions and behaviors using AI Blueprint.
- Designed levels (lobby, tutorial, arena) to familiarize guests with the movement system.
- **Created and shaded** the weapon model in Blender.