

Yuxuan Zhang

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EDUCATION

University of Southern California

M.S. Computer Science

Aug. 2025 – May 2027

Los Angeles, CA

Huazhong University of Science and Technology

B. Eng, Biomedical Engineering

Aug. 2021 – Jun. 2025

Wuhan, China

PROJECTS

Unnamed Combat1 ARPG | *Unreal 5, C++, Blueprint*

Aug. 2025 – Present

- Implemented core combat features including a Block/Parry system and an Execute mechanic using Blueprint.
- Debugged and optimized Gameplay Ability System (GAS) components to improve stability and responsiveness.
- Designing and developing advanced BOSS AI behavior trees to enable dynamic and challenging encounters.

Brand New Level 2D Platformer Game | *Unity, C#*

Aug. 2025 – Present

- Designed and implemented core gameplay systems including player state machine, skill mechanics, enemy behaviors, and battle logic.
- Built the Unity project architecture and authored all gameplay scripts in C#.
- Collaborated on level design, contributing to the layout and gameplay flow of one of the game's stages.

PrimeEngine Mechanics and Optimization | *C++, Autodesk Maya*

Aug. 2025 – Present

- Developed and integrated an automated level instantiation system to streamline environment creation in PrimeEngine.
- Enhanced NPC behavior logic by implementing more adaptive and intelligent decision-making in the engine's source code.

2D Snake Mini Game | *C*

Jun. 2023 – Jul. 2023

- Wrote a 2D Snake mini game with 100% C language.
- Designed some test cases, including extreme situations, to test its availability.

EXPERIENCE

AI Medical Imaging Research Assistant

Jun. 2024 – May 2025

Huazhong University of S&T, remote with Northwestern University

Wuhan, China

- Collaborated with the Advanced AI in Medicine and Physics Laboratory (AIMP-Lab), Department of Radiology at Northwestern University, on MRI reconstruction research.
- Developed a deep learning-based MRI reconstruction method using a dual-domain, multi-path, self-supervised diffusion model.
- Manuscript under review for publication in *IEEE Transactions on Neural Networks and Learning Systems*.

Medical Ultrasound Laboartory Internship

Oct. 2024 – Nov. 2024

Huazhong University of S&T

Wuhan, China

- Developed a complete workflow for ultrasound imaging, spanning signal acquisition, preprocessing, and tumor segmentation.
- Implemented and contributed to optimizing a U-Net-based deep learning algorithm for medical image segmentation, adopted for use in the lab's research pipeline.

TECHNICAL SKILLS

Languages: Python, C/C++, C#, Java, RISC-V, MATLAB, HTML/CSS

Developer Tools: Unity, Unreal, Git, Google Cloud Platform, VS Code, Visual Studio, Autodesk Maya, Cygwin

Libraries: PyTorch, TensorFlow, Pandas, NumPy, Matplotlib

GAME EXPERIENCE

Steam: 1300+h

World of Warcraft: 1000+h

Overwatch: 200+h

Diablo IV: 100+h

Hearthstone Battleground: 150+h