Yuxuan Zhang

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Education

University of Southern California Aug. 2025 – May 2027
M.S. Computer Science *Los Angeles, CA*

Huazhong University of Science and Technology Aug. 2021 – Jun. 2025
B. Eng, Biomedical Engineering *Wuhan, China*

Technical Skills

Languages: C/C++, C#, Python, Java, RISC-V, Verilog, MATLAB, HTML/CSS
Developer Tools: Visual Studio, Unity, Unreal, Git, VS Code, Perforce, Google Cloud Platform, Autodesk Maya
Skills: Gameplay Programming, Object-Oriented Programming, Debugging, Graphics Programming, Tabletop Design

Projects

Tetris Runner: 2D Platformer Game | *Unity 2D, C#* Aug. 2025 – Present

- Designed and implemented programming and core gameplay systems, including player state machine, animation control and platform generation with Tetris-like control.
- Improved and debugged scripts of basic gameplay mechanism.
- Contributed to building a more stable project with Unity tools for future iterations of art/level design.

ARPG Team Project | *Unreal 5, Blueprint, C++* Aug. 2025 – Present

- Debugged and optimized Gameplay Ability System (GAS) components to improve stability.
- Improved block ability in battle system with Blurprint and C++.
- Added execution ability to the system.

Game Engine Optimization | *C++, PrimeEngine* Aug. 2025 – Present

- Enhanced NPC behavior logic by implementing more adaptive and intelligent decision-making in the engine's source code.
- Developed a culling strategy to optimize object rendering, which improved frame rate in the level.

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. Arxiv pre-print link: https://arxiv.org/pdf/2503.18836.

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.

Game INTEREST

Steam: 1300+h
World of Warcraft: 1000+h
Overwatch: 200+h
Diablo IV: 100+h
Hearthstone Battleground: 150+h