

ZeHua Wu

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EDUCATION

Communication University of China | Beijing, China

GPA 3.72/4.0

Bachelor of Engineering in Digital Media Technology (Game Design Technology Track)

Sept 2022 – Present

Bachelor of Management in Management Science and Engineering

Sept 2021 – Jun 2022

Relevant courses: Data Structures & Algorithms, Computer Graphics, Game Programming, Advanced Mathematics, Linear Algebra

INTERNSHIP EXPERIENCES

Tencent Games | *Gameplay Programmer Intern, Delta Force* | Shenzhen, China

June 2025 – Sept 2025

- **Boosted** the performance of the Spine animation system in Unreal Engine by 60% by implementing optimizations such as CPU parallelism, pre-baked mesh animations, and draw call batching.
- **Resolved** a critical UI rendering bug within the Spine UE Runtime by analyzing and patching its source code, directly improving the development team's workflow and efficiency.

DEVELOPMENT EXPERIENCES

C++ Software Rasterizer from Scratch

Sept 2024 – Present

- **Engineered** a lightweight software renderer in C++ from the ground up, with zero external library dependencies. Implemented core rendering pipeline features, including model loading (.obj), texture mapping (.tga), and rasterization algorithms. **Authored** the entire codebase, from fundamental geometric math libraries to file I/O and rendering logic. **Used Win32API** to create a windowed GUI and optimize performance.
- https://hmxsqaq.github.io/projects/cpp_renderer.html

AssAssIn | **Excellence Award** | Tencent GWB Game Awards 2024

June 2024 - Present

- **Developed** a 2-player competitive game with a team of 6 for the "GameFeel" themed competition, focusing on "collision" as the core gameplay mechanic. Served as a **Game Programmer**, implementing key systems including UI, enemy AI behavior, and the new player tutorial logic. **Enhanced** game feel by integrating impactful visual and audio feedback for player actions. **Collaborated** with the team using Git for version control in a fast-paced development cycle. Currently **refining** and preparing the project for public release.
- <https://hmxsqaq.github.io/projects/assassin.html>

Just Suck. | **Third Prize** | G-bits Game Jam

Jul 2023

- **Developed** a video game with a team of 5 students using Unity, built around the theme of "Absorption." Adopted a minimalist design approach to avoid visual clutter. Enhanced with extensive audio and visual effects to provide immersive, responsive feedback for a unique player experience.
- Served as **lead programmer**, delivering complete code and leveraging plugins to create dynamic animations that significantly enhanced control responsiveness. **Implemented** post-processing effects to elevate visual presentation and overall game polish.
- https://hmxsqaq.github.io/projects/just_suck.html

Unity Toolkit Development

May2023 - Present

- **Engineered** a comprehensive, reusable toolkit to accelerate personal game development projects.
- **Designed** and implemented a suite of modular systems, including a singleton manager, object pool, event bus, audio manager, and a generic timer.
- **Built** the framework to promote code decoupling and improve project scalability, packaged for easy import into new projects.
- <https://github.com/hmxsqaq/Unity-HmxsToolkit>

SKILLS

Engines: Unity Engine, Unreal Engine

Programming Languages: C#, C/C++, Lua, Python

Developer Tools: Git, Markdown, MS Office

Concepts: Object-Oriented Programming, Design Patterns (Singleton, Object Pool, Observer), Algorithms