

# Yifei MIAO

Tel:(213)-662-3093 | Email: yifeimia@gmail.com | Website: <https://mmmiu.github.io/>

## EDUCATION

### University of Southern California

Computer Science (Game development), Master of Science

GPA: 4.0/4.0

Los Angeles, CA, USA

August 2023 – May 2025(Expected)

### University of Southern California

Computer Science, Bachelor of Science

GPA: 3.88/4.0

Los Angeles, CA, USA

May 2020 – May 2023

**Courses:** Programming Game Engines, Video Game Programming, Computer Graphics, Professional C++, Software Engineering, Algorithms and Theory of Computing, Artificial Intelligence, Computer Systems, Operating Systems, Internetworking.

## SKILLS

- **Programming Languages:** C++, C#, Python, Lua, Java, TypeScript.
- **Libraries and Frameworks:** Gson, FastJson, Google ProtoBuf, pytest.
- **Development Tools:** Unity, Visual Studio, VS Code, Pycharm, Git, Sourcetree, Perforce.
- **Cloud Services:** Unity Cloud (Relay Service).
- **Web Development:** development skills including frontend, backend, and cloud services.

## PROFESSIONAL EXPERIENCE

### NetEase Games

Game Engine Development Intern Engineer

Hangzhou, China

July – August 2024

- Refactored the compilation process of a graphical programming tool in Python, enabling the compilation of nodes into a custom Abstract Syntax Tree (AST). Established a framework for translating projects into both dynamic and static programming languages. Code was successfully merged into the master branch.
- Enhanced the existing framework by developing a comprehensive graphical testing tool for the new compilation process. Created test cases covering all supported custom AST structures, significantly improving the maintainability of the compilation process and the stability of code generation.

### Facet Games

Client-Side Intern Programmer

Shanghai, China

June – August 2023

- Contributed to the development of *Big Name: City Lovin'*, a simulation/match-3 game, from version 0.12 to 0.14. Created shell scripts to automate the compilation of nested Protobuf files and developed a tutorial editor to streamline iteration for game designers.
- Implemented features such as the user info card and "Tower-Climbing Challenge," leveraging Agile, Scrum, and Git methodologies for rapid iteration.

### University of Southern California

Course Producer of CSCI 310 Software Engineering

Los Angeles, CA, USA

January - May 2023, 2024

- Led student teams in developing an API-based movie search website, acting as a stakeholder and providing guidance throughout the development process.
- Provided weekly support to over 50 students, helping them enhance their knowledge and progress their projects.

## PROJECT EXPERIENCE

### Princess and Knight: Rendezvous in the Dungeon: Unity Game-Jam project

Los Angeles, January - May 2024

- Led the development of a 3D online P2P co-op adventure game in Unity and C#, serving as the map designer and lead programmer. Oversaw gameplay, style, architecture, and mechanics, including Unity Netcode. Managed the full development cycle with data-driven approaches and Agile processes for rapid iteration based on feedback.
- Collaborated with a team from Berklee College of Music on game soundtracks and effects, enhancing the overall game experience.

### Summon Shapes: Ludum Dare 2-days Game-Jam

Online, April 2024

- Developed a 2D survival game in Unity and C#, responsible for game architecture and core mechanics, including the player summoning process. The game was rated in the top 15% of all published games.
- Worked with the development and art teams to optimize Agile processes, improving team efficiency and project completion speed.

### Atmospheric Scattering in Vulkan

Los Angeles, August - November 2023

- Implemented advanced atmospheric rendering techniques in Vulkan, integrating previous research and OpenGL features.
- Developed Rayleigh and Mie scattering through Ray Marching, and implemented variable sky coloring via Tone Mapping. Aimed to explore efficient and realistic atmospheric simulation for games and visualization applications.