

# WANG XIHAO

Student at the University of Montpellier – Master IMAGINE

## EXPERIENCE

Feb 2025  
Jun 2025

### VOLUMETRIC RENDERING AND CLOUD SIMULATION NEUVAGES

**TER Project** | University of Montpellier

**Languages and technologies:** C++, OpenGL, GLSL

- Designed a volumetric rendering engine in C++/OpenGL/GLSL for visualizing participating media (clouds, fog).
- Implemented ray marching, procedural deformation, and dynamic volumetric textures.
- Comparative study of several rendering approaches.

Feb 2025  
May 2025

### STAR ENGINE – 3D GAME ENGINE

**Group Project (M1)** | University of Montpellier

**Languages and technologies:** C++, OpenGL, GLSL, Assimp, ImGui, ECS architecture

- Developed a complete 3D game engine (editor, PBR, animation, physics).
- Integrated Physically-Based Rendering (metalness, roughness, AO, cubemap, IBL).

Mar 2025  
May 2025

### PHOTO MOSAIC WITH ADVANCED CRITERIA

- Generated photo mosaics (C++) using several matching methods: average color, histogram comparison, color distribution, and color blending (PSNR up to 21 dB).

Oct 2024  
Jan 2025

### RAY TRACING

- Implemented reflection, refraction, transparency, and metallic materials with roughness. Kd-Tree acceleration structure.

## EDUCATION

Sep 2024  
Present

### MASTER'S DEGREE IN COMPUTER SCIENCE – IMAGINE TRACK

**University of Montpellier** | Montpellier

Specialization in image processing and analysis, computer graphics (OpenGL/GPU, real-time and offline rendering), and 3D vision and modeling.

Sep 2020  
Jun 2024

### BACHELOR'S DEGREE IN COMPUTER SCIENCE

**University of Montpellier** | Montpellier

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🌐 Chinois

🔗 <https://xihao-wang.github.io/>

## SUMMARY

Master's student in Computer Science IMAGINE track at the University of Montpellier, I am looking for a 6-month end-of-study internship in the field of game development, graphics programming, 3D rendering, or artificial intelligence applied to image processing and 2D/3D reconstruction. I wish to apply my skills in OpenGL, GLSL, C++, and interactive simulation within a technically demanding and creative environment.

## SKILLS

- C++, OpenGL, GLSL
- JavaScript
- Python
- Godot / Unity
- Android Studio

## LANGUAGES

- French – Professional
- English – Intermediate
- Chinois - Native