

# NOYA CAI

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## OBJECTIVE

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Technical artist and Gameplay/Graphics programmer. Available from May 2025. Open to relocate.

## EDUCATION

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**Rochester Institute of Technology (RIT)** *Aug/2023 - Present*  
Master of Science in Game Design and Development  
**University of Science and Technology of China (USTC)** *Sep/2019 - June/2023*  
Bachelor of Engineering in Computer Science and Technology

## COURSES

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<b>Math</b>	Linear Algebra, Calculus, Computational Methods, Equations of Mathematical Physics
<b>CS</b>	Computer Architecture, Data Structure and Algorithm, Computer Networks, Data Base
<b>Graphics</b>	Computer Animation, Game Graphics Programming, Global Illumination

## SKILLS

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<b>Programming</b>	Proficient in C, C++, C#, GLSL, HLSL, Python, Swift, Java, HTML
<b>Library</b>	OpenCV, OpenGL, OpenXR, DirectX, CUDA, ARKit, RealityKit
<b>Software</b>	Visual Studio Code, Visual Studio, Xcode, Unity, Unreal Engine, Trello, Figma

## WORK EXPERIENCE

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**Magic Spell Studio, Augmented Reality Software Engineer** *Feb/2024-Present*  
**Keywords:** VR/AR, Unity, C#, SwiftUI, ARKit, RealityKit, ios, Figma, Trello

- Developed an AR windowed application using Unity for Apple Vision Pro to be used in medical fields.
- Worked with designers to implement complex UI/UX system to meet client's needs.
- Worked with data engineers to migrate data from FHIR server to an AR application.
- Using SwiftUI, ARKit, Compositor Services, and RealityKit to develop an AR immersive application for Apple Vision Pro to be used in medical research.
- Separated the main thread of the program into multiple threads and improved the overall speed by 30%.

## PROJECTS

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**GPU-Based Global Illumination Renderer and Ocean Simulator** *Jan/2024-May/2024*  
**as Graphics Programmer, using Linear Algebra, C++, OpenGL, GLSL**

- Implemented a path tracer that allows user-defined primitive shapes including triangles and spheres.
- Implemented multiple tone-reproduction post effects which can be selected according to different image and screen brightness conditions.
- Based on this renderer, implemented a realistic Ocean Simulator with Gerstner wave, Caustics, and click-promoted water circle wave on the surface.

**Warped as Gameplay Programmer and Technical Artist, using Unity, GitHub, Agile** *Aug/2023-Dec/2023*

- Implemented a complex rotation system as the main mechanism of a top-down isometric puzzle game.
- Designed and implemented cut-scene animation using Bezier Curve and Catmull-Rom spline.
- Designed, modeled, and rigged the main character using Blender.

## ACTIVITY

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**Captain of management school's Female Soccer Team** *USTC, Sep/2020-May/2022*

- Recruited 8 teammates, organized and oversaw weekly training sessions, acquired sponsorship for equipment
- Increased the team rank from 8 to 4 out of 8 teams