

# 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  
[Course Taken: Computer Animation, Game Graphics Programming, Global Illumination](#)  
**University of Science and Technology of China (USTC)** *Sep/2019 - June/2023*  
Bachelor of Engineering in Computer Science and Technology  
[Course Taken: Computational Methods, Equations of Mathematical Physics, Data Structure and Algorithm](#)

## 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, DirectX11, 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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**Duolatera (Capstone VR online co-op puzzle game)** *Jan/2024-May/2024*  
[as Technical Artist, and Graphics/Gameplay Programmer, using Unreal Engine 5, C++, and HLSL](#)

- Implemented cel-shader material for forward-shading, portal vfx material as well as several other shaders for in-game props.
- Implemented dialogue system, voice chat system, and several other gameplay puzzle mechanics.

**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.
- Based on this renderer, implemented a realistic Ocean Simulator with Gerstner wave, Caustics, and click-promoted water circle wave on the surface.

**VR-Live VR/Graphics Programmer, using Unity, GitHub, Sony Mocopi** *Aug/2023-Dec/2023*

- Built and integrated a framework that works with Sony Mocopi to use as Motion Capture tool in VR-Live performances. It allows multiple performers and 20+ audiences to join over the network.

**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.