

YingXuan(Jennifer) Liao

General Engineer

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Available for Interns after Dec 16th, 2022

SKILLS

Programming: C++, Lua, C#, python, Tensorflow, Java web development, Xml/Html/CSS/JavaScript

Game Engine: Unity/Unreal **Graphics:** OpenGL(GLSL); RenderDoc; DX11; Sketch/Figma; MagicalVoxel

EDUCATION

Carnegie Mellon University (CMU)- Master of Entertainment Technology **2021.08 – Expected 2023.05**
Entertainment Technology Center, Major in Entertainment Technology(Computer Graphics)

Wuhan University (WHU) - Bachelor of Engineering **2015.09 - 2019.06**
School of Computer Science, Major in Software Engineering

EXPERIENCE

Lilith Games Company | **Game developer** | **Lua, In-house game engine, Metaverse** **2020.03 - 2021.05**

- Worked on **io games, RPG, and chatroom** in a Metaverse game platform project.
- Implemented game logics like cameras, FSM, NPC behaviors, Object Pool in the **In-house game engine**.
- Converted the design into reality using scripting languages (Lua).

Neusoft Ruidao Company | **Software Engineer (Intern)** | **Java web dev, MySQL** **2018.07 - 2018.08**

- Joined an incubator project about a travel blog website developed with Java, including front-end and back-end development. e.g. MySQL, Java Servlet, Spring MVC, and other common technologies.

PROJECTS

Path tracer & Soft Rasterizer | **Graphics Engineer** | **C++, OpenGL(GLSL)** **2022.02 - 2022.05**

- See in <https://www.yingxuanliao.com/computergraphics>
- Writing 3D CG software toolsets, based on [CMU 15-662](#) / [Nori](#).
- Using C++ and OpenGL to implement many functions in rasterizer, path tracing and particles.
- Using PCF, PCSS to implement the **soft shadows** in GLSL.
- Using PRT (including **Spherical Harmonics**) to implement the **real-time environment lighting**.

Telepathway, Google | **General Engineer(Graphics)** | **CG, C#, Unity, XR** **2022.02 - 2022.05**

- An Academic Team Project with Google, exploring the **visualization of Machine Learning**.
- Write procedural generating map in **Unity** using Delaunay triangles and mesh editing.
- Involved in visualizing K-means clustering and Reinforcement machine learning.

Build Virtual World, CMU | **General Engineer** | **Shader graph, C#, Unity, VR/AR** **2021.09 - 2021.12**

- Built each game with the other programmer, 2 artists, and a sound designer in every 2 weeks. Including **Unity, XR technology(AR,VR)** and so on.
- Created **particle systems** like fire, fog effects and **shader graph** to make water, thunder.
- Implemented game logics like **Singleton Pattern, NPC behaviors, Game manger Template**.

RESEARCH

Bachelor Degree's Thesis

Chatbot Under VR - how to enhance the conversation experience **2018.12 – 2019.05**

- Developed and trained a spoken dialogue system using **seq2seq** in **python**.
- Analyzed the emotion scores of players and AI's words with the help of **IBM Watson SDK**, and explored how emotion analysis would change games in a testing VR game environment in **Unity**.