Yilin Liu

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EDUCATION

University of Pennsylvania(UPenn), Philadelphia, PA, USA   Sep 2021 – Jan 2023

- MSE in Computer Graphics and Game Technology
- **Core Courses:** Interactive Computer Graphics, Advanced Rendering, Computer Animation, Procedural Computer Graphics, 3D Modelling, GPU Programming, Advanced Topics in Computer Graphics, Game Design Practicum, Engineering Entrepreneurship

Xi'an Jiaotong - Liverpool University（XJTLU）, Suzhou, Jiangsu, China   Sep 2017 – Jun 2021

- BEng in Digital Media Technology
  - GPA: 3.78 / 4.0 (Top 1)

SELECTED PROJECTS

Physically-based shaders，Coursework，UPenn, [Link](#)   Apr 2022 – May 2022

- Implemented diffuse and specular image based lighting，loading of HDR mapping, obj files and textures

Path Tracer Renderer，Coursework，UPenn, [Link](#)   Jan 2022 – May 2022

- Implemented a basic path tracer, including the intersection detection, BRDF, Fresnel Dielectric, Global Illumination, K-d tree acceleration, and a GPU shader

The Beadiest - A Maya Plugin，Coursework，UPenn, [Link](#)   Feb 2022 – May 2022

- Designed and implemented a Maya plugin that converts 3D model to bead work model based on *Beady: Interactive Beadwork Design and Construction* in SIGGRAPH'12

Mini Minecraft，Coursework，UPenn, [Link](#)   Oct 2021 – Dec 2021

- Designed and Implemented the procedural world generation in a mini Minecraft based on 3D Perlin Noise and Worley Noise; the biomes include grassland, mountains, lakes, iceland, caves and their transitions.

Mini Maya，Coursework，UPenn, [Link](#)   Oct 2021 – Nov 2021

- Implemented a mini Maya editor based on C++; implemented basic functions such as vertex, edge, and face manipulation; implemented loading of obj files, tessellation, and skinning.

RelicVR：An Educational Archaeology Game，Coursework，XJTLU, [Link](#)   Mar 2021 – Jul 2021

- Designed and implemented an educational VR game that allows players dig the relics out of clod; Implemented a GPU-based Marching Cube algorithm to allow players modify voxels with hammers in real time
- Published a paper on ACM SIGCHI PLAY 2021:
  - **Yilin Liu**, Yiming Lin, Rongkai Shi, Yiming Luo, and Hai-Ning Liang. 2021. RelicVR: A Virtual Reality Game for Active Exploration of Archaeological Relics.

Exploring Effect of Visual Cues in Co-located AR Collaboration，Final Year Project，XJTLU, [Link](#)
Sep 2020 – Jun 2021

- Designed and developed a network communication system based on AR interaction in Unity; conducted user experiment and statistic analysis
- Published a paper on ACM SUI 2021：
  - Lei Chen, **Yilin Liu,** Yue Li, Lingyun Yu, BoYu Gao, Maurizio Caon, Yong Yue, and Hai-Ning Liang. 2021. Effect of Visual Cues on Pointing Tasks in Co-located Augmented Reality Collaboration.

WORK EXPERIENCES

Modeller Intern, Youxiang Studio, Jincheng Group, Suzhou Jun 2018 – Jul 2018

- Modelled objects such as spaceships and cars in the film with Maya

ACTIVITIES

SIGGRAPH 2022，Vancouver   Aug 2022 – Aug 2022

TECHNICAL SKILLS

C++, OpenGL, C#, Java, Processing/p5.js, Python, HTML/CSS/JavaScript, WebGL, MATLAB, LaTeX,

PRODUCTION TOOLS

Unity, Maya/MEL, Unreal, ZBrush, Motion Builder, Houdini, Substance Painter, Substance Designer, Adobe Premiere Pro, Adobe Photoshop, Adobe InDesign, Figma