

Xiangming Ka

<https://xiangmingka.wixsite.com/website>

Email : xiangmik@andrew.cmu.edu

Mobile : +1-412-933-0068

EDUCATION

Carnegie Mellon University

Master of Entertainment Technology; Class of 2023

Pittsburgh, PA

August. 2021 – Present

University of Electronic Science and Technology of China

Bachelor of Software Engineering; GPA: 3.75/4.0

Chengdu, China

August. 2016 – June. 2020

Exchange Study: UC Santa Barbara

GPA: 3.84/4.0

Santa Barbara, CA

March. 2019 – June. 2019

Courses: Computer Graphics, Advanced Image Synthesis

PROFESSIONAL EXPERIENCE

Bungie, Inc.

Technical Artist Intern

Bellevue, WA

May 2022 - August 2022

- Worked on Destiny 2 Graphics System and Workflow Team
- Performance optimization
- Cross-disciplinary troubleshooting

Unity Technologies

Technical Artist Intern

Shanghai, China

August 2020 - July 2021

- Render Feature and Shader development
- Enterprise support for Art Assets and Rendering improvements
- Devised internal development tools

ACKNOWLEDGE SKILLS

Programming Languages: C#, C++, C, HLSL, GLSL, OpenGL, Python, Java, Swift

Technologies: Unity, Unreal, Visual Studio, Perforce, Git

DCC: Maya, Substance Painter, Substance Designer, Photoshop, Blender, Houdini

SELECTED PROJECTS

Advanced Screen-Space Subsurface Scattering and Skin Rendering

Unity Technologies, Shanghai

Tech: Unity, C#, HLSL, Substance Designer

Sept. 2020 - Dec. 2020

- Developed a Screen-Space Subsurface Scattering Render Feature using Burley's normalized diffusion model in Unity's Universal Render Pipeline
- Implemented highly performance-optimized Compute Shader for mobile and VR platforms
- Built a user-friendly Diffusion Profile system to control the subsurface scattering

Environmental Lighting for Unity Shanghai Office RTX Demo

Unity Technologies, Shanghai

Tech: Unity, HDRP, Substance Painter, Substance Designer, Maya

May. 2021 - Jul. 2021

- Physically-Based Environmental Lighting in HDRP
- Photometry validation
- Optimized for Real-time Ray Tracing

Node-Based Shading Solution for Character Rendering

Unity Technologies, Shanghai

Tech: Unity, C#, HLSL

Mar. 2021 - Jun. 2021

- Shader Graph extension for Character Shading—Skin, Hair, Eye, and Fabric Shading
- Built Pre-integrated Subsurface Scattering in skin shading
- Researched and implemented two types of BRDF for silk-like and cotton-like fibers, created Translucency and Anisotropic Specular in Hair and Fabric Shading

Froxel-Based Volumetric Fog Render Feature

Unity Technologies, Shanghai

Tech: Unity, C#, HLSL

Dec. 2020 - Mar. 2021

- Designed volumetric textures as intermediate storage, and used Compute Shaders and UAVs to raymarch
- Devised multiple Denoising Algorithms to improve volumetric shadow quality, including ESM and Temporal Reprojection
- Optimized Compute Shader for parallel computing