


Jingtao Huang

 www.jingtaoh.com
 jingtaoh@usc.edu
 +1 (213) 245-6755
 Los Angeles, CA 90007

EXPERIENCE

Activision Blizzard, Inc. Jun. 2022 - Aug. 2022
Graphics R&D Intern Los Angeles, CA

- Work on performance capture for hands.

Adobe Inc. May 2021 - Aug. 2021
Research Intern - C++, Substance 3D, Github Remote, CA

- Improved rendering capabilities of an internal geometry library.
- Mentored by *Dr. Jérémie Dumas, Dr. Vojtěch Krs, and Giorgio Gori.*

University of Southern California Jan. 2021 - May 2022
Course Producer Los Angeles, CA

- *Computer Graphics*, CSCI 420, Spring 2021 and Spring 2022.
- *Computer Animation and Simulation*, CSCI 520, Spring 2022.

Detour Bus (A VR comedy Game) May 2020 - May 2021
Engineer - C#, Unity, FMOD, Perforce Remote, CA

- Developed and maintained game features and tools.
- Collaborated with writers, designers, and artists to build 8 levels.

SELECTED PROJECTS

Volume Renderer for Hand Anatomy - C++, Embree, TBB Spring 2022

- Implemented ray casting algorithm to visualize hand MRI data.
- Improved image quality by utilizing geometry of interior structures.
- Devised transfer functions for individual hand tissues.

3D Human Shape and Pose - C++, OpenGL, ImGui, Git Fall 2021

- Incorporated statistical human shape model into graphics pipeline.
- Designed graphical user interface to manipulate its shape and pose.

IK with Skinning - C++, Eigen, ADOL-C, Git Spring 2021

- Implemented and compared different skinning methods.
- Wrote an inverse kinematic solver to deform characters.

Prime Engine Development - DirectX, Maya, Fall 2020

- Performed frustum culling to optimize rendering performance.
- Built skeleton animation blending system and physics component.
- Implemented toon shading, reflection and plant animation.

CPU Ray Tracer - C++, OpenMP Spring 2020

- Implemented primitive intersection and illumination.
- Supported anti-aliasing, soft shadows and recursive reflection.
- Optimized rendering speed with BVH and multiprocessing.

EDUCATION

University of Southern California

Jan. 2020 - Aug. 2022
Master of Science in Computer Science
Advised by *Prof. Jernej Barbic*

Beijing Jiaotong University

Sep. 2014 - Jun. 2018
Bachelor of Engineering in Computer Science
Bachelor of Economics in Finance
Outstanding Graduate

Relevant Coursework

Calculus, Linear Algebra
Data Structure, Algorithms
Computer Architecture
High Performance Computing
Augmented, Virtual and Mixed Reality
Computer Graphics
Game Engine Development
Computer Animation and Simulation

SKILLS

Languages

C++, C#, GLSL, \LaTeX

Tools

OpenGL, DirectX
Maya, RenderMan, Unity,
CMake, OpenMP, TBB, ImGui
Vim, CLion, Visual Studio
Git, Perforce

Technical

VR Development
Skeletal Animation
Shader Programming
Version Control and Build System
GPU Architecture and Graphics Pipeline
Troubleshooting and Optimization
Game Engine Development

Environments

macOS, Windows 10, Ubuntu

ACTIVITIES

SIGGRAPH 2020 Student Volunteer
USC SIGGRAPH Student Chapter
Viterbi Graduate Mentor