Siyu Zhang

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Demo Video Link: https://www.youtube.com/channel/UCAY_ZKih5pyyMWnMfb3WHrQ

EDUCATION

University of California, Berkeley, Berkeley, CA
- Master of Engineering in Electrical Engineering and Computer Science 08.2021 – 05.2022 (expected)

University of Pittsburgh, Pittsburgh, PA
- Bachelor of Science in Computer Science 09.2017 – 12.2020
- Digital Media Certificate
- **GPA: 3.99 / 4.0**

SKILLS

Programming Languages: C++, C, Python, C#, Java, MATLAB, R, JavaScript, HTML, CSS, Assembly (MIPS)
Frameworks and Tools: CUDA, OpenGL, Docker, Flask, Jinja, Arduino
Software: Houdini, Unity, Blender, ZBrush, 3ds Max, Maya, Photoshop, Substance Painter, Premiere Pro

EXPERIENCE

Light Chaser Animation Studio *– Beijing, China* 01.12.2021 – 07.28.2021
Internship, Research & Development Engineer at TD Department
- Contributed to the development of the self-developed physics engine used for supporting the CFX (character effects) team
- Improved the run-time of the XPBD-based cloth simulation by 100 times faster using GPU with **CUDA** compared with CPU

Huawei Technologies Co., Ltd. *– Shenzhen, China* 05.05.2020 – 08.06.2020
Internship, Cloud Computing Engineer (Edge-cloud AR/VR rendering group)
- Developed (individually) an AR/VR prototype application for internal rendering testing and demo-use
- Deployed both the desktop version and VR version of the application with **Unity**, **C#** and **SteamVR**

PROJECTS

ATTT */ An individual class project finished in Immersive Computing and Virtual Reality* 10.2021 – 11.2021
- Designed and developed an augmented version of Tic-tac-toe game in AR mode using **Unity3D**, **C#** and AR Foundation
- Designed the UI and helper information of the application and deployed it on Android devices

FEM-StVK */ An individual experimental project finished during the internship at Light Chaser Animation Studio* 02.2021
- Implemented a simple version (only contains tetrahedral and collision constraints) of FEM for simulating StVK material using **C++** and **Houdini** for visualization

PBD-Cloth */ An individual experimental project finished during the internship at Light Chaser Animation Studio* 01.2021
- Implemented a simple version (only contains distance, point, and collision constraints) of Position Based Dynamics method by Matthias Muller for cloth simulation (demo GIF on GitHub) using **C++** and **OpenGL**

C_U Fish */ A Blender project guided by Professor Brian A. Barsky* 09.2020 – 11.2020
- Designed the project for comparing ray tracing (with Cycles Engine) and rasterization (with Eevee) typically in food rendering
- Modeled, sculpted, texturized, and rendered a plate of grilled fish and other food such as donuts with **Blender**
- Wrote a report on comparing and analyzing rasterization and ray tracing typically in food rendering in **Blender**

PickMe */ A group project finished in "She Innovates 2020" Hackathon* 02.01.2020
- Designed and developed an AR-based mobile application with **Unity3D** for replacing tiny paper raffle ticket with **Augmenting Reality** objects and users can raffle with other people who have mobile phones in any events at any time in any places
- Took charge of building UI, connecting scenes, enabling AR effects, animations and visualizing the data

3D Maze */ An individual class project finished in Introduction to Computer Graphics class* 10.2019 - 11.2019
- Implemented an algorithm to generate random maze, built the maze by **OpenGL** and **C**
- Simulated the viewpoint of solving the randomly generated maze by applying transformation matrices and left-hand rule

PUBLICATION

GPU Cloth Simulation Pipeline in Lightchaser Animation Studio */ SIGGRAPH Asia 2021 Technical Communications*
Haowei Han, Meng Sun, **Siyu Zhang**, Dongying Liu, Tiantian Liu

ACTIVITIES

University Teaching Assistant for Data Structure / University of Pittsburgh 01.2020 – 04.2020
- Prepared recitations for students enrolled in Data Structure class provided by Dr. Ramirez and held office hours for students