

Siqi Wang, Software Engineer

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EDUCATION

Carnegie Mellon University, Master of Entertainment Technology Pittsburgh, PA
Entertainment Technology Center, GPA 3.67/4 May 2021

University of Electronic Science and Technology of China, Bachelor of Engineering Chengdu, China
School Of Software Engineering, GPA 3.93/4 July 2019

Relevant Courses: Computer Graphics, Object-oriented Programming, Linear Algebra, Algorithm and Data Structure, Discrete Math
Computer Networking, Compiler Theory, Operating System, Building Visual Worlds, Digital logic

SKILLS

Skills: C/C++, C#, Unity, Unreal, OpenGL, Tensorflow, Python

Tools&Platform: Perforce, Subversion, Git, HTC Vive VR, MagicLeap AR, Kinect, CMake, Linux

EXPERIENCE

iQiyi, Inc. Dec.2018 – May.2019
Software Engineer Intern, Graphics *Shanghai, China*

Participated in new applications and researches attached to iQiyi App's 160 millions daily active users.

- **Computer-Graphics-Based AI Dataset Generating Tool**
Used computer graphics to generate auto-labeled data for machine learning. Over 80% accurate rate in varieties of situations. Highly configurable tool can generate the data within 1 hour, which would take a whole team 2 weeks to generate manually.
- **Virtual Live Streamer**
Developed functions of 3D character customizing, such as face, skin, haircut, by using blendshapes and skin animation. Synchronized the 3D animation of the lip to the real-time voice from the customer. Precise in over 90% cases.

NetEase Games, Inc. Jan.2018 – Aug.2018
Software Engineer Intern, Game Engine *Hangzhou, China*

Developed and optimized game engine's functions to support the commercial game project with 25 million registered players.

- **CPU-Based Optimization Module (Occluded Culling)**
Developed occluded culling module, which decreased GPU load by 20%, with only 200KB-600KB extra RAM. Compared to Unity Game Engine, CPU-cost is reduced from 1ms/frame to 0.05ms/frame while culling result outperforms Unity in 80% cases, at the acceptable cost of offline computing time.
- **Art Assets Optimization and Batching Control System**
Engineered the tools to optimize the art resources like textures, materials, to reduce draw-calls by 30%. Made balance of number of draw-calls, RAM, priorities of the resource, while remain the 90% visual fidelity at the time.
- **Efficient Terrain Model Rendering and Editing Tool**
Implemented texture technique of terrain rendering. Reduced over 50% RAM of textures used in terrain. Increase the efficiency of artists' editing by developing features like edit brush tools, and automatic model mesh dividing.

ACADEMIC PROJECTS

Build Visual Worlds, Carnegie Mellon University Sept.2019 – present

- Five rounds of agile development across various hardware and platform including VR, AR, Kinect, location-based hardware, each was completed within one to three weeks.
- Communicated with four different teammates in each round, in an inter-discipline, collaborative and dynamic environment.
- Did the coding and debugging in team, scheduled and divided the tasks, managed the version control.

Indie Game : *Micro World*, University of Electronic Science and Technology of China Sept.2017 – Jun.2017

- Won Microsoft ID@XBOX China, Campus Final Competition Outstanding Awards.
- Algorithm-generated worlds with over 100+ combinations. Optimize to make over 1000+ scripted AI activated at the same time.

Simplified Physics Engine, University of Electronic Science and Technology of China Sept.2016 – Nov.2017

- Built collision detection supporting basic colliders and 3D software elastic network simulation.
- Used GPU to accelerate the physics computation by voxelizing the scene, over 60k cubes can be real-time simulated.