Qiaozhi (George) Wang

Software Engineer

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SUMMARY

Software engineer with a background in game development and 3D visualization. Proficient in C++ and modern C++ features. Have a solid understanding of algorithms and software engineering principals to write efficient and robust code. Project experience with various visualization tools such as Unity, UE4 and OpenGL. Proven ability to tackle real-world problems and provide creative solutions. Thrived in collaborative and fast-paced environment.

EDUCATION

Carnegie Mellon University, Pittsburgh, PA
Master of Science, Computational Design, May 2017
Thesis: Haptic Design Interface for Virtual Reality
Tianjin University, Tianjin, China
Bachelor of Engineering, Built Environment, June 2015

Selected Graduate Coursework:
Fund. of Programming and CS (Python), Principles of Imperative Computation (C), Principles of Software Construction (Java), Computer Graphics (C++), Computer Vision (Matlab), Parametric Modelling (Python)

SKILLS

Proficient Languages: C++, Python, C#
Dev Tools: Visual Studio, Git, Mercurial, CMake
Visualization: Unity, UE4, OpenGL, GLSL, CUDA
Embedded Hardware: Arduino, Raspberry Pi, AVR

WORK EXPERIENCE

Jr. Gameplay Engineer **Facebook Reality Lab Pittsburgh (Insight Global)** Aug. 2017 – Present

- Communicated and collaborated with researchers to identify research needs then built visualization and data logging tools to support faster and better research iteration. (UE4, OpenGL)
- Implemented an automatic build, test and network deployment pipeline for in-house research software which reduced iteration time by 90%. (Python)
- Developed a plugin for data collection and playback, enabling in-VR avatar user study. (Unity, C++)
- Experimented with different interaction approaches for better social VR experiences. (Unity, C#)

Teaching Assistant **Fund. of Computational Design, CMU** Sep. 2015 – Dec. 2015

- Adapted course materials and helped students to learn data structure and OOP concepts. (Python)

Software Developer **Built Environment Lab, Tianjin University** Sep. 2012 – June 2014

- Designed and implemented a sensor driver that detects the Air Quality Index of public schools. (C)

ACADEMIC PROJECTS

Haptic Design Interface for Virtual Reality - Master Thesis Unity, Motion Capture May 2017

- Experimented with using physical objects to provide passive haptic feedback in VR.
- Researched custom position tracking sensors with Lighthouse tracking system.
- Prototyped an expressive modelling environment with haptic spatial interfaces.

Research in Game Dev. - Gameplay Designer Unity, C# Dec. 2016

- Researched and identified the pros and cons in current VR interfaces and interactions.
- Built prototypes using HTC Vive that aim to provide a more intuitive and efficient VR experience.

Character Recognition using Neural Networks Matlab Nov. 2016

- Implemented a feedforward neural network for hand written character classification.

rhinoVR – Software Developer Python, C# May 2016

- Developed a plugin for Rhinoceros 3D which allows the users to view their models in VR.

Path Tracer with CUDA-accelerated BVH Construction C++, OpenGL, CUDA Apr. 2016

- Implemented path tracing with Monte Carlo method.
- Compared the performances between SAH, CPU-LBVH and GPU-LBVH generation methods.