ZIBO YE

Entertainment Technology Center
Carnegie Mellon University, Pittsburgh, PA
ziboy@andrew.cmu.edu

WORK/PROJECT EXPERIENCE

Thunder Fire Studio, NetEase Corp.   Hangzhou, China
Game Engine Intern   July 2019 – Aug 2019
Game Engine Programmer   July 2020 – July 2021

- As a Graphics Programmer: Implemented massive GPU-based real-time fluid simulation in Justice (逆水寒).
  - It is the first time real-time fluid simulation is used in an MMO game
  - Implemented using Position Based Fluid Simulation and Screen Space Rendering, integrated into the custom Ark Engine using C++, DirectX 11&12 and HLSL compute shaders
  - Added features such as Color Blending and Screen Space Collision
  - Optimized to run on mainstream GPU smoothly without hurting performance
- As a Technical Artist: Wrote many HLSL shaders for artists to use, including a widely-adopted universal shader
- As an Engine Programmer: Implemented new features in the custom Ark game engine using C++, including:
  - A new model particle effect system and a sub-effect system in the effect system tailored to artists' need
  - Fuzzy Search, AutoSave and File History in internal Effect Editor and Model Editor
  - Fixing graphics and engine bugs

EDUCATION

Carnegie Mellon University   Pittsburgh, PA
Master of Entertainment Technology   Sept 2021 – Present

- In the first semester, I implemented one MR game demo (HoloLens 2) and three VR game demos (Quest 2) using Unity and C#, each demo developed rapidly in two weeks with a team of five.
- In the current semester, I am working on a VR biofeedback meditation project, developing a standalone SwiftUI Watch app to send real-time heartbeat from Apple Watch to Quest 2 to give user positive feedback in the virtual immersive meditation environment.

Peking University   Beijing, China
BS in Computer Science   Sept 2016 – June 2020

- GPA: 3.59/4.0; admitted on basis of performance on national college admissions exam (35/169100, top 0.02%)
- Highlighted Courses:
  - Computer Generated Imagery and Visual Effects: 94.5/100
  - Computer Graphics: 87/100

RESEARCH EXPERIENCE

Center on Frontiers of Computing Studies, Computer Science Dept., PKU   Beijing, China
Research Intern to Professor Baoquan Chen, Executive Director   Nov 2019 – June 2020

- Participation in weekly seminar & group discussion on Computer Graphics
- Undergraduate Graduation Project on surveying Ray Tracing Technique in Game Production

Laboratory for Affective Intelligent Robotics, Computer Science Dept., PKU   Beijing, China
Research Intern to Professor Tao Wang   May 2018 – Oct 2019

- Participated in weekly seminars on Computer Vision and Deep Learning
- Delivered several reports on specific topics, such as tutorial of shell coding, surveys on Pose Estimation and Meta-Learning to lab teammates
- Finished the Undergraduate Research Intern Project "Multi-scale Real-time Pose Estimation in webcam"

ADDITIONAL INFORMATION

Computer and Language Skills

- Programming: Proficient in C, C++ and HLSL, Competent in Python, Swift, C# (Unity) and Lua
- Knowledge in Computer Graphics, Game Engine Architecture, and Unity Engine Game Development
- Fluent in English and Mandarin, TOEFL: 107 (Best Score), GRE: 322+3.0

Additional Professional and Extracurricular Experiences

- Team Leader of Peking University's "Back to High School" Undergraduate Enrollment Propagation
- President of Student Union of Zhenhai High School

Interests

- Enjoy playing and studying high-fidelity games
- Swimming, Movie, Anime