ZIBO YE

Pittsburgh, PA | ziboy@andrew.cmu.edu | linkedin.com/in/zibo-ye/ | github.com/zibo-ye

Real-time Rendering | Computer Graphics | Game Engine | GPGPU Parallel Programming

SKILLS

- Fluent in Modern C++, 4 years of studying experience + 2 years of work experience
- Proficient in HLSL and DirectX 11 & 12
- Experienced with CUDA, Python, Rust, C#, Swift and Lua
- Proficient with Unity, experienced with Unreal Engine
- Extensive knowledge in Computer Graphics, Computer Architecture and Real-time Rendering.
- Tools: Visual Studio, VSCode, CMake, Xcode
- Profilers: RenderDoc, Microsoft PIX, Nsight Graphics, Visual Studio CPU Profiler
- Source Control: Git, Subversion, Perforce

WORK EXPERIENCE

Game Engine Programmer (Intern) | Thunder Fire Studio, NetEase Corp. Feb 2023 – July 2023

Project: Justice, a Chinese MMORPG using custom in-house C++ engine for PC, with backend of DirectX 11&12

- Implemented an instanced system to reduce CPU/GPU overhead of bullets, gained over 10% overall perf boost
- Created and optimized a multi-threaded physically based soft body simulation system on CPU
- Initiated a General-Purpose GPU Compute Framework in the in-house engine using modern C++ and HLSL
  - Implemented several fundamental parallel algorithms, achieved theoretical max throughput on GPU
- Optimized engine compilation time down to half, and some other QoL improvements

AR/VR Software Engineer Intern | TDG | Apple May 2022 – Aug 2022

Project: RealityKit, Apple Vision Pro

- Developed AR technologies for RealityKit framework on Apple Vision Pro
- Designed and implemented an internal tool that helps with the testing workflow using C++

Game Engine Programmer | Thunder Fire Studio, NetEase Corp. July 2020 – July 2021

Project: Justice, a Chinese MMORPG using custom in-house C++ engine for PC, with backend of DirectX 11&12

- Implemented GPU-based real-time fluid simulation system using modern C++, DirectX and HLSL
  - Implemented using Position Based Fluid Simulation and Screen Space Rendering
  - Added novel features such as Color Blending and Screen Space Collision
  - Optimized the performance to run on mainstream GPU smoothly.
- Wrote a widely adopted uber-shader (one for all) for VFX artists
- Implemented a model particle system and a recursive sub-effect system
- Fuzzy Search, Auto Save and File History for internal artist editors

EDUCATION

Carnegie Mellon University Pittsburgh, PA

Master of Entertainment Technology Sept 2021 – May 2024 (Expected)

Highlighted Projects:

- Inner Matter: VR biofeedback meditation
- INTENT: Interactive Tool for Empathy in Neurotypicals towards Autistic people in workspace

Highlighted Courses:

- Physically Based Rendering
- Computational Photography

Peking University Beijing, China

Bachelor of Science in Intelligence Science and Technology Sept 2016 – June 2020

Highlighted Courses:

- Introduction to Computer Systems (equivalent to 15-213 in CMU)
- Operating Systems
- Computer Graphics