Wenjian Zhou

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SKILLS CUDA, DirectX, OpenGL, Pytorch, C++, C, Python.

EDUCATION

University of Utah, Salt Lake City, Utah, USA
- M.S. in Computing (dropped) Aug 2023 – Jan 2024
- Core courses: Interactive Computer Graphics, Visualization of Scientific Data, Deep Learning, Machine Learning

Guangdong University of Technology, Guangzhou, Guangdong, China
- B.S. in Computer Science Sep 2019 – Jul 2023

EXPERIENCE

Booming Tech, Hangzhou, Zhejiang, China
- Graphics Engineer (Rendering) Feb 2025 – Now
  - Developing real-time rendering techniques in our leading MMO: Conqueror's Blade
  - Implemented rendering algorithms for in-house engine Chaos Engine, implemented Brent Burley's subsurface scattering algorithm for better skin rendering.
  - Implemented translucency volume lighting mode for rendering of translucent materials, cost only 1/2 to 1/3 compared to previous translucent shading algorithms.

Nankai University, Tianjin, China
- Undergraduate Research Intern Mar 2022 – Dec 2022
  - Supervisor: Prof. Beibei Wang
  - Working on physics-based material appearance, specifically microfacet theory and its multiple scattering application, which originates from the Boltzmann transport equation.
  - Developed a 2D to 3D pytorch tensor kernel to help reduce the storage of the 3D occupancy map.

University of Utah, Salt Lake City, UT, USA
- Teaching Assistant Aug 2024 – Dec 2024
  - TA for: Introduction to Computer Graphics, Image Processing.

PROJECTS

CUDA-Accelerated ReSTIR DI [Github]
- Interactive Computer Graphics Jan 2024 – May 2024
  - An interactive ray tracing renderer that implements ReSTIR DI. Implemented with OpenGL and CUDA.
  - Implemented GRIS(Generalized Resampled Importance Sampling), spatiotemporal reuse of GRIS samples, CUDA acceleration on rendering.

BSDF Visualization [Github]
- Visualization for Scientific Data Jan 2024 – May 2024
  - An interactive WebGL application for visualizing various BSDF (Bidirectional Scattering Distribution Function) lobes, which provides better intuitive understanding of these BSDFs and how lights interact with them.
  - Implemented BSDF lobes: diffuse, specular, microfacet BRDF and BSDF (rough conductor/dielectric surface).

Tiny-NeRF
- Deep Learning Aug 2023 – Dec 2023
  - A tiny version of NeRF, which is a neural network based volume rendering algorithm for novel view synthesis.
  - Implemented the original NeRF model structure, trained, and then did optimization to make it smaller.

Physically-Based Renderer [Github]
- Individual Project during my undergrad Sep 2021 – Jan 2022
  - A physically based renderer based on **Ray Tracing in One Weekend** and **Physically-based Rendering: From Theory to Implementation**. It was developed to solidify my understanding of Monte Carlo path tracing and volumetric path tracing.
  - Supported integrators: path tracing, volumetric path tracing.
  - Supported BSDFs: diffuse, (rough) dielectric, (rough) conductor, microfacet model.

AWARDS & SCHOLARSHIPS
- HPG 2024 Student Competition 2nd Prize. [Link] [Entry] 2024
- Tuition Waive Scholarship, Kahlert School of Computing 2024 Fall

LANGUAGES
- Chinese: Native.
- English: Fluent.