Qihao He

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Education

Texas A&M University May 2025 – Present
Doctor of Philosophy in Computer Science, GPA 3.88/4.00 College Station, TX, USA
Available for 2026 Summer Research Internship May 2026 – Aug. 2026

Texas A&M University Aug. 2023 – May 2025
Master of Science in Computer Science College Station, TX, USA

The Hong Kong University of Science and Technology Sep. 2019 – Jun. 2023
Bachelor of Science in Data Science and Technology & Computer Science, GPA 3.65/4.30 Kowloon, Hong Kong

- 2022/23 CSE Best Final Year Project: **Real-time Vacancy Detection System**

Publications

Neural Importance Sampling of Many Lights Sep. 2024 – Mar. 2025
Pedro Figueiredo, **Qihao He**, Steve Bako, Nima Khademi Kalantari
SIGGRAPH 2025

Neural Path Guiding with Distribution Factorization Sep. 2023 – Jan. 2025
Pedro Figueiredo, **Qihao He**, Nima Khademi Kalantari
EGSR 2025

Work Experience

Aurora May 2024 – Aug. 2024
Software Engineer Intern, Synthetic World and Sensor Simulation Team Mountain View, CA, USA
Topic: Many-light rendering.

- Implemented Stochastic Lightcuts, organized in spatial cells within a Bounding Volume Hierarchy.

Capmi Technology Jun. 2022 – Aug. 2022
Software Developer Intern New Territories, Hong Kong
Topic: IMU-based motion capture.

- Implemented Foot Rooted Kinematic Model and Kalman Filtering algorithms for an inertial motion capture system.

Projects

Volumetric Rendering Sep. 2024 – Present

- Research volumetric path tracer with neural and inverse rendering capabilities for graphics applications.

Graphics Projects github.com/iphyqh/course_projects_pg Sep. 2022 – Dec. 2022

- **Geometry Processing.** Implemented Laplacian smoothing methods and a Laplacian mesh editing technique.
- **Rendering.** Implemented volumetric cloud rendering using fractal noise and ray marching.

Pixel Fantasy github.com/phyqh/Pixel-Fantasy Feb. 2022 – May 2022

- An OpenGL-based game featuring a 3D ARPG with 2D Sprites without dependence on game engine.

Teaching Experience

Teaching Assistant for CSCE 441: Computer Graphics Texas A&M University, Fall 2025
Instructor: Dr. Nima Kalantari

Skills

- **Programming Languages:** Python, C++, CUDA, Java, Scala
- **Tech Skills:** PyTorch, Mitsuba 3, OptiX, Embree, OpenGL

Last Updated in October, 2025