

# Qihao He

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## Education

### Texas A&M University

Doctor of Philosophy in Computer Science, GPA 3.88/4.00  
Available for 2026 Summer Research Internship

May 2025 – Present

College Station, TX, USA

May 2026 – Aug. 2026

### Texas A&M University

Master of Science in Computer Science

Aug. 2023 – May 2025

College Station, TX, USA

### The Hong Kong University of Science and Technology

Bachelor of Science in Data Science and Technology & Computer Science, GPA 3.65/4.30  
• 2022/23 CSE Best Final Year Project: [Real-time Vacancy Detection System](#)

Sep. 2019 – Jun. 2023

Kowloon, Hong Kong

## Publications

### Neural Importance Sampling of Many Lights

Pedro Figueiredo, **Qihao He**, Steve Bako, Nima Khademi Kalantari  
SIGGRAPH 2025<sup>1</sup>

Sep. 2024 – Mar. 2025

### Neural Path Guiding with Distribution Factorization

Pedro Figueiredo, **Qihao He**, Nima Khademi Kalantari  
EGSR 2025

Sep. 2023 – Jan. 2025

## Work Experience

### Aurora

Software Engineer Intern, Synthetic World and Sensor Simulation Team

May 2024 – Aug. 2024

Mountain View, CA, USA

*Topic: Many-light rendering.*

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

### Capmi Technology

Software Developer Intern

Jun. 2022 – Aug. 2022

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

### Expertise

- Volumetric path tracer, neural importance sampling and neural material.

### Graphics Projects [github.com/iphyqh/course\\_projects\\_pg](https://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](https://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 December, 2025

<sup>1</sup>First time attendee @ Vancouver!