

# Qihao He

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## Education

<b>Texas A&amp;M University</b> 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
<b>Texas A&amp;M University</b> Master of Science in Computer Science	Aug. 2023 – May 2025 College Station, TX, USA
<b>The Hong Kong University of Science and Technology</b> Bachelor of Science in Data Science and Technology & Computer Science, GPA 3.65/4.30 • 2022/23 CSE Best Final Year Project: <b><u>Real-time Vacancy Detection System</u></b>	Sep. 2019 – Jun. 2023 Kowloon, Hong Kong

## Publications

<b>Neural Importance Sampling of Many Lights</b> Pedro Figueiredo, <b>Qihao He</b> , Steve Bako, Nima Khademi Kalantari SIGGRAPH 2025 <sup>1</sup>	Sep. 2024 – Mar. 2025
<b>Neural Path Guiding with Distribution Factorization</b> Pedro Figueiredo, <b>Qihao He</b> , Nima Khademi Kalantari EGSR 2025	Sep. 2023 – Jan. 2025

## Work Experience

<b><u>Aurora</u></b> Software Engineer Intern, Synthetic World and Sensor Simulation Team <i>Topic: Many-light rendering.</i> • Implemented Stochastic Lightcuts, organized in spatial cells within a Bounding Volume Hierarchy.	May 2024 – Aug. 2024 Mountain View, CA, USA
<b><u>Capmi Technology</u></b> Software Developer Intern <i>Topic: IMU-based motion capture.</i> • Implemented Foot Rooted Kinematic Model and Kalman Filtering algorithms for an inertial motion capture system.	Jun. 2022 – Aug. 2022 New Territories, Hong Kong

## Projects

<b>Expertise</b> • Volumetric path tracer, neural importance sampling and neural material.	
<b>Graphics Projects</b> <a href="https://github.com/iphyqh/course_projects_pg">github.com/iphyqh/course_projects_pg</a> • <b>Geometry Processing.</b> Implemented Laplacian smoothing methods and a Laplacian mesh editing technique. • <b>Rendering.</b> Implemented volumetric cloud rendering using fractal noise and ray marching.	Sep. 2022 – Dec. 2022
<b>Pixel Fantasy</b> <a href="https://github.com/phyqh/Pixel-Fantasy">github.com/phyqh/Pixel-Fantasy</a> • An OpenGL-based game featuring a 3D ARPG with 2D Sprites without dependence on game engine.	Feb. 2022 – May 2022

## Teaching Experience

<b>Teaching Assistant for CSCE 441: Computer Graphics</b> Instructor: Dr. Nima Kalantari	Texas A&M University, Fall 2025
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## 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!