# Ziqi Lu

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## EDUCATION

**Bachelor of Mathematics and Physics + Civil Engineering and Systems**    September 2021 - Now
Weiyang College, Tsinghua University

**GPA:** 3.74/4.00
**TOEFL:** 100

## SKILLS AND INTERESTS

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|---|---|
| **Interests** | Rendering (both PBR & NPR) , Simulation, 3D Scene Reconstruction |
| | Psysically-based Motion Generation/Capture, AR/VR/MR Equipments |
| **Skills** | **Language:** C/C++/CUDA, Python with ML Libraries |
| | **Familiar with:** Embedded System, blender, photographing |

## RESEARCH EXPERIENCES

**Enhancement on State-of-the-Art Differentiable Rendering Pipeline**    September 2023 - Now
*Research Intern Advised by Prof. Shi-Min Hu and Tai-Jiang Mu*

· Focus on long-term and accurate optimization of differentiable rendering.

## PROJECTS

**Micropt: Distributed Path Tracing and Stochastic Progressive Photon Mapping**    June 2023
*Major Project as a part of **Fundamentals of Computer Graphics***

· A renderer implementing classic physically based rendering algorithms and modern features.
· Designed to be combatible with current PBR pipeline performed by artists, also with parameterized geometry.
· Optimized and accelerated using OpenMP (multi-thread computing) , BVH and importance sampling.

**Embedded Rotaeno: A Rhythm Game Developed on Mobile System**    April 2022 - June 2022
*Major Project as a part of **Digital Design and Embedded System***

· An integrated game developed on ARM-v3 with support to multiple I/O devices.
· High performance low-level graphic user interface and OLED screen driver with real-time response to gamer actions.
· Original design of gaming patterns catering to the hardware design (Rotate the device with gyroscope sensor).

## DECLARATION

I hereby declare that all the details furnished above are true to the best of my knowledge and belief.