YIBO YIN

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EDUCATION

Wuhan University **Wuhan, China**
B.Eng. in Computer Science and Technology *Sept. 2021 - Present*
GPA: 3.94 /4.00 | **Average Score:** 92.02 /100 | **Ranking:** 3% of 253

RESEARCH EXPERIENCE

Graphics and Vision Lab, Wuhan University *May. 2023 - Jan. 2024*
Research Assistant Advisor: Prof. Chunxia Xiao

- Assembled a set of equipment with an Intel depth camera and STMicroelectronics ToF sensors, creating a dataset of over 10,000 images and corresponding sensor data.
- Proposed a neural network leveraging ToF sensor data and RGB pictures for monocular depth estimation.

Computer Graphics Lab, remotely at the University of Texas at Dallas *April. 2024 - Present*
Research Assistant Advisor: Prof. Xiaohu Guo

- Applied the SIGGRAPH Course Note *Evaluation of Loop Subdivision Surfaces* to medial axis meshes.
- Applied the SGP paper *Fitting Sharp Features with Loop Subdivision Surfaces* to medial axis meshes with internal and external features.
- Modified and organized the code for the SIGGRAPH paper *Q-MAT: Computing Medial Axis Transform by Quadratic Error Minimization* to form an open-source project.*[Github]*
- Proposed a subdivision surface fitting method in collaboration with advisor, designed to preserve the sharp features of the medial axis mesh during fitting.

Waterloo Computer Graphics Lab, remotely at University of Waterloo *June. 2024 - Present*
Research Assistant Advisor: Prof.Toshiya Hachisuka

- Reproduced WoB method for Laplace's equation with Dirichlet boundaries in the SIGGRAPH paper *A Practical Walk-on-Boundary Method for Boundary Value Problems*.

SELECTED PROJECTS

Software Renderer *Jan. 2023 - Mar. 2023*
Solo Project

- Implemented the rendering pipeline with features including MVP transformations, texture mapping, perspective projection, programmable shaders, shadow mapping, ambient occlusion, etc.

Interactive Ray Tracer *Mar. 2023 - June. 2023*
Project Leader

- Developed a Whitted-style like ray tracing system with an interactive GUI, enabling users to add spheres with customizable metal and dielectric materials to the scene and render them.
- Led the development process, implementing the core ray tracing algorithm, material creation and configuration, object addition functionalities, and the asynchronous rendering process.

AWARDS

- **Outstanding Student** (10% school-wide), Wuhan University *2022, 2023, 2024*
- **Second Class Scholarship** (10% school-wide), Wuhan University *2022*
- **Third Class Scholarship** (15% school-wide), Wuhan University *2023, 2024*
- **Lei Jun Computer Innovation and Development Fund**, Wuhan University *2024*

TECHNICAL SKILLS

- **Languages:** Mandarin Chinese (Native Speaker), English (TOEFL iBT 102, R26 | L26 | S23 | W27)
- **Programming Languages:** C++, C, Python, C#, GLSL, SQL, Verilog HDL, Java
- **Software:** Nori, Blender, Pbrt-v3
- **Library/Framework/Tool:** PyTorch, Git, CMake