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

- Extended the evaluation algorithm in the SIGGRAPH Course Note paper*Evaluation of Loop Subdivision Surfaces* and the SGP paper *Fitting Sharp Features with Loop Subdivision Surfaces* to fragmented medial axis meshes under Loop Subdivision.
- Extended the simplification algorithm in the SIGGRAPH paper *Q-MAT: Computing Medial Axis Transform by Quadratic Error Minimization* to fragmented medial axis meshes.
- Proposed a subdivision surface fitting algorithm in collaboration with advisor, designed to preserve the sharp features of the fragmented medial axis mesh during fitting.

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

- Reproduced the algorithm in the SIGGRAPH paper *A Practical Walk-on-Boundary Method for Boundary Value Problems* for solving the boundary value problem of Laplace's equation with Dirichlet boundaries.

SELECTED PROJECTS

Software Renderer *Jan. 2023 - Mar. 2023*
Personal 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, 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
- **Library/Framework/Tool/Software:** Git, CMake, Nori, Blender, Pbrt-v3, PyTorch