Sitong Wang

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South China University of Technology, Guangzhou, China

Objective

Seeking 2026-fall Master or Ph.D. student position in Computer Vision and Computer Graphic to leverage my expertise in 3D Scene Reconstruction and related work. Aiming to contribute to innovative projects at the intersection of 3D content reconstruction or generation and practical problem-solving in fields such as architecture structure designing and content generation by Artificial Intelligence.

Experience

- **South China University of Technology [🌐]** *10/2024 - present*
  Undergraduate Intern Guangzhou, China
  - Current work in process is based on the existing achievement Toy-GS: Assembling Local Gaussians for Precisely Rendering Large-Scale Free Camera Trajectories (AAAI 2025). In terms of its existing functions, we designed and added a scene and camera trajectory division algorithm based on graph theory, and used the graph structure to realize multi view constraint and perspective constraint on disordered input images. In summary, we designed and constructed a general high-precision reconstruction algorithm suitable for any scene (aerial, ground, indoor, etc.) and any camera trajectory.

Education

- **South China University of Technology** *09/2022 - present*
  Undergraduate major in Artificial Intelligence, School of Future Technology, Guangzhou, China
  - GPA: 3.78/4.00
  - Core Curriculums: Linear Algebra (95), Data Structure (92), Machine Learing (91), Discrete Mathematics (92), Digital Image Processing (95), Digital Signal Processing (90), Reinforcement Learning (94).

Projects

- **MetaSCUT: Large-Scale Scene Simulation based on 3D-GS and Universal Physics Engine** *12/2024 - 01/2025*
  Keywords: 3D Scene Reconstruction, Physical Simulation
  - Develop the "MetaSCUT" framework for physical simulation in large-scale scene based on 3D Gaussian Splatting and Universal Physics Engine.
  - Implement high-quality reconstruction of SCUT-GZIC scenes by using self-provided aerial datasets and 3D Gaussian Splatting techniques.
  - Integrate Blender for dynamic interaction simulation, including vehicle physics and robotic arm control.
  - Achieve efficient mesh reconstruction and rendered images with Surface-Aligned Gaussian Splatting (SuGaR), outperforming traditional methods in terms of detail and accuracy.
  - Anticipated further development and work is scheduled to mainly focus on enhancing the simulation accuracy and complexity of our virtual campus by leveraging the Genesis physics engine.
  - The code of "MetaSCUT" project page is available here: []

Skills

- **Programming:** Python, C++, Matlab, Html
- **Writting:** Latex, Markdown, Word

Honors and Awards

- **The Third-prize Scholarship** *12/2024, 12/2023*
  South China University of Technology
- **First-prize in Guangdong Province of Contemporary Undergraduate Mathematical Contest in Modeling** *09/2024*
  China Society for Industrial and Applied Mathematics
- **Second-prize in the southern division of MathorCup Mathematics Application Challenge** *04/2024*
  Chinese Society of Optimization, Overall Planning and Economic Mathematics
- **Finalist of Mathematical Contest in Modeling (MCM) and Interdisciplinary Contest in Modeling (ICM)** *02/2024*
  Consortium for Mathematics and its Applications (COMAP)

Certifications

- **South China University of technology - Baidu pinecone talent training elite class: Graduated Student** *09/2024*
- **College English Test Band6: 542** *12/2023*
- **College English Test Band4: 613** *12/2022*

COLLABORATORS

1. **Qi Liu**
   Professor and Doctoral supervisor, School of Future Technology, South China University of Technology
   IEEE Senior Member, Member of the Youth Working Committee of China Society of Image and Graphics
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   Relationship: Research Mentor
2. **Xiaohan Zhang**
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   Relationship: Collaborator