Wenqi Wang

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Education

Tsinghua University **Beijing, China**
B.E. Computer Science and Technology *September 2020 − June 2024*
- Major GPA: **3.80/4.00**

Research Experience

GrUVi Lab, Simon Fraser University **Vancouver, Canada**
Advisor: Hao (Richard) Zhang *2023 − present*

CAD Shape Decomposition:
- Design a novel pipeline to decompose the shape into construction sequence in a differentiable way.
- Explore boolean operations to improve the expression ability and flexibility of decomposition.
- Explore sketch-extrude primitives to get a more structured and easy-to-edit geometry from the object.
- Plan to enable model with generative ability.

Single View Reconstruction by Slice Images:
- We propose a completely new notion on single view reconstruction by slicing object in the same view instead of predicting multi-views.
- Conduct the pipeline of predicting sliced images of the object from a condition view using diffusion models to reveal the occluded structures.
- Implement the other state-of-art multi-view alternatives and show the superiority of our method.

Megvii Research **Beijing, China**
Research Intern at Vision Model Group, Foundation Model Department *2022 − 2023*

- Research on the variational auto-encoders and diffusion models for image generation.
- Contribute to the open source project and community.

Institute of AI Industry Research, Tsinghua University **Beijing, China**
Research Intern at Federated Learning Group *2021 − 2022*

- Implemented the prototype learning in Federated Learning frame.
- Use few-shot learning to label the distributed data in edge devices.

Projects

AI Gaming Platform & Agent Competition Games
Develop agent games and maintain website where students can submit their agents to fight. Website

Conditional Image Generation based on Jittor **Spring, 2022**
A model course project of Fundamentals of Computer Graphics. *Project Repo*

Voxel Art in Taichi Language **Fall, 2022**
A little ray-traced Taichi rendered voxel-art in 180 lines. *Project Repo*

Skills

- **Programming Languages:** C, C++, Python, Javascript, Java, C#, MySQL, Verilog, Unity
- **Sports:** Swimming, Billiard, Soccer
- **Talents:** Photography, Harmonica