

JINGWEI XU

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GitHub: <https://github.com/DavidXu-JJ>

Website: <https://davidxu-jj.github.io>

EDUCATION

ShanghaiTech University, Master of Computer Science Sep. 2023 – Jun. 2026 expected

Advisor: Prof. Shenghua Gao

Shanghai University, Bachelor of Computer Science, Top 3% scholarship Sep. 2019 – Jun. 2023

RESEARCH INTEREST

Computer Vision: Radiance Field, Image-based 3D Reconstruction

Computer Graphics: Differential Geometry, Volume Rendering

PUBLICATIONS

(* denotes equal contributions, † denotes corresponding authors)

1. DebSDF: Delving into the Details and Bias of Neural Indoor Scene Reconstruction Aug. 2023
Yuting Xiao*, **Jingwei Xu***, Zehao Yu, Shenghua Gao† TPAMI 2024
[project page] [arXiv] [code]
Keywords: Multi-view Reconstruction, Uncertainty Learning, Differential Geometry
2. 3D StreetUnveiler with Semantic-Aware 2DGS June. 2024
Jingwei Xu, Yikai Wang, Yiqun Zhao, Yanwei Fu, Shenghua Gao† arXiv 2024
[project page] [arXiv] [code]
Keywords: Empty Street Reconstruction, 3D Inpainting

OPEN SOURCE PROJECT

GPU optimized Poisson Reconstruction

Jun. 2022 – Aug. 2022

CUDA, C++

Personal Project

Specific tasks:

- Use the conjugate gradient solver to get the least squares solution for the Laplacian over the octree. Finally extract the surface through Marching Cubes.
- Implement the parallel octree building on GPU and parallelly extract the surface with reference to pseudocode, which doesn't have open source implementation before. ×40 efficiency improvement is achieved on NVIDIA RTX 2050.

Project repository and demo: https://github.com/DavidXu-JJ/PoissonRecon_GPU

HONORS AND AWARDS

Silver Medal, Chinese Collegiate Programming Contest(CCPC) Guangzhou Station

Nov. 2021

Bronze Medal, International Collegiate Programming Contest(ICPC) Shenyang Station

Nov. 2021

Top-tier 3% scholarship, Shanghai University

Outstanding Graduate of Shanghai University

SKILLS

- Programming Tools: C, C++, CUDA, CMake, Python, PyTorch
- Development Tools: Git, SSH, Docker, Singularity, Vim
- Platform: Linux = macOS > Windows, familiar with Linux/Unix

SERVICES

Journal Reviewer: TMM