Yingshuang Zou

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EDUCATION

Tsinghua University - *Tsinghua Shenzhen International Graduate School*   *Aug.2022 - Jun.2025(expected)*

- M.E. in Electronic and Information Engineering (Artificial Intelligence)
- Advisor: Prof. Haoqian Wang
- GPA: 3.94 / 4.0
- Research interests: 3D Scene Reconstruction and Perception; 3D Gaussian Splatting; Depth Estimation

Northwestern Polytechnical University - *School of Software*   *Sept.2018 - Jun.2022*

- B.E. in Software Engineering
- GPA: 89.42 / 100.0
- Main Courses: Probability Theory, Digital Image Processing, Data Structures and Algorithm Analysis

PUBLICATIONS

M^2Depth: Self-supervised Two-Frame Multi-camera Metric Depth Estimation   *2024*

Yingshuang Zou[*], Yikang Ding[*], Xi Qiu, Minglei Lu, Haoqian Wang, Haotian Zhang

European Conference on Computer Vision. (**ECCV 2024, Oral**) [Website]

TranSplat: Generalizable 3D Gaussian Splatting from Sparse Multi-View Images with Transformers   *2024*

Chuanrui Zhang[*], *Yingshuang Zou*[*], Zhuoling Li, Minmin Yi, Haoqian Wang

AAAI Conference on Artificial Intelligence. (**AAAI 2025**) [Website]

UniScene: Unified Occupancy-centric Driving Scene Generation   *2025*

Bohan Li[*], Jiazhe Guo[*], Hongsi Liu[*], *Yingshuang Zou*[*], Yikang Ding[*], Xiwu Chen, Hu Zhu, Feiyang Tan, Chi Zhang, Tiancai Wang, Shuchang Zhou, Li Zhang, Xiaojuan Qi, Hao Zhao, Mu Yang, Wenjun Zeng, Xin Jin

The IEEE/CVF Conference on Computer Vision and Pattern Recognition. (**CVPR 2025**) [Website]

MuDG: Taming Multi-modal Diffusion with Gaussian Splatting for Urban Scene Reconstruction   *2025*

Yingshuang Zou[*], Yikang Ding[*], Chuanrui Zhang, Jiazhe Guo, Bohan Li, Xiaoyang Lyu, Feiyang Tan, Xiaojuan Qi, Haoqian Wang

ArXiv preprint arXiv: 2503.10604 [Website]

PROFESSIONAL EXPERIENCES

Self-Supervised Multi-camera Depth Estimation - *Megvii Technology*   *June. 2023 - Dec. 2023*

- Construct spatial-temporal 3D cost volumes and design a spatial-temporal fusion module for surrounding depth estimation, which strengthens the depth accuracy by fusing the spatial-temporal information;
- Introduce the SAM prior into the depth estimation task and propose a multi-grained feature fusion module to integrate SAM features with internal features for enhancing the depth quality in detail.

Gaussian Splatting for Dynamic Driving Scenes - *Megvii Technology*   *Dec. 2023 - May 2024*

- Design a novel scene representation for modeling complex dynamic street scene, which efficiently reconstructs and renders high-fidelity "dynamic urban scenes" in real-time; Enhance both visual and geometric quality by jointly optimizing appearance, depth, semantics, and optical flow.
- Reconstruct the scene using the six images from the driving scenes for the task of novel view synthesis.

ICRA Robomaster AI Challenge - *Northwestern Polytechnical University*   *Dec. 2019 - June 2021*

- Design a simulation platform based on Gazebo for sensors information and robot navigation simulation; design perception and planning strategies for robotics and conducts hands‑on debugging with the actual robots.
- Served as the team leader, maintaining the project and achieving 6th place among 72 teams.

HONORS AND AWARDS

- **Nation Scholarship**   *2021*
- Scholarship, Tsinghua University   *2023, 2024*
- Outstanding Graduates   *2022*
- First Class Scholarship, Northwestern Polytechnical University   *2019, 2020, 2021*

SKILLS

- **Programming:** Python, C++/C, CUDA, Matlab, LaTeX
- **Languages:** English, Chinese