Yingshuang Zou

yingsh.zou@gmail.com +86-158-5844-0068 heiheishuang.xyz

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^{2}Depth: 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 *2024*

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

ArXiv preprint arXiv: 2412.05435 [Website]

3D Face Arbitrary Style Transfer *2023*

Xiangwen Deng, ***Yingshuang Zou***, Yuanhao Cai, Chendong Zhao, Yang Liu, Zhifang Liu, Yuxiao Liu, Jiawei Zhou, Haoqian Wang

ArXiv preprint arXiv: 2303.07709 [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
- **Programming Frameworks:** Pytorch, Scikit-Learn, ROS, Docker
- **Languages:** English, Chinese