YAOKUN LI

Email: liyk58@mail2.sysu.edu.cn | **Homepage:** https://iron-lyk.github.io/

RESEARCH INTEREST

My research interests center around generalizable neural representations, 3D reconstruction/editing, and face analysis. For lifelong research, I strive to advance lightweight, generalizable representation learning for 3D objects/scenes, aiming to achieve effective 3D representations tailored for real-world applications. In the near term, I've been keen on exploring how to utilize the prior knowledge of LLMs or VLMs to address uncertainty in sparse 3D reconstruction.

BACKGROUND

Sun Yat-sen University — Shenzhen, China
M.S. in Traffic Information Engineering & Control *(Average: 86.73/100)* — Sep. 2021 – present
Supervisor: Prof. Chao Gou & Prof. Guang Tan *(Postgraduate Recommendation)*

Wuhan University of Technology — Wuhan, China
B.S. in Automotive Engineering. *(Average: 85.82/100)* — Sep. 2015 – Jun. 2021
Military Service — *Sep. 2016 – Sep. 2018*

RESEARCH

Preprint

- **Yaokun Li**, Chao Gou, Guang Tan. "Taming Uncertainty in Sparse-view Generalizable NeRF via Indirect Diffusion Guidance" **(arXiv 2024)**
  - *We propose ID-NeRF, a novel Indirect Diffusion-guided NeRF framework that mitigates uncertainty in Generalizable NeRFs with sparse inputs by indirectly leveraging a distilled diffusion prior.*

Publications

- **Yaokun Li**, Guang Tan, and Chao Gou. "Cascaded Iterative Transformer for Jointly Predicting Facial Landmark, Occlusion Probability and Head Pose." International Journal of Computer Vision **(IJCV 2023)**.
  - *We propose a task-dependent inspired cascaded iterative transformer multitasking framework for joint prediction of facial landmark, occlusion probability, and pose.*

- **Yaokun Li**, Yuezhao Yu, Yuliang Liu, and Chao Gou. "MS-GCN: Multi-Stream Graph Convolution Network for Driver Head Pose Estimation." IEEE International Conference on Intelligent Transportation Systems **(ITSC 2022)**.
  - *We propose a multi-stream graph convolution network to incorporate topological, local, and global facial information for driver's head pose estimation.*

Ongoing

- **Yaokun Li**, Guang Tan, Chao Gou. "Template-Free Generalizable Gaussian Splatting for Single-View Reconstruction"
  - *We focus on the highly ill-posed task of 3D reconstruction from a single image, intending a two-stage process that first utilizes prior knowledge from large models for shape regularization and then deforms 3D Gaussians.*

AWARDS

- **2019**: **China National Scholarship (Top 0.5%)**
- **2020**: **Polytechnic Youth Top Ten Students (10 per year across the university)**
- **2023**: Third Prize of 2023 "Huawei Cup" National Graduate Student Mathematical Modeling Competition

SKILLS

- **Programming Languages:** Python, C.
- **Framework:** Pytorch.
- **Languages:** Chinese (native), English (522 in CET-4, 503 in CET-6, preparing for IELTS).