YAOKUN LI

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RESEARCH INTEREST

My research interests center around generalizable neural representations, 3D reconstruction, and face analysis/editing. In the long term, 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 tend to do some work on generalizable NeRF and 3D facial/body reconstruction.

BACKGROUND

Sun Yat-sen University   Shenzhen, China
Successive master-doctor program in Control Science and Engineering   *Sep. 2021 − present*
Supervisor: Prof. Guang Tan & Assoc. Prof. Chao Gou

Wuhan University of Technology   Wuhan, China
B.Eng. in Vehicle Engineering   *Sep. 2015 − Sep. 2016 & Sep. 2018 − Jun. 2021*
Military service   *Sep.2016 − Sep. 2018*

RESEARCH

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)**.

  - *We propose a task-dependent inspired cascaded iterative transformer multitasking framework for joint prediction of facial landmark, occlusion probability, and pose.*

- Yuchen Zhou, Guang Tan, Rui Zhong, **Yaokun Li**, and Chao Gou. "PIT: Progressive Interaction Transformer for Pedestrian Crossing Intention Prediction." IEEE Transactions on Intelligent Transportation Systems **(TITS)**.

  - *We propose a progressive interaction transformer to capture the dynamic spatiotemporal interactions between humans, vehicles, and the environment more progressively as humans do.*

- **Yaokun Li**, Yuezhao Yu, Yuliang Liu, and Chao Gou. "MS-GCN: Multi-Stream Graph Convolution Network for Driver Head Pose Estimation." **(ITSC 2022)**

  - *We propose a multi-stream graph convolution network to incorporate topological, local, and global facial information for driver's head pose estimation.*

Under review

- **Yaokun Li**, Chao Gou, Shuaixian Wang, and Guang Tan. "Taming Uncertainty in Generalizable NeRF with Sparse Inputs using Indirect Diffusion-Guided Latent Space." **(ICRA 2024)**

  - *We propose ID-NeRF, a generalizable NeRF that leverages a pre-trained diffusion model to offer indirect guidance in resolving uncertainty from sparse inputs.*

AWARDS

- **2023:** Third Prize of 2023 "Huawei Cup" National Graduate Student Mathematical Modeling Competition

- **2022:** Honorable mention in HACKPKU 2022

- **2019:** China National Scholarship

SKILLS

- **Programming Languages:** Python, C/C++.

- **Framework:** Pytorch, Tensorflow.

- **Languages:** Chinese (native), English (daily communication, academic reading and writing).