Yunqi Zhao

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Master Student at Tsinghua University, Beijing, China

Education

Tsinghua University (THU), Beijing, China 2022 – 2025

- *Master student* in Electronics and Information Engineering, expected June 2022
- Research on 2D and 3D computer vision, co-supervised by Prof. Lu Fang and Prof. Ruqi Huang
- GPA: 3.9 / 4.0, Rank: Top 10%

Southeast University (SEU), Nanjing, China 2018 – 2022

- *B.S.* in Automation
- Research on 3D computer vision, supervised by Prof. Yanggang Wang
- GPA: 3.9 / 4.0, Rank: 1 / 104

Research Interests

My research interests mainly lie in 2D and 3D computer vision, especially in:

- Visual Cognition: Multi-object Tracking and Pedstrian Trajectory Prediction in Gigapixel Complex Scenes.
- 3D Reconstruction: Understanding, Interaction and Active Reconstruction of Indoor Scenes.

Publications

- **Yunqi Zhao***, Yuchen Guo*, Zheng Cao, Kai Ni, Ruqi Huang, Fu Fang. "DynamicTrack: Advancing Gigapixel Tracking in Crowded Scenes". The IEEE International Conference on Multimedia & Expo (***ICME 2024 Oral***)
- Haozhe Lin*, Chunyu Wei*, Li he*, Yuchen Guo*, **Yunqi Zhao**, Shanglong Li, Fu Fang. "GigaTraj: Predicting Long-term Trajectories of Hundreds of Pedestrians in Gigapixel Complex Scenes". The IEEE / CVF Computer Vision and Pattern Recognition Conference (***CVPR 2024***)
- Yiming Xie, **Yunqi Zhao**, Shijian Jiang, Jiangyong Hu, Yangang Wang. "Occluded Animal Shape and Pose Estimation from a Single Color Image". The 11th International Conference on Image and Graphics (***ICIG 2021***)

Research Experience

Pedestrian Trajectory Prediction in Gigapixel Complex Scenes 2023-2024

- Propose a trajectory prediction dataset of hundreds of people in gigapixel complex scenes.
- Design a trajectory complexity metric and conduct statistical and comparative analysis.
- Advisor: Prof. Lu Fang

Multi-object Tracking in Gigapixel Complex Scenes 2022-2023

- Propose a contrastive learning-based detector for simultaneous head and body detection.
- Design a hierarchical association algorithm to utilize head and body cues for multi-object tracking.
- Advisor: Prof. Lu Fang and Prof. Ruqi Huang

Scene Reconstruction and Understanding for Intelligent Interaction 2021-2022

- Propose a real-time system for indoor scene reconstruction, segmentation, and simplification.
- Design local and global interaction patterns to enhance 3D perception of the visually impaired people.
- Advisor: Prof. Lu Fang and Prof. Yangang Wang

Honors and Awards

Excellent Graduate, Southeast University.	2022
Outstanding Student, Southeast University.	2021
National Encouragement Scholarship, the Minister of Education, China.	2019,2020
3nd Prize, iFLYTEK A.I. Developer Competition.	2022
3nd Prize, China College Student Computer Design Competition.	2020

Skills and Hobbies

- Programming Languages: Python, C, C++, MATLAB
- Tools/Frameworks: Pytorch, Git, LaTeX
- Hobbies: I love music, especially rock and hip-hop. I also like running and enjoy traveling to various places on foot.