SAINING ZHANG

College of Computing and Data Science,
Nanyang Technological University, Singapore
Email: SAINING001@e.ntu.edu.sg
Homepage

EDUCATION

Nanyang Technological University Singapore
M.Eng. in Computer Science and Engineering, Aug 2024-Present
Supervised by Prof. Hanwang Zhang

Beijing Institute of Technology Beijing, China
B.Sc. in Computer Science and Technology Oct 2020 – Jun 2024

- GPA: 88.4/100 (3.7/4.0)
- Selected awards: Outstanding Undergraduate Dissertation Award, Second-class Scholarship of Beijing Institute of Technology;

PUBLICATIONS

1. H. Xu*, **Saining Zhang***, Peishuo Li, Baijun Ye, Xiaoxue Chen, Huan-ang Gao, Jv Zheng, Xiaowei Song, Ziqiao Peng, Run Miao, Jinrang Jia, Yifeng Shi, Guangqi Yi, Hang Zhao, Hao Tang, Hongyang Li, Kaicheng Yu, Hao Zhao†. "CRUISE: Cooperative Reconstruction and Editing in V2X Scenarios using Gaussian Splatting", under review, *ICRA 2025*.
2. **Saining Zhang***, Baijun Ye*, Xiaoxue Chen, Yuantao Chen, Zongzheng Zhang, Cheng Peng, Yongliang Shi, Hao Zhao†. "Drone-assisted Road Gaussian Splatting with Cross-view Uncertainty", accepted, *BMVC 2024*.
3. **Saining Zhang**, Yuhang Zhang, Ye Zhang, Yufei Wang, Zhigang Song†. "A Dual-Direction Attention Mixed Feature Network for Facial Expression", *Electronics (JCR Q2), 12 (17), 3595, 2023*.

SELECTED AWARDS AND HONORS

- **Outstanding Undergraduate Dissertation Award, Beijing Education Commission (top 0.9% in 130,000 students)**
- **Winner Award**, NTIRE 2024 (CVPR 2024 workshop) Stereo Image Super-Resolution Challenge Track 1 & Track 2
- **Second place**, 2021 iFLYTEK A.I. Developer Competition Facial Expression Recognition Challenge

RESEARCH EXPERIENCE

Institute for AI Industry Research, Tsinghua University Beijing, China
Research Intern to Assistant Professor Hao Zhao Oct 2023 – Present

Drone-assisted Road Gaussian Splatting

- The work introduces a method to improve road scene synthesis for autonomous driving simulations by integrating aerial imagery with ground-level views. It uses an uncertainty-aware approach to enhance the training of 3D Gaussian Splatting, resulting in better rendering quality and detail, especially when the view shifts or rotates. The method outperforms existing techniques and could significantly improve autonomous driving simulations.

V2X simulation

Harvard T.H. Chan School of Public Health (Department of Biostatistics) Remote
Research Intern to Assistant Professor Junwei Lu Mar 2023 – Mar 2024

Research for Medical Informatics

- Hyperbolic embedding for entity alignment between knowledge graphs
- Involved in Multi Modal General Med AI via LLM

University of Chinese Academy of Sciences Beijing, China

RA to Prof. Jiaoqing Pan and Associate Research Fellow, Zhigang Song Aug 2022 – Oct 2022

Facial Expression Recognition

- Worked on a model to teach computers to understand human emotions and attitudes via facial expressions; proposed a novel baseline based on MobileFaceNets and added MixConv to take advantage of multiple-size kernels; added dual direction attention heads (vertical and horizontal) to the baseline, which could achieve long-range dependencies. The model performed best on AffectNet-7, AffectNet-8 and RAF-DB and second-best on FER-Plus.

Beijing Institute of Technology (School of Medical Technology) Beijing, China

Research Intern to Professor Jian Yang May 2022 – May 2023

High-Resolution Boundary Detection for Medical Image Segmentation

- Assisted in testing of high-resolution boundary detection in medical image segmentation. We applied piece-wise two-sample T-test to the loss function. Tested our loss on UNet, nnUNet and FCN and achieved best performance on ACDC Challenge data comparing to other loss functions

WORK EXPERIENCE

Huawei International Pte Ltd Singapore

Assistant Engineer Sep 2024 – Present

Beijing Horizon Information Technology Co., Ltd Remote

Cloud Platform Intern, D-Robotics Sep 2024 – Present

Beijing Samsung Telecommunication R&D Center Beijing, China

Algorithm Intern, Vision Computing Lab Jun 2022 – Sep 2022

- Research on Object Detection, Instance Segmentation, and Face Reenactment; coded a model for Instance Segmentation

ADDITIONAL INFORMATION

Computer Skills

- C++, Python and assembly languages (X86, MIPS, RISC-V). Familiar with Java, SQL, Pytorch toolbox. Some knowledge of Computer Vision, Original (drawing), Matlab (mathematical modeling) and LaTex (writing)

Language Skills

- TOEFL: 102 (Reading: 28, Listening: 27, Oral: 22, Writing:25)
  GRE: 323 (Verbal: 153, Quantitative: 170, Writing: 3.0)