Zijun Zhang
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EDUCATION

Sun Yat-sen University (SYSU) Shenzhen, China
B.Eng in Intelligent Science and Technology 09/2020 - 07/2024

- Overall GPA: 3.8/4.0; Upper Division GPA: 4.0/4.0
- Merit Scholarship since Fall 2020

University of California, San Diego (UCSD) La Jolla, USA
M.S. in Electrical and Computer Engineering (Machine Learning and Data Science) 09/2024 - now

- Overall GPA: 4.0/4.0

RESEARCH

Research Intern, Q-Lab *(PI: Dr. Lianhui Qin)* *La Jolla, USA*
Few-Step Video Generation and Sampling Acceleration 02/2025–Present

- Investigated distillation techniques for diffusion models to enable efficient video generation with fewer sampling steps.
- Explored reinforcement learning-based methods to fine-tune few-step diffusion models, improving generation efficiency under customized reward signals.

***Researcher*, Human Cyber Physical Intelligence Integration Lab** (*PI: Dr. Xiaodan Liang)* Shenzhen, China
3D Visual Perception for Autonomous Driving, *Graduation Project* 05/2024-10/2024

- Conducted a literature review on 3D visual perception and object detection and summarized the pros and cons of classical computer vision algorithms
- Reproduced the VoTr model for 3D object detection from LiDAR point clouds based on the Waymo Open dataset and KITTI dataset
- Designed a new framework for 3D object detection from point clouds by replacing the positional encoding of the VoTr model with learnable Fourier feature encoding, bringing 5% improvements on the KITTI dataset

Motion Trajectory Prediction for Autonomous Vehicles on Urban Roads Shenzhen, China
"Ingenuity Cup" National Artificial Intelligence Innovation Application Competition 01/2023-12/2023

- On the basis of the VectorNet and mmTransformer Model, proposed the method of constructing subgraph network and generating global graph by higher-order interaction to enhance simulation for directions of the historical trajectory of the vehicle and for the interference of the traffic scene
- Embedded the mmTransformer network architecture with multiple attention mechanisms for wider and longer visual information
- Trained and validated the model by predicting the motion trajectory for the next 3s using the DeepRoute dataset, improving the training speed, reducing the FLOP by half, and surpassing the baseline by 20%

PUBLICATIONS

SYSU School of Intelligent Systems Engineering Shenzhen, China
Volunteer Winter 2021

- Led the planning and implementation of an on-site event at a high school for student recruitment

SKILLS

Technical: Python, PyTorch, MATLAB, C/C++, Java, and LaTeX
Languages: Mandarin (native); English (advanced, TOEFL 104)