Zicheng Zeng

Panyu District, Guangzhou, China

☎ +(86) 156-0181-0547 | ✉ zichzeng@gmail.com | ⌂ zczeng.com | ⊙ sxdl

EDUCATION

South China University of Technology, China   *2022.09 - present*
Candidate for Bachelor of Engineering in Artificial Intelligence

- GPA: 3.92/4.0 (Top 3%).
- Core Modules: Data Structures (4.0/4.0), Advanced Language Programming (4.0/4.0), Machine Learning (4.0/4.0), Digital Image Processing (4.0/4.0), Discrete Mathematics (4.0/4.0), Stochastic Process (4.0/4.0), Reinforcement Learning (4.0/4.0).

PUBLICATIONS

1. Zicheng Zeng, Yu Chen, Nuo Chen, Yong Du, and Huaidong Zhang. "Instance-Level Strong Augmentation for Semi-Supervised 3D Object Detection." *Under Review at CVPR*, 2025
2. Yu Chen, Zicheng Zeng, Nuo Chen, Yong Du, and Huaidong Zhang. "ATSS3D: Adaptive Threshold for Semi-Supervised 3D Object Detection." *Under Review at CVPR*, 2025

RESEARCH EXPERIENCE

Instance-Level Augmentation for Semi-Supervised 3D Object Detection
Research Assistant, Supervised by Prof. Huaidong Zhang   *2024.07 - 2024.11*

- Designed three innovative augmentation techniques: Instance Switch, intra-class mixup, and inter-class mixup, to enhance instance-specific feature learning.
- Designed two augmentation constraints: instance box fitting and density-controlled instance generation, to improve generalization and training robustness.
- Implemented and tested the ISA framework on ScanNet and SUN RGB-D datasets, achieving a 3.0% improvement on the ScanNet 5% dataset and a 5.2% improvement on the SUN RGB-D 1% dataset.

Adaptive Threshold for Semi-Supervised 3D Object Detection
Research Assistant, Supervised by Prof. Huaidong Zhang   *2024.08 - 2024.11*

- Assisted in developing an adaptive threshold method for semi-supervised 3D object detection. Introduced a scene-level adaptive threshold and a batch-level probability weighting mechanism to filter low-quality pseudo labels, based on class frequencies and model performance.
- Contributed to the writing of the paper and performed the experimental validation of the method on ScanNet and SUN RGB-D datasets.

PROJECTS

Development of a Personalized 3D Avatar Style Customization Platform
Project Leader   *2024.04 - 2024.08*

- Led the development of a platform that transforms 2D video inputs into high-quality 3D avatars using Neural Radiance Fields (NeRF).
- Introduced a novel text-driven stylized model training method for avatar customization via text prompts.
- Developed a web-based application for generating personalized 3D avatars and stylized portraits.
- Showcased the platform at The Institution of Engineering and Technology Hong Kong Young Professionals Exhibition & Competition 2024.

AWARDS AND HONORS

National Scholarship (<1%)   *2023*
Finalist (Top 2%), 2024 Mathematical Contest in Modeling (MCM)   *2024*

SKILLS

Computer Skills: Python, C++, Java, Linux, Git, Docker