



Jiakai Zhang

Introduction

I am a last-year Ph.D. candidate at VRVC Lab, ShanghaiTech University, advised by Prof. Jingyi Yu. In the summer of 2022, I joined Meta Reality Labs as a research scientist intern in Redmond, WA. My research interests lie in interdisciplinary reconstruction and generation tasks (e.g., dynamic human, spectrum, and protein) using neural representations. Currently, I am focusing on developing the next-generation data-driven pipeline for Cryo-EM, via foundation models and generative models. I have also served as a reviewer for top conferences, including CVPR, ECCV, ICCV, NeurIPS, and SIGGRAPH. Beyond academia, I co-founded a startup, *Cellverse*, for developing protein-centric AI applications.

Education

- 2020–Present **Ph.D. Candidate**, *ShanghaiTech University*, Shanghai.
VRVC Lab, advised by Prof. Jingyi Yu. Published several papers in Nature Communications, SIGGRAPH, CVPR, NeurIPS. GPA: 4.0/4.0
- 2016–2020 **Undergraduate**, *ShanghaiTech University*, Shanghai.
Linear Algebra: A, Introduction to Information Science and Technology: A, Data Structure: A, Web and Text Mining: A, Computer Vision: A-

Experience

Vocational

- 2022.5– **Co-founder**, *Cellverse*, Shanghai.
Present Exploring protein-centric AI applications. Two papers accepted by NeurIPS 2024: DRACO and CryoGEM.
- 2022.8– **Research Scientist Intern**, *Meta Reality Labs*, Redmond, WA.
2023.2 Advised by Zhaoyang Lv, built a 3D-aware ego-centric question-answering system using neural radiance fields(NeRF) and ChatGPT.
- 2018.12– **Algorithm Intern**, *Stereeye Intelligent Technology Co.,Ltd.*, Shanghai.
2022.1 Participate in algorithm and software development.

Miscellaneous

- 2020.9–2021.1 **TA of Computational Photography Class**, *ShanghaiTech University*, Shanghai.
Designed homework, gave lectures, and helped with final presentations for groups.

Awards

- 2016.9–2020.6 **Undergraduate**, *ShanghaiTech University*, Shanghai.
- Excellence Scholarship of ShanghaiTech University
 - "Innovation, Originality and Entrepreneurship" Challenge Third Prize
 - "Intel Cup ESDC Webinar" Third Prize
 - "ShanghaiTech 2nd Innovation and Entrepreneurship Summit" First Prize

2020.9– **Ph.D. Candidate**, *ShanghaiTech University*, Shanghai.
Present ○ **National Scholarship**

Research Activities

Attendance SIGGRAPH, SIGGRAPH Asia, CVPR, VIS, Nature Communications, ECCV, NeurIPS

Served as reviewer CVPR, ICCV, ECCV, SIGGRAPH, NeurIPS, ICLR

References

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- [2] Yingjun Shen*, Haizhao Dai*, Qihe Chen, Yan Zeng, **Jiakai Zhang**, Yuan Pei, and Jingyi Yu. “DRACO: A Denoising-Reconstruction Autoencoder for Cryo-EM”. In: *Advances in Neural Information Processing Systems* 37 (2024).
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- [7] Fuqiang Zhao, Wei Yang, **Jiakai Zhang**, Pei Lin, Yingliang Zhang, Jingyi Yu, and Lan Xu. “Humanerf: Efficiently generated human radiance field from sparse inputs”. In: *Proceedings of the IEEE/CVF Conference on Computer Vision and Pattern Recognition*. 2022, pp. 7743–7753.
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- [9] Fuqiang Zhao, Yuheng Jiang, Kaixin Yao, **Jiakai Zhang**, Liao Wang, Haizhao Dai, Yuhui Zhong, Yingliang Zhang, Minye Wu, Lan Xu, and Jingyi Yu. “Human Performance Modeling and Rendering via Neural Animated Mesh”. In: *ACM Trans. Graph.* 41.6 (Nov. 2022). ISSN: 0730-0301. DOI: 10.1145/3550454.3555451. URL: <https://doi.org/10.1145/3550454.3555451>.
- [10] Quan Meng, **Jiakai Zhang**, Qiang Hu, Xuming He, and Jingyi Yu. “LGNN: A Context-aware Line Segment Detector”. In: *Proceedings of the 28th ACM International Conference on Multimedia*. 2020, pp. 4364–4372.