Jiakai Zhang

Last Update: 2021.10.20

Introduction

I am interested in Computer Vision, Computer Graphics, Computational Photography, and Bioinformatics. I received my Bachelor of Computer Science and Technology at ShanghaiTech University. Now I am the Ph.D. candidate at ShanghaiTech University where I am advised by Prof. Jingyi Yu. I just finished my first year of study and my expected graduation date is September 2025. I am passionate about exploring novel ideas and implement them. Also, I enjoy cooperating and communicating with excellent researchers. Now I am focused on dynamic scene reconstruction for daily scenes and some biological & medical (e.g., cryo-EM, cryo-ET) background reconstruction problems. Generally speaking, I believe neural representation is the future of scene reconstruction problems, and I devote myself to it.

Education

2020– 2025(Expected) **Ph.D.**, *ShanghaiTech University*, Shanghai, *Major GPA: 4/4*.
In Virtual Reality and Visual Computing Lab, supervised by Prof. Jingyi Yu. 2 accepted publications. Deep Learning: A, Matrix Computation: A, Algorithm Design and Analysis:A, Frontiers of Computer Vision:A

2016–2020 **Bachelor**, *ShanghaiTech University*, Shanghai, *GPA: 3.5/4*.
Linear Algebra: A, Introduction to Information Science and Technology: A, Data Structure: A, Web and Text Mining: A, Computer Vision: A-

Experience

Vocational

2018–Present **Intern**, *Stereye Intelligent Technology Co.,Ltd.*, Shanghai.
Part-time intern in startup company.
Detailed achievements:

- Participated the design of start-up project pipeline and algorithm
- Devoloped holographic projection software to show 3D models for gallery and exihibition.
- Learned about 3D Reconstruction, Object Recognition, plane structure extracting and multiple algorithms of SLAM.

Miscellaneous

ShanghaiTech University – Shanghai – China
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2020.9–2021.1 **TA of Computational Photography Course**, *ShanghaiTech University*, Shanghai.
Detailed experiences:
- Designed homework.
- Taught basic light field knowledge and gave exercise classes.
- Participated in every group final project designing.

2018.5–2018.9 **"Intel Cup ESDC Webinar" Third Prize**, *ShanghaiTech University*, Shanghai.
Detailed experiences:
- Designed a system to recognize, analyze and record person's emotion using CNN.
- Learned about the FPGA and Intel-up2 Board.
- Learned about the Machine Learning and Computer Vision.
- Learned about Python, Keras, OpenCV and Face & Emotion Recognition.

2017.7–2017.8 **Support Education Volunteer**, *Deyang*, Sichuan.
Detailed experiences:
- Taught pupils about the science and cultural.
- Learned the responsibility of young people.
- Made the plan to solve the problem about lack of reading extra books for leftover children.

Languages

English Academic level *Had CET-4 and CET-6 Certificate*

Mandarin Native speaker

Computer skills

Programming languages C, C++, Python, Matlab, html

Platforms Windows, Mac OS, Linux

Adobe Photoshop, Acrobat, After Effects

Office PPT, Word, Excel

Libraries PyTorch, OpenGL, Numpy, PIL and so on.

Interests

Computer Games League of Legends, Steam, Hearthstone

Basketball Took part in basketball competation "Yumin" Cup many times, and won the championship, the second place and the third place.

Outdoors Chengdu, Shanghai for Music Festivals. Suzhou, Hangzhou for go hiking, and so on. Looking forward to the next exciting trip.

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–Present **Ph.D Candidate**, *ShanghaiTech University*, Shanghai.
- **National Scholarship** (not officially received, but determined.)

Research Activities

ACM MM 2020 Attended and helped to prepare a presentation.

SIGGRAPH 2021 Attended and gave a presentation.

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DynaVis@CVPR 2021 Invited to give a presentation. Youtube recorded live

IEEE VIS 2021 Invited to give a presentation.

Publications

[1] Zhang Jiakai, Liu Xinhang, Ye Xinyi, Zhao Fuqiang, Zhang Yanshun, Wu Minye, Zhang Yingliang, Xu Lan, and Yu Jingyi. Editable free-viewpoint video using a layered neural representation. In *ACM SIGGRAPH*, 2021.

[2] 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*, pages 4364–4372, 2020.