Yihang Chen

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Education

Shanghai Jiao Tong University, Ph.D Candidate Information and Communication Engineering, SEIEE

Shanghai, China Sept. 2021 - Jun. 2026 (expected)

Monash University. Ph.D Candidate

Melbourne. Australia

Electrical and Computer Systems Engineering, Faculty of Engineering

Sept. 2021 - Jun. 2026 (expected)

Dalian University of Technology, Bachelor of Engeneering Degree, top 5%

Dalian, China

Electronic Information Engineering (English Intensive), SICE

Sept. 2017 - Jun. 2021

*I am a joint Ph.D candidate of SJTU and Monash University, supervised by Prof. Weiyao Lin, Prof. Jianfei Cai and Prof. Mehrtash Harandi. My research interests include NeRF/3DGS and compression techniques.

Publication List

3D Radiance Field Compression

- Yihang Chen, Qianyi Wu, Mengyao Li, Weiyao Lin, Mehrtash Harandi, Jianfei Cai, "Fast Feedforward 3D Gaussian Splatting Compression", ARXIV 2024, preprint.
- Yihang Chen, Qianyi Wu, Weiyao Lin, Mehrtash Harandi, Jianfei Cai, "HAC: Hash-grid Assisted Context for 3D Gaussian Splatting Compression", ECCV 2024.
- Yihang Chen, Qianyi Wu, Mehrtash Harandi, Jianfei Cai, "How Far Can We Compress Instant-NGP-Based NeRF?", CVPR 2024.

Image Compression

• Shizhan Liu, Weiyao Lin, Yihang Chen, Yufeng Zhang, Wenrui Dai, John See, Hongkai Xiong, "A Unified Framework for Jointly Compressing Visual and Semantic Data", ACM TOMM 2024.

Others

- Tieyuan Chen*, Huabin Liu*, Tianyao He, Yihang Chen, Chaofan Gan, et al., "MECD: Unlocking Multi-Event Causal Discovery in Video Reasoning", NIPS 2024, spotlight.
- Zhenyu Xie, Zelin Ni, Wenjie Yang, Yuang Zhang, Yihang Chen, Yang Zhang, Xiao Ma, "A Robust Online Multi-Camera People Tracking System With Geometric Consistency and State-aware Re-ID Correction", CVPR Workshop 2024.
- Yihang Chen, Weijie Dong, Yongping Xie, "A dual realization of Chua's chaotic oscillator using a currentcontrolled nonlinear resistor", ICCS 2021.
 - *This is my very first work done at DUT during my undergraduate years, on the topic of circuits and systems.

Patent & Proposal

- Weiyao Lin, Yihang Chen, Jianfei Cai, Mehrtash Harandi, Qianyi Wu, "An Instant-NGP model compression method based on context model", Chinese Patent, under review.
- Yihang Chen, Weiyao Lin, "Coding context prediction using hyperprior", *Tech Proposal*, *IEEE 1857.11 Standard*.

Work Experience

ByteDance, Research Intern, Feb. 2021 - Aug. 2021

Beijing, China

Conducted research on low-light video enhancement and gained experience in image and video coding. The low-light video enhancement work led to an unpublished paper, while the image coding proposal was accepted as part of the IEEE 1857.11 standard.

Awards

National Scholarship, top 5% in the School Tolybread Scholarship (higher than National Scholarship), top 1 in the School

Nov. 2018, **China** Nov. 2019, **China**

Skills

Programming: Python, C/C++, CUDA, LaTeX

Language: Chinese (native), English