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

Electrical and Computer Systems Engineering, Faculty of Engineering

Melbourne, Australia

Sept. 2021 - Jun. 2026 (expected)

Dalian University of Technology, Bachelor of Engeneering Degree, top 5% Electronic Information Engineering (English Intensive), SICE

Dalian, China 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 compression and image/video compression.

Work Experience

ByteDance, Research Intern

Beijing, China

Research on low-light video enhancement. Also experienced with image/video coding.

Feb. 2021 - Aug. 2021

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.

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