




Yihang Chen

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Education

Shanghai Jiao Tong University, Ph.D Candidate (Joint) Information and Communication Engineering, SEIEE	Shanghai, China Sept. 2021 – Jun. 2026 (expected)
Monash University, Ph.D Candidate (Joint) Electrical and Computer Systems Engineering, Faculty of Engineering	Melbourne, Australia Feb. 2023 – Jun. 2026 (expected)
Dalian University of Technology, Bachelor of Engineering Degree, top 5% Electronic Information Engineering (English Intensive), SICE	Dalian, China Sept. 2017 – Jun. 2021

Research Interests

1. 3D scene reconstruction/Volume rendering

- I am familiar with NeRF/3DGS, particularly in their compression techniques. I also know about dynamic 3DGS, generalizable feedforward approaches for NeRF/3DGS (eg, MVSplat, LGM, GS-LRM), and large-scene reconstruction, etc.

2. Compression techniques

- I am familiar with end-to-end compression (eg, for images, videos and 3D scenes) and understand the basic principles of traditional codecs (eg, H.264, HEVC). My research focuses on compression of NeRF/3DGS.
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Work Experience

ByteDance, Research Intern, Feb. 2021 – Aug. 2021	Beijing, China
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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, under review**.
- **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 current-controlled nonlinear resistor”, **ICCS 2021**.

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

Nov. 2018, **China**

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

Nov. 2019, **China**

Skills

Programming: Python (Pytorch), C/C++, CUDA, LaTeX

Language: Chinese (native), English