Yihang Chen

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Education

Shanghai Jiao Tong University, Ph.D Candidate   **Shanghai, China**
Information and Communication Engineering, SEIEE   *Sept. 2021 – Present*

Monash University, Ph.D Candidate   **Melbourne, Australia**
Electrical and Computer Systems Engineering, Faculty of Engineering   *Sept. 2021 – Present*

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 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, 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***.
  *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   *Nov. 2018*, **China**
Tolybread Scholarship (higher than National Scholarship), top 1 in the School   *Nov. 2019*, **China**

Skills

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

Language: Chinese (native), English