

# Zhenghong Zhou

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## EDUCATION BACKGROUND

Huazhong University of Science and Technology, Information and Communication Engineering Sep. 2021–Jun. 2024  
M.S. in school of EIC, Advisor: [Xinggang Wang](#), [Wenyu Liu](#)  
Focus: Computer vision, neural radiance field, multi-modal model, AI for medicine

Huazhong University of Science and Technology, Biomedical Engineering Sep. 2017–Jun. 2021  
B. E. in school of Engineering Sciences, GPA: **90.4/100**, rank: 2/28

## PUBLICATIONS

*Proceedings of the IEEE/CVF International Conference on Computer Vision (ICCV), 2023*

- Kan Wu\*, Houwen Peng\*, **Zhenghong Zhou\***, et al. TinyCLIP: CLIP Distillation via Affinity Mimicking and Weight Inheritance.
- This project proposes a novel cross-modal distillation method for large-scale language-image pre-trained models, introduces two core techniques: affinity mimicking and weight inheritance, reduces the size of the pre-trained CLIP ViT-B/32 by 50% while maintaining comparable zero-shot performance, demonstrates the good transferability of TinyCLIP in various downstream tasks.

*Arxiv (preparing to submit), 2023*

- **Zhenghong Zhou\***, Huangxuan Zhao\*, Jiemin Fang, et al. TiAVox: Time-aware Attenuation Voxels for Sparse-view 4D DSA Reconstruction.
- This project proposes a Time-aware Attenuation Voxel (TiAVox) approach for sparse-view 4D DSA reconstruction, which paves the way for high-quality 4D imaging. TiAVox can reconstruct 4D/3D/2D result from the real clinical scene of radiocontrast agent flow. Without any neural network involved, TiAVox enjoys specific physical interpretability. TiAVox does not require 3D supervision, and only needs 30 or less views to reconstruct.

*Cell Reports Medicine (IF=16.98), 2022*

- Huangxuan Zhao\*, **Zhenghong Zhou\***, Feihong Wu\*, et al. Self-supervised learning enables excellent 3D digital subtraction angiography reconstruction from ultra-sparse 2D projection views: A multicenter study.
- This project proposes a self-supervised learning method to realize 3D-DSA reconstruction using ultra-sparse 2D projections. Two radiologists scored the reconstructed images from internal and external datasets using eight projections and identified all 82 lesions with high diagnostic confidence. The radiation dosages are approximately 1/16.7 compared with the gold standard method.

\*: equal contribution.

## EXPERIENCE

- **Microsoft Research Asia**, Beijing China. Dec. 2022 – Jun. 2023  
Research intern, mentored by [Dr. Houwen Peng](#), working on visual-language models

## SKILLS

Programming: Python > matlab > C++

Languages: *Native* in Mandarin, *Fluent* in English (TOEFL: 101)

Major Courses: Machine Learning, Modern Pattern Recognition, Image Analysis and Understanding, Computer Systems and Data Structures, Algorithmic Design & Analysis, etc.

## CONTEST

### 10<sup>th</sup> The Chinese Mathematics Competition

- Partook in advanced courses of mathematical analysis and linear algebra, and won the First Prize in Hubei's final competition (Top 5%).

## AWARDS AND HONORS

- Merit Graduate Student award, HUST Oct. 2023
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- Outstanding Graduate award, HUST Jun. 2021
- National Encouragement Scholarship Sep. 2020
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- Outstanding Undergraduates (Top 1%), HUST Oct. 2018
- Academic Excellence Scholarship, HUST Sep. 2018