Curriculum Vitae

He, Ruifei

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EDUCATION

Ph.D. @ The University of Hong Kong, Hong Kong   *Sep. 2021 - Jun. 2025 (expected)*
- 4-year Ph.D., Department of Electrical and Electronic Engineering
- HKPFS, HKU-PS awardee
- Advisor: Xiaojuan Qi

B.Eng. @ Zhejiang University, Zhejiang, China   *Sep. 2017 - Jun. 2021*
- Chu Kochen Honors College
- Major: Automation; GPA: 91.25/100, 3.95/4.0; Major Ranking: 3/153.
- Advisor: Yong Liu

RELEVANT COURSES (Grades out of 100)

Artificial Intelligence (93), Machine Vision and Machine Learning (97), Computer Vision (98), Special Topics on Mixed Reality (91), Data Analysis and System Identification (94), Mathematical Modeling & Simulating (96), Data Structure (96), Robotics (91), Embedded System (93), Linear Algebra (91), Probability and Mathematical Statistics (97), Complex Variable Functions & Integral Transformation (97), Partial Differential Equations (94)

HONORS AND AWARDS

- Hong Kong PhD Fellowship (HKPFS)
- HKU Presidential PhD Scholarship (HKU-PS)
- Zhejiang Government Scholarship (top 3%)
- Zhejiang University Scholarship – First Prize (top 3%)
- Excellent Student Award (top 5%)
- Scholarship for Pilotage (top 5%)
- Zhejiang University Public Service Award (top 10%)

PUBLICATION

- **Ruifei He**, Chuhui Xue, Wenqing Zhang, Yingchen Yu, Zhengzhe Liu, Song Bai, Xiaojuan Qi. "Multi-Modal Controllable Video-to-Audio Generation." Under review.
- Wei Huang, Yue Liao, Jianhui Liu, **Ruifei He**, Haoru Tan, Shiming Zhang, Hongsheng Li, Si Liu, Xiaojuan Qi. "MC-MoE: Mixture Compressor for Mixture-of-Experts LLMs Gains More." Under review.
- **Ruifei He**, Chuhui Xue, Haoru Tan, Wenqing Zhang, Yingchen Yu, Song Bai, Xiaojuan Qi. "Debiasing Text-to-Image Diffusion Models." ACM Multimedia Workshop, 2024.
- **Ruifei He**, Shuyang Sun, Xin Yu, Chuhui Xue, Wenqing Zhang, Philip Torr, Song Bai, Xiaojuan Qi. "Is synthetic data from generative models ready for image recognition?" International Conference on Learning Representations (ICLR), **spotlight (notable-top-25%)**, 2023.

- Hai Wu, **Ruifei He**, Haoru Tan, Xiaojuan Qi, Kaibin Huang. "Vertical Layering of Quantized Neural Networks for Heterogeneous Inference." IEEE Transactions on Pattern Analysis and Machine Intelligence, 2023.
- Shuyang Sun*, Jie-Neng Chen*, **Ruifei He**, Alan Yuille, Philip Torr, Song Bai. "LUMix: Improving Mixup by Better Modelling Label Uncertainty." ICASSP, 2022.
- **Ruifei He**, Shuyang Sun, Jihan Yang, Song Bai, Xiaojuan Qi. "Knowledge Distillation as Efficient Pre-training: Faster Convergence, Higher Data-efficiency, and Better Transferability." IEEE Conference on Computer Vision and Pattern Recognition (CVPR), 2022.
- **Ruifei He***, Jihan Yang*, Xiaojuan Qi. "Re-distributing Biased Pseudo Labels in Self-training for Semi-supervised Semantic Segmentation." IEEE/CVF International Conference on Computer Vision (ICCV), **oral (3.4% acceptance rate)**, 2021.
- Liang Liu, Jiangning Zhang, **Ruifei He**, Yong Liu, Yabiao Wang, Ying Tai, Donghao Luo, Chengjie Wang, Jilin Li, Feiyue Huang. "Learning by Analogy: Reliable Supervision from Transformations for Unsupervised Optical Flow Estimation." IEEE Conference on Computer Vision and Pattern Recognition (CVPR), 2020.

Experiences

Research Intern | AI Lab, ByteDance   *Apr. 2021-Nov. 2024*
Advisor: Bai Song
Topic: Data-centric/efficient learning, Multi-modal, AIGC

Visiting Student | CVMI Lab, The University of Hong Hong   *May 2020-March 2021*
Advisor: Professor Xiaojuan Qi
Topic: Semi-supervised learning, Semantic segmentation

Visiting Student | APRIL Lab, Zhejiang University   *Dec. 2018-Apr. 2020*
Advisor: Professor Yong Liu
Topic: Self-supervised learning, Optical flow estimation

SKILLS

- Programming: Python, C, C++, Matlab, Linux, Docker, Pytorch, Tensorflow, Protobuf, Solidworks