ZHI HOU

✉ zhou9878@uni.sydney.edu.au ☏ +61-0415287593
⌂ https://github.com/zhihou7 Ⓖ Google Scholar

I'm a third-year PhD Student from The University of Sydney, supervised by Prof. Dacheng Tao. My research interests include Computer Vision, particularly **Human-Object Interaction, 3D Human, Sample Relationship**, Action Recognition, Long-Tailed Recognition, Few-shot and Zero-shot Learning.

Before I am engaged in research, I mainly focus on software engineering and have plentiful engineering experiences in Java (Android Engineer), Python, Tensorflow, PyTorch. Knowledge in C/C++/JVM.

I am passionate about challenging problems, and keep enthusiastic about new things.

EDUCATION

Ph.D.
- **The University of Sydney**
- **Major: Computer Vision**

- **Supervisor: Dacheng Tao**
- 2020/3 - now

M.Eng.
- South China University of Technology
- Major：Computer Science

- Advisors：Guihua Wen
- 2014/9 - 2017/6

B.Eng.
- South China University of Technology
- Major：Computer Science and Technology

- **GAP: 3.76/4.0, Rank 1/60**
- 2010/9 - 2014/6

PUBLICATIONS

1. **Zhi Hou**, Baosheng Yu, Dacheng Tao. Discovering Human-Object Interaction Concepts via Self-Compositional Learning. **ECCV2022.**
2. **Zhi Hou**, Baosheng Yu, Dacheng Tao. BatchFormer: Learning to explore Sample Relationships for Robust Representation Learning. **CVPR2022**.
3. **Zhi Hou**, Baosheng Yu, Chaoyue Wang, Yibin Zhang, Dacheng Tao. BatchFormerV2: Exploring Sample Relationships for Dense Representation Learning. arxiv.org
4. **Zhi Hou**, Baosheng Yu, Yu Qiao, Xiaojiang Peng, Dacheng Tao. Affordance Transfer Learning for Human-Object Interaction Detection. **CVPR2021**.
5. **Zhi Hou**, Baosheng Yu, Yu Qiao, Xiaojiang Peng, Dacheng Tao. Detecting Human-Object Interaction via Fabricated Compositional Learning. **CVPR2021**.
6. **Zhi Hou**, Xiaojiang Peng, Yu Qiao, Dacheng Tao. Visual Compositional Learning for Human Object Interaction Detection. **ECCV2020.**

7. Guihua Wen, **Zhi Hou**, et al. Ensemble of deep neural networks with probability-based fusion for facial expression recognition[J]. Cognitive Computation, 2017, 9(5): 597-610 (conducted mainly by myself)
8. DanYang Li, Guihua Wen, **Zhi Hou**, et al. RTCRelief-F: an effective clustering and ordering-based ensemble pruning algorithm for facial expression recognition[J]. Knowledge & Information Systems, 2018:1-32.

AWARDS

Champion, CVPR2018 ActivityNet Moments in Time Challenge(rank 1st)
2011-2012 National Encouragement Scholarship
2010-2011 National Scholarship

WORK EXPERIENCE

2020/12-2022/3 — JD Explore Academy, China
Working as a research intern. I mainly focused on Human-Object Interaction and Sample Relationship Exploration.

2019/6 - 2020/3 — Shenzhen Institutes of Advanced Technology, CAS
Working as a Visiting Student in mmlab in SIAT under the supervision from Prof Yu Qiao and Xiaojiang Peng. I'm mainly focused on Human-Object Interaction and Action Understanding.

2017/7 - 2018/6 — Hikvision Research Institute
Research Engineer in the pre-research team. Mainly responsible for algorithm research. **In ActivityNet2018 Challenge**, the Inception-ResNet 3D model designed by myself achieved the best single model(top1: **35.1%**), while the ensemble result is 38.6%, **well ahead of the second(37.5%)**. I also study semantic super-pixel segmentation.

2014/5- 2014/7 —   Shenzhen institute of The Chinese University of Hong Kong.
Sofware testing Research Assistant in Prof. Michael R. Lyu's team, collaborating with Dr. Yu Kang.