

Mingfei Han *Ph.D. Candidate*

<https://scholar.google.com/citations?user=wJEoIXsAAAAJ&hl=en>

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Research Interests

- My research interests lie in computer vision and machine learning. Currently, I am focusing on large vision-language models and their application in robotics. I worked on video-language downstream tasks related to object prediction in videos, like Referring-VOS. Previously, I worked on individual and group activity recognition, and video object detection with full and limited supervision. During my Master's thesis, I worked on moving object detection and tracking.

Education

Ph.D. 2023-2024 University of Technology Sydney, Sydney, NSW, Australia

- Major: Computer Science
- Advisor: Prof. Xiaojun Chang

2021-2023 Monash University, Melbourne, VIC, Australia

- Major: Computer Science
- Advisor: Prof. Xiaojun Chang

M.Eng. 2016-2019 Chinese Academy of Sciences, Beijing, China

- Major: Computer Technology
- Thesis: Research on Object Detection and Tracking using Satellite Videos

B.Eng. 2012-2016 Nankai University, Tianjin, China

- Major: Computer Science
- Ranking: 11/79

Publications

- [1]. Shot2Story20k: A New Benchmark for Comprehensive Understanding of Multi-shot Videos, *arxiv* 2023

Mingfei Han, Linjie Yang, Xiaojun Chang, Heng Wang

- [2]. Video Recognition in Portrait Mode, *CVPR* 2024

Mingfei Han, Linjie Yang, Xiaojie Jin, Jiashi Feng, Xiaojun Chang, Heng Wang

- [3]. HTML: Hybrid Temporal-scale Multimodal Learning Framework for Referring Video Object Segmentation, *ICCV* 2023

Mingfei Han, Yali Wang, Zhihui Li, Lina Yao, Xiaojun Chang and Yu Qiao

- [4]. Mask Propagation for Efficient Video Semantic Segmentation, *NeurIPS* 2023

Yuetian Weng, **Mingfei Han**, Haoyu He, Mingjie Li, Lina Yao, Xiaojun Chang and Bohan Zhuang

- [5]. Dual-AI: Dual-path Actor Interaction Learning for Group Activity Recognition, *CVPR 2022 (Oral)*

Mingfei Han, David Junhao Zhang, Yali Wang, Rui Yan, Lina Yao, Xiaojun Chang and Yu Qiao

- [6]. An Efficient Spatio-Temporal Pyramid Transformer for Action Detection, *ECCV 2022*
Yuetian Weng, Zizheng Pan, **Mingfei Han**, Xiaojun Chang, Bohan Zhuang

- [7]. Progressive Frame-Proposal Mining for Weakly Supervised Video Object Detection, *Trans. on Image Processing 2021*

Mingfei Han, Yali Wang, Mingjie Li, Xiaojun Chang, Yi Yang and Yu Qiao

- [8]. Mining Inter-Video Proposal Relations for Video Object Detection, *ECCV 2020*

Mingfei Han, Yali Wang, Xiaojun Chang and Yu Qiao

- [9]. Object Tracking in Satellite Videos by Improved Correlation Filters with Motion Estimations, *IEEE Transactions on Geoscience and Remote Sensing 2019*

Shiyu Xuan, Shengyang Li, **Mingfei Han**, et al.

Research Experience

2023.4 – ongoing ReLER Lab, AAIL, University of Technology Sydney

- Advised by Prof. Xiaojun Chang
- Working on video-language models, individual and group activity recognition, and dense prediction in videos. (CVPR 2022, ICCV 2023 and 2 in submission)

2021.2 – 2023.4 Monash University

- Advised by Prof. Xiaojun Chang

2019.10 – 2021.1 MMLab, SIAT, Chinese Academy of Sciences

- Advised by A/Prof. Yali Wang and Prof. Yu Qiao
- Worked on action recognition/object detection in videos, and its variants under limited supervision. (ECCV 2020, CVPR 2022 and TIP 2021)

2017.7 – 2019.7 CSU, Chinese Academy of Sciences

- Advised by Prof. Shengyang Li
- Worked on moving objects detection and tracking in satellite videos. (Trans. on GRS in 2019 and conference papers)

Honours & Awards

- Data61 PhD Scholarship (**full** scholarship, 2021)

- **First Prize** in the TRECVID 2019 competition: Activities in Extended Video (2019)
- **First Prize** in the "Vehicle Tracking of Satellite Videos" competition organized by NSFC (National Natural Science Foundation of China) (2018)
- CSU Excellent Master Scholarship (2018, top 3%)
- **Graduate with Honour** of Nankai University (2016, top 3%)
- National Encouragement Scholarship (2014/2015)