

Kaihua Tang

50 Nanyang Avenue, Block N4 #B1c-17, 639798, Singapore
tkhchipaomian@gmail.com • +65 85873496 • <https://kaihuatang.github.io/>

EDUCATION

Nanyang Technological University, Singapore

- Ph.D in Computer Science Jul 2018 – Dec 2021
 - Adviser: Asst. Prof. Hanwang Zhang

Shanghai Jiao Tong University, China, **Waseda University**, Japan

- Dual M.S. Program in Computer Science Sep 2015 – Mar 2018
 - Adviser: Prof. Lizhuang Ma & Prof. Sei-ichiro Kamata

Shanghai Jiao Tong University, Shanghai, China

- B.S. in Computer Science Sep 2011 – Jul 2015
 - Adviser: Prof. Kai Yu
- Second Major in Chinese Painting Sep 2012 – Jul 2014
 - Adviser: Qi Wang

WORK EXPERIENCE

Nanyang Technological University, Singapore

- Postdoctoral Research Scientist Jan 2022 – Now
 - Working with Asst. Prof. Hanwang Zhang

PUBLICATIONS

Accumulated more than 1200+ citations in 4 years

- Kaihua Tang, Mingyuan Tao, Jiaxin Qi, Zhenguang Liu, Hanwang Zhang, “Invariant Feature Learning for Generalized Long-Tailed Classification,” in *ECCV*, Oct 2022.
- Xuanyu Yi, Kaihua Tang, Xian-Sheng Hua, Joo-Hwee Lim, Hanwang Zhang, “Identifying Hard Noise in Long-Tailed Sample Distribution,” **Oral Presentation**, in *ECCV*, Oct 2022.
- Jiaxin Qi, Kaihua Tang, Qianru Sun, Xian-Sheng Hua, Hanwang Zhang, “Class Is Invariant to Context and Vice Versa: On Learning Invariance for Out-Of-Distribution Generalization,” in *ECCV*, Oct 2022.
- Kaihua Tang, Mingyuan Tao, Hanwang Zhang, “Adversarial Visual Robustness by Causal Intervention,” arXiv preprint, 2021.
- Xinting Hu, Kaihua Tang, Chunyan Miao, Xian-Sheng Hua, Hanwang Zhang, “Distilling Causal Effect of Data in Class-Incremental Learning,” in *CVPR*, Jun 2021.
- Yulei Niu, Kaihua Tang, Hanwang Zhang, Zhiwu Lu, Xian-Sheng Hua, Ji-Rong Wen, “Counterfactual VQA: A Cause-Effect Look at Language Bias,” in *CVPR*, Jun 2021.
- Kaihua Tang, Jianqiang Huang, Hanwang Zhang, “Long-Tailed Classification by Keeping the Good and Removing the Bad Momentum Causal Effect,” in *NeurIPS*, Dec 2020.
- Mitra Tajrobehkar, Kaihua Tang, Hanwang Zhang, Joo-Hwee Lim, “Align R-CNN: A Pairwise Head Network for Visual Relationship Detection,” in *TMM*, 2021.
- Kaihua Tang, Yulei Niu, Jianqiang Huang, Jiaxin Shi, Hanwang Zhang, “Unbiased Scene Graph Generation from Biased Training,” **Oral Presentation**, in *CVPR*, Jun 2020.
- Xinting Hu, Yi Jiang, Kaihua Tang, Hanwang Zhang, Chunyan Miao, Jingyuan Chen, “Learning to Segment the Tail,” in *CVPR*, Jun 2020.
- Kaihua Tang, Hanwang Zhang, Baoyuan Wu, Wenhan Luo, Wei Liu, “Learning to Compose Dynamic Tree Structures for Visual Contexts,” **Oral & Best Paper Finalists (45/5160)**, in *CVPR*, Jun 2019.
- Xu Yang, Kaihua Tang, Hanwang Zhang, Jianfei Cai, “Auto-Encoding Scene Graphs for Image Captioning,” **Oral Presentation**, in *CVPR*, Jun 2019.
- Kaihua Tang, Sei-ichiro Kamata, Xiaonan Hou, Shouhong Ding, Lizhuang Ma, “Eigen-Aging Reference Coding for Cross-Age Face Verification and Retrieval,” in *ACCV*, Nov 2016.

PROJECTS

Accumulated more than 1800+ Github Stars in 4 years

Scene-Graph-Benchmark.pytorch

	<ul style="list-style-type: none"> ▪ Description: this is one of the most popular open-source codebases in the scene graph generation (SGG) field. It integrates all the existing metrics and multiple well-known SGG models. It's also a PyTorch implementation of unbiased TDE (CVPR 2020 Oral). ▪ Github Link: https://github.com/KaihuaTang/Scene-Graph-Benchmark.pytorch 2020
	Long-Tailed-Recognition.pytorch
	<ul style="list-style-type: none"> ▪ Description: this project provides a strong single-stage baseline for Long-Tailed Classification, Detection, and Instance Segmentation. It is also a PyTorch implementation of De-confounded TDE (NeurIPS 2020). ▪ Github Link: https://github.com/KaihuaTang/Long-Tailed-Recognition.pytorch 2020
	VQA2.0-Recent-Approachs-2018.pytorch
	<ul style="list-style-type: none"> ▪ Description: this is an open-source visual question answering (VQA) framework built on top of the bottom-up-attention-vqa. It integrates several popular VQA methods published in 2018. ▪ Github Link: https://github.com/KaihuaTang/VQA2.0-Recent-Approachs-2018.pytorch 2019
AWARDS & SCHOLARSHIPS	<ul style="list-style-type: none"> ▪ Outstanding Reviewer (Top 10%) for ICML 2022 2022 ▪ 2021 Alibaba Outstanding Interns in Academic Cooperation, Alibaba Group 2021 ▪ 2021 & 2019 PREMIA Best Student Paper Award, 2nd Place, PREMIA 2021, 2019 ▪ CVPR 2019 Best Paper Finalists, CVPR Committee 2019 ▪ Honorable Judge Award, The 5th Cloud Programming World Cup, FORUM8 Tokyo 2017 ▪ Waseda Partial Tuition-Waiver Scholarship for Privately Financed International Students GPA rank Top 10 out of 300. 2015 ▪ IPS special scholarship for international students, Waseda University 2014 ▪ Monbukagakusho Honors Scholarship for Privately Financed International Students 2014 ▪ Emerging Talent Award, Cloud Programming World Cup (FORUM8), Tokyo 2013
INTERNSHIP	<p>Alibaba, DAMO Academy, Research Intern, Hangzhou, China</p> <ul style="list-style-type: none"> ▪ Project: Robust Machine Learning Jul 2019- Nov 2021 <p>Tencent, AI Lab, Research Intern, ShenZhen, China</p> <ul style="list-style-type: none"> ▪ Project: Scene Graph Generation Mar 2018- Jun 2018 <p>Mihoyo, Mobile Game Development Intern, Shanghai, China</p> <ul style="list-style-type: none"> ▪ Project: Mobile Game Development Using Unity 3D. Apr 2017- Dec 2017 <p>TOSHIBA Research & Development Intern, TOSHIBA, Tokyo, Japan</p> <ul style="list-style-type: none"> ▪ Project: Image Inpainting Aug 2015- Sep 2015
SKILLS	Recently Used: Python, Pytorch; Have Experience Before: MATLAB, C#, Java, C++,
LANGUAGES	<ul style="list-style-type: none"> ▪ Chinese: Native language, English: Fluent (TOEFL 103, GRE 328), Japanese: Basic (N2).
VOLUNTEER ACTIVITIES	<ul style="list-style-type: none"> ▪ 28th ACM-Multimedia Program, ACM-MM Committees Oct 2020 – Oct 2020 ▪ YAPM Summer Volunteer Program, TECC Organization Jul 2014 – Aug 2014 ▪ Volunteer of Spring Festival Railway Transport Feb 2013 ▪ Volunteer of TORAY Cup Shanghai International Marathon Dec 2011
INTERESTS	Outdoor Activities (Hiking, Camping, Mountain Climbing, Roller Skating, etc), Anime, Comic and Games (ACG), Game Development

[CV compiled on 2022-07-14]