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 900+ citations in 3 years

- Kaihua Tang, Mingyuan Tao, Jiaxin Qi, Zhenguang Liu, Hanwang Zhang, "Invariant Feature Learning for Generalized Long-Tailed Classification," under review, Mar 2022.

- Xuanyu Yi, Kaihua Tang, Xian-Sheng Hua, Joo-Hwee Lim, Hanwang Zhang, "Identifying Hard Noise in Long-Tailed Sample Distribution," under review, Mar 2022.

- 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, Mingyuan Tao, Hanwang Zhang, "Adversarial Visual Robustness by Causal Intervention," arXiv preprint, 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 Presentation & Finallists (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 1600+ Github Stars in 3 years

Long-Tailed-Recognition.pytorch (460+ stars)

- 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

Scene-Graph-Benchmark.pytorch (680+ stars)

- Description: this is one of the most popular open-source codebases in the scene graph generation (SGG) field. It integrates all the exsiting 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

VQA2.0-Recent-Approachs-2018.pytorch (260+ stars)

- 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	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

Alibaba, DAMO Academy, Research Intern, Hangzhou, China

- Project: Robust Machine Learning   Jul 2019- Nov 2021

Tencent, AI Lab, Research Intern, ShenZhen, China

- Project: Scene Graph Generation   Mar 2018- Jun 2018

Mihoyo, Mobile Game Development Intern, Shanghai, China

- Project: Mobile Game Development Using Unity 3D.   Apr 2017- Dec 2017

TOSHIBA Research & Development Intern, TOSHIBA, Tokyo, Japan

- Project: Image Inpainting   Aug 2015- Sep 2015

SKILLS   **Recently Used:** Python, Pytorch; **Have Experience Before:** MATLAB, C#, Java, C++,

LANGUAGES
- **Chinese**: Native language, **English**: Fluent (TOEFL 103, GRE 328), **Japanese**: Basic (N2).

VOLUNTEER ACTIVITIES
- 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 2022-03-16*]