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.
- 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 & Best Paper 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 1800+ Github Stars in 4 years

Scene-Graph-Benchmark.pytorch

- 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

Long-Tailed-Recognition.pytorch

- 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

- 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 2015
  GPA rank Top 10 out of 300.
- 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 2022-07-09*]