

# Kaihua Tang

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## 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, Zhengguang 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 & 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 1600+ Github Stars in 3 years

#### 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).

	<ul style="list-style-type: none"> <li>Github Link: <a href="https://github.com/KaihuaTang/Long-Tailed-Recognition.pytorch">https://github.com/KaihuaTang/Long-Tailed-Recognition.pytorch</a> 2020</li> </ul>
	<b>Scene-Graph-Benchmark.pytorch</b>
	<ul style="list-style-type: none"> <li>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).</li> <li>Github Link: <a href="https://github.com/KaihuaTang/Scene-Graph-Benchmark.pytorch">https://github.com/KaihuaTang/Scene-Graph-Benchmark.pytorch</a> 2020</li> </ul>
	<b>VQA2.0-Recent-Approachs-2018.pytorch</b>
	<ul style="list-style-type: none"> <li>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.</li> <li>Github Link: <a href="https://github.com/KaihuaTang/VQA2.0-Recent-Approachs-2018.pytorch">https://github.com/KaihuaTang/VQA2.0-Recent-Approachs-2018.pytorch</a> 2019</li> </ul>
<b>AWARDS &amp; SCHOLARSHIPS</b>	<ul style="list-style-type: none"> <li>2021 Alibaba Outstanding Interns in Academic Cooperation, Alibaba Group 2021</li> <li>2021 &amp; 2019 PREMIA Best Student Paper Award, 2nd Place, PREMIA 2021, 2019</li> <li>CVPR 2019 Best Paper Finalists, CVPR Committee 2019</li> <li>Honorable Judge Award, The 5th Cloud Programming World Cup, FORUM8 Tokyo 2017</li> <li>Waseda Partial Tuition-Waiver Scholarship for Privately Financed International Students GPA rank Top 10 out of 300. 2015</li> <li>IPS special scholarship for international students, Waseda University 2014</li> <li>Monbukagakusho Honors Scholarship for Privately Financed International Students 2014</li> <li>Emerging Talent Award, Cloud Programming World Cup (FORUM8), Tokyo 2013</li> </ul>
<b>INTERNSHIP</b>	<p><b>Alibaba, DAMO Academy, Research Intern</b>, Hangzhou, China</p> <ul style="list-style-type: none"> <li>Project: Robust Machine Learning Jul 2019- Nov 2021</li> </ul> <p><b>Tencent, AI Lab, Research Intern</b>, ShenZhen, China</p> <ul style="list-style-type: none"> <li>Project: Scene Graph Generation Mar 2018- Jun 2018</li> </ul> <p><b>Mihoyo, Mobile Game Development Intern</b>, Shanghai, China</p> <ul style="list-style-type: none"> <li>Project: Mobile Game Development Using Unity 3D. Apr 2017- Dec 2017</li> </ul> <p><b>TOSHIBA Research &amp; Development Intern</b>, TOSHIBA, Tokyo, Japan</p> <ul style="list-style-type: none"> <li>Project: Image Inpainting Aug 2015- Sep 2015</li> </ul>
<b>SKILLS</b>	<b>Recently Used:</b> Python, Pytorch; <b>Have Experience Before:</b> MATLAB, C#, Java, C++,
<b>LANGUAGES</b>	<ul style="list-style-type: none"> <li><b>Chinese:</b> Native language, <b>English:</b> Fluent (TOEFL 103, GRE 328), <b>Japanese:</b> Basic (N2).</li> </ul>
<b>VOLUNTEER ACTIVITIES</b>	<ul style="list-style-type: none"> <li>28th ACM-Multimedia Program, ACM-MM Committees Oct 2020 – Oct 2020</li> <li>YAPM Summer Volunteer Program, TECC Organization Jul 2014 – Aug 2014</li> <li>Volunteer of Spring Festival Railway Transport Feb 2013</li> <li>Volunteer of TORAY Cup Shanghai International Marathon Dec 2011</li> </ul>
<b>INTERESTS</b>	Outdoor Activities (Hiking, Camping, Mountain Climbing, Roller Skating, etc), Anime, Comic and Games (ACG), Game Development

[CV compiled on 2022-03-16]