

# Kai Wang

PH.D STUDENT · COMPUTER SCIENCE

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## Education

### School of Computing, National University of Singapore

PH.D STUDENT, AI SINGAPORE PH.D FELLOWSHIP

- Advisor: Presidential Young Prof. Yang You

*Singapore*

08.2021 -

### University of Chinese Academy of Sciences

MASTER OF ENGINEERING

- Outstanding Graduates
- Advisor: Prof. Yu Qiao and Assoc. Prof. Xiaojiang Peng

*Beijing, China*

09.2017 - 06.2020

### Beijing Normal University Zhuhai Campus

BACHELOR OF ENGINEERING

- China National Scholarship (Top 0.2%)
- Outstanding Graduates

*Zhuhai, China*

09.2013 - 06.2017

## Publications

PUBLISHED (6 CVPR, 1 ECCV, 1 AAAI, AND 1 TIP)

- [1]. **Kai Wang**, Bo Zhao, Xiangyu Peng, Zheng Zhu, Shuo Yang, Shuo Wang, Guan Huang, Hakan Bilen, Xinchao Wang, and Yang You. 2022. **CAFE: Learning to Condense Dataset by Aligning Features**. IEEE/CVF Conference on Computer Vision and Pattern Recognition.
- [2]. **Kai Wang**, Shuo Wang, Panpan Zhang, Zhipeng Zhou, Zheng Zhu, Xiaobo Wang, Xiaojiang Peng, Baigui Sun, Hao Li, and Yang You. 2022. **An Efficient Training Approach for Very Large Scale Face Recognition**. IEEE/CVF Conference on Computer Vision and Pattern Recognition.
- [3]. Xiangyu Peng\*, **Kai Wang\***, Zheng Zhu, Mang Wang, and Yang You. 2022. **Crafting Better Contrastive Views for Siamese Representation Learning**. IEEE/CVF Conference on Computer Vision and Pattern Recognition. Equal Contribution.
- [4]. Wangbo Zhao, Kai Wang, Xiangxiang Chu, Fuzhao Xue, Xinchao Wang, and Yang You. 2022. **Modeling Motion with Multi-Modal Features for Text-Based Video Segmentation**. IEEE/CVF Conference on Computer Vision and Pattern Recognition.
- [5]. Shiming Chen, Ziming Hong, Guosen Xie, Wenhan Yang, Qinmu Peng, Kai Wang, Jian Zhao, Xinge You. 2022. **MSDN: Mutually Semantic Distillation Network for Zero-Shot Learning**. IEEE/CVF Conference on Computer Vision and Pattern Recognition.
- [6]. Jianfei Yang, Zhaoyang Zeng, Kai Wang, Han Zou, Lihua Xie. 2021. **GarbageNet: a unified learning framework for robust garbage classification**. IEEE Transactions on Artificial Intelligence.
- [7]. Chunmei Feng, **Kai Wang**, Shijian Lu, Yong Xu, Xuelong Li. 2021. **Brain MRI Super-Resolution using Coupled-Projection Residual Network**. Neurocomputing.
- [8]. **Kai Wang**, Xiaojiang Peng, Jianfei Yang, Shijian Lu, Yu Qiao. 2020. **Suppressing Uncertainties for Large-Scale Facial Expression Recognition**. IEEE/CVF Conference on Computer Vision and Pattern Recognition, 6897-6906.
- [9]. **Kai Wang**, Xiaojiang Peng, Jianfei Yang, Debin Meng, Yu Qiao. 2020. **Region Attention Networks for Pose and Occlusion Robust Facial Expression Recognition**. IEEE Transactions on Image Processing, 4057-4069.
- [10]. Xiaojiang Peng\*, **Kai Wang\***, Zhaoyang Zeng\*, Qing Li, Jianfei Yang, Yu Qiao. 2020. **Suppressing Mislabelled Data via Grouping and Self-Attention**. European Conference on Computer Vision, 786-802. Equal Contribution
- [11]. **Kai Wang**, Xiaoxing Zeng, Jianfei Yang, Debin Meng, Kaipeng Zhang, Xiaojiang Peng, Yu Qiao. 2018. **Cascade Attention Networks for Group Emotion Recognition with Face, Body and Image Cues**. 20th ACM International Conference on Multimodal Interaction, 640-645.

- [12]. **Kai Wang**, Jianfei Yang, Da Guo, Kaipeng Zhang, Xiaojiang Peng, Yu Qiao. 2019. **Bootstrap model ensemble and rank loss for engagement intensity regression**. 21th ACM International Conference on Multimodal, 551-556.
- [13]. Da Guo\*, **Kai Wang\***, Jianfei Yang, Kaipeng Zhang, Xiaojiang Peng, Yu Qiao. 2019. **Exploring Regularizations with Face, Body and Image Cues for Group Cohesion Prediction**. 21th ACM International Conference on Multimodal, 557-561. Equal Contribution
- [14]. Sijie Ji\*, **Kai Wang\***, Xiaojiang Peng, Jianfei Yang, Zhaoyang Zeng, Yu Qiao. 2020. **Multiple Transfer Learning and Multi-Label Balanced Training Strategies for Facial AU Detection in the Wild**. IEEE/CVF Conference on Computer Vision and Pattern Recognition Workshops, 414-418. Equal Contribution
- [15]. Junhao Liu, **Kai Wang**, Chunpu Xu, Zhou Zhao, Ruifeng Xu, Ying Shen, Min Yang. 2020 **Interactive Dual Generative Adversarial Networks for Image Captioning**. AAAI, 11588-11595.
- [16]. Xingyu Fan, Zhongying Deng, **Kai Wang**, Xiaojiang Peng, Yu Qiao. 2020. **Learning Discriminative Representation For Facial Expression Recognition From Uncertainties**. IEEE International Conference on Image Processing (ICIP), 903-907.
- [17]. Debin Meng, Xiaojiang Peng, **Kai Wang**, Yu Qiao. 2019. **Frame attention networks for facial expression recognition in videos**. IEEE International Conference on Image Processing (ICIP), 3866-3870.
- [18]. Jianfei Yang, **Kai Wang**, Xiaojiang Peng, Yu Qiao. 2018. **Deep recurrent multi-instance learning with spatio-temporal features for engagement intensity prediction**. 20th ACM International Conference on Multimodal Interaction, 594-598.
- [19]. Lianzhi Tan, Kaipeng Zhang, **Kai Wang**, Xiaoxing Zeng, Xiaojiang Peng, Yu Qiao. 2017. **Group emotion recognition with individual facial emotion CNNs and global image based CNNs**. 19th ACM International Conference on Multimodal Interaction, 549-552.

## Intern

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|           |   |                 |
|-----------|---|-----------------|
| 6 months  | <b>Huawei Cloud</b> , Huawei Technology Company | Research Intern |
| 12 months | <b>Alibaba DAMO Acadmey</b> , Alibaba Group     | Research Intern |

## Awards

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|------|---|-----------|
| 2021 | <b>ICCV Masked Face Recognition Challenge</b> , ICCV Committee                | Champion  |
| 2020 | <b>CVPR2020-AU Detection Challenge</b> , CVPR Committee                       | Top3      |
| 2019 | <b>2019 National AI Challenge, Person-Reid, Top6 (6/2518)</b> , Shenzhen Gov. | \$ 30,000 |
| 2019 | <b>2019 Garbage Classification Challenge, Top1 (1/2611)</b> , Huawei Company  | \$ 30,000 |
| 2019 | <b>2019 Emotiw V-A Emotion Recognition</b> , ICMI                             | Rank 3th  |
| 2019 | <b>2019 Emotiw Group Cohesion Recognition</b> , ICMI                          | Rank 2nd  |
| 2018 | <b>Pacific Earthquake Engineering Research ImageNet</b> , PEER                | Champion  |
| 2018 | <b>2018 Emotiw Engagement Recognition</b> , ICMI                              | Champion  |
| 2018 | <b>2018 Emotiw Group Emotion Recognition</b> , ICMI                           | Rank 2nd  |
| 2017 | <b>2017 Emotiw Group Emotion Recognition</b> , ICMI                           | Champion  |
| 2016 | <b>National Entrepreneurship Competition</b> , Zhuhai, Zhuhai Gov.            | Top20     |