Kai Wang

PH.D STUDENT · COMPUTER SCIENCE

Institutes of Data Science & School of Computing, National University of Singapore

✉ kai.wang960112@gmail.com

Education

School of Computing, National University of Singapore *Singapore*

PH.D STUDENT, AI SINGAPORE PH.D FELLOWSHIP *08.2021 -*

• Advisor: Presidential Young Prof. Yang You

University of Chinese Academy of Sciences *Beijing, China*

MASTER OF ENGINEERING *09.2017 - 06.2020*

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

Beijing Normal University Zhuhai Campus *Zhuhai, China*

BACHELOR OF ENGINEERING *09.2013 - 06.2017*

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

Publications

PUBLISHED (8 CVPR, 4 NEURIPS, 1 ICLR, 3 ICCV, 2 ECCV, 1 AAAI, AND 1 TIP. **CITATIONS: 2136, H-INDEX: 17**)

[30]. Mingjia Shi, Yuhao Zhou, Qing Ye, **Kai Wang**, Huaizheng Zhang, Shudong Huang, and Jiancheng Lv 2023. **pFedBreD: Personalized Prior for Reactivating the Overlooked Information in Federated Learning**. Thirty-Seventh Conference on Neural Information Processing Systems (NeurIPS).

[29]. Yifan Zhang, Daquan Zhou, Bryan Hooi, **Kai Wang**, and Jiashi Feng 2023. **Expanding Small-Scale Datasets with Guided Imagination**. Thirty-Seventh Conference on Neural Information Processing Systems (NeurIPS).

[28]. Beining Yang, **Kai Wang**[*], Qingyun Sun, Cheng Ji, Xingcheng Fu, Hao Tang, Yang You, and Jianxin Li 2023. **Does Graph Distillation See Like Vision Dataset Counterpart?**. Thirty-Seventh Conference on Neural Information Processing Systems (NeurIPS). Equal Contribution

[27]. Daquan Zhou, **Kai Wang**[*] , Jianyang Gu[*], Xiangyu Peng, Dongze Lian, Yifan Zhang, Yang You, and Jiashi Feng 2023. **Dataset Quantization**. International Conference on Computer Vision (ICCV). Equal Contribution

[26]. Yanqing Liu, Jianyang Gu, **Kai Wang**[†], Zheng Zhu, Wei Jiang, and Yang You 2023. **DREAM: Efficient Dataset Distillation by Representative Matching**. International Conference on Computer Vision (ICCV). Project Lead

[25]. Zangwei Zheng, Mingyuan Ma, **Kai Wang**, Ziheng Qin, Xiangyu Yue, and Yang You 2023. **Preventing Zero-Shot Transfer Degradation in Continual Learning of Vision-Language Models**. International Conference on Computer Vision (ICCV).

[24]. Jianyang Gu, **Kai Wang**, Wei Jiang, et.al, Yang You, and Jian Zhao. 2023. **MSINet: Twins Contrastive Search of Multi-Scale Interaction for Object ReID**. IEEE Conference on Computer Vision and Pattern Recognition (CVPR).

[23]. Shuo Yang, Zhaopan Xu, **Kai Wang**, Yang You, Hongxun Yao, Tongliang Liu, and Min Xu. 2023. **BiCro: Noisy Correspondence Rectification for Multi-modality Data via Bi-directional Cross-modal Similarity Consistency**. IEEE Conference on Computer Vision and Pattern Recognition (CVPR).

[22]. Jianfei Yang, Xiangyu Peng, **Kai Wang**, ZHeng Zhu, Jiashi Feng, Lihua Xie, and Yang You. 2023. **Divide to Adapt: Mitigating Confirmation Bias for Domain Adaptation of Black-Box Predictors**. The Eleventh International Conference on Learning Representations (ICLR, **Spotlight Paper**).

[21]. Songhua Liu, **Kai Wang**, Xingyi Yang, Jingwen Ye, and Xinchao Wang. 2022. **Dataset Distillation via Factorization**. Thirty-Sixth Conference on Neural Information Processing Systems (NeurIPS, **Spotlight Paper**).

[20]. Zelin Zang, Siyuan Li, Di Wu, Ge Wang, **Kai Wang**, Lei Shang, Baigui Sun, Hao Li, and Stan Li. 2022. **DLME: Deep Local-flatness Manifold Embedding**. European Conference on Computer Vision (ECCV).

[19]. **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.

[18]. **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.

[17]. 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(**Oral Presentation**)

[16]. 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.

[15]. 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.

[14]. 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.

[13]. Chunmei Feng, **Kai Wang**, Shijian Lu, Yong Xu, Xuelong Li. 2021. **Brain MRI Super-Resolution using Coupled-Projection Residual Network**. Neurocomputing.

[12]. **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.

[11]. **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 Mislabeled Data via Grouping and Self-Attention**. European Conference on Computer Vision, 786-802. Equal Contribution

[9]. **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.

[8]. **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.

[7]. 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

[6]. 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

[5]. 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.

[4]. 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.

[3]. 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.

[2]. 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.

[1]. 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

10 months	**TikTok**, ByteDance	Research Intern
12 months	**Alibaba DAMO Acadmey**, Alibaba Group	Research Intern
6 months	**Huawei Cloud**, Huawei Technology Company	Research Intern

Awards

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