

張 凱鵬 (ZHANG, KAIPENG)

About Me

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I am a second-year Ph.D. student in the Graduate School of Information Science and Technology at The University of Tokyo, supervised by Prof. Yoichi Sato. Before coming to UTokyo, I received my M.S. degree in 2018 from National Taiwan University and my B.E. degree in 2016 from Donghua University.

My research interest mainly lies in computer vision and focuses on face analysis, deep network architecture, active learning, and few-shot learning. My works received over **4500 citations** and **4000 GitHub Stars**. Besides, I won some **face analysis competitions in top conferences**. I also was awarded **JSPS Fellowship**, the highest-level fellowship for Ph.D. students in Japan.

I also serves as a **senior program committee member** for IJCAI 2021 and **reviewer/program committee member** for most top machine learning/computer vision conferences (e.g., NeurIPS, ICML, ICLR, AAAI, ECCV, ICCV, and CVPR) and journals (e.g., TPAMI, TIP, TNNLS, TCSVT, and TMM).

Besides my academic achievements, I have **rich industrial experiences** in developing AI products. I was a researcher in SenseTime and an algorithm consultant in ULSee. I also did research internships at Microsoft Research Asia, Tencent, and MMLAB of SIAT, and was a research assistant supported by MediaTek.



Education

Ph.D. - The University of Tokyo, Japan	04/2019 – 02/2022
Graduate School of Information Science and Technology supervised by Prof. Yoichi Sato	
M.S. - National Taiwan University, Taiwan	09/2016 – 08/2018
Graduate Institute of Networking and Multimedia, supervised by Prof. Winston Hsu.	
B.E. - Donghua University, China	09/2012 – 07/2016
Computer Networking (Excellent Engineer Program)	

Experience

Tencent AI Lab & AI Advertisement Department	09/2020 – 02/2021
Research Intern (Tencent Rhino-Bird Elite Training Program) Mentor: Dr. Zhifeng Li and Dr. Wei Liu - Very deep models (billions of parameters) for computer vision tasks - Large-scale logo detection and recognition for advertisement analysis	
The University of Tokyo	04/2019 – 03/2022
Ph.D. student & Research assistant (JSPS Fellowship) Advisor: Prof. Yoichi Sato - PI: Incremental active learning for semantic segmentation, Grant-in-Aid for JSPS Fellows - Real-time semantic segmentation. ICRA 2020.	
SenseTime	09/2018 – 03/2019
Full-Time Researcher - (Core member) Build an incremental city-scale face recognition learning system for ShenZhen Security Bureau.	
National Taiwan University	09/2016 – 08/2018
Master student & Research assistant (supported by MediaTek) Advisor: Prof. Winston Hsu - Face hallucination and ultra-low-resolution recognition (a project supported by MediaTek). ECCV 2018 & CVPRW 2018. - Virtual try-on shoe. ACCV 2018 - Disguised face recognition in the wild. Rank 1 in Disguised Faces in the Wild Challenge, CVPR 2018. - Group-level emotion recognition in the wild. Rank 1 in EmotionW (ICMI Grand Challenge) 2017 and Rank 2 in EmotionW 2018	

Algorithm consultant

- Design algorithms and frameworks for face analysis products.

Tencent AI Lab

07/2017 – 09/2017

Research Intern

Mentor: Dr. Zhifeng Li and Dr. Wei Liu

- Real-time face detection and alignment for real-world products. ICCV 2017

Multimedia Laboratory, Shenzhen Institutes of Advanced Technology

07/2015 – 08/2016

Visiting student

Advisor: Prof. Zhifeng Li and Prof. Yu Qiao

- A discriminative deep feature learning approach. ECCV 2016 & IJCV
One of the most cited face recognition and metric learning papers.
- A multi-task cascaded convolutional networks. IEEE SPL.
One of the most cited face detection papers.
- A deep convolutional neural network approach for facial attributes recognition
Rank 1 in ChaLearn Looking at People Challenge - Track 2 & 3, CVPR 2016.

Publications (received 4500 citations, Jan. 2021)

Regular papers

* indicate equal contribution

1. Zhanpeng Zhang, **Kaipeng Zhang**, “FarSee-Net: Real-Time Semantic Segmentation by Efficient Multi-scale Context Aggregation and Feature Space Super-resolution”, ICRA 2020.
2. Yandong Wen*, **Kaipeng Zhang***, Zhifeng Li and Yu Qiao, “A Comprehensive Study on Center Loss for Deep Face Recognition”, IJCV 2019. **(a.k.a Center Loss, one of the most cited face recognition papers)**
3. **Kaipeng Zhang**, Zhanpeng Zhang, Chia-Wen Cheng, Winston Hsu, Yu Qiao, Wei Liu and Tong Zhang, “Super-Identity Convolutional Neural Network for Face Hallucination”, ECCV 2018.
4. Chao-Te Chou, Cheng-Han Lee, **Kaipeng Zhang**, Hu Cheng Lee and Winston Hsu, “Pose Invariant Virtual Try-On Shoe with Conditional Image Completion”, ACCV 2018.
5. Cheng-Han Lee, **Kaipeng Zhang**, Hu Cheng Lee, Chia-Wen Cheng and Winston Hsu, “Attribute Augmented Convolutional Neural Network for Face Hallucination”, CVPRW 2018.
6. **Kaipeng Zhang**, Zhanpeng Zhang, Hao Wang, Zhifeng Li, Yu Qiao and Wei Liu, “Detecting Faces Using Inside Cascaded Contextual CNN”, ICCV 2017.
7. Yandong Wen, **Kaipeng Zhang**, Zhifeng Li and Yu Qiao, “A Discriminative Deep Feature Learning Approach for Face Recognition”, ECCV 2016. **(a.k.a Center Loss, one of the most cited face recognition papers)**
8. **Kaipeng Zhang**, Zhanpeng Zhang, Zhifeng Li and Yu Qiao, “Joint Face Detection and Alignment using Multi-task Cascaded Convolutional Networks”, IEEE SPL 2016. **(a.k.a MTCNN, one of the most cited face detection papers)**

Competition papers

1. Guo, Da, Kai Wang, Jianfei Yang, **Kaipeng Zhang**, Xiaojiang Peng, and Yu Qiao, “Exploring Regularizations with Face, Body and Image Cues for Group Cohesion Prediction,” ICMI 2019.
2. Wang, Kai, Jianfei Yang, Da Guo, **Kaipeng Zhang**, Xiaojiang Peng, and Yu Qiao, "Bootstrap model ensemble and rank loss for engagement intensity regression," ICMI 2019.
3. **Kaipeng Zhang**, Ya-Liang Chang and Winston Hsu, “Deep Disguised Faces Recognition”, CVPRW 2018
4. Kai Wang, Xiaoxing Zeng, Jianfei Yang, Debin Meng, **Kaipeng Zhang**, Xiaojiang Peng and Yu Qiao, “Cascade Attention Networks for Group Emotion Recognition with Face, Body and Image Cues”, ICMI 2018.
5. Lianzhi Tan, **Kaipeng Zhang**, Kai Wang, Xiaoxing Zeng, Xiaojiang Peng and Yu Qiao, “Group Emotion Recognition with Individual Facial Emotion CNNs and Global Image Based CNNs”, ICMI 2017.
6. **Kaipeng Zhang**, Lianzhi Tan, Zhifeng Li, Yu Qiao, “Gender and Smile Classification using Deep Convolutional Neural Networks”, CVPRW 2016.

Selected Honors & Awards

JSPS Research Fellowships for Young Scientists	2021
Tencent Rhino-Bird Elite Training Program	2020
Collaborative Research Program, The University of Tokyo	2019
Scholarships from Foundation's Support Fund, The University of Tokyo	2019
MSRA Fellowship Nomination Award	2019
Outstanding Undergraduate Thesis, Donghua University	2016

Selected Competitions

Primary contributor

Disguised Faces in the Wild Workshop, CVPR 2018, Rank 1	2018
Group-level emotion recognition, EmotiW, ICMI 2017 Grand Challenge, Rank 1	2017
Accessories Classification, ChaLearn Looking at People Challenging, CVPR 2016, Rank 1	2016
Smile and Gender Classification, ChaLearn Looking at People Challenging, CVPR 2016, Rank 1	2016

Secondary contributor

Group-based Cohesion Prediction, EmotiW, ICMI 2019 Grand Challenge, Rank 2	2019
Engagement Prediction in the Wild, EmotiW, ICMI 2019 Grand Challenge, Rank 3	2019
Group-level emotion recognition, EmotiW, ICMI 2018 Grand Challenge, Rank 2	2018

Academic Services

Senior Program committee member

IJCAI

Reviewer/Program committee member

NeurIPS, ICML, ICLR, AAAI, ECCV, ICCV, CVPR, ACCV, WACV, ICME

TPAMI, TIP, TNNLS, TCSVT, TMM, Neurocomputing, Pattern Recognition, and SPL.

Invited Talks

Deep Face Analysis

National Institute of Informatics (NII), Japan, 2019

Exploring Regularizations with Face, Body and Image Cues for Group Cohesion Prediction

EmotionW, ICMI Grand Challenge 2019

Bootstrap model ensemble and rank loss for engagement intensity regression

EmotionW, ICMI Grand Challenge 2019

Deep Disguised Faces Recognition

Disguised Faces in the Wild Workshop, CVPR 2018

Cascade Attention Networks for Group Emotion Recognition with Face, Body and Image Cues

EmotionW, ICMI Grand Challenge 2018

Group Emotion Recognition with Individual Facial Emotion CNNs and Global Image Based CNNs

EmotionW, ICMI Grand Challenge 2017

Gender and Smile Classification using Multi-Stage Fine-tuning Deep Convolutional Neural Networks

Looking at People Workshop, CVPR 2016