CURRICULUM VITAE

NAME: Feng Jiashi

TITLE: Assistant Professor

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CURRENT POSITION: Assistant Professor, Department of Electrical and Computer Engineering, National University of Singapore (Oct. 2015 – present), 100% of time spent in Singapore every year

EMPLOYMENT HISTORY
- Postdoc Research Fellow, EECS Department, University of California, Berkeley (USA) - Jun. 2014 – Oct. 2015

ACADEMIC QUALIFICATIONS
- Ph.D. in Electrical and Computer Engineering, National University of Singapore, Singapore. May 2014
- B.E. in Automation, University of Science and Technology of China, China. June 2007

RESEARCH INTERESTS:
- Machine learning
- Computer vision
- Deep learning
- Artificial intelligence

LIST OF 5 MOST SIGNIFICANT PUBLICATIONS IN THE PAST 3 YEARS RELEVANT TO THE PROPOSAL
- Bo Zhao, Xiao Wu, Jiashi Feng, Qiang Peng, Shuicheng Yan, "Diversified Visual Attention Networks for Fine-Grained Object Classification," IEEE Transactions on Multimedia, 2016.
- Hanjiang Lai, Shengtao Xiao, Yan Pan, Zhen Cui, Jiashi Feng, Chunyan Xu, Jian Yin, Shuicheng Yan, "Deep Recurrent Regression for Facial Landmark Detection," IEEE Transactions on Circuits and Systems for Video Technology, 2016.
- Jianan Li, Yunchao Wei, Xiaodan Liang, Jian Dong, Tianfu Xu, Jiashi Feng, Shuicheng Yan, "Attentive Contexts for Object Detection," IEEE Transactions on Multimedia, 2016.

- Yunchao Wei, Xiaodan Liang, Yunpeng Chen, Xiaohui Shen, Ming-Ming Cheng, Jiashi Feng, Yao Zhao, Shuicheng Yan, "STC: A Simple to Complex Framework for Weakly-supervised Semantic Segmentation," IEEE Transactions on Pattern Analysis and Machine Intelligence, 2016.
- Changzhi Luo, Meng Wang, Richang Hong, Jiashi Feng, "Beyond Object Proposals: Random Crop Pooling for Multi-label Image Recognition," IEEE Transactions on Image Processing, 25 (12), 5678-5688, 2016.

PATENTS

N/A

SCIENTIFIC AWARDS

- Winner Award, ImageNet Large-Scale Visual Recognition Challenge, 2017
- Winner Award, MS-Celeb-1 Million face recognition challenge, 2017
- Winner Award, emotion recognition in the wild with ICMI 2016
- Best Paper Prize to the manuscript titled "Return of Frustratingly Easy Domain Adaptation" by Baochen Sun, Jiashi Feng and Kate Saenko Best, at the Workshop on Transferring and Adapting Source Knowledge (TASK) in Computer Vision (CV), held in Santiago de Chile on December 11th, 2015
- Best Technical Demo Award ACM Multimedia Conference, 2012.

SUMMARY OF MOST RELEVANT RESEARCH OUTCOMES FROM ALL PREVIOUS GRANTS

Prof. Feng has started his appointment at NUS in late 2015, and most of the grants he has been awarded are in progress. The only completed grant is the three-year project supported by Singapore Ministry of Home Affairs that started on Jun 2014. The goal of the project was to provide a system capable of performing occlusion-robust and cross-age face detection and recognition.

In this project, we have made the following achievements:

1. We developed a new convolutional neural network (CNN) based model and found that the model is naturally granted with certain robustness to occlusion over faces and achieved good performance in presence of partial occlusions;

2. We improved the CNN model by further enhancing its robustness to face occlusions by (1) developing a multi-branch network model addressing occlusions at different scales and (2) developing a robust face landmark detection model based on sequential decision making learning.

3. We developed a facial occlusion removal model that can recover occluded faces even half of the faces are occluded.

4. The model achieved 90% recognition accuracy in presence of ½ face occlusion.

5. We developed a cross-age face recognition model that recognized faces with an accuracy of 85% even in presence of 40 years age gap;

6. We developed an automatic face aging model that can transform faces between any ages between year 5 and year 80.

7. We integrated all the functions into a face recognition system which is deployed by MHA.