### Xiaoxiao SUN M.Sc. | Computer Science

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I'm a visiting fellow now at the Information Systems Technology and Design (ISTD), Singapore University of Technology and Design (SUTD) under the supervision of Assistant Professor Liang Zheng. I received my M.Sc from College of Computer and Control Engineering, Nankai University (NKU) in 2018, supervised by Prof. Jufeng Yang.



#### INTERESTS

#### Computer Vision, Deep Learning, Medical Image Processing, Transfer Learning



#### EDUCATION

M.Sc., Computer Science and Technology, in College of Computer and Control Engineering, Nankai Uni-2015-2018

B.Sc., Information and Computing Science, in School of Mathematics Sciences, Hebei University of Tech-2011-2015 nology

## **PUBLICATION**

- Jufeng Yang, Xiaoxiao Sun, Yu-Kun Lai, Liang Zheng, Ming-Ming Cheng. "Recognition from Web Data: A Progressive Filtering Approach", TIP 2018
- Jufeng Yang, Xiaoxiao Sun, Jie Liang, Paul Rosin. "Clinical Skin Lesion Diagnosis using Representations Inspired by Dermatologist Criteria", CVPR 2018
- Jufeng Yang, Liyi Chen, Le Zhang, Xiaoxiao Sun, Dongyu She, Shao-Ping Lu, Ming-Ming Cheng. "Historical Context-based Style Classification of Painting Images via Label Distribution Learning", ACM TMM 2018
- Jufeng Yang, Ming Sun, Xiaoxiao Sun. "Learning Visual Sentiment Distributions via Augmented Conditional Probability Neural Network", AAAI 2017
- Xiaoxiao Sun, Jufeng Yang, Ming Sun, Kai Wang. "A Benchmark for Automatic Visual Classification of Clinical Skin Disease Images", ECCV 2016



### RESEARCH PROJECTS

#### September 2015

#### Automatic Visual Classification of Clinical Skin Disease Images, NKU, China

- > Collect a clinical skin disease images dataset SD-198 and evaluate the performance of different kinds of visual features on clinical skin diseases
- > Design medical representation for skin lesion recognition based on the dermatologist criteria to make the representation consistent with the observation of doctor and to improve the recognition results
- > Utilize easily labeled attributes of skin disease such as asymmetry, regularity of border and color to learn an attribution model for recognizing skin diseases

Supervisor: Professor Jufeng Yang Professor Paul Rosin (Cardiff University)

#### Now September 2016

#### Learning from Web Data for Object Recognition, NKU, China

- > Leverage the abundant number of web data to address the problem of data lacking when training the CNN. Specifically, focus on minimizing the influence of the incorrect tags that compromise the learned CNN model
- > Propose a progressive filtering approach and multi-label correction strategy to address above pro-
- > Design a framework to undo the dataset bias between web and standard datasets based on domain adaption (feature-level) and unsupervised object detection (image-level)

Supervisor: Professor Jufeng Yang Mingming Cheng Yu-Kun Lai (Cardiff University) Liang Zheng (SUTD)

#### September 2016

# Learning Visual Sentiment Distributions via Augmented Conditional Probability Neural Network, NKU, China

#### March 2016

- > Address the sentiment ambiguity by label distribution learning (LDL) based on that one image usually evokes multiple emotions simultaneously
- > Propose two new models BCPNN and ACPNN for label distribution learning, which take advantage of binary label representation and augment affective labels, respectively

Supervisor : Professor Jufeng Yang

# THONORS AND AWARDS

- 2018 Excellent Master Graduate, Nankai University
- 2017 National Scholarship for Outstanding Postgraduate, the Ministry of Education, China
- 2017 Merit Student, Nankai University
- 2015 Outstanding Graduate of Universities, the Ministry of Education, Hebei Province

# LANGUES





- > Python, Matlab, C++, Linux
- > Caffe, TensorFlow
- > LaTex, Visio