



Dongyu She

VISUAL SENTIMENT ANALYSIS · OBJECT RECOGNITION · WEAKLY-SUPERVISED DETECTION
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Education

Nankai University

M.S.

MASTER IN COLLEGE OF COMPUTER AND CONTROL ENGINEERING, CV LAB

Aug. 2016 - Exp. Jun. 2019

- Advisor: **Jufeng Yang**, Associate Professor, Nankai University, yangjufeng@nankai.edu.cn
- Mentor: **Ming-Ming Cheng**, Professor, Nankai University, cmm@nankai.edu.cn
- Mentor: **Ming-Hsuan Yang**, Professor, University of California, Merced, minghsuanyang@gmail.com
- Mentor: **Paul L. Rosin**, Professor, University of Cardiff, rosinpl@cardiff.ac.uk

Nankai University

B.S.

BACHELOR IN COLLEGE OF COMPUTER AND CONTROL ENGINEERING; BACHELOR IN FINANCE

Aug. 2012 - Jun. 2016

- Major classes: Data Structure, Object Oriented Programming, Algorithm Design, Operation System, etc.

Publication

CONFERENCE

- 1 **Jufeng Yang, Dongyu She, Yu-Kun Lai, Paul Rosin and Ming-Hsuan Yang, Weakly Supervised Coupled Networks for Visual Sentiment Analysis** *CVPR 2018*
spotlight
- 2 **Jufeng Yang, Dongyu She, Yu-Kun Lai and Ming-Hsuan Yang, Retrieving and Classifying Affective Images via Deep Metric Learning** *AAAI 2018*
oral
- 3 **Jufeng Yang, Dongyu She and Ming Sun, Joint Image Emotion Classification and Distribution Learning via Deep Convolutional Neural Network** *IJCAI 2017*
- 4 **Yuxiang Zhang, Jiamei Fu, Dongyu She, Ying Zhang, Senzhang Wang, Jufeng Yang, Text Emotion Distribution Learning via Multi-Task Convolutional Neural Network** *IJCAI 2018*
- 5 **Jiamei Fu*, Dongyu She*, Xingxu Yao, Yuxiang Zhang, Jufeng Yang, Deep Coordinated Textual and Visual Network for Sentiment-oriented Cross-modal Retrieval** *PRICAI 2018*
- 6 **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 MM 2018*

JOURNAL

- 7 **Jufeng Yang, Dongyu She, Ming Sun, Ming-ming Cheng, Liang Wang and Paul Rosin, Visual Sentiment Prediction based on Automatic Discovery of Affective Regions** *TMM 2018*

Submitted

- 2018.05 **Jufeng Yang, Dongyu She, Ming-Ming Cheng, Paul L. Rosin, Junwei Han, Liang Wang, Philip H.S. Torr, Towards Emotion Ambiguity of Visual Content via Label Distribution Learning** *submitted to TPAMI*

Technical Skills

- Coding **Python, C++**, Pytorch, Caffe, matlab, Linux
Others **CET6(527)**, LaTeX, Photoshop, Visio

Experience

Academic Visitor

COMPUTER VISION LAB, CARDIFF UNIVERSITY & ADVISOR: YU-KUN LAI

UK, Cardiff

Oct. 2017

- **Project:** weakly supervised detection; **Invited Talk:** Visual Sentiment Analysis using Convolutional Neural Network

Conference Volunteer

ORGANIZING AND RECEPTION

China, Tianjin

Apr. 2017

- Computational Visual Media Conference (CVM 2017)

Projects

1. Weakly Supervised Detection

CVLab

IDEA & REFERENCE INVESTIGATION & CODING & PAPER WRITING

Sep. 2016 - PRESENT

- Detecting a specific soft map that evoking sentiment in a weakly supervised manner, while only requiring for the **image-level labels**.
- Proposing a **weakly supervised coupled convolutional network** (WSCNet) with two branches to leverage the localized information.
- **Detection branch** summaries feature maps to the image-level scores with the cross spatial pooling strategy, **Classification branch** takes both holistic and localized representation into consideration.
- Getting SOA classification result and achieving **comparable detection results** with fully-supervised methods, accepted by **CVPR 2018**.

2. Visual Sentiment Recognition

CVLab

IDEA & REFERENCE INVESTIGATION & CODING & PAPER WRITING

Jan. 2016 - PRESENT

- Learning information from a **large-scale web dataset** to improve the **generalization ability** of the deep model for the recognition.
- Incorporating a **multiple kernel scheme** in the CNN model that can select features from different layers with suitable kernels automatically.
- Comparing with various basic low-level representations and deep features, achieving SOA result, submitted to **ACM MM 2018**
- A web application for recognizing visual sentiment is released for public: cv.nankai.edu.cn/apps

3. Sentiment Label Distribution Learning

CVLab

IDEA & REFERENCE INVESTIGATION & CODING & PAPER WRITING

Jan. 2017 - PRESENT

- Addressing the **sentiment ambiguity** problem that image rarely expresses pure emotion, but often a mixture of different emotions via **Label Distribution Learning (LDL)**.
- **Simultaneously** optimizing the classification and distribution prediction in a **multi-task CNN model** for the distribution datasets.
- Exploring **implication** and **exclusion** strategies to transform the dominant sentiment label into distribution for the single-label datasets.
- Getting SOA distribution prediction result and improving the classification performance, accepted by **IJCAI 2017**.

4. Emotion-Based Image Retrieval

CVLab

IDEA & REFERENCE INVESTIGATION & CODING & PAPER WRITING

Jun. 2017 - PRESENT

- Exploring the **hierarchical relation** between sentiments for image retrieval task, that emotions with the **same polarity** are highly related.
- Designing the **sentiment constraint** to consider the natural polarities of emotions during training by generalizing the triplet constraint
- Utilizing the texture information with **sentiment vector** to distinguish affective images based on Gram matrix.
- Retrieving images **in the affective level** and achieving SOA result, accepted by **AAAI 2018**

Honors&Awards

2014 **Merit Student**, honor

2015 **Nankai University 'Gongneng' Scholarship**, the second prize

2015 **China Undergraduate Mathematical Contest in Modeling**, Second Class Award at the provincial level

2016 **Nankai University 'Mingshanyunneng' Scholarship**, the first prize

2017 **Merit Student**, honor