Xihui Liu

xihui.liu.me@gmail.com • https://xh-liu.github.io
Google Scholar

Personal Profile

Xihui Liu is currently a Ph.D. student in Multimedia Lab (MMLab) (established by Prof. Xiaoou Tang), the Chinese University of Hong Kong. She is supervised by Prof. Xiaogang Wang and Prof. Hongsheng Li. Before that, she received bachelor's degree in Electronic Engineering from Tsinghua University in 2017.

Research Interests

- Computer vision and deep learning.
- Vision and language.

Education

- **The Chinese University of Hong Kong** — **Hong Kong, China**
  PhD student in Multimedia Lab (MMLab), Advised by Prof. Xiaogang Wang. — *08/2017–now*
  GPA 3.925/4.0.
- **Tsinghua University** — **Beijing, China**
  B.S. in Electronic Engineering — *08/2013–07/2017*
  GPA 91/100, ranking top 10%. Excellent undergraduate awardee.
- **University of Alberta** — **Alberta, Canada**
  Exchange student in Electrical and Computer Engineering — *08/2016–12/2016*
  GPA 4.0/4.0. National exchange scholarship awardee.

Publications

Xihui Liu, Hongsheng Li, Jing Shao, Dapeng Chen, and Xiaogang Wang. Show, tell and discriminate: Image captioning by self-retrieval with partially labeled data. *European Conference on Computer Vision (**ECCV**)*, 2018.

Dapeng Chen, Hongsheng Li, **Xihui Liu**, Yantao Shen, Jing Shao, Zejian Yuan, and Xiaogang Wang. Improving deep visual representation for person re-identification by global and local image-language association. *European Conference on Computer Vision (**ECCV**)*, 2018.

Xihui Liu, Haiyu Zhao, Maoqing Tian, Lu Sheng, Jing Shao, Shuai Yi, Junjie Yan, and Xiaogang Wang. Hydraplus-net: Attentive deep features for pedestrian analysis. In *International Conference on Computer Vision (**ICCV**)*, 2017.

Zhongdao Wang, Luming Tang, **Xihui Liu**, Zhuliang Yao, Shuai Yi, Jing Shao, Junjie Yan, Shengjin Wang, Hongsheng Li, and Xiaogang Wang. Orientation invariant feature embedding and spatial temporal regularization for vehicle re-identification. In *International Conference on Computer Vision (**ICCV**)*, 2017.

Kai Kang, Hongsheng Li, Tong Xiao, Wanli Ouyang, Junjie Yan, **Xihui Liu**, and Xiaogang Wang. Object detection in videos with tubelet proposal networks. In *The IEEE Conference on Computer Vision and Pattern Recognition (**CVPR**)*, 2017.

Selected Projects

- **Show, Tell and Discriminate: Image Captioning by Self-retrieval with Partially Labeled Data (ECCV 2018)**
  - Proposed an image captioning framework with a self-retrieval module as training guidance, which encourages generating discriminative captions (implemented by Pytorch).
  - The proposed framework can be trained with partially labeled data.
  - Achieved state-of-the-art performance on image captioning.
- **HydraPlus-Net: Attentive Deep Features for Pedestrian Analysis (ICCV 2017)**
  - Proposed multi-directional attention modules to train multilevel and multi-scale attention-strengthened features for fine-grained tasks of pedestrian analysis (implemented by Caffe).
  - Achieved stage-of-the-art performance with the proposed structure on pedestrian attribute recognition and person re-identification.
  - Released a large-scale pedestrian attribute recognition dataset for academic research.

Working Experience

- **Sensetime Research** — **Beijing, China**
  Research Intern — *September 2016–July 2017*
  - Worked with Dr. Jing Shao on person attribute recognition.
- **Multimedia Lab(MMLab), The Chinese University of Hong Kong** — **Hong Kong, China**
  Research Assistant — *July 2016–August 2016*
  - Worked on object detection in videos with Dr. Kai Kang, supervised by Prof. Xiaogang Wang.
  - Our team won first place in ImageNet Video Object Detection Challenge with provided data, 2016.

Awards and Honors

- CUHK Postgraduate Scholarship, 2017-now.
- Excellent undergraduate in Tsinghua University, 2017.
- Comprehensive Excellent Scholarship in Tsinghua University, in years 2014, 2015, and 2016.
- Research and Innovation Excellent Scholarship in Tsinghua University, 2016.
- Academic Excellent Scholarship in Tsinghua University, in years 2014, 2015 and 2016.
- First Prize in high-school national Mathematical Olympiad, 2012.

Skills

- Programming languages: Python, Matlab, LaTeX, C/C++.
- Deep learning platforms: PyTorch, Caffe.
- Productivity tools: Matlab, Microsoft Visual Studio, Vim, Sublime, Git.
- Operating systems: Linux/Unix, Windows.