

Han Zhang

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INTERESTS

Computer Vision, Deep Learning, Machine Learning, Medical Image Processing.
Especially interested in Generative Adversarial Networks (GAN) and Fine-grained classification

EDUCATION

Rutgers University, Piscataway, NJ 09/2012-Present
Ph.D. candidate in Computer Science, GPA (3.97/4.00)
Advisor: Prof. Dimitris N. Metaxas

Beijing University of Posts and Telecommunications (BUPT), Beijing, China 09/2009-04/2012
M.E. in Communication and Information Systems

China Agricultural University (CAU), Beijing, China 09/2006-07/2009
B.S. in Information Science, Honors Program, GPA (3.91/4.00)

WORKING EXPERIENCE

Software Engineer Intern, Core Data Science, Facebook, CA, USA 05/2016-08/2016
Software Engineer Intern, Philips Research North America, NY, USA 05/2015-08/2015
Research Intern, Lab of Media Search, National University of Singapore, Singapore 09/2011-02/2012
Software Engineer Intern, Samsung, Beijing, China 08/2010-09/2010

RESEARCH & PROJECT

StackGAN: Text to Photo-realistic Image Synthesis with Stacked Generative Adversarial Networks
CBIM, Rutgers University 08/2016-Present

- ❖ Propose a novel Stacked Generative Adversarial Networks for synthesizing photo-realistic images from text.
- ❖ Introduce a new Conditioning Augmentation technique to stabilize the conditional GAN training and also improves the diversity of the generated samples

Fine-grained Image Classification based on Deep Learning
CBIM, Rutgers University 09/2015-08/2016

- ❖ Propose novel part proposal method which greatly improves the part detection accuracy
- ❖ Design new part layers in CNN network for part-based fine grained classification

Multimodal Deep Learning for Cervical Dysplasia Diagnosis
CBIM, Rutgers University 01/2016-04/2016

- ❖ Designed a deep learning framework for the task of cervical dysplasia diagnosis using multimodal information collected during patient screening visit

PUBLICATIONS

1. **Han Zhang**, Tao Xu, Hongsheng Li, Shaoting Zhang, Xiaolei Huang, Xiaogang Wang, and Dimitris Metaxas, "StackGAN: Text to Photo-realistic Image Synthesis with Stacked Generative Adversarial Networks", arXiv:1612.03242, (under review).
2. Mohamed Elhoseiny, Yizhe Zhu, **Han Zhang** and Ahmed Elgammal, "Link the head to the "peak": Zero Shot Learning from Noisy Text descriptions at Part Precision", CVPR2017

3. **Han Zhang**, Tao Xu, Mohamed Elhoseiny, Xiaolei Huang, Shaoting Zhang, Ahmed Elgammal, and Dimitris Metaxas, “SPDA-CNN: Unifying Semantic Part Detection and Abstraction for Fine-grained Recognition”, CVPR 2016
4. Tao Xu, **Han Zhang**, Xiaolei Huang, Shaoting Zhang, Dimitris Metaxas, “Multimodal Deep Learning for Cervical Dysplasia Diagnosis”, MICCAI 2016, **Early Acceptance**
5. Tao Xu, **Han Zhang**, Cheng Xin, Edward Kim, L Rodney Long, Zhiyun Xue, Sameer Antani, and Xiaolei Huang., “Multi-feature based Benchmark for Cervical Dysplasia Classification Evaluation”, Pattern Recognition, 2016.
6. **Han Zhang**, Shaoting Zhang, Kang Li and Dimitris Metaxas, “Robust shape prior modeling based on Gaussian-Bernoulli Restricted Boltzmann Machine”, IEEE International Symposium on Biomedical Imaging (ISBI), 2014, **Oral presentations**
7. Jun Hu, **Han Zhang**, Anastasia Miliou, Thodoris Tsimpidis, Hazel Thornton and Vladimir Pavlovic, “Categorization of Underwater Habitats Using Dynamic Video Textures”, ICCV Underwater Vision Workshop, 2013
8. Jin Yuan, Huanbo Luan, Dejun Hou, **Han Zhang**, Yan-Tao Zheng, Zheng-Jun Zha and Tat-Seng Chua, “Video Browser Showdown by NUS”, International Conference on Multimedia Modeling (MMM) demo, 2012
9. **Han Zhang** and Zhicheng Zhao, “A Novel video and audio copy detection algorithm”, IEEE International Conference on Intelligent Computing and Intelligent Systems (ICIS), 2011
10. Tao Xu, Hong Liu, Yueliang Qian and **Han Zhang**, “A Novel Method for People and Vehicle Classification Based on Hough Line Feature”, International Conference on Information Science and Technology (ICIST), 2011
11. Xin Guo, Yuanbo Chen, Wei Liu, Yuanhui Mao, **Han Zhang**, Kang Zhou, Lingxi Wang, Yan Hua, Zhicheng Zhao, Yanyun Zhao, Anni Cai , “BUPT-MCPRL at TRECVID 2010”, TRECVID Workshop, 2010.

PROFESSIONAL ACTIVITIES

1. Review for IEEE International Conference on Computer Vision (ICCV 2017)
2. Review for IEEE Conference on Computer Vision and Pattern Recognition (CVPR 2017)
3. Review for International Conference on Medical Image Computing and Computer Assisted Interventions (MICCAI 2014, 2017)
4. Review for Neurocomputing
5. Review for IEEE International Symposium on Biomedical Imaging (ISBI 2014)

TECHNICAL SKILLS

Knowledge: Machine learning, Deep Learning, Computer Vision, Optimization, Large Scale Data Processing

Programming: C/C++, Matlab, Python, SQL, Caffe, Tensorflow, PyTorch