Yu Xiang

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RESEARCH INTERESTS

Computer Vision Object Recognition and Tracking, Scene Understanding, Image and Video Retrieval Machine Learning Graphical Model, Energy-based Learning, Deep Learning

EDUCATION

2010.9-2015.12 Ph.D. in Computer Vision, University of Michigan, Ann Arbor, MI, USA.

- Dissertation: 3D Object Representations for Recognition

- Advisor: Prof. Silvio Savarese

2007.9-2010.7 M.Sc. in Computer Science, Fudan University, Shanghai, China.

- Dissertation: Graphic Models for Semantic Context Modeling in Automatic Image Annotation

- Advisor: Prof. Xiangdong Zhou

2003.9-2007.7 **B.Sc. in Computer Science**, Fudan University, Shanghai, China.

EXPERIENCE

2016.8 – present **Postdoctoral Researcher**, *University of Washington*, Seattle, WA, USA.

- Advisor: Prof. Dieter Fox

2016.2 - 2016.7 **Postdoctoral Researcher**, Stanford University, Palo Alto, CA, USA.

- Advisor: Prof. Silvio Savarese

2013.9 – 2015.12 Visiting Student, Stanford University, Palo Alto, CA, USA.

- Advisor: Prof. Silvio Savarese

2014.5 – 2014.8 **Summer Intern**, *NEC Labs America*, Cupertino, CA, USA.

2015.6 - 2015.9 - Department: Media Analytics

2009.9 – 2010.1 **Teaching Assistant**, The C Programming Language, Fudan University, Shanghai, China.

- Instructor: Prof. Xiangdong Zhou

2009.7 - 2009.9 **Junior Research Assistant**, National University of Singapore, Singapore.

- Advisor: Prof. Tat-Seng Chua

AWARDS

2012 Outstanding Master's Thesis Award of Shanghai

PUBLICATIONS

Conference Yu Xiang, Wonhui Kim, Wei Chen, Jingwei Ji, Christopher Choy, Hao Su, Roozbeh Mot-

taghi, Leonidas Guibas and Silvio Savarese. ObjectNet3D: A Large Scale Database for 3D Object Recognition. In *European Conference on Computer Vision* (*ECCV*), 2016

(Spotlight Oral Presentation).

Conference Carolina Redondo-Cabrera, Roberto López-Sastre, Yu Xiang, Tinne Tuytelaars and Silvio

Savarese. Pose Estimation Errors, the Ultimate Diagnosis. In European Conference on

Computer Vision (ECCV), 2016.

Conference Hyun Oh Song, **Yu Xiang**, Stefanie Jegelka and Silvio Savarese. Deep Metric Learning via

Lifted Structured Feature Embedding. In *Proceedings of IEEE International Conference on Computer Vision and Pattern Recognition (CVPR)*, 2016 (Spotlight Oral Presentation).

- Conference **Yu Xiang**, Alexandre Alahi and Silvio Savarese. Learning to Track: Online Multi-Object Tracking by Decision Making. In *International Conference on Computer Vision (ICCV)*, pp. 4705-4713, 2015 (**Oral Presentation**).
- Conference **Yu Xiang**, Wongun Choi, Yuanqing Lin and Silvio Savarese. Data-Driven 3D Voxel Patterns for Object Category Recognition. In *Proceedings of IEEE International Conference on Computer Vision and Pattern Recognition (CVPR)*, pp. 1903-1911, 2015 (Oral Presentation).
- Conference Roozbeh Mottaghi, **Yu Xiang** and Silvio Savarese. A Coarse-to-Fine Model for 3D Pose Estimation and Sub-category Recognition. In *Proceedings of IEEE International Conference on Computer Vision and Pattern Recognition (CVPR*), pp. 418-426, 2015.
- Conference **Yu Xiang***, Changkyu Song*, Roozbeh Mottaghi and Silvio Savarese (*equal contribution). Monocular Multiview Object Tracking with 3D Aspect Parts. In *European Conference on Computer Vision (ECCV)*, pp. 220-235, 2014.
- Conference **Yu Xiang**, Roozbeh Mottaghi and Silvio Savarese. Beyond PASCAL: A Benchmark for 3D Object Detection in the Wild. In *IEEE Winter Conference on Applications of Computer Vision (WACV*), pp. 75-82, 2014.
- Conference **Yu Xiang** and Silvio Savarese. Object Detection by 3D Aspectlets and Occlusion Reasoning. In the 4th International IEEE Workshop on 3D Representation and Recognition (3dRR), pp. 530-537, 2013.
- Conference Sid Yingze Bao, **Yu Xiang** and Silvio Savarese. Object co-detection. In *Proceedings of European Conference on Computer Vision* (**ECCV**), vol. 7572, pp. 86-101, 2012.
- Conference **Yu Xiang** and Silvio Savarese. Estimating the aspect layout of object categories. In *Proceedings of IEEE International Conference on Computer Vision and Pattern Recognition* (*CVPR*), pp. 3410-3417, 2012.
- Conference **Yu Xiang**, Xiangdong Zhou, Zuotao Liu, Tat-Seng Chua and Chong-Wah Ngo. Semantic Context Modeling with Maximal Margin Conditional Random Fields for Automatic Image Annotation. In *Proceedings of IEEE International Conference on Computer Vision and Pattern Recognition (CVPR), pp. 3368-3375, 2010.*
- Conference Zuotao Liu, Xiangdong Zhou, **Yu Xiang** and Yan-Tao Zheng. Learning contextual metrics for automatic image annotation. In *Advances in Multimedia Information Processing PCM*, vol. 6297, pp. 124-135, 2010.
 - Journal Hongtao Xu, Xiangdong Zhou, **Yu Xiang** and Baile Shi. Adaptive model for web image semantic automatic annotation. In *Journal of Software* (in Chinese), vol. 21, no. 9, pp. 2183-2195, 2010.
- Conference **Yu Xiang**, Xiangdong Zhou, Tat-Seng Chua and Chong-Wah Ngo. A Revisit of Generative Model for Automatic Image Annotation using Markov Random Fields. In *Proceedings of IEEE International Conference on Computer Vision and Pattern Recognition (CVPR)*, pp. 1153-1160, 2009.
- Conference Hongtao Xu, Xiangdong Zhou, Mei Wang, **Yu Xiang** and Baile Shi. Exploring Flickr's related tags for semantic annotation of web images. In *Proceedings of the ACM International Conference on Image and Video Retrieval (CIVR*), no. 46, 2009.
- Conference Hongtao Xu, Xiangdong Zhou, Lan Lin, **Yu Xiang** and Baile Shi. Automatic web image annotation via web-scale image semantic space learning. In *Advances in Data and Web Management*, vol. 5446, pp. 211-222, 2009.

Personal Skills

Language Chinese, English

Programming C/C++, MATLAB, Python, CUDA, JAVA

Professional Activities

Commu. Chair International Conference on 3D Vision, 2016

Prog. Chair 5th Workshop on 3D Representation and Recognition, 2015

Prog. Committee 4th Workshop on 3D Representation and Recognition, 2013

Journal Reviewer IEEE Transactions on Pattern Analysis and Machine Intelligence

Journal Reviewer IEEE Transactions on Circuits and Systems for Video Technology Conf. Reviewer IEEE Conference on Computer Vision and Pattern Recognition