Yun Jiang

CONTACT INFORMATION	350 Gates Hall, Cornell University Ithaca, NY. 14850 http://www.cs.cornell.edu/~yunjiang/	*phone(M):* (607) 229-2988 *E-mail:* yunjiang@cs.cornell.edu

EDUCATION

Cornell University, Ithaca, USA   Septermber 2009 to present

Ph.D., Department of Computer Science

- Advisor: Prof. Ashutosh Saxena
- Selected courses: Machine Learning, Computer Vision, Robotic Learning, Algorithm, Matrix Computation, Decision Theory, Game Theory, Bayesian Stat. and Data Analysis, Statistical Principles.
- GPA: 3.9/4.0

Shanghai Jiao Tong University, Shanghai, China   March 2005 to June 2009

B.E., Department of Computer Science and Engineering

- GPA: 91.4/100, 4.0/4.3
- Rank: 1/150

SELECTED HONORS

- ACM International Collegiate Programming Contest (ACM/ICPC)
  - 14th Place, the 2010 ACM/ICPC World Finals
  - Champion, the 2009 ACM/ICPC Greater New York Region
  - Champion, the 2006 ACM/ICPC Asia Regional - Hanoi
  - Champion, the 2005 ACM/ICPC Asia Regional - Seoul
- McMullen Fellowship, Cornell University, 2009–2010
- Excellent Academic Scholarship of Shanghai Jiao Tong University, class A, 2007–2008
- Morgan Stanley Scholarship of Shanghai Jiao Tong University, 2006–2007
- He Yici Scholarship of Shanghai Jiao Tong University, 2005–2006

RESEARCH INTERESTS

Robotics, Computer Vision, 3D perception, Machine Learning

RESEARCH PROJECTS

Modeling 3D Environments through Hidden Human Context
- Proposed a novel idea of using hallucinated humans and human-object relations to reason objects in the environment.
- Developed a new graphical model, Infinite Latent Conditional Random Field (ILCRF), that can admit unknown number of latent variables and latent potential functions in a mixture of CRFs.
- Applied to two different tasks: 3D scene labeling and 3D scene arrangement. Also tested on our real robot.

Factoring Different Types of Topics
- Proposed a new topic model where each word is generated from a joint of different types of topics, instead of only one topic.
- Presented a variational inference algorithm to learn topics.

Learning to Arrange a Room
- Considered how to place objects stably as well as in preferred orientations.
- Proposed a graphical model to capture human preference in placing objects. Formulated the inference as an integer programming problem.
- Tested on our real robot (PR2) for arranging a disorganized room.

Learning to grasp novel objects
- Designed a rectangular representation for a valid grasp, and proposed a fast approach to efficiently learn/infer grasps from RGB-D images.
- The same approach was applied to two different robot grippers.

WORKING EXPERIENCE	**Microsoft Research Asia**, Beijing, China	**July to November 2008**

- User segmentation in behavioral targeted (BT) online advertising. Studied strategies such as co-clustering, supervised BT and unsupervised BT.

PUBLICATIONS

Yun Jiang, Marcus Lim, Changxi Zheng, Ashutosh Saxena. Learning to Place New Objects in a Scene, In *International Journal of Robotics Research (IJRR)*, 31(9):1021-1043, 2012.

Yun Jiang, Ashutosh Saxena. Modeling High-Dimensional Humans for Activity Anticipation using Gaussian Process Latent CRFs," In *Robotics: Science and Systems (RSS)*, 2014.

Yun Jiang, Ashutosh Saxena. Infinite Latent Conditional Random Fields for Modeling Environments through Humans, In *Robotics: Science and Systems (RSS)*, 2013.

Yun Jiang, Hema S. Koppula, Ashutosh Saxena. Hallucinated Humans as the Hidden Context for Labeling 3D Scenes, In *Computer Vision and Pattern Recognition (CVPR)*, 2013 (oral).

Yun Jiang, Ashutosh Saxena. Discovering Different Types of Topics: Factored Topics Models, In *International Joint Conferences on Artificial Intelligence (IJCAI)*, 2013.

David Fischinger, Markus Vincze and **Yun Jiang**. Learning Grasps for Unknown Objects in Cluttered Scenes, In *International Conference on Robotics and Automation (ICRA)*, 2013.

Yun Jiang, Ashutosh Saxena. Hallucinating Humans for Learning Robotic Placement of Objects, In *International Symposium on Experimental Robotics (ISER)*, 2012.

Yun Jiang, Marcus Lim, Ashutosh Saxena. Learning Object Arrangements in 3D Scenes using Human Context, In *International Conference on Machine Learning (ICML)*, 2012.

Yun Jiang, Changxi Zheng, Marcus Lim, Ashutosh Saxena. Learning to Place New Objects, In *International Conference on Robotics and Automation (ICRA)*, 2012. First appeared in RSS workshop on mobile manipulation, June 2011.

Yun Jiang, John Amend, Hod Lipson, Ashutosh Saxena. Learning Hardware Agnostic Grasps for a Universal Jamming Gripper, In *International Conference on Robotics and Automation (ICRA)*, 2012.

Yun Jiang, Stephen Moseson, Ashutosh Saxena. Efficient Grasping from RGBD images: Learning using a new Rectangle Representation, In *International Conference on Robotics and Automation (ICRA)*, 2011.

X.Lin, G.R.Xue, W.Dai, **Y.Jiang**, Q.Yang and Y.Yu. Can Chinese Web Pages be Classified with English Data Source? In *International World Wide Web Conference (WWW)*, 2008.

J.Yan, N.Liu, G.Wang, W.Zhang, **Y.Jiang**, Zh.Chen. How much the Behavioral Targeting can Help Online Advertising?. In *International World Wide Web Conference (WWW)*, 2009.

SKILLS

Computer Science
    Programming Language: C, C++, Java, MATLAB, Python.
    Familiar with ROS and OpenCV, and classical algorithms and tools in Machine Learning