

Gao Huang

CONTACT INFORMATION	350 Gates Hall Cornell University Ithaca, NY, 14850, USA	<i>Phone:</i> 607-280-9549 <i>Email:</i> gh349@cornell.edu <i>Web:</i> www.cs.cornell.edu/~gaohuang
RESEARCH INTERESTS	My research focuses on machine learning and its applications, in particular deep learning, resource-efficient learning and weakly-supervised/unsupervised learning.	
CURRENT APPOINTMENT	Postdoctoral Fellow, Cornell University Department of Computer Science <i>Advisor:</i> Kilian Q. Weinberger	2015 - Present
EDUCATION	PhD in Machine Learning, Tsinghua University <i>Advisors:</i> Cheng Wu and Shiji Song	2009 - 2015
	B.S. in Control Science and Engineering, Beihang University GPA Rank: 1/200+	2005 - 2009
RESEARCH EXPERIENCE	Intern, Microsoft Research Asia <i>Advisor:</i> Jianwen Zhang	04/2014 - 10/2014
	Visiting Scholar, Nanyang Technological University <i>Advisor:</i> Guangbing Huang	02/2014 - 03/2014
	Visiting Scholar, Washington University in St. Louis <i>Advisor:</i> Kilian Q. Weinberger	01/2013 - 07/2013
AWARDS & HONORS	<ul style="list-style-type: none">- CVPR Best Paper Award, 2017- Doctoral Dissertation Award, Chinese Association of Automation, 2015- First Prize of Doctoral Dissertation Award, Tsinghua University, 2015- Outstanding Graduate, Tsinghua University, 2015- Top 100 Most Influential Scientific Papers by Chinese Authors, Ministry of Science and Technology of China, 2015- Stars of Tomorrow Internship Program, Microsoft Research, 2014- National Scholarship for PhD Students, Ministry of Education of China, 2012- First Prize Scholarship for Postgraduate, Tsinghua University, 2012, 2013, 2014- Outstanding Graduate of Beijing, 2009- National Scholarship, Ministry of Education of China, 2008- First Prize Scholarship, Beihang University, 2006, 2007, 2008	
INVITED TALKS & PRESENTATIONS	<ul style="list-style-type: none">- University of British Columbia, Vancouver, Canada, 05/2018- Microsoft Research, Seattle, USA, 04/2018- Washington University in St. Louis, USA, 04/2018- University of Chicago, Chicago, USA, 03/2018- Temple University, Philadelphia, USA, 02/2018- Megvii Technology Limited (Face++), Beijing, China, 12/2017- Shanghai Jiao Tong University, Shanghai, China, 12/2017- AI Seminar, Cornell University, Ithaca, USA, 09/2017- CVPR, Honolulu, USA, 07/2017- Apple Research, Seattle, USA, 07/2017- Microsoft Research Asia, Beijing, China, 12/2016- Tsinghua University, Beijing, China, 12/2016- AAAI Conference on Artificial Intelligence, Austin, USA, 01/2015- European Conference on Machine Learning, Nancy, France, 09/2014- Nanyang Technological University, Singapore, 02/2014	

1. Gao Huang*, Shichen Liu*, Laurens van der Maaten and Kilian Weinberger. CondenseNet: An Efficient DenseNet using Learned Group Convolutions. *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 2018, Salt Lake City, USA.
2. Yan Wang*, Lequn Wang*, Yurong You*, Xu Zou, Vincent Chen, Serena Li, Gao Huang, Bharath Hariharan, Kilian Weinberger. Resource Aware Person Re-identification across Multiple Resolutions. *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 2018, Salt Lake City, USA.
3. Gao Huang, Danlu Chen, Tianhong Li, Felix Wu, Laurens van der Maaten and Kilian Weinberger. Multi-Scale Dense Convolutional Networks for Resource Efficient Image Classification. *International Conference on Learning Representations (ICLR)*, 2018, Vancouver, Canada. **Oral presentation.**
4. Zhuang Liu, Jianguo Li, Zhiqiang Shen, Gao Huang, Shoumeng Yan and Changshui Zhang. Learning Efficient ConvNets through Network Slimming. *International Conference on Computer Vision (ICCV)*, 2017, Venice, Italy.
5. Gao Huang*, Zhuang Liu*, Laurens van de Maaten and Kilian Weinberger. Densely Connected Convolutional Networks. *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 2017, Hawaii, USA. **Oral presentation. (Best Paper Award)**
6. Gao Huang*, Yixuan Li*, Geoff Pleiss, Zhuang Liu, John E. Hopcroft and Kilian Weinberger. Snapshot Ensembles: Train 1, Get M for Free. *International Conference on Learning Representations (ICLR)*, 2017, Toulon, France.
7. Gao Huang*, Chuan Guo*, Matt Kusner, Yu Sun, Fei Sha and Kilian Weinberger. Supervised Word Mover’s Distance. *Neural Information Processing Systems (NIPS)*, 2016, Barcelona, Spain. **Oral presentation.**
8. Gao Huang*, Yu Sun*, Zhuang Liu, Daniel Sedra and Kilian Weinberger. Deep networks with stochastic depth. *European Conference on Computer Vision (ECCV)*, 2016, Amsterdam, Netherlands. **Spotlight.** (This paper was recommended as an **Oral Presentation** at NIPS 2016 Deep Learning Symposium.)
9. Gao Huang, Jianwen Zhang, Shiji Song and Zheng Chen. Maximin separation probability clustering. *The AAAI Conference on Artificial Intelligence (AAAI)*, 2015, Austin, USA.
10. Yihe Wan, Shiji Song and Gao Huang. Incremental Extreme Learning Machine Based on Cascade Neural Networks. *IEEE International Conference on Systems, Man and Cybernetics (IEEE SMC)*, 2015, Hong Kong.
11. Yanshang Gong, Shiji Song and Gao Huang. Dimension Reduction by Maximizing Pairwise Discriminations. *IEEE International Conference on Systems, Man and Cybernetics (IEEE SMC)*. 2015, Hong Kong.
12. Chen Qin, Shiji Song and Gao Huang. Non-linear neighborhood component analysis based on constructive neural networks. *IEEE International Conference on Systems, Man and Cybernetics (IEEE SMC)*, 2014, San Diego, CA, USA.
13. Gao Huang, Shiji Song, Zhixiang Xu, Kilian Weinberger and Cheng Wu. Transductive minimax probability machine. *European Conference on Machine Learning (ECML)*, 2014, Nancy, France. **Oral presentation.**
14. Zhixiang Xu, Gao Huang, Kilian Weinberger, Alice Zheng. Gradient Boosted Feature Selection. *ACM SIGKDD International Conference on Knowledge Discovery and Data Mining (KDD)*, 2014, New York, NY, USA.
15. Zhixiang Xu, Matt Kusner, Gao Huang and Kilian Weinberger. Anytime representation learning. *International Conference on Machine Learning (ICML)*, 2013, Atlanta GA, USA.

Journal Publications

15. Shiji Song, Yanshang Gong, Yuli Zhang, Gao Huang and Guangbin Huang. Dimension Reduction by Minimum Error Minimax Probability Machine. *IEEE Transactions on Systems, Man, and Cybernetics: Systems*, 47(1), pp. 58-69, 2016.
16. Shuang Li, Shiji Song and Gao Huang. Prediction reweighting for domain adaptation. *IEEE Transactions on Neural Networks and Learning Systems*, 2016.
17. Quan Zhou, Shiji Song, Gao Huang and Cheng Wu. Efficient lasso training from a geometrical perspective. *Neurocomputing* 168 (11), pp. 234-239, 2015.
18. Chen Qin, Shiji Song and Gao Huang and Lei Zhu. Unsupervised neighborhood component analysis for clustering. *Neurocomputing*, 168(11), pp. 609-617, 2015.
19. Gao Huang, Tianchi Liu, Yan Yang, Zhiping Lin, Shiji Song and Cheng Wu. Discriminative clustering via extreme learning machine, *Neural Networks*, 70(10), pp. 1-8, 2015.
20. Gao Huang, Guang-Bin Huang, Shiji Song and Keyou You. Trends in extreme learning machine: a review, *Neural Networks*, 61(2), pp. 32-48, 2015.
21. Gao Huang, Shiji Song, Jatinder Gupta and Cheng Wu. Semi-supervised and unsupervised extreme learning machines. *IEEE Transactions on Cybernetics*, 44 (12), pp. 2405-2417, 2014.
22. Gao Huang, Shiji Song, Jatinder Gupta and Cheng Wu. A second order cone programming approach for semi-supervised learning. *Pattern Recognition*, 46(12), pp. 3548-3558, 2013.
23. Gao Huang, Shiji Song, Cheng Wu and Keyou You. Robust support vector regression for uncertain input and output data, *IEEE Transactions on Neural Networks and Learning System*, 23 (11), pp. 1690-1700, 2012.
24. Gao Huang, Shiji Song and Cheng Wu. Orthogonal least squares algorithm for training cascade neural networks. *IEEE Transactions on Circuits and Systems I: Regular Papers*, 59 (11), pp. 2629-2637, 2012.
25. Quan Zhou, Shiji Song, Cheng Wu and Gao Huang. Kernelized LARS-LASSO for constructing radial basis function neural networks. *Neural Computing and Applications*, 23(7-8), pp. 1969-1976, 2013.

Technical Reports and Preprints

26. Geoff Pleiss*, Danlu Chen*, Gao Huang, Tongcheng Li, Laurens van der Maaten and Kilian Q. Weinberger. Memory-Efficient Implementation of DenseNets. *Technical Report*, 2017.

* Equal contribution

TEACHING EXPERIENCE	Guest Lecturer for <i>Advanced Machine Learning</i> Fall 2017 Instructor: Professor Kilian Weinberger Department of Computer Science, Cornell University
	Teaching Assistant for <i>Applied Stochastic Process</i> Fall 2010, 2011, 2012 Instructor: Professor Shiji Song Department of Automation, Tsinghua University

REVIEWING & SERVICE

Senior Program Committee (SPC) member for AAAI 2018
Reviewer for Journal of Machine Learning Research (JMLR), Machine Learning (ML), IEEE Transactions on Pattern Recognition and Machine Intelligence (TPAMI), IEEE Transactions on Image Processing (TIP), IEEE Transactions on Neural Networks and Learning Systems (TNNLS), IEEE Transactions on Cybernetics, International Conference on Machine Learning (ICML), Neural Information Processing Systems (NIPS), International Conference on Artificial Intelligence and Statistics (AISTATS), International Conference on Learning Representations (ICLR), IEEE Conference on Computer Vision and Pattern Recognition (CVPR), International Conference on Computer Vision (ICCV), AAAI Conference on Artificial Intelligence (AAAI)