Chiyuan Zhang

Computer Science & Artificial Intelligence Laboratory (CSAIL)
The Center for Brains, Minds & Machines (CBMM)
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Education

2012- PhD Candidate in EECS Department, MIT
Computer Science and Artificial Intelligence Laboratory (CSAIL)
Center for Brain, Minds & Machines (CBMM)
Tomaso Poggio

2014-2014 Summer Exchange Program in Japan
Graduate School of Informatics, Kyoto University
Computer Science Department, Tokyo Institute of Technology
Marco Cuturi
Masashi Sugiyama

2009-2012 MEng in Computer Science at Zhejiang University
Research focus: Machine Learning & Computer Vision
Xiaofei He & Deng Cai

2005-2009 BEng in Chu Kochen Honors College & College of Computer Science at Zhejiang University

Selected Publications

ICLR17 **Chiyuan Zhang**, Samy Bengio, Moritz Hardt, Benjamin Recht, Oriol Vinyals: *Understanding deep learning requires rethinking generalization.* 5th International Conference on Learning Representations (**ICLR**), **Best Paper Award**, 2017.

NIPS15 **Chiyuan Zhang***, Charlie Frogner*, Hossein Mobahi, Mauricio Araya-Polo, Tomaso Poggio: *Learning with a Wasserstein Loss.* Advances in Neural Information Processing Systems 28 (**NIPS**), 2015. *equal contribution.

LearningSys Tianqi Chen, Mu Li, Yutian Li, Min Lin, Naiyan Wang, Minjie Wang, Tianjun Xiao, Bing Xu, **Chiyuan Zhang**, Zheng Zhang: *MXNet: A Distributed Deep Learning Framework for Efficiency and Flexibility.* NIPS Workshop on LearningSys, 2015.

INTERSPEECH15 **Chiyuan Zhang**, Stephen Voinea, Georgios Evangelopoulos, Lorenzo Rosasco, Tomaso Poggio: *Discriminative Template Learning in Group-Convolutional Networks for Invariant Speech Representations.* **INTERSPEECH**, 2015.

INTERSPEECH14 Stephen Voinea, **Chiyuan Zhang**, Georgios Evangelopoulos, Lorenzo Rosasco, Tomaso Poggio: *Word-level Invariant Representations from Acoustic Waveforms.* **INTERSPEECH** (**Best Student Paper Award**), 2014.

JMLR13 Binbin Lin, Xiaofei He, **Chiyuan Zhang**, Ming Ji: *Parallel Vector Field Embedding.* Journal of Machine Learning Research (**JMLR**), 2013.

TCSVT13 **Chiyuan Zhang**, Xiaofei He: *Image Compression by Learning to Minimize the Total Error.* IEEE Transactions on Circuits and Systems for Video Technology (**TCSVT**), 2013.

NIPS12 Binbin Lin, Sen Yang, **Chiyuan Zhang**, Jieping Ye, Xiaofei He: *Multi-task Vector Field Learning*. Advances in Neural Information Processing Systems 25 (**NIPS**), 2012.

NIPS11 Binbin Lin, **Chiyuan Zhang**, Xiaofei He: *Semi-supervised Regression via Parallel Field Regularization*. Advances in Neural Information Processing Systems 24 (**NIPS**), 2011.

KDD10 Deng Cai, **Chiyuan Zhang**, Xiaofei He: *Unsupervised feature selection for multi-cluster data*. International Conference on Knowledge Discovery and Data Mining (**KDD**), 2010.

Projects & Experiences

2016 Summer Intern at Google Brain: Understanding the effect of regularization on large neural networks (Host: Moritz Hardt & Samy Bengio).

2015 MXNet and MXNet.jl: lightweight, portable, flexible distributed deep learning library with multiple language bindings; joint efforts by the DMLC team.

2014 Mocha.jl: efficient and extensible multi-backends (GPU & CPU) deep learning framework for Julia. The **3rd most star-ed** Julia package on github.

2014 Summer Visiting at Kyoto University and Tokyo Institute of Technology: Optimal Transport (Advisor: Marco Cuturi) & Density Ratio Estimation (Advisor: Masashi Sugiyama) and applications to Domain Adaptation Learning problems.

2013 Internship at Shell Intl. E&P Inc.: automatic geological feature detection from pre-stack seismic traces with Machine Learning models (Host: Mauricio Araya Polo).

2012 SHOGUN C++ Machine Learning Library: I surveyed and implemented various well-known multiclass learning algorithms for SHOGUN (Mentor: Cheng Soon Ong, Söeren Sonnenburg).

2011 Large-scale Content-based Image Search System: I'm a main developer for image cutting, visual features (color and SURF), and distributed computing infrastructure & architecture.

2008 YASnippet: I created the most popular open source snippet automation plugin for GNU Emacs (now maintained by capitaomorte). The **5th most star-ed** Emacs plugin on github.

Skills

Programming C, C++, CUDA, Julia, Python, Ruby, Matlab, Javascript, with practical experiences.

Language Chinese Mandarin (native), English (fluent), Japanese (intermediate proficiency, JLPT N2).

Professional Activities

NIPS Reviewer (14,15,17) of *Advances in Neural Information Processing Systems* (NIPS).

ICML Reviewer (16,17) of *International Conference on Machine Learning* (ICML).

JMLR Reviewer (15) and webmaster (13-Present) of *Journal of Machine Learning Research* (JMLR).

IJCAI Reviewer (13) of *International Joint Conference on Artificial Intelligence* (IJCAI).

NEUCOM Reviewer (10-17) of *Neurocomputing*.