Zi **Wang**

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Research Interest

Machine learning theory, algorithms and applications in related areas such as robotics.

Education

Sep. 2014 – now

Ph.D. Student in EECS, ***Massachusetts Institute of Technology*** Cambridge, MA
- GPA: 5.0/5.0; Completed both TQE and RQE (qualifying examinations); Minor in Japanese.
- Advisors: Prof. Stefanie Jegelka, Prof. Leslie Pack Kaelbling, and Prof. Tomás Lozano-Pérez

Sep. 2014 – Feb. 2016

S.M. in EECS, ***Massachusetts Institute of Technology*** Cambridge, MA
- Thesis: Optimization as Estimation with Gaussian Process Bandits
- Advisors: Prof. Stefanie Jegelka and Prof. Leslie Pack Kaelbling

2010 – 2014

B.Eng. in Computer Science and Technology, ***Tsinghua University*** Beijing, China
- Thesis: Fast Dropout Training for Deep Neural Networks (in Chinese)
- Outstanding Graduates Award; GPA: 92/100; rank: 2/129; advisors: Prof. Fei Sha and Prof. Jun Zhu

Honors & Awards

2014-2015 Greater China Computer Science Fellowship, *MIT.* Cambridge, MA

Sep. 2013 Anita Borg Scholarship, *Google China.* Beijing, China

2010 - 2014 4 Undergraduate Scholarships/Awards, *Tsinghua.* Beijing, China

May 2010 Tomorrow's Star of Shanghai's Science and Technology, *top 0.02%.* Shanghai, China

Feb. 2009 Mathematical Contest in Modeling (MCM), *Honorable Mention.* Bedford, MA

Experience

Research Experience

Sep. 2014 – now

Research Assistant, *Learning and Intelligent Systems Group, CSAIL, MIT.* Cambridge, MA
- Develop novel and effective learning and planning algorithms for non-Gaussian stochastic systems.
- Research practical algorithms for Bayesian optimization applied to robotics with theoretical guarantees.

Jul. 2013 – May. 2014

Research Assistant, *Theoretical and Empirical Data Sciences Group, USC.* Los Angeles, CA
- Derived and implemented a fast training algorithm with regularizer for neural nets via noise marginalization.
- Developed a discriminative non-negative matrix factorization algorithm for speech separation.

Mar. 2013 – Jul. 2014

Research Assistant, *State Key Lab of Intelligent Tech. & Systems, Tsinghua.* Beijing, China
- Researched scalable inference algorithms for correlated/dynamic topic models, and created visualizations.

Dec. 2012 – May 2013

Research Assistant, *Future Internet Technology Sub-interest Group, Tsinghua.* Beijing, China
- Researched matrix factorization and random forest for movie recommendation for Baidu Inc.

Teaching Experience

Fall 2015

Teaching Assistant, *6.883 Learning with Discrete and Combinatorial Structure*, MIT

Professional Service

Reviewer and **volunteer** of AISTATS 2016. **Volunteer** of NIPS 2013.

Co-president of Graduate Women in Course 6 (GW6) in 2016.

Supervisor of MIT's Undergraduate Research Opportunities Program (UROP) in 2016.
- Supervisee: Michael Amoako. Project: Robot Motion Mapping with PR2.

Publication

Preprint

Z. Wang, S. Jegelka, L. P. Kaelbling, T. Lozano-Pérez. **Focused Model-Learning and Planning for Non-Gaussian Continuous State-Action Systems**. *arXiv preprint arXiv:1607.07762 (2016).*

Conference

Z. Wang, B. Zhou, S. Jegelka. **Optimization as Estimation with Gaussian Processes in Bandit Settings**. *International Conference on Artificial Intelligence and Statistics (AISTATS), 2016. Full oral presentation (6% acceptance rate).*

Z. Wang, F. Sha. **Discriminative Non-Negative Matrix Factorization for Single-Channel Speech Separation**. *IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP), Florence, Italy, 2014.*

J. Chen, J. Zhu, **Z. Wang**, X. Zheng, B. Zhang. **Scalable Inference for Logistic-Normal Topic Models**. *Neural Information Processing Systems (NIPS), Lake Tahoe, CA, 2013.*

Skills

Programming and related

Most experienced (>4 years) with Python, Matlab and LaTeX.

Some experience (>2 years) with Java, C/C++, JavaScript, HTML.

Dabbled (<1 year) in VHDL, Verilog HDL, Assembly.

Fast learner of new programming languages.

Language

Chinese (native), English (fluent), Japanese (beginner).