

# Chicheng Zhang

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## CURRENT POSITION

Postdoctoral Researcher  
Microsoft Research New York City  
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## EDUCATION

*PhD*, Computer Science  
UC San Diego, La Jolla, CA, USA, 2012.9-2017.8  
Advisor: Kamalika Chaudhuri  
Thesis Title: Active Learning and Confidence-rated Prediction

*Master of Science*, Computer Science  
UC San Diego, La Jolla, CA, USA, 2012.9-2015.6

*Bachelor of Science*, Machine Intelligence, School of EECS  
Peking University, Beijing, China, 2008.9-2012.7

*Second Degree Certificate*, Mathematics and Applied Mathematics  
Peking University, Beijing, China, 2009.9-2012.7

**PUBLICATIONS** Songbai Yan and Chicheng Zhang, Revisiting Perceptron: Efficient and Label-Optimal Learning of Halfspaces. NIPS 2017.

Alina Beygelzimer, Francesco Orabona and Chicheng Zhang, Efficient Online Bandit Multiclass Learning with  $\tilde{O}(\sqrt{T})$  Regret. ICML 2017.

Alina Beygelzimer, Daniel Hsu, John Langford and Chicheng Zhang, Search Improves Label for Active Learning. NIPS 2016.

Chicheng Zhang and Kamalika Chaudhuri, The Extended Littlestone's Dimension for Learning with Mistakes and Abstentions. COLT 2016.

Chicheng Zhang and Kamalika Chaudhuri, Active Learning from Weak and Strong Labelers. NIPS 2015.

Chicheng Zhang, Jimin Song, Kevin C. Chen and Kamalika Chaudhuri, Spectral Learning of Large Structured HMMs for Comparative Epigenomics. NIPS 2015.

Chicheng Zhang and Kamalika Chaudhuri, Beyond Disagreement-based Agnostic Active Learning. NIPS 2014.

## WORKSHOP CONTRIBUTIONS

Chicheng Zhang and Kamalika Chaudhuri, A Potential-based Framework for Online Learning with Mistakes and Abstentions. NIPS 2016 Workshop on Reliable Machine Learning in the Wild.

Alina Beygelzimer, Daniel Hsu, John Langford and Chicheng Zhang, Search Improves Label for Active Learning. ICML 2016 Workshop on Data Efficient Machine Learning.

Chicheng Zhang and Kamalika Chaudhuri, Active Learning with Weak and Strong Labelers. ICML 2015 Active Learning Workshop.

Kamalika Chaudhuri and Chicheng Zhang, Improved Algorithms for Confidence-Rated Prediction with Error Guarantees. NIPS 2013 Workshop on Learning Faster from Easy Data.

<b>RESEARCH EXPERIENCE</b>	<i>Research Assistant</i> 2012.9-2017.8 UC San Diego, Department of Computer Science and Engineering <b>Supervisor: Prof. Kamalika Chaudhuri</b> <ul style="list-style-type: none"><li>• Active learning algorithms utilizing both weak and strong labelers</li><li>• Generic reduction from active learning to confidence-rated prediction</li><li>• Algorithms for online/batch confidence-rated prediction with error guarantees</li><li>• Spectral learning for parameter estimation in HMMs with tree-structured hidden states</li></ul>
	<i>Undergraduate Research Assistant</i> 2010.6-2012.6 Peking University, Department of Machine Intelligence <b>Supervisor: Prof. Liwei Wang</b> <ul style="list-style-type: none"><li>• Proved bounds on the disagreement coefficient of the class of <math>\alpha</math>-smooth decision boundary functions under smooth densities, making their upper and lower bounds match within a constant</li></ul>
<b>INTERNSHIP EXPERIENCE</b>	<i>Research Intern</i> 2016.6-2016.9 Yahoo! Research, New York, USA <b>Supervisor: Dr. Alina Beygelzimer and Dr. Francesco Orabona</b> <ul style="list-style-type: none"><li>• Multiclass linear classification with bandit feedback</li><li>• An efficient algorithm with <math>\tilde{O}(\sqrt{T})</math> regret in the adversarial setting</li></ul>
	<i>Research Intern</i> 2015.6-2015.9 Yahoo! Labs, New York, USA <b>Supervisor: Dr. Alina Beygelzimer</b> <ul style="list-style-type: none"><li>• Active learning with search oracle, a new type of interaction oracle</li><li>• Shown the search oracle can be helpful in active learning for model selection</li></ul>
	<i>Software Testing Intern</i> 2011.7-2011.8 MicroVu Co., Beijing, China <ul style="list-style-type: none"><li>• Investigated rigid-body alignment algorithms: feature extraction based on curvature and template matching</li><li>• Tested the software for checking deficiencies on machine parts</li></ul>
<b>TEACHING</b>	<b>Teaching Assistant:</b> CSE 151 – Introduction to Machine Learning, Spring 2015/Winter 2017, UCSD. CSE 202 – Graduate Algorithms, Spring 2016, UCSD. CSE 250C – Machine Learning Theory, Spring 2017, UCSD.
<b>HONORS AND AWARDS</b>	4th place in ACM Southern California Regional Programming Contest 2015 8th place in ACM Southern California Regional Programming Contest 2013 2nd place in UCSD Programming Contest 2013 Li Huirong Scholarship 2011 3rd Prize in Beijing Collegiate Mathematical Contest 2011 Starlight International Media Scholarship 2010 Merit Student Award 2009 3rd Prize in National Mathematics Olympiad in Province 2007

**SERVICES**

**Reviewer:** UAI 2015-2016, NIPS 2015-2017, AISTATS 2016-2018, ICML 2016-2017, ICLR 2018, JAIR, JACM, JMLR, TCS.

**Subreviewer:** COLT 2014-2017, ALT 2015.

**SKILLS**

C/C++, Java, Python, Matlab, Assembly, SQL.