

# Christopher Xie

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## CONTACT INFORMATION

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*Website:* <https://chrisdxie.github.io/>

## RESEARCH INTERESTS

Statistical Machine Learning, Probabilistic Inference, Artificial Intelligence

## EDUCATION

**Ph.D.**, University of Washington September 2015 - Present  
Computer Science and Engineering

**Bachelor of Science**, University of California, Berkeley May 2015  
Electrical Engineering and Computer Science, GPA: 3.87/4.0

## RESEARCH EXPERIENCE

**Graduate Research Assistant**, University of Washington September 2015 - Present  
Advisor: *Emily Fox*

- Modifying Stochastic Variational Inference for lengthy time series models including Hidden Markov Models and Autoregressive Hidden Markov Models.

**Undergraduate Research Assistant**, University of California, Berkeley June 2014 - May 2015  
Advisor: *Pieter Abbeel*

- Explored the use of Optimism-Driven Exploration with Model Predictive Control in order to learn system dynamics on the fly while performing specific tasks.
- Combined globally optimal planners with generic boundary value problem solvers implemented with Sequential Convex Programming to solve optimal motion planning for arbitrary dynamics.

Advisor: *Stuart Russell* September 2013 - June 2014

- Used Contingent Bayesian Networks to attack the problem of Relation Extraction. Devised a proposal distribution for Metropolis-Hastings Markov Chain Monte Carlo inference for our model of the world. Performed inference using probabilistic programming language BLOG.

## PUBLICATIONS

Christopher Xie, Teodor Moldovan, Sergey Levine, Sachin Patil, Pieter Abbeel. Model-based Reinforcement Learning with Parametrized Physical Models and Optimism-Driven Exploration. *Proc. IEEE Int. Conf. on Robotics and Automation - ICRA, 2016*.

Christopher Xie, Jur van den Berg, Sachin Patil, Pieter Abbeel. Toward Asymptotically Optimal Motion Planning for Kinodynamic Systems using a Two-Point Boundary Value Problem Solver. *Proc. IEEE Int. Conf. on Robotics and Automation - ICRA, 2015*.

## TEACHING EXPERIENCE

**University of California, Berkeley**, Berkeley, CA

*Teaching Assistant*, CS189: Introduction to Machine Learning January - May, 2015  
Taught by Professor Peter Bartlett and Alyosha Efros.

*Teaching Assistant*, CS189: Introduction to Machine Learning January - May, 2014  
Taught by Professor Jitendra Malik and Alyosha Efros.

## PROFESSIONAL EXPERIENCE

**Google**, Mountain View, CA May - August, 2015  
*Software Engineering Intern*  
Worked on Google Glass (now known as Project Aura).

**eBay, Inc.**, San Jose, CA May - August, 2013  
*Applied Research Intern, Trust Science*  
Trained neural network and decision tree models to classify fraudulent activity using features extracted from clickstream data only. Optimized them to prevent loss from fraud.

**International Computer Science Institute**, Berkeley, CA April 2012 - April 2013  
*Student Researcher, Artificial Intelligence Group*  
FrameNet: Developed software to collect crowdsourced data from Amazon Mechanical Turk.  
MetaNet: Collaborated with linguists to create a Russian metaphor search using parsed Russian sentences to extract verb-noun relations and clustering algorithms to search for potential new metaphors.

HONORS AND AWARDS	CSE Educators Endowed Fellowship in Computer Science & Engineering (UW)	2015
	Draper Laboratory Fellowship (declined)	2015
	Eta Kappa Nu Membership	
	Student Member of IEEE	

SKILLS	Proficient in Python, Matlab, C++, Java
	Skilled at Hadoop, Hadoop Streaming, Hive, bash shell scripting/automation

HOBBIES	<ul style="list-style-type: none"><li>• Taekwondo - Received medals from many national and international tournaments. Member of the Alternate Junior National Team in 2010.</li><li>• Music - Played keyboard in multiple bands, performed all over the Bay Area.</li></ul>
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