

# Christopher Xie

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## CONTACT INFORMATION

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

## RESEARCH INTERESTS

Robotics, Computer Vision, Machine Learning, Artificial Intelligence

## EDUCATION

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

**Master of Science**, University of Washington June 2017  
Computer Science and Engineering

**Bachelor of Science**, University of California, Berkeley May 2015  
Electrical Engineering and Computer Science

## RESEARCH EXPERIENCE

**Graduate Research Assistant** September 2015 - Present  
University of Washington – Seattle, WA

**Undergraduate Research Assistant** September 2013 - August 2015  
University of California, Berkeley – Berkeley, CA

## PUBLICATIONS

Christopher Xie, Yu Xiang, Arsalan Mousavian, Dieter Fox. “Unseen Object Instance Segmentation for Robotic Environments”. *arXiv:2007.08073*, 2020.

William Agnew, Christopher Xie, Aaron Walsman, Octavian Murad, Caelen Wang, Pedro Domingos, Siddhartha Srinivasa. “Amodal 3D Reconstruction for Robotic Manipulation via Stability and Connectivity”. *ICML Workshop on Object-Oriented Learning*, 2020.

Christopher Xie, Yu Xiang, Arsalan Mousavian, Dieter Fox. “The Best of Both Modes: Separately Leveraging RGB and Depth for Unseen Object Instance Segmentation”. *Conference on Robot Learning - CoRL*, 2019.

Christopher Xie, Yu Xiang, Zaid Harchaoui, Dieter Fox. “Object Discovery in Videos as Foreground Motion Clustering”. *IEEE Conference on Computer Vision and Pattern Recognition - CVPR*, 2019.

Christopher Xie, Emily Fox, Zaid Harchaoui. “A Simple Adaptive Tracker with Reminiscences”. *IEEE Int. Conf. on Robotics and Automation - ICRA*, 2019.

Christopher Xie, Avleen Bijral, Juan Lavista Ferres. “NonSTOP: A NonStationary Online Prediction Method for Time Series”. *IEEE Signal Processing Letters*, 2018.

Christopher Xie, Alex Tank, Alec Greaves-Tunnell, Emily Fox. “A Unified Framework for Long Range and Cold Start Forecasting of Seasonal Profiles in Time Series”. *arXiv:1710.08473*, 2017.

Christopher Xie, Alex Tank, Emily Fox. “A Unified Framework for Missing Data and Cold Start Prediction for Time Series Data”. *NeurIPS Time Series Workshop*, 2016. **Best Oral Presentation**.

Christopher Xie, Teodor Moldovan, Sergey Levine, Sachin Patil, Pieter Abbeel. “Model-based Reinforcement Learning with Parametrized Physical Models and Optimism-Driven Exploration”. *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". *IEEE Int. Conf. on Robotics and Automation - ICRA, 2015.*

INVITED TALKS

Teaching Robots to be as Smart as Infants. *Honda Research Institute Curious Minded Machines Workshop, 2019.*

A Unified Framework for Missing Data and Cold Start Prediction for Time Series Data. *NeurIPS Time Series Workshop, 2016.*

TEACHING  
EXPERIENCE

**University of Washington** – Seattle, WA

*Teaching Assistant*, Machine Learning Coursera Specialization January - March, 2016  
Taught by Emily Fox and Carlos Guestrin.

**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

**NVIDIA** – Seattle, WA March - September, 2018

*Robotics Research Intern, NVIDIA Robotics Research Lab*  
Worked on discovering unseen objects in novel environments.

**Microsoft** – Redmond, WA June - September, 2016

*Research Intern, Consumer Data and Analytics*  
Worked on Online Learning methods for Forecasting Nonstationary Time Series.

**Google** – Mountain View, CA May - August, 2015

*Software Engineering Intern, Project Aura*  
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

ICRA 2019 RAS Travel Award 2019  
Best Oral Presentation at NIPS 2016 Time Series Workshop 2016  
National Defense Science and Engineering Graduate (NDSEG) Fellowship 2016

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

ADVISING	Yang Wang (UW undergrad, Sept 2018 - June 2019. next: Master of Science in Information Networking @ CMU)
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PROFESSIONAL ACTIVITIES	<b>Paper Reviewing:</b> IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS) 2016 Neural Information Processing Systems (NeurIPS) 2019
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HOBBIES	<b>Taekwondo:</b> Received medals from many national and international tournaments. Member of the Alternate Junior National Team in 2010. <b>Music:</b> Played keyboard in multiple bands, performed all over the Bay Area.
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