

Lily Xu

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EDUCATION	Harvard University , Cambridge, MA PhD Candidate, School of Engineering and Applied Sciences Advised by Prof. Milind Tambe	2019 – present
	Dartmouth College , Hanover, NH B.A. with Honors in Computer Science, minor in Spanish GPA: 3.83 (Magna cum laude)	2014 – 2018
PUBLICATIONS	Game Theory on the Ground: The Effect of Increased Patrols on Detering Poachers <i>Working paper</i> <i>Appeared at Harvard CRCS Workshop on AI for Social Good 2020</i> Lily Xu, Andrew Perrault, Andrew Plumptre, Margaret Driciru, Fred Wanyama, Aggrey Rwetsiba, and Milind Tambe	
	A High-Performance Graph Model for Near-Optimal Payments for Ecosystem Services <i>Working paper</i> <i>Appeared at Mechanism Design for Social Good (MD4SG) Workshop 2020</i> Florian Berlinger*, Lily Xu*, Yiling Chen <i>*Equal contribution</i>	
	Dual-Mandate Patrols: Learning While Patrolling in Green Security Domains <i>In submission</i> <i>Appeared at Harvard CRCS Workshop on AI for Social Good 2020</i> Lily Xu, Elizabeth Bondi, Fei Fang, Andrew Perrault, Kai Wang, and Milind Tambe	
	Stay Ahead of Poachers: Illegal Wildlife Poaching Prediction and Patrol Planning Under Uncertainty with Field Test Evaluations <i>IEEE International Conference on Data Engineering (ICDE) 2020</i> Lily Xu*, Shahrzad Gholami*, Sara Mc Carthy, Bistra Dilkina, Andrew Plumptre, Milind Tambe, Rohit Singh, Mustapha Nsubuga, Joshua Mabonga, Margaret Driciru, Fred Wanyama, Aggrey Rwetsiba, Tom Okello, Eric Enyel <i>*Equal contribution</i>	
HONORS AND AWARDS	Certificate of Appreciation from the SMART Consortium Five Citations for Academic Excellence at Dartmouth College <i>Special distinction rarely awarded by faculty members “for meritorious characteristics not indicated adequately by academic grades.”</i> Computational Photography (Jarosz, CS 89.15) Latin American Film (Spitta, Spanish 63.01) Computer Graphics (Whiting, CS 77) Object-Oriented Programming (Peters, CS 10) Introduction to Programming and Computation (Farid, CS 1) Adobe Women-In-Technology Scholarship – Honorable Mention Rick Angulo World Experience Award	2018 2014 – 2018 2017 2016

	<p><i>For “intellectual openness, enthusiasm, and impressive academic performance” following a study abroad program in Cusco, Peru. Award in \$1,500.</i></p>	
	James O. Freedman Presidential Scholar	2016
	Willis S. Fitch '17 Metropolitan Washington Scholarship	2015
	Bank of America's Joe Martin Scholarship	2014
RESEARCH EXPERIENCE	<p>Harvard University, Cambridge, MA <i>Doctoral Research Assistant</i> Advised by Prof. Milind Tambe.</p>	2019 – present
	<p>University of Southern California, Los Angeles, CA <i>Doctoral Research Assistant</i> Advised by Prof. Bistra Dilkina and Prof. Milind Tambe.</p>	2018 – 2019
	<p>Dartmouth College, Hanover, NH <i>Undergraduate Senior Thesis Researcher</i> Advised by Prof. Amro Farid.</p>	2017 – 2018
	<p><i>Presidential Scholar Research Assistant</i> Advised by Prof. Emily Whiting and Prof. David Kotz.</p>	2016 – 2017
WORK EXPERIENCE	<p>Google, Seattle, WA <i>Software Engineering Intern</i></p>	Summer 2017
	<p>Dyn, Inc., Hanover, NH <i>Data Analytics Research Intern</i></p>	Spring 2016
TEACHING EXPERIENCE	<p>Harvard University Head Teaching Fellow, CS 182: Artificial Intelligence</p>	Fall 2020
	<p>Dartmouth College Teaching assistant for 11 courses. Helped design assignments and course material for the first offering of CS 11 and delivered a guest lecture to 70 students.</p> <ul style="list-style-type: none"> • CS 1: Intro to Programming and Computation — Fall 2015, Winter 2016, Spring 2017, Fall 2017, Spring 2018 • CS 10: Object-Oriented Programming — Spring 2015, Spring 2016 • CS 11: Foundations of Applied Computer Science — Spring 2018 • CS 31: Algorithms — Winter 2017 • Tuck FWP: Fundamentals of Web Programming — Spring 2017 • Tuck DSA: Data Structures and Analytics — Spring 2017 	
STUDENTS MENTORED	<p>Emilia Cabrera '21, Harvard College</p> <p>Rachel Guo '22, Harvard College</p>	<p>Fall 2020</p> <p>Summer 2020, Fall 2020</p>
PROFESSIONAL SERVICE	<p>Program Organization Co-organizer, MD4SG Working Group on Environment and Climate Co-organizer, CompSust Open Graduate Seminar (COGS) Lead organizer, Harvard CRCS Workshop on AI for Social Impact Co-organizer, Computational Sustainability Doctoral Consortium</p>	<p>January 2020 –</p> <p>January 2020 –</p> <p>March 2020</p> <p>October 2019</p>
	<p>Program Committee <i>Conferences</i></p>	

	AAAI Emerging Track on AI for Social Impact (AISI)	2021
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	<i>Workshops</i>	
	NeurIPS Workshop on Machine Learning for the Developing World (ML4D)	2020
	4th Workshop on Mechanism Design for Social Good (MD4SG)	2020
	Harvard CRCS Workshop on AI for Social Good	2020
	KDD Workshop on Humanitarian Mapping	2020
	Reviewer	
	IJCAI Special Track on CompSust and Human Well-being, subreviewer	2020
LEADERSHIP	Ledyard Canoe Club at Dartmouth, Secretary, Canoeing Leader	2014 – 2018
	<ul style="list-style-type: none"> Co-governed club functions for over 100 undergraduates. Managed club assets that include \$1M in endowments, a student-run rental business with annual revenues of \$50K, and boats and equipment valued at \$150K. Co-organized an Explorers Symposium featuring ten notable alumni, including Olympic racers and members of National Geographic-sponsored expeditions. Led a group of twenty-eight students on a nine-day, 220-mile canoe expedition. Voted by my peers to receive the Jay Evans '49 Award for service and commitment to the club. 	
	Fusion Dance Ensemble, Director	2014 – 2018
	<ul style="list-style-type: none"> Led a group of fourteen dancers. Choreographed, taught, and performed contemporary and hip-hop dances. 	
	Dartmouth Sophomore Trips, Co-director	2015 – 2016
	<ul style="list-style-type: none"> Planned the Sophomore Trips program for 130 undergraduates across 14 three-day outdoor trips throughout New Hampshire and Vermont. 	
	Dartmouth First-Year Trips, Grant Crew Volunteer	Summer 2015
	<ul style="list-style-type: none"> Served on a nine-person crew for a 21-day, round-the-clock commitment to assist 300 students in five-day outdoor orientation trips. 	
OUTREACH	Speaking	
	MD4SG and the Environment, Data Science Africa	July 2020
	Inclusivity in the Outdoors, Ledyard Canoe Club	July 2020
	Dartmouth Women in Computer Science, panelist	May 2020
	Harvard SEAS Diversity, Inclusivity, and Belonging, panelist	May 2020
	Center for Initiatives in Jewish Education, high school student visit	March 2020
	World Science Festival, Science and Storytime	June 2019
	L.A. Unified School District (LAUSD), African American Family Day	May 2019
	Zoo Magnet High School, College and Career Day	November 2018
	Mentoring	
	InTouch Peer Mentor, Harvard University	2020 –
	Women in STEM Mentor, Harvard University	2019 –
	Women in Computer Science panelist and mentor, Dartmouth College	2017 – 2018
	Volunteering	
	Graduate Council Outreach Committee, Harvard University	2020 –
	Project Teach, Harvard University	April 2020
	Presenter, Cambridge Public Schools STEAM It Up!	October 2019

Technical lead, Hustle N' Code hackathon

December 2018

Hustle N' Code is a Los Angeles hackathon for youth in public housing developments. My team won first place, and the four students each received a laptop.

PRESS

Harvard SEAS, Preventing Poaching.

June 2020

USC Viterbi Magazine, AI is for Animals.

April 2019