

Lily Xu

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lily-x.github.io

ACADEMIC APPOINTMENTS	Columbia University. New York, NY Sun-Wu Assistant Professor Department of Industrial Engineering and Operations Research (IEOR) Affiliated faculty, Department of Computer Science (CS) Affiliated faculty, Department of Ecology, Evolution, and Environmental Biology (E3B) Member, Data Science Institute (DSI)	July 2025 –
	University of Oxford. Oxford, UK Postdoctoral Research Fellow Leverhulme Centre for Nature Recovery & Department of Economics <i>Mentor: Alex Teytelboym</i>	2024 – 2025
EDUCATION	Harvard University. Cambridge, MA PhD in Computer Science <i>Advisor: Milind Tambe</i> <i>Thesis committee: Dimitris Bertsimas, Yiling Chen, Andrew Davies, Fei Fang</i>	2024
	Dartmouth College. Hanover, NH A.B. with Honors in Computer Science, minor in Spanish <i>Magna cum laude</i>	2018
HONORS	IFAAMAS Victor Lesser Distinguished Dissertation Award Runner-Up	2024
	Siebel Scholar	2024
	<i>Grant awarded for academic excellence and demonstrated leadership.</i>	
	Rising Star in Data Science (UChicago)	2023
	Rising Star in EECS (GATech)	2023
	Rising Star in Management Science and Engineering (Stanford MS&E)	2023
	Google PhD Fellowship	2022
	<i>One of 13 awardees in machine learning globally.</i>	
	INFORMS Doing Good with Good OR Competition Winner	2021
	<i>Recognizes the “most exciting work performed by students in partnership with public and private organizations that yields tangible and beneficial outcomes for individuals, communities, and organizations”.</i>	
	AAAI Best Paper Award Runner Up	2021
	<i>3 best papers and 3 runner-ups were selected out of 9,034 submissions and 1,692 accepted papers.</i>	
	Harvard University Derek Bok Certificate of Distinction in Teaching	2021
	Certificate of Appreciation from the SMART Partnership	2019
	<i>Recognition for contribution to developing PAWS system.</i>	
	Five Citations for Academic Excellence at Dartmouth College	2014 – 2018
	<i>Special distinction rarely awarded by faculty members “for meritorious characteristics not indicated adequately by academic grades”, received across five computer science and Spanish courses.</i>	
	Adobe Women-In-Technology Scholarship – Honorable Mention	2017

PROFESSIONAL	SMART Conservation Partnership. AI Lead 2022 – present <i>I work with SMART to effectively integrate AI research into their conservation management activities. The SMART Partnership is the global leader in protected area solutions, consisting of 8 leading conservation NGOs: WWF, WCS, Wildlife Protection Solutions, Frankfurt Zoological Society, ZSL, NC Zoo, Panthera, and Re:wild.</i>
	INVERSA. Scientific Advisor, AI for Invasive Species Management 2025 – <i>INVERSA builds systems that transform how we fight invasive species.</i>
PREPRINTS	* indicates equal contribution † indicates undergraduate I advised (α–β) indicates alphabetical ordering Latent Spherical Flow Policy for Reinforcement Learning with Combinatorial Actions <i>Under review</i> Lingkai Kong, Anagha Satish, Hezi Jiang, Akseli Kangaslahti, Andrew Ma, Wenbo Chen, Mingxiao Song, Lily Xu, Milind Tambe Quantifying the causal impact of ranger patrol deterrence on wildlife poaching using machine learning <i>Under review</i> Rachel Guo^{†*}, Lily Xu*, Andrew Perrault, Luke W. Miratrix, Andrew J. Plumptre, Joshua Mabonga, Herbert Kitimbo, Fredrick Wanyama, Simon Nampindo, Milind Tambe, Andrew B. Davies Artificial Replay: A Meta-Algorithm for Harnessing Historical Data in Bandits <i>Under review</i> (α–β) Siddhartha Banerjee, Sean R. Sinclair, Milind Tambe, Lily Xu, Christina Lee Yu Reflections from the Workshop on AI-Assisted Decision Making for Conservation <i>White paper</i> Lily Xu*, Esther Rolf*, Sara Beery, Joseph R. Bennett, Tanya Berger-Wolf, Tanya Birch, Elizabeth Bondi-Kelly, Justin Brashares, Melissa Chapman, Anthony Corso, Andrew Davies, Nikhil Garg, Angela Gaylard, Robert Heilmayr, Hannah Kerner, Konstantin Klemmer, Vipin Kumar, Lester Mackey, Claire Monteleoni, Paul Moorcroft, Jonathan Palmer, Andrew Perrault, David Thau, Milind Tambe
PUBLICATIONS (JOURNALS)	From maps to models: Participation and contestability in the dynamic management of natural resources <i>Geo</i> (2025) Caleb Scoville, Razvan Amironesei, Lily Xu, Melissa Chapman, Nicholas R. Record, Carl Boettiger Unlocking the value of ranger-based monitoring for biodiversity conservation and protected area management <i>Conservation Letters</i> (2025).

Timothy Kuiper, Anthony Dancer, Colin Beale, Arash Ghoddousi, Harriet Ibbett, Laure Joanny, Blessing Kavhu, Aidan Keane, Daniel Makaza, E.J. Milner-Gulland, Jennifer Moore, and **Lily Xu**

Biodiversity monitoring for a just planetary future

Science (2024). Vol. 383, Issue 6678, pp. 34–36.

Melissa Chapman, Benjamin R. Goldstein, Christopher J. Schell, Justin S. Brashares, Neil H. Carter, Diego Ellis-Soto, Hilary Oliva Faxon, Jenny E. Goldstein, Benjamin S. Halpern, Joycelyn Longdon, Kari EA Norman, Dara O'Rourke, Caleb Scoville, **Lily Xu**, Carl Boettiger

Bridging adaptive management and reinforcement learning for more robust decisions

Philosophical Transactions of the Royal Society B (2023). Vol. 378, Issue 1881.

Melissa Chapman, **Lily Xu**, Marcus Lapeyrolerie, Carl Boettiger

PUBLICATIONS
(CONFERENCES)

Generative AI Against Poaching: Latent Composite Flow Matching for Wildlife Conservation

IAAI 2026. 38th Conference on Innovative Applications of Artificial Intelligence

Lingkai Kong, Haichuan Wang, Charles A. Emogor, Vincent Börsch-Supan, **Lily Xu**, Milind Tambe

[Oral Presentation](#)

Reinforcement learning with combinatorial actions for coupled restless bandits

ICLR 2025. 13th International Conference on Learning Representations

Lily Xu, Bryan Wilder, Elias B. Khalil, Milind Tambe

A Bayesian Approach to Online Learning for Contextual Restless Bandits with Applications to Public Health

AAAI 2025. 39th AAAI Conference on Artificial Intelligence

Biyonka Liang, **Lily Xu**, Aparna Taneja, Milind Tambe, Lucas Janson

[Oral Presentation](#)

Optimistic Whittle Index Policy: Online Learning for Restless Bandits

AAAI 2023. 37th AAAI Conference on Artificial Intelligence

Kai Wang*, **Lily Xu***, Aparna Taneja, Milind Tambe

[Oral Presentation](#)

Robust Planning over Restless Groups: Engagement Interventions for a Large-Scale Maternal Telehealth Program

AAAI 2023. 37th AAAI Conference on Artificial Intelligence

Jackson A. Killian*, Arpita Biswas*, **Lily Xu***, Shresth Verma*, Vineet Nair, Aparna Taneja, Aparna Hegde, Neha Madhiwalla, Paula Rodriguez Diaz, Sonja Johnson-Yu, Milind Tambe

Flexible Budgets in Restless Bandits: A Proximal Primal-Dual Algorithm for Efficient Budget Allocation

AAAI 2023. 37th AAAI Conference on Artificial Intelligence

Paula Rodriguez Diaz, Jackson A. Killian, **Lily Xu**, Aparna Taneja, Arun Sai Suggala, Milind Tambe

Restless and Uncertain: Robust Policies for Restless Bandits via Deep Multi-Agent Reinforcement Learning

UAI 2022. 38th Conference on Uncertainty in Artificial Intelligence
Jackson A. Killian, **Lily Xu**, Arpita Biswas, Milind Tambe

Ranked Prioritization of Groups in Combinatorial Bandit Allocation

IJCAI 2022. 31st International Joint Conference on Artificial Intelligence
Lily Xu, Arpita Biswas, Fei Fang, Milind Tambe

Coordinating Followers to Reach Better Equilibria: End-to-End Gradient Descent for Stackelberg Games

AAAI 2022. 36th AAAI Conference on Artificial Intelligence
Kai Wang, **Lily Xu**, Andrew Perrault, Michael K. Reiter, Milind Tambe

Robust Reinforcement Learning Under Minimax Regret for Green Security

UAI 2021. 37th Conference on Uncertainty in Artificial Intelligence
Lily Xu, Andrew Perrault, Fei Fang, Haipeng Chen, Milind Tambe
Oral Presentation
Top 6.17% of submissions

Envisioning Communities: A Participatory Approach Towards AI for Social Good

AIES 2021. 4th AAI/ACM Conference on AI, Ethics, and Society
Elizabeth Bondi*, **Lily Xu***, Diana Acosta-Navas, Jackson A. Killian

Dual-Mandate Patrols: Multi-Armed Bandits for Green Security

AAAI 2021. 35th AAAI Conference on Artificial Intelligence
Lily Xu, Elizabeth Bondi, Fei Fang, Andrew Perrault, Kai Wang, and Milind Tambe
Best Paper Award Runner Up
Top 6 of 1692 accepted papers

Stay Ahead of Poachers: Illegal Wildlife Poaching Prediction and Patrol Planning Under Uncertainty with Field Test Evaluations

ICDE 2020. 36th IEEE International Conference on Data Engineering
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

PUBLICATIONS
(BOOK CHAPTERS)

Environment, Society, and Machine Learning

Oxford Handbook of the Sociology of Machine Learning (2023)
Caleb Scoville, Hilary Faxon, Melissa Chapman, Samantha Jo Fried, **Lily Xu**, Carl Boettiger, J. Michael Reed, Marcus Lapeyrolerie, Amy Van Scoyoc, Razvan Amironesei

INVITED TALKS

Does not include contributed conference and workshop talks
Major talks underlined

Scheduled

<i>Columbia LEAP.</i> Climate Data Science lectures series	May 2026
<i>Columbia Business School.</i> Tamer Institute	May 2026
<i>NYU.</i> Responsible AI workshop	Mar 2026
<i>UCSB.</i> Bren department seminar	Mar 2026

<i>Banff Int'l Research Station (BIRS).</i>	Contextual Stochastic Optimization	Feb 2026
<i>Columbia.</i>	Ecol., Evol., and Enviro. Biology (E3B) department seminar	Feb 2026
<i>NYU.</i>	Technology Management and Innovation (TMI) department seminar	Dec 2025
<i>Columbia.</i>	SIPA Sustainable Development	Nov 2025
<i>INFORMS.</i>	Annual Meeting, Computing Cluster	Oct 2025
<i>UN ITU.</i>	AI for Good series on biodiversity	Oct 2025
<i>MIT.</i>	SCC / LIDS, AI4Society Seminar	Oct 2025
<i>Columbia.</i>	CS department	Oct 2025
<i>Alphabet.</i>	Modeling Talk Series	Sep 2025
<i>Climate Change AI.</i>		Sep 2025

Reinforcement learning with combinatorial actions for coupled restless bandits

<i>London Business School.</i>	Workshop on Information and Learning (WIL)	Jun 2025
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Barriers to explainability for sustainability, and a path towards more reliable models

<i>ICLR workshop.</i>	XAI4Science	Apr 2025
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Sequential planning with messy data: RL and restless bandits for maternal health

<i>University of Toronto.</i>	Rotman Young Scholar Seminar	Aug 2025
<i>London Business School.</i>	Management Science and Operations group	Jun 2025
<i>University of Oxford.</i>	Pandemic Sciences Institute	May 2025
<i>Imperial College Business School.</i>	Analytics & Operations group	May 2025
<i>University of Southern California.</i>	Center for AI and Society (CAIS)	Mar 2025
<i>INFORMS Annual Meeting.</i>		Oct 2024

Conservation management and policy with causal inference and ML

<i>MSOM.</i>	London, UK	Jun 2025
<i>Alliance Summer School.</i>	Paris, France	Jun 2025
<i>World Bank and Berkeley CEQA.</i>	MeasureDev conference	Apr 2025
<i>Oxford.</i>	Nuffield College Economics seminar	Jan 2025
<i>EIEE.</i>	European Inst. on Economics and the Environment, Milan, Italy	Nov 2024
<i>Oxford.</i>	Institute for Ethics in AI	Oct 2024
<i>Oxford.</i>	Environmental Economics seminar	Oct 2024
<i>University of Maryland.</i>	Analytics for Good workshop, Smith School	May 2024

Beyond monitoring: Budding possibilities in AI decision-making for nature recovery

<i>RISE Research Institutes of Sweden.</i>	Learning Machines Seminar	Jun 2025
<i>University College London.</i>	People and Nature Lab	May 2025
<i>Wageningen University.</i>	Wildlife Ecology and Conservation Group	Apr 2025
<i>Columbia (Ecology & Stats dept).</i>	AI and Global Change Symposium	Feb 2025
<i>Oxford.</i>	Oxford Internet Institute	Feb 2025
<i>Oxford.</i>	Interdisciplinary Centre for Conservation Science	Nov 2024
<i>ETH Zürich.</i>	<u>AI + Environment Summit</u> , Zürich, Switzerland, <i>keynote</i>	Oct 2024
<i>National Academies.</i>	US Global Change Research Program	Sep 2024
<i>Aspen Global Change Institute.</i>	AI for Biodiversity workshop, Aspen, CO	Jul 2024
<i>Climate Change AI.</i>	Summer School	Jun 2024
<i>Harvard.</i>	CGA Geospatial AI workshop	May 2024
<i>Verena Institute.</i>		May 2024
<i>Equitech Futures.</i>		Apr 2024

High-stakes decisions from low-quality data: AI decision-making for planetary health

<i>University of Belgrade.</i>	ICDSST Conference. Belgrade, Serbia, <i>keynote</i>	May 2025
<i>Oxford Saïd.</i>	Business School	Nov 2024
<i>GATech.</i>	School of Computer Science	Feb 2024
<i>Max Planck Institute.</i>	MPI-SWS Kaiserslautern	Feb 2024
<i>Max Planck / Universität Tübingen.</i>	Tübingen AI Center	Feb 2024
<i>CMU.</i>	Engineering and Public Policy (EPP)	Feb 2024
<i>Cornell.</i>	Information Science	Feb 2024
<i>Cornell.</i>	ORIE	Feb 2024
<i>Michigan.</i>	IOE	Feb 2024
<i>Dartmouth.</i>	Thayer School of Engineering	Jan 2024
<i>Columbia.</i>	IEOR	Jan 2024
<i>Yale School of Management.</i>	Operations group	Jan 2024
<i>Columbia Business School.</i>	DRO division	Jan 2024
<i>MIT Sloan.</i>	OR/STATS	Jan 2024
<i>Wharton School.</i>	OID	Dec 2023
<i>UT Austin McCombs.</i>	IROM	Nov 2023
<i>Caltech.</i>	FALCON Research Group Seminar	Nov 2023
<i>UChicago.</i>	Rising Stars in Data Science	Nov 2023
<i>UC Berkeley.</i>	Data Science Toolbox Series	Oct 2023
<i>INFORMS Annual Meeting.</i>	ML for Social Good session	Oct 2023
<i>Cornell ORIE.</i>	Young Researchers Workshop	Oct 2023
<i>J.P. Morgan.</i>	AI Research group	Oct 2023
<i>Stanford MS&E.</i>	Rising Stars in MS&E	May 2023

Causal AI and Conservation

<i>ICCB.</i>	Int'l Conference on Conservation Biology, Kigali, Rwanda	Jul 2023
<i>Microsoft Research New England.</i>	Machine Learning Ideas seminar	Jun 2023
<i>United Nations ITU.</i>	AI for Good Summit	Jun 2023
<i>WWF.</i>	<u>Fuller Seminar Series on Conservation AI</u>	Apr 2023

Minimax Regret Optimization: Robust Planning for Conservation and Maternal Health

<i>Berkeley MARL.</i>	Multi-Agent Learning Seminar	Mar 2023
<i>Brown University.</i>	Algorithmic Game Theory group	Mar 2023

Learning and Planning Under Uncertainty for Wildlife Conservation

<i>Harvard Kennedy School.</i>	"Leading in AI" Executive Education	Jul 2023
<i>Penn State.</i>	CSRAI Young Achievers Symposium	Mar 2023
<i>UC Berkeley.</i>	Global Policy Lab	Feb 2023
<i>Centro de Analítica para Políticas Públicas (CAPP).</i>	(in Spanish)	Dec 2022
<i>Georgia Tech.</i>	ISyE department seminar	Nov 2022
<i>Analytics for a Better World.</i>	<u>ABW Webinar Series</u>	Sep 2022
<i>Harvard Kennedy School.</i>	"Leading in AI" Executive Education	Jul 2022
<i>UC Berkeley.</i>	Ethics and Practices of Algorithmic Conservation	Apr 2022
<i>UCL.</i>	Climate Hack AI Competition, <i>keynote</i>	Mar 2022
<i>Harvard University.</i>	HCI Colloquium: AI-Assisted Decision-Making	Feb 2022
<i>Pasteur's Quadrant.</i>	Seminar Series	Feb 2022
<i>INFORMS.</i>	<u>Doing Good with Good OR Finalists</u>	Oct 2021

Ranked Prioritization of Groups in Combinatorial Bandit Allocation

<i>Sony.</i>	Computer Science Laboratories (CSL) Paris	Oct 2022
<i>Stanford.</i>	Computing & Society group	Oct 2022

	<i>INFORMS Annual Meeting.</i> Fairness in Sequential Decision Making	Oct 2022
	Envisioning Communities: A Participatory Approach to AI for Social Good	
	<i>MIT.</i> AI Ethics group	Sep 2022
	<i>Women's Forum.</i> Women4AI Daring Circle workshop	Jun 2022
	Robust Reinforcement Learning Under Minimax Regret for Green Security	
	<i>Google Research India.</i> AI for Social Good research group	Jan 2022
	PAWS: AI to Predict and Plan Against Poaching	
	<i>ICCB.</i> International Congress for Conservation Biology	Dec 2021
	<i>IUCN WCC.</i> World Conservation Congress	Sep 2021
	<i>WILDLABS.</i> Tech Tutors: Season Three	Sep 2021
	<i>AI for Climate.</i> Mexico Talk Series powered by Huawei	Jul 2021
	<i>SMART Partnership.</i> International Women's Day Webinar	Mar 2021
	<i>WWF.</i> Webinar on SMART	Apr 2020
	<i>AI LA.</i> Earth Summit	Apr 2021
	Dual-Mandate Patrols: Multi-Armed Bandits for Green Security	
	<i>Beijing Academy of Artificial Intelligence.</i>	Mar 2021
	<i>University College London.</i> AI Society	Feb 2021
INVITED PANELS	<i>Columbia.</i> Biodiversity Data Analytics	Nov 2025
	<i>Climate Change AI & ETH Future Cities Laboratory.</i> Singapore	Apr 2025
	<i>Blue Earth.</i> Blue Earth Summit, London, UK	Oct 2024
	<i>ETH AI Center, Switzerland.</i> AI+X Summit, Zürich, Switzerland	Oct 2024
	<i>Arthur AI.</i> AI Fest	Sep 2024
	<i>Hertz Foundation Workshop.</i> AI Science and Policy, <i>moderator</i> panelists: Jacob Steinhardt, Julie Owono, Jessica Fjeld	Jul 2022
	<i>South by Southwest (SXSW).</i> AI for Wildlife	Mar 2021
	<i>Harvard CRCS.</i> AI for Social Impact, <i>moderator</i> panelists: Susan Murphy, Erez Yoeli, Desmond Patton	Mar 2020
GUEST LECTURES	<i>Columbia University.</i> Sustainable Development	Spring 2026
	<i>Columbia University.</i> IEOR E1000: Frontiers in OR and Data Analytics	Spring 2026
	<i>Columbia University.</i> IEOR E4505: Operations Research in Public Policy	Spring 2025
	<i>American University of Cairo.</i>	Spring 2025
	<i>USC.</i> ISE 625. Analytics for Social Impact	Spring 2025
	<i>Oxford.</i> Intelligent Earth PhD course	Winter 2025
	<i>NYU Stern.</i> Recent Advances in Data-Driven Decision Making	Fall 2024
	<i>Harvard.</i> CS 288. AI for Social Impact	Fall 2024
	<i>Harvard.</i> CS 288. AI for Social Impact	Spring 2024
	<i>Vanderbilt.</i> CS 5891. AI for Social Impact	Spring 2024
	<i>Cornell Tech.</i> CS 6382. Data Science for Social Change	Fall 2023
	<i>Cornell Tech.</i> ORIE 5355/INFO 5370. Applied Data Science: Decision-making beyond prediction	Fall 2023
	<i>Harvard.</i> CS 182. Artificial Intelligence	Fall 2023
	<i>Cornell.</i> INFO 6960. Data Science for Global Development	Spring 2023
	<i>MIT.</i> 15 076. Analytics for a Better World	Spring 2023
	<i>Harvard.</i> CS 96. Machine Learning for Social Impact	Spring 2023
	<i>Wellesley.</i> CS 115. Computing for the Socio-Techno Web	Fall 2022

<i>Ohio State.</i>	CSE 3521. Survey of Artificial Intelligence I	Fall 2022
<i>Harvard.</i>	CS 288. AI for Social Impact	Fall 2022
<i>University of Southern California.</i>	ISE 599. Analytics for Social Impact	Spring 2022
<i>UPenn Wharton.</i>	OIDD 941. Recent Advances in Data-Driven Decision-Making	Spring 2022
<i>Harvard.</i>	CS 96. Machine Learning for Social Impact	Spring 2022
<i>Cornell Tech.</i>	ORIE 5355/INFO 5370. People, Data, Systems	Fall 2021
<i>Harvard Business School.</i>	HBSMBA 2231. From Data to Decisions	Fall 2021
<i>Wellesley.</i>	CS 115. Computing for the Socio-Techno Web	Fall 2021
<i>Australian National University.</i>	CECS8001. Building Cyber-Physical Systems	Fall 2021
<i>University of Pittsburgh.</i>	CS 1699. AI for Good: Ethics and Implications	Spring 2021
<i>University of Michigan.</i>	SI 431. Algorithms and Society	Spring 2021
<i>Harvard.</i>	CS 182. Artificial Intelligence	Fall 2020
<i>Dartmouth.</i>	CS 11. Foundations of Applied Computer Science	Spring 2018

WORK
EXPERIENCE

Google Research. India, AI for Social Good lab <i>Student Researcher</i>	Spring 2022
Google. Seattle, WA <i>Software Engineering Intern</i>	Summer 2017
Dyn, Inc. Hanover, NH <i>Data Analytics Research Intern</i>	Spring 2016

STUDENTS ADVISED **PhD Advisees**

Siyi (Icey) Ai 2025 –
 Tahda Queer 2025 –

MS Advisees

Kyran Flynn 2025 –

Undergraduate

Hannah Park (UChicago) Jun 2025 –

Undergraduate: Harvard College

Vincent Börsch-Supan '25 Sep 2022 – Dec 2023

Alejandra Perea Rojas '24 Jun 2022 – Dec 2022

Christopher Ong '23 Spring 2022

April Chen '22 Summer 2021

Adobe Research Women-In-Technology Scholarship Winner

Ezenia Diaz-Lembert '23 Spring 2021

Emilia Cabrera '21 Sep 2020 – Dec 2021

*Thesis: Protecting the Lion's Share: Mitigating Illegal Wildlife Poaching
 with Multi-Agent Reinforcement Learning*

Rachel Guo '22 Jun 2020 – May 2023

NCWIT Collegiate Award Winner

CRA Outstanding Undergraduate Researcher Award — Honorable Mention

Harvard Hoopes Prize for Outstanding Thesis

NSF Graduate Research Fellowship

Thesis: On the Effect of Ranger Patrols on Deterring Poaching: A Bayesian

Approach for Causal Inference Using Field Tests as an Instrument

Next step: Stanford ICME PhD student

TEACHING
EXPERIENCE**Columbia University**

IEOR 3658: Probability for Engineers Fall 2026

IEOR E8100: Advanced Topics in IEOR Spring 2026

ORCS E4200: Data-Driven Decision Modeling Fall 2025, Fall 2026

Harvard University

→ *Head Teaching Fellow*

CS 182: Artificial Intelligence Fall 2020

Harvard Derek Bok Certificate of Distinction in Teaching

Dartmouth College

→ *Teaching Assistant, Department of Computer Science*

CS 11: Foundations of Applied Computer Science, *head TA* Spring 2018

CS 1: Intro to Programming and Computation Spring 2018

CS 1: Intro to Programming and Computation Fall 2017

CS 31: Algorithms Winter 2017

CS 1: Intro to Programming and Computation Spring 2017

CS 10: Object-Oriented Programming Spring 2016

CS 1: Intro to Programming and Computation Winter 2016

CS 1: Intro to Programming and Computation Fall 2015

CS 10: Object-Oriented Programming Spring 2015

→ *Teaching Assistant, Tuck School of Business*

Tuck FWP: Fundamentals of Web Programming Spring 2017

Tuck DSA: Data Structures and Analytics Spring 2017

FUNDING:	Industry gift. Quintessence Marine. \$20,000 in support
PROPOSALS AND AWARDS	EAAMO Executive Director funding, supported by the Cornell Tech PiTech Faculty Impact Fellowship. Awarded 2023. (I co-wrote proposal and helped scope position). Approx ~\$100,000 in support
	Lily Xu. Siebel Scholar, awarded 2023. \$35,000
	Lily Xu. Google PhD fellowship, awarded 2022. \$88,029

PROFESSIONAL SERVICE	EAAMO (Equity and Access in Algorithms, Mechanisms, and Optimization) formerly Mechanism Design for Social Good (MD4SG)	
	Nonprofit incorporation and Executive Director recruitment, lead	Apr 2023 –
	MD4SG/EAAMO Bridges initiative-wide co-organizer	Mar 2021 –
	<i>with Charles Cui, Francisco J. Marmolejo Cossío, George Obaido, Matthew Olckers, and Ana-Andreea Stoica;</i>	
	<i>previously with Rediet Abebe, Irene Lo, and Wanyi Li</i>	
	Working Group on Environment, advisor	Apr 2021 –
	Community Engagement team, founder and co-lead	Oct 2020 – Apr 2021
	Working Group on Environment, co-founder and co-organizer	Jan 2020 – Apr 2021
	Workshop Organization	
	Organizer, Beyond monitoring: Envisioning opportunities for AI to help inform conservation decision-making @ Oxford	Jun 2025
	Co-organizer, Climate Change AI Workshop @ ICLR	Apr 2025
	Co-organizer, AI-Assisted Decision Making for Conservation Workshop	Oct 2022
	<i>with Esther Rolf and Milind Tambe</i>	
	Organizer, SMART/PAWS Workshop. Rio Bravo, Belize	Aug 2022
	Lead organizer, Harvard CRCS Rising Stars Workshop	Mar 2020
	Co-organizer, Computational Sustainability Doctoral Consortium	Oct 2019
	<i>with Priya Donti, Genevieve Flaspohler, Aaron Ferber, and Sebastian Ament</i>	
	Tutorials	
	Lead organizer, AI for Social Impact tutorial @ EAAMO	Oct 2023
	<i>with Emily Aiken, Priya Donti, Nikhil Garg, and Paul Gözl</i>	
	Panels	
	Co-organizer and co-moderator. The Future of AI for Social Impact	Apr 2022
	<i>panelists: Fei Fang, Lynn Kaack, Danaë Metaxa, Bryan Wilder</i>	
	Conference Event Organization	
	AI for biodiversity decisions, Int'l Conservation Tech Conference (ICTC)	Feb 2026
	Poster co-chair, ACM EAAMO'24	Oct 2024
	Session co-organizer, WALE workshop	Jun 2024
	Social co-chair, ACM EAAMO'23	Oct 2023
	Social co-chair, ACM EAAMO'22	Oct 2022
	Social co-chair, ACM EAAMO'21	Oct 2021
	Social co-chair, Fourth Workshop on MD4SG	Aug 2020
	Seminar Organization	

Co-organizer, UN ITU AI for Good series on biodiversity	Spring 2025
Co-organizer, Harvard CRCS Social Impact Seminar Series	Spring 2022
Co-organizer, Harvard CRCS Rising Stars Speaker Series	Apr 2021
Co-organizer, CompSust Open Graduate Seminar (COGS)	Spring 2020

REVIEWING SERVICE

Journal Reviewing

Ambio
 Biological Conservation
 Computing and Sustainable Societies (JCSS, formerly COMPASS)
 Conservation Letters
 Conservation Science and Practice
 Journal of Artificial Intelligence Research (JAIR)
 Operations Research
 Nature Sustainability
 Nature Communications
 Proceedings of the National Academy of Sciences (PNAS)

Area Chair / Senior Program Committee (Conference meta-reviewing)

NeurIPS. Neural Information Processing Systems 2026
AAAI AISI track. AAAI Conference on Artificial Intelligence 2026

Program Committee (Conference reviewing)

→ Conferences

AAMAS. Autonomous Agents and Multi-Agent Systems 2025
AIES. Artificial Intelligence, Ethics, and Society 2022, 2023
AAAI. AAAI Conference on Artificial Intelligence 2023
AAAI AISI track. AAAI Conference on Artificial Intelligence 2020, 2021, 2022, 2025
COMPASS. Computing and Sustainable Societies 2021
EAAMO. Equity and Access in Algorithms, Mechanisms, and Optimization 2021, 2022, 2023, 2024
EC. Economics and Computation 2025
FAccT. Fairness, Accountability, and Transparency 2022, 2023, 2025
IAAI. AAAI Innovative Applications of Artificial Intelligence 2023
ICLR. International Conference on Learning Representations 2025
NeurIPS. Neural Information Processing Systems 2023
UAI. Uncertainty in Artificial Intelligence 2023

→ Workshops

AI for Wildlife Conservation @ SIGSPATIAL 2023
 Autonomous Agents for Social Good (AASG) @ AAMAS 2021, 2023
 AI for Social Good @ AAAI 2023
 Data-Driven Humanitarian Mapping @ KDD 2020, 2021, 2022
 Regulating Machine Learning @ NeurIPS 2023
 Computational Sustainability @ NeurIPS 2023
 Cooperative AI Workshop @ NeurIPS 2022
 Black in AI Workshop @ NeurIPS 2020, 2021, 2022
 Machine Learning for the Developing World (ML4D) @ NeurIPS 2020, 2021
 Machine Learning for Public Health @ NeurIPS 2021
 Resistance AI @ NeurIPS 2020
 AI for Social Good @ IJCAI 2020
 Mechanism Design for Social Good (MD4SG) 2020
 AI for Social Good @ Harvard CRCS 2020

Competition / Proposal Reviewing Committee		
	WILDLABS Awards	2026
	Climate Change AI, Innovation Grants, <i>Meta-reviewer</i>	2024
	AI2, EarthRanger Conservation Tech Award	2022, 2023
Reviewer		
	Deep Learning Indaba	2022
	Caltech Computer Vision for Ecology (CV4Ecology) Summer School	2022
	ICML, <i>subreviewer</i>	2021
	NeurIPS, <i>subreviewer</i>	2020
	IJCAI Special Track on CompSust and Human Well-being, <i>subreviewer</i>	2020
	COMPASS, <i>subreviewer</i>	2019
	Bloomberg Data for Good Exchange (D4GX), <i>subreviewer</i>	2019
AT COLUMBIA	Steering committee, SEAS Junior Faculty working group	2026 –
	Task Force, AI for Social Good and Society Initiative	2025 –
	Faculty Search Committee, IEOB	2025 – 26
	Faculty Search Committee, Ecology, Evolution & Enviro. Biology (E3B)	2025 – 26
	PhD committee, IEOB	2025 – 26
	PhD admissions committee, IEOB	2024 – 25
THESIS COMMITTEES	Darshan Chakrabarti (Columbia IEOB), advisor: Christian Kroer	defense 2025
	Joel Mugenyi (Columbia EEE), advisor: Vijay Modi	proposal 2025
	Yuezi Wu (Columbia MechE), advisor: Vijay Modi	defense 2025
OUTREACH	Speaking	
	<i>UMD</i> . Student Sustainability Summit	May 2025
	<i>Harvard</i> . CS 290, Navigating grad school, <i>panelist</i>	Nov 2023
	<i>Harvard</i> . Tech for Social Good and Harvard Computer Society	Mar 2023
	<i>Harvard SEAS</i> . PhD Admitted Students Open House, <i>panelist</i>	Mar 2021
	<i>Harvard SEAS</i> . Research Labs Open House	Nov 2020
	<i>GirlsComputingLeague</i> . AIInnovation Business Summit	Sep 2020
	<i>IEEE Computer Society</i> . Women in Computing, Kerala (India) Chapter	Sep 2020
	<i>Data Science Africa</i> . Tutorial on MD4SG and the Environment	Jul 2020
	<i>Ledyard Canoe Club</i> . Inclusivity in the Outdoors	Jul 2020
	<i>Dartmouth</i> . Women in Computer Science, <i>panelist</i>	May 2020
	<i>Harvard SEAS</i> . Diversity, Inclusivity, and Belonging, <i>panelist</i>	May 2020
	<i>Center for Initiatives in Jewish Education</i> . High school student visit	Mar 2020
	<i>World Science Festival</i> . Science and Storytime	Jun 2019
	<i>L.A. Unified School District (LAUSD)</i> . African American Family Day	May 2019
	<i>Zoo Magnet High School</i> . College and Career Day	Nov 2018
	Mentoring	
	<i>Harvard University</i> . InTouch Peer Mentor	2020 – 2023
	<i>Harvard University</i> . Women in STEM Mentor	2019 – 2020
	<i>Dartmouth College</i> . Women in Computer Science	2017 – 2018
	Volunteering	
	<i>Harvard SEAS</i> . A Guide to Your PhD	Oct 2020
	<i>Harvard University</i> . Project Teach	Apr 2020
	<i>Cambridge Public Schools</i> . STEAM It Up!	Oct 2019
	<i>Hustle N' Code</i> . Hackathon, <i>technical lead</i>	Dec 2018
	<i>Hustle N' Code is a Los Angeles hackathon for youth in public housing.</i>	

My team won first place, and the four students each received a laptop.

Case Studies

Harvard Business School. SMART: AI and ML for Wildlife Conservation Oct 2022

Podcasts

Ecochat. AI for Conservation - Using Machine Learning to Stop Poaching 2023

Cold Call (Harvard Business School podcast). Can AI and Machine Learning Help Park Rangers Prevent Poaching? 2023

INFORMS Resoundingly Human Podcast. May 2022

Rethinking Economics NL. Disruptive Technologies podcast series. May 2021

Video

Alhub. New Voices in AI: environmental conservation with Lily Xu. Oct 2022

Voice of America (VOA) News. Wildlife Rangers Use AI to Predict Poachers' Next Moves. Jan 2022

Articles

Think Landscape. How AI is transforming conservation Aug 2024

Business Insider. Conservationists are using artificial intelligence to map out the best ways for saving threatened wildlife and resources Oct 2022

Oxford Science. AI in conservation: a modern-day solution to the biodiversity crisis? March 2022

The Hill. These new technologies could transform wildlife conservation. Feb 2022

Harvard SEAS. Computer Conservation. Nov 2021

Alhub. Interview with Lily Xu. Oct 2021

Engadget. PAWS anti-poaching AI predicts where illegal hunters will show up next. Mar 2021

Mongabay. Where to patrol next: 'Netflix' of ranger AI serves up poaching predictions. Nov 2020

Harvard SEAS. Preventing poaching. Jun 2020

BBC Sounds. How tech is tackling wildlife trafficking. Jun 2020

BBC World Service. Using technology to take on poachers. Aug 2019

USC Viterbi Magazine. AI is for Animals. Apr 2019

REFERENCES

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Assistant Professor, Cornell Tech