ANDI PENG

CONTACT

MIT CSAIL (32-386)
32 Vassar Street
Cambridge, MA 02139

andipeng@mit.edu
+1 (440) 715-0384
https://andipeng.com

EDUCATION

Massachusetts Institute of Technology — Cambridge, MA
Ph.D. Electrical Engineering and Computer Science
Advisor: Julie Shah

Feb 2023 — **Massachusetts Institute of Technology** — Cambridge, MA
M.S. Electrical Engineering and Computer Science
Advisors: Pulkit Agrawal and Julie Shah

May 2018 — **Yale University**, *cum laude, with distinction* — New Haven, CT
B.S. Cognitive Science
B.A. Global Affairs
Awarded Douglas A. Beck Prize *for high academic achievement, leadership potential, personal integrity, and commitment to public service*

RESEARCH POSITIONS

Fall 2023 — Part-Time Researcher, **Boston Dynamics AI Institute** — Cambridge, MA
Host: JW Wang

Summer 2023 — Research Intern, **MIT-IBM Watson AI Lab** — Cambridge, MA
Host: Chuang Gan

Summer 2021 — Research Intern, **Facebook AI Research (FAIR)** — Pittsburgh, PA
Hosts: Aravind Rajeswaran and Vikash Kumar

2018 - 2020 — AI Resident, **Microsoft Research** — Redmond, WA
Hosts: Ece Kamar, Besmira Nushi, Emre Kiciman, Kori Inkpen

2018 — Policy Intern, **White House Office of Science and Technology Policy (OSTP)** — Washington, DC
Research Associate, **National Institute for Standards and Technology (NIST)**
Host: Jake Taylor

2016 - 2018 — Undergraduate Researcher, **Yale University** — New Haven, CT
Advisor: Brian Scassellati

Summer 2016 — MARTI Researcher, **NASA Glenn Research Center** — Cleveland, OH
Hosts: Justin Gray and Jeffrey Chin

FELLOWSHIPS, HONORS, AND AWARDS

2023 - 2024	Open Philanthropy Research Grant	$145,422
2020 - 2025	NSF Graduate Research Fellowship	$138,000
2018	Fox Fellowship, University of Cambridge	$30,000 *(declined)*
2017	Truman Scholarship	$30,000
2017	Grand Strategy Research Grant, Yale University	$4,000
2016	John D. Heinz Fellowship, Yale University	$14,000
2015	Nathan Hale Scholarship, Yale University *A special distinction that reflects the university's esteem for past and future achievements*	$55,000
2014	The President's Volunteer Service Award, Barack Obama's Council on Service and Civic Participation	
2013	Appointment to the U.S. Military Academy at West Point *Nominated by Senator Sherrod Brown and Congressman Steve LaTourette*	*(declined)*

JOURNAL PUBLICATIONS

Nature Make Greenhouse-Gas Accounting Reliable—Build Interoperable Systems
Amy Luers, Leehi Yona, Christopher Field, Robert Jackson, Katharine Mach, Benjamin Cashore, Cynthia Elliott, Lauren Gifford, Colleen Honigsberg, Lena Klaassen, Damon Mathews, **Andi Peng**, Christian Stoll, Marian Van Pelt, Ross Virginia, Lucas Joppa.
Nature 607.7920, 2022

CONFERENCE PUBLICATIONS

* equal contribution

Preprint Learning with Language-Guided State Abstractions
Andi Peng, Ilia Sucholutsky, Belinda Li, Theodore Sumers, Thomas Griffiths, Jacob Andreas, Julie Shah
Workshop on Social Intelligence in Humans and Robots, RSS 2023 (oral)

Preprint Human-Guided Complexity-Controlled Abstractions
Andi Peng*, Mycal Tucker*, Eoin Kenny, Noga Zaslavsky, Pulkit Agrawal, Julie Shah.

Preprint Aligning Human and Robot Representations
Andreea Bobu*, **Andi Peng***, Pulkit Agrawal, Julie Shah, Anca Dragan.
Workshop on Collaborative Robots and Work of the Future, ICRA 2022
Workshop on Social Intelligence in Humans and Robots, RSS 2022
Workshop on ML Safety, NeurIPS 2022

ICML 2023 Diagnosis, Feedback, Adaptation: A Human-in-the-Loop Framework for Test-Time Policy Adaptation
Andi Peng, Aviv Netanyahu, Mark Ho, Tianmin Shu, Andreea Bobu, Julie Shah, Pulkit Agrawal.
Proceedings of the *International Conference on Machine Learning* (ICML), 2023
Workshop on Human in the Loop Learning, NeurIPS 2022
Press: MIT News (front page featured story), EE Times, ASME

AAAI 2022 (oral, top 4%) Investigations of Performance and Bias in Human-AI Teamwork in Hiring
Andi Peng, Besmira Nushi, Kori Inkpen, Emre Kiciman, Ece Kamar.
Proceedings of the *AAAI Conference on Artificial Intelligence* (AAAI), 2022
Workshop on Trust and Reliance in Human-AI Teams, CHI 2022

AAAI 2020 (oral, top 3%) Human-Machine Collaboration for Fast Land-Cover Mapping
Caleb Robinson, Anthony Ortiz, Kolya Malkin, Blake Elias, **Andi Peng**, Dan Morris, Bistra Dilkina, Nebojsa Jojic.
Proceedings of the *AAAI Conference on Artificial Intelligence* (AAAI), 2020
Workshop on Climate Science and Adaptation, ICLR 2020
Workshop on Tackling Climate Change with Machine Learning, NeurIPS 2019

AIES 2020 (oral) The Perils of Objectivity: Towards a Normative Framework for Fair Judicial Decision-Making
Andi Peng, Malina Simard-Halm.
Proceedings of the *AAAI/ACM Conference on Artificial Intelligence, Ethics, and Society* (AIES), 2020

HCOMP 2019 What You See is What You Get? The Impact of Representation Criteria on Human Bias in Hiring
Andi Peng, Besmira Nushi, Emre Kiciman, Kori Inkpen, Siddharth Suri, Kori Inkpen, Ece Kamar.
Proceedings of the *AAAI Conference on Human Computation and Crowdsourcing* (HCOMP), 2019

SciTech 2017 Conceptual Feasibility Study of the Hyperloop Vehicle for Next-Generation Transport
Kenneth Decker, Jeffrey Chin, **Andi Peng**, Colin Summers, Golda Nguyen, Andrew Oberlander, Gazi Sakib, Nariman Sharifrazi, Christopher Heath, Justin Gray, Robert Falck.
Proceedings of the *AIAA SciTech Forum and Exposition* (SciTech), 2017
Archived as NASA Technical Report

WORKSHOP PUBLICATIONS

ICLR 2022 Strengthening Subcommunities: Towards Sustainable Growth in AI Research
Andi Peng, Jessica Zosa Forde, Yonadav Shavit, Jonathan Frankle.
Workshop on ML Evaluation Standards, ICLR 2022

CHI 2020 On the Nature of Bias Percolation: Assessing Multiaxial Collaboration in Human-AI Systems
Andi Peng, Besmira Nushi, Kori Inkpen, Emre Kiciman, Ece Kamar.
Workshop on Human-Centered Approaches to Fair and Responsible AI, CHI 2020 (oral)

POLICY WORK

P4. Led and evaluated grant on Improving the ML Publishing Process.
Schmidt Futures. ICLR 2022 ML Evaluation Standards Workshop.
Apr 2022

P3. Report on Algorithmic Risk Assessment Tools in the U.S. Criminal Justice System
The Partnership on AI. Working Group on Fairness, Transparency, and Accountability.
Apr 2019

P2. National Strategic Overview for Quantum Information Science
The White House. Office of Science and Technology Policy.
Sep 2018

P1. Nigeria: Tracking and Promoting Good Governance
United States Institute of Peace. Through the Yale Jackson School of Global Affairs.
Dec 2016

INDUSTRY EXPERIENCE

2021 - 2022	(Part-time) Policy Analyst, **Schmidt Futures**	New York, NY
2019 - 2020	Applied Scientist II, **Microsoft AI & Research**	Redmond, WA
Summer 2017	Security Engineering Intern, **Facebook eCrime Team** *Created ML threat modeling to aid federal investigators. Collaborated with law enforcement on counter-terrorism, sex trafficking, and state-sponsored information cases.*	Menlo Park, CA
2014 - 2015	Product Manager, **IT Central Station**	Tel Aviv, Israel

INVITED TALKS

2023	Aon AI Fireside Chat	Chicago, IL
2023	Yale for Humanity: AI, Ethics, and Society: Utilizing Technology for Good	Chicago, IL
2022	FAccT SEDL Workshop	Seoul, South Korea
2022	Yale Cyber Leadership Forum	New Haven, CT
2021	MIT GW6 Research Summit	Cambridge, MA
2021	Facebook AI Research (FAIR) Robotics Seminar	Pittsburgh, PA
2020	Microsoft Research Adaptive Systems and Interaction Group	Virtual
2019	Microsoft AI&R Diversity, Inclusion and Belonging Day	Redmond, WA
2019	Microsoft AI for Good Research Group	Redmond, WA
2018	Microsoft Research AI Seminar	Redmond, WA
2016	NASA Aeronautics Research Mission Directorate	Glenn, OH
2014	Hubei University School of International Studies	Enshi, China

WORKSHOP ORGANIZATION

NeurIPS 2023	Workshop on Goal-Conditioned Reinforcement Learning	New Orleans, LA
ICML 2023	Workshop on Learning from Implicit Human Feedback	Honolulu, HI
CoRL 2022	Workshop on Aligning Robot Representations with Humans	Auckland, New Zealand

TEACHING

Yale Jackson School of Global Affairs

2022-2023 GLBL 6610: Artificial Intelligence, Emerging Technologies, and National Power — Guest Lecturer (4x)

MIT Electrical Engineering and Computer Science

IAP 2021 6.S090: Deep Learning for Control — Co-Head T.A.

Yale Computer Science

Fall 2017 CPSC 100 (CS50): Introduction to Computer Science — T.A.
Spring 2017 CPSC 223: Data Structures and Programming Techniques — T.A.
Spring 2016 CPSC 202: Mathematical Tools for Computer Science — T.A.

Fall 2015, 2016 CPSC 100 (CS50): Introduction to Computer Science — Head T.A.
First undergraduate head T.A. for the largest engineering course in university history (managed course staff of 62). Had weekly teaching sections professionally filmed and produced for streaming.

Yale Astrophysics

Spring 2015 ASTR 343: Gravity, Astrophysics, and Cosmology — T.A.

PROFESSIONAL SERVICE

University Service

Student Advisory Group (AI+D), MIT EECS Faculty Search — 2023
Board of Advisors, Yale Jackson School of Global Affairs — 2020 - 2023

Department Service

Graduate Visit Days Event Host, MIT EECS — 2021 -
Executive Board, Yale Psi Chi Honor Society — 2017 - 2018
Student Advisory Board, Yale Jackson Institute for Global Affairs — 2016 - 2018
Student Advisory Board, Yale Brady-Johnson Program in Grand Strategy — 2017 - 2018

Outreach

Yale FLOAT (Women and Minorities in CS) — 2016 - 2018

Leadership

Peer Liaison, Yale Asian-American Cultural Center — 2017 - 2018
Sole upperclassman peer mentor in Berkeley College (one of 14 residential colleges at Yale).
Captain, Yale Women's Club Soccer — 2015 - 2016
Deputy ED, Teaching Peace Initiative — 2013 - 2015
Helped run a national student-run 501(c)(3) nonprofit for teaching peace-curriculum in schools.

REVIEWING

Program Committee

AAAI Conference on Artificial Intelligence (AAAI) — 2023 - 2024

Reviewing

Conference on Neural Information Processing Systems (NeurIPS) — 2022
Robotics: Science and Systems (RSS) — 2022 - 2023
IEEE International Conference on Robotics and Automation (ICRA) — 2022
International Conference on Learning Representations (ICLR) — 2022
AAAI Conference on Artificial Intelligence (AAAI) — 2021 - 2022
ACM Conference on Human Factors in Computing Systems (CHI) — 2020 - 2023
AAAI/ACM Conference on Artificial Intelligence, Ethics, and Society (AIES) — 2020

RESEARCH MENTORSHIP

Summer 2023 Jiaming Shan (Undergraduate at MIT-IBM Watson AI Lab)
Research on collaborative agents.

Fall 2021 Jerry Mao (Undergraduate at MIT)
Research on DARPA Machine Common Sense Project.

TECHNICAL SKILLS

Languages	Python, Java, C/C++, R, JavaScript, LaTeX
Software	PyTorch, TensorFlow, Gym, OpenCV, Stata

OTHER INTERESTS

Running team member of the Boston Athletic Association (BAA). Annual participant at the Boston Marathon and USA Track and Field running circuit. Ex-college soccer player.

LANGUAGES (HUMAN)

English	Native
Mandarin	Native
French	Conversational