# **ANDI PENG**

# **CONTACT**

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# **EDUCATION**

Massachusetts Institute of Technology

Ph.D. Electrical Engineering and Computer Science
Advisors: Pulkit Agrawal and Julie Shah

Yale University, cum laude, with distinction in major

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**

Summer 2021	Research Intern, <b>Facebook AI Research (FAIR)</b> Mentors: Aravind Rajeswaran and Vikash Kumar	Pittsburgh, PA
2018 - 2020	AI Resident, <b>Microsoft Research</b> Mentors: Ece Kamar, Besmira Nushi, Emre Kiciman, Kori Inkpen	Redmond, WA
2018	Policy Intern, White House Office of Science and Technology Policy (OSTP) Research Associate, National Institute for Standards and Technology (NIST) Mentor: Jake Taylor	Washington, DC
2016 - 2018	Undergraduate Researcher, <b>Yale University</b> Advisor: Brian Scassellati	New Haven, CT
Summer 2016	MARTI Researcher, <b>NASA Glenn Research Center</b> Mentors: Justin Gray and Jeffrey Chin	Cleveland, OH

# FELLOWSHIPS, HONORS, AND AWARDS

2020 - 2025	NSF Graduate Research Fellowship	\$138,000			
2022	FTX Future Fund Regrant	\$42,600			
2018	Fox Fellowship, University of Cambridge	\$30,000 (declined)			
2017	017 Truman Scholarship				
2017	Douglas A. Beck Prize, Yale University				
2017	Grand Strategy Research Grant, Yale University	\$4,000			
2016	John D. Heinz Fellowship, Yale University	\$14,000			
2015	Nathan Hale Scholarship, Yale University \$55,000 A special distinction that reflects the university's esteem for past and future achievements				
2014	The President's Volunteer Service Award, Barack Obama's Council on Service and C	livic Participation			
2013	National Merit Scholarship	\$2,500			
2013	Appointment to the U.S. Military Academy at West Point Nominated by Senator Sherrod Brown and Congressman Steve LaTourette	(declined)			

# **CONFERENCE PUBLICATIONS**

C5. Investigations of Performance and Bias in Human-AI Teamwork in Hiring

Andi Peng, Besmira Nushi, Kori Inkpen, Emre Kiciman, Ece Kamar.

AAAI 2022 (oral, top 4%)

Presented at CHI 2022, Workshop on Trust and Reliance in Human-AI Teams

Human-Machine Collaboration for Fast Land-Cover Mapping C4.

Caleb Robinson, Anthony Ortiz, Kolya Malkin, Blake Elias, Andi Peng, Dan Morris, Bistra Dilkina, Neboisa Jojic.

AAAI 2020 (oral, top 3%)

Presented at ICLR 2020, Workshop on Climate Science and Adaptation

Presented at NeurIPS 2019, Workshop on Tackling Climate Change with Machine Learning

C3. The Perils of Objectivity: Towards a Normative Framework for Fair Judicial Decision-Making Andi Peng, Malina Simard-Halm. AIES 2020

C2. 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. HCOMP 2019

C1. 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.

AIAA SciTech 2017

Archived as NASA Technical Report

### **JOURNAL PUBLICATIONS**

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, 2022

#### **WORKSHOP PUBLICATIONS**

W3. Aligning Robot Representations with Humans

Andreea Bobu, Andi Peng.

ICRA 2022, Workshop on Collaborative Robots and Work of the Future RSS 2022, Workshop on Social Intelligence in Humans and Robots

W2. Strengthening Subcommunities: Towards Sustainable Growth in AI Research

Andi Peng, Jessica Zosa Forde, Yonadav Shavit, Jonathan Frankle.

ICLR 2022, Workshop on ML Evaluation Standards

On the Nature of Bias Percolation: Assessing Multiaxial Collaboration in Human-AI Systems W1. Andi Peng, Besmira Nushi, Kori Inkpen, Emre Kiciman, Ece Kamar.

CHI 2020, Workshop on Human-Centered Approaches to Fair and Responsible AI

#### **POLICY WORK**

Led and evaluated grant on Improving the ML Publishing Process. P4. 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

National Strategic Overview for Quantum Information Science P2.

The White House. Office of Science and Technology Policy. Sep 2018

P1.	Nigeria:	Tracking	and Pror	noting (	Good	Governance
	- 1-0					

**United States Institute of Peace**. Through the Yale Jackson School of Global Affairs. Dec 2016

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Part-time Researcher, <b>Schmidt Futures</b>						
	New York, NY					
2019 - 2020 Applied Scientist II, Microsoft AI & Research						
2019 - 2020 Applied Scientist II, <b>Microsoft AI &amp; Research</b> Redmond  Summer 2017 Security Engineering Intern, <b>Facebook eCrime Team</b> Created ML threat modeling to aid federal investigators. Collaborated with law enforcement on counter-terror sex trafficking, and state-sponsored information cases.						
Product Manager, IT Central Station	Tel Aviv, Israel					
T.S.						
FAccT SEDL Workshop	Seoul, South Korea					
Yale Cyber Leadership Forum	New Haven, CT					
MIT GW6 Research Summit	Cambridge, MA					
Facebook AI Research (FAIR) Robotics Seminar	Pittsburgh, PA					
Microsoft Research Adaptive Systems and Interaction Group	Virtual					
Microsoft AI&R Diversity, Inclusion and Belonging Day	Redmond, WA					
Microsoft AI for Good Research Group	Redmond, WA					
Microsoft Research AI Seminar	Redmond, WA					
NASA Aeronautics Research Mission Directorate	Glenn, OH					
Hubei University School of International Studies	Enshi, China					
MIT Electrical Engineering and Computer Science 6.S090: Deep Learning for Control	Co-Head T.A.					
Yale Computer Science CPSC 100 (CS50): Introduction to Computer Science CPSC 223: Data Structures and Programming Techniques CPSC 202: Mathematical Tools for Computer Science	T.A. T.A. T.A.					
CPSC 100 (CS50): Introduction to Computer Science First undergraduate head T.A. for the largest engineering course in university history (multiple) Had weekly teaching sections professionally filmed and produced for streaming.	Head T.A. anaged course staff of 62).					
Yale Astrophysics ASTR 343: Gravity, Astrophysics, and Cosmology	T.A.					
Reviewing Conference on Neural Information Processing Systems (NeurIPS) Robotics: Science and Systems (RSS) IEEE International Conference on Robotics and Automation (ICRA) International Conference on Learning Representations (ICLR) AAAI Conference on Artificial Intelligence (AAAI) ACM Conference on Human Factors in Computing Systems (CHI) AAAI/ACM Conference on Artificial Intelligence, Ethics, and Society (AIES) University Service Board of Advisors, Yale Jackson School of Global Affairs  Department Service  Executive Roard, Yale Rei Chi Honor Society	2022 2022 2022 2022 2021, 2022 2020, 2021, 2022 2020, 2021, 2022 2020, 2021, 2022					
	Created ML. Threat modeling to aid federal investigators. Collaborated with law enforcem sex trafficking, and state-sponsored information cases.  Product Manager, IT Central Station  S  FACCT SEDL Workshop Yale Cyber Leadership Forum MIT GW6 Research Summit Facebook AI Research (FAIR) Robotics Seminar Microsoft Research Adaptive Systems and Interaction Group Microsoft Al&R Diversity, Inclusion and Belonging Day Microsoft AI for Good Research Group Microsoft Research AI Seminar NASA Aeronautics Research Mission Directorate Hubei University School of International Studies  MIT Electrical Engineering and Computer Science 6.5090: Deep Learning for Control Yale Computer Science CPSC 100 (CS50): Introduction to Computer Science CPSC 203: Data Structures and Programming Techniques CPSC 202: Mathematical Tools for Computer Science CPSC 100 (CS50): Introduction to Computer Science First undergraduate head T.A. for the largest engineering course in university history (m. Had weekly teaching sections professionally filmed and produced for streaming. Yale Astrophysics ASTR 343: Gravity, Astrophysics, and Cosmology  Reviewing Conference on Neural Information Processing Systems (NeurIPS) Robotics: Science and Systems (RSS) IEEE International Conference on Robotics and Automation (ICRA) International Conference on Artificial Intelligence (AAAI) ACM Conference on Human Factors in Computing Systems (CHI) AAAI (ACM Conference on Artificial Intelligence, Ethics, and Society (AIES) University Service Board of Advisors, Yale Jackson School of Global Affairs					

Student Advisory Board, Yale Jackson Institute for Global Affairs	2016, 2017, 2018
Student Advisory Board, Yale Brady-Johnson Program in Grand Strategy	2017, 2018

# Mentorship

Yale FLOAT (Women and Minorities in CS)

2016, 2017, 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, 2014, 2015

Helped run a national student-run 501(c)(3) nonprofit for teaching peace-curriculum in schools.

# RESEARCH MENTORSHIP

2022 - Present Marcel Torne Villasevil (MEng at Harvard)

Research on continual learning from human feedback.

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

#### **LANGUAGES (HUMAN)**

English Native Mandarin Native

French Conversational