

ANDI PENG

Microsoft AI & Research
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EDUCATION

Massachusetts Institute of Technology Ph.D. Electrical Engineering and Computer Science Computer Science and Artificial Intelligence Laboratory (CSAIL)	Fall 2020 - Cambridge, MA
Yale University , <i>cum laude</i> , GPA: 3.9/4.0 B.S. Cognitive Science Thesis: An Integrated Machine Learning Approach to Studying Terrorism B.A. Global Affairs, <i>with distinction</i> Capstone: Early Detection of Boko Haram Attacks in Nigeria	2013 - 2018 New Haven, CT

AFFILIATIONS

Microsoft Research Adaptive Systems and Interaction Group	Sep 2018 - Present Redmond, WA
Yale University Jackson Institute for Global Affairs Social Robotics Lab	Aug 2013 - Present New Haven, CT
White House Office of Science and Technology Policy (OSTP) National Institute for Standards and Technology (NIST) Joint Quantum Institute	Jan - Sep 2018 Washington, DC
National Aeronautics and Space Administration (NASA) Glenn Research Center	May 2016 - Feb 2017 Cleveland, OH

SELECTED FELLOWSHIPS, HONORS, AND AWARDS

2020	NSF Graduate Research Fellowship	\$138,000
2018	Fox International Fellowship, University of Cambridge	\$30,000 (<i>declined</i>)
2017	Truman Scholarship	\$30,000
2017	Douglas A. Beck Prize, Yale University "To an outstanding student for high academic achievement, leadership potential, personal integrity, and commitment to public service"	
2017	Brady-Johnson Grand Strategy Research Grant, Yale University	\$4,000
2016	Multidisciplinary Aeronautics Research Team Initiative (MARTI), NASA	\$10,000
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, Obama's Council on Service and Civic Participation	
2013	National Merit Scholarship	\$2,500
2013	Appointment to the United States Military Academy at West Point Nominations from Senator Sherrod Brown and Congressman Steve LaTourette	(<i>declined</i>)

REFEREED CONFERENCE PUBLICATIONS

- C4. [Human-Machine Collaboration for Fast Land-Cover Mapping](#).
Caleb Robinson, Anthony Ortiz, Kolya Malkin, Blake Elias, **Andi Peng**, Dan Morris, Bistra Dilkina, and Nebojsa Jojic.
Proceedings of the 34th AAAI Conference on Artificial Intelligence (AAAI 2020).
[Oral, 20.6% Acceptance Rate]
- C3. [The Perils of Objectivity: Towards a Normative Framework for Fair Judicial Decision-Making](#).
Andi Peng and Malina Simard-Halm.
Proceedings of the 3rd AAAI/ACM Conference on Artificial Intelligence, Ethics, and Society (AIES 2020).
[Spotlight, 34.1% Acceptance Rate]
- 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, and Ece Kamar.
Proceedings of the 7th AAAI Conference on Human Computation and Crowdsourcing (HCOMP 2019).
[25.0% Acceptance Rate]
- 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, and Robert Falck.
Proceedings of the 55th AIAA Aerospace Sciences Meeting (SciTech 2017).

JOURNAL PUBLICATIONS

- J1. How different AI models effect accuracy and bias of human decision-making.
Andi Peng, Besmira Nushi, Kori Inkpen, Emre Kiciman, and Ece Kamar.
In preparation.

REFEREED WORKSHOP PUBLICATIONS

- W2. On the Nature of Bias Percolation: Assessing Multiaxial Collaboration in Human-AI Systems.
Andi Peng, Besmira Nushi, Kori Inkpen, Emre Kiciman, and Ece Kamar.
The 38th ACM Conference on Human Factors in Computing Systems (CHI 2020) Workshop on *Human-Centered Approaches to Fair and Responsible AI*.
- W1. [Human-machine collaboration for fast land-cover mapping](#).
Caleb Robinson, Anthony Ortiz, Kolya Malkin, Blake Elias, **Andi Peng**, Dan Morris, Bistra Dilkina, and Nebojsa Jojic.
The 33rd Conference on Neural Information Processing Systems (NeurIPS 2019) Workshop on *Tackling Climate Change with Machine Learning*.

POLICY CONTRIBUTIONS

Contributions made to institutional policy work.

- 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.
2019.
- P2. [National Strategic Overview for Quantum Information Science](#).
The White House. Office of Science and Technology Policy.
2018.
- P1. [Nigeria: Tracking and Promoting Good Governance](#).
United States Institute of Peace. Through the Yale Jackson Institute for Global Affairs.
2016.

WORK AND RESEARCH EXPERIENCE

Microsoft AI & Research <i>Applied Scientist II</i> <ul style="list-style-type: none"> AI Strategy and Architecture Team 	Sep 2019 - Present Redmond, WA
Microsoft Research <i>AI Resident</i> <ul style="list-style-type: none"> Collaborators: Ece Kamar, Besmira Nushi, Emre Kiciman, Siddharth Suri, Kori Inkpen, and Nebojsa Jojic. 	Sep 2018 - Sep 2019 Redmond, WA
White House Office of Science and Technology Policy (OSTP) <i>Policy Intern</i> <ul style="list-style-type: none"> Under the U.S. CTO, contributed to national quantum and AI strategy. 	Jan 2018 - May 2018 Washington, DC
National Institute of Standards and Technology (NIST) <i>Research Associate</i> <ul style="list-style-type: none"> Helped stand up the Quantum Economic Development Consortium. 	Summer 2018 Washington, DC
Yale Computer Science Department <i>Undergraduate Researcher, advised by Joan Feigenbaum</i> <ul style="list-style-type: none"> Deployment of risk assessment tools in criminology decision-making. 	Spring 2017 New Haven, CT
Facebook eCrime Team <i>Security Engineering Intern</i> <ul style="list-style-type: none"> Threat modeling to aid investigators. Collaborated with law enforcement on counter-terrorism, sex trafficking, and state-sponsored information cases. 	Summer 2017 Menlo Park, CA
Yale Computer Science Department <i>Undergraduate Researcher, advised by Brian Scassellati</i> <ul style="list-style-type: none"> Reinforcement learning for multi-agent Sphero control and navigation. 	Spring 2017 New Haven, CT
U.S. Institute of Peace <i>Global Affairs Capstone, advised by William Casey King</i> <ul style="list-style-type: none"> Early-detection of Boko Haram events in Nigeria with sentiment analysis. 	Fall 2016 New Haven, CT
NASA Glenn Research Center <i>MARTI Researcher</i> <ul style="list-style-type: none"> Modeling and feasibility study of the Hyperloop transportation system. 	Summer 2016 Cleveland, OH
IT Central Station <i>Product Manager</i> <ul style="list-style-type: none"> Designed BI workflows and new site features. 	Aug 2014 - Aug 2015 Tel Aviv, Israel

TALKS AND PRESENTATIONS

C3.	<i>The Perils of Objectivity: Towards a Normative Framework for Fair Judicial Decision-Making</i> Spotlight session, AIES 2020. New York, NY.	Feb 2020
C2.	<i>The Impact of Representation Criteria on Human Bias in Hiring</i> Conference session, HCOMP 2019: "Recruiting the Crowd". Skamania Lodge, WA.	Oct 2019
C2.	<i>Do We Want Male Nannies? Decomposing Human and Algorithmic Biases in Hiring</i> Invited talk, Microsoft AI&R Diversity, Inclusion and Belonging Day. Redmond, WA.	Jun 2019
C4.	<i>Human-AI Collaboration for Social Good</i> Presentation, Microsoft AI for Good. Redmond, WA.	May 2019
P2.	<i>Federal Science Policy: Lessons from the White House</i> Presentation, Microsoft Research AI residency program. Redmond, WA.	Sep 2018

- C1. *Conceptual Sizing and Feasibility Study for a Magnetic Plane Concept* Jan 2017
Conference session, SciTech 2017: "Hyperloop and Future High-Speed Transportation Concept". Grapevine, TX.
- C1. *Conceptual Feasibility Study of the Hyperloop for Next-Generation Transport* Aug 2016
Presentation to NASA Administration (Aeronautics Research Mission Directorate). Glenn, OH.
- U.S.-China Relations and the Role of International Development* Jun 2014
Invited talk, Hubei University School of International Studies. Enshi, China.

TEACHING

Yale Computer Science Department

Teaching Assistant

CPSC 100 (CS50): Introduction to Computer Science Fall 2017

CPSC 223: Data Structures and Programming Techniques Spring 2017

CPSC 202: Mathematical Tools for Computer Science Spring 2016

Head Teaching Assistant

CPSC 100 (CS50): Introduction to Computer Science Fall 2015, 2016

First undergraduate head TA in university history for the largest engineering course in university history. Managed a course staff of 62 for 450+ students. Had weekly teaching sections professionally filmed and produced for streaming on the course website.

Yale Astrophysics Department

Teaching Assistant

ASTR 343: Gravity, Astrophysics, and Cosmology Spring 2015

PROFESSIONAL SERVICE

Reviewer	CHI 2020
Student Advisory Board	Yale Psi Chi Honor Society, 2017 - 2018 Yale Jackson Institute for Global Affairs, 2016 - 2018 Yale Brady-Johnson Program in Grand Strategy, 2017 - 2018
Mentor	Yale FLOAT (Women and Minorities in CS), 2016 - 2018

OTHER SERVICE

Yale Asian-American Cultural Center	2016 - 2017
<i>Peer Liaison</i>	
<ul style="list-style-type: none"> The sole upperclassman peer mentor in Berkeley College (one of 14 residential colleges at Yale). Organized diversity initiatives, programming, and events across the university at large. 	
Yale Women's Club Soccer	2015 - 2017
<i>Captain</i>	
<ul style="list-style-type: none"> Managed team tryouts, practices, and social events. 	
Teaching Peace Initiative	2013 - 2016
<i>Deputy Executive Director</i>	
<ul style="list-style-type: none"> Helped lead a student-run 501(c)(3) for teaching peace-curriculum in schools. Operational in 21 states and 3 continents at time of transition. 	

LANGUAGES (HUMAN)

English	Native
Mandarin	Native
French	Conversational

LOVELY PEOPLE WHO HAVE WRITTEN LETTERS FOR ME

1. **Dr. Ece Kamar**
Principal Researcher
Microsoft Research
Redmond, WA
eckamar@microsoft.com
2. **Dr. Jacob Taylor**
Assistant Director for Quantum Information Science
White House Office of Science and Technology Policy (OSTP)
Washington, DC
jacob.taylor@nist.gov
3. **Dr. Brian Scassellati**
Professor of Computer Science, Cognitive Science, and Mechanical Engineering
Yale University
New Haven, CT
brian.scassellati@yale.edu