ANDI PENG

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EDUCATION

Massachusetts Institute of Technology   Eventually
Ph.D. Electrical Engineering and Computer Science   Cambridge, MA
Computer Science and Artificial Intelligence Laboratory (CSAIL)

Yale University, *cum laude*, GPA: 3.9/4.0   2013 - 2018
B.S. Cognitive Science   New Haven, CT
Thesis: An Integrated Machine Learning Approach to Studying Terrorism

B.A. Global Affairs, *with distinction*
Capstone: Early Detection of Boko Haram Attacks in Nigeria

AFFILIATIONS

Microsoft Research, Adaptive Systems and Interaction Group   Sep 2018 - Present
AI Resident   Redmond, WA
Mentors: Ece Kamar, Besmira Nushi, Emre Kiciman, Kori Inkpen, Nebojsa Jojic

White House Office of Science and Technology Policy (OSTP)   Jan - Sep 2018
National Institute for Standards and Technology (NIST)   Washington, DC
Policy Intern/Research Associate
Mentor: Jake Taylor

Yale University, Social Robotics Lab   Aug 2016 - May 2018
Undergrad Researcher   New Haven, CT
Mentor: Brian Scassellati

NASA Glenn Research Center   May 2016 - Feb 2017
MARTI Researcher   Cleveland, OH
Mentors: Justin Gray, Jeffrey Chin

SELECTED FELLOWSHIPS, HONORS, AND AWARDS

2020	NSF Graduate Research Fellowship	$138,000
2018	Fox International Fellowship, University of Cambridge	$30,000 *(declined)*
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	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	*(declined)*

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.
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.
ICLR 2020, Workshop on *Climate Science and Adaptation*.
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.

INDUSTRY EXPERIENCE

Microsoft AI & Research   Sep 2019 - Present
Applied Scientist II   Redmond, WA

- AI Strategy and Architecture Team

Facebook eCrime Team   Summer 2017
Security Engineering Intern   Menlo Park, CA

- Threat modeling to aid investigators. Collaborated with law enforcement on counter-terrorism, sex trafficking, and state-sponsored information cases.

IT Central Station   Aug 2014 - Aug 2015
Product Manager   Tel Aviv, Israel

- Designed BI workflows and new site features.

TALKS AND PRESENTATIONS

W2.   *On the Nature of Bias Percolation: Assessing Multiaxial Collaboration in Human-AI Systems*   Apr 2020
Workshop on Fair and Responsible AI, CHI 2020. Zoom (previously Honolulu, HI).

C3.   *The Perils of Objectivity: Towards a Normative Framework for Fair Judicial Decision-Making*   Feb 2020
Spotlight session, AIES 2020. New York, NY.

C2.   *The Impact of Representation Criteria on Human Bias in Hiring*   Oct 2019
Conference session, HCOMP 2019: "Recruiting the Crowd". Skamania Lodge, WA.

C2.   *Do We Want Male Nannies? Decomposing Human and Algorithmic Biases in Hiring*   Jun 2019
Invited talk, Microsoft AI&R Diversity, Inclusion and Belonging Day. Redmond, WA.

C4.   *Human-AI Collaboration for Social Good*   May 2019
Presentation, Microsoft AI for Good. Redmond, WA.

P2.   *Federal Science Policy: Lessons from the White House*   Sep 2018
Presentation, Microsoft Research AI residency program. Redmond, WA.

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
Board of Advisors	Yale Jackson School of Global Affairs, 2020 - Present
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
Peer Liaison
- 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
Captain
- Managed team tryouts, practices, and social events.

Teaching Peace Initiative   2013 - 2016
Deputy Executive Director
- 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