ANDI PENG

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EDUCATION

Ent. 2020	**Massachusetts Institute of Technology** Ph.D. Student, Electrical Engineering and Computer Science Computer Science and Artificial Intelligence Laboratory (CSAIL)	Cambridge, MA
2013-18	**Yale University**, *cum laude* B.S. Cognitive Science (Advisor: Brian Scassellati) Thesis: An Integrated Machine Learning Approach to Studying Terrorism B.A. Global Affairs, *with distinction* (Advisor: William Casey King) Capstone: Early Detection of Boko Haram Attacks in Nigeria	New Haven, CT

SELECTED FELLOWSHIPS, HONORS, AND AWARDS

2018 Fox International Fellowship, University of Cambridge ($30,000: *declined*)

2017 Truman Scholarship ($30,000)

Douglas A. Beck Prize, to an outstanding student for "high academic achievement, leadership potential, personal integrity, and commitment to public service", Yale

2016 Multidisciplinary Aeronautics Research Team Initiative, NASA ($10,000)

John D. Heinz Fellowship, Yale ($14,000)

2015 Nathan Hale Scholarship, "a special distinction that reflects the university's esteem for past and future achievements", Yale ($55,000)

2014 The President's Volunteer Service Award, Barack Obama's Council on Service and Civic Participation

2013 National Merit Scholarship ($2,500)

Appointment to the United States Military Academy at West Point *declined*)

REFEREED CONFERENCE PUBLICATIONS

[C5] **Andi Peng**, Emre Kiciman, Besmira Nushi, Kori Inkpen, and Ece Kamar. He's a paralegal and she's a lawyer? How different AI models effect accuracy and bias of human decision-making. **Under review**.

[C4] **Andi Peng** and Malina Simard-Halm. The perils of objectivity: towards a normative framework for fair judicial decision-making. To appear in *Proceedings of the 3rd AAAI/ACM Conference on Artificial Intelligence, Ethics, and Society* (AIES 2020). New York, NY. [34.1% Acceptance Rate]

[C3] Caleb Robinson, Anthony Ortiz, Kolya Malkin, Blake Elias, **Andi Peng**, Dan Morris, Bistra Dilkina, and Nebojsa Jojic. Human-machine collaboration for fast land-cover mapping. To appear in *Proceedings of the 34th AAAI Conference on Artificial Intelligence* (AAAI 2020). New York, NY. [Oral, 20.6% Acceptance Rate]

[C2] **Andi Peng**, Besmira Nushi, Emre Kiciman, Kori Inkpen, Siddharth Suri, Kori Inkpen, and Ece Kamar. What you see is what you get? The impact of representation criteria on human bias in hiring. In *Proceedings of the 7th AAAI Conference on Human Computation and Crowdsourcing* (HCOMP 2019). Skamania Lodge, WA. [25%Acceptance Rate]

[C1] Kenneth Decker, Jeffrey Chin, **Andi Peng**, Colin Summers, Golda Nguyen, Andrew Oberlander, Gazi Sakib, Nariman Sharifrazi, Christopher Heath, Justin Gray, and Robert Falck. Conceptual feasibility study of the Hyperloop vehicle for next-generation transport. In *Proceedings of the 55th AIAA Aerospace Sciences Meeting* (SciTech 2017). Grapevine, TX.

REFEREED WORKSHOP PUBLICATIONS

[W1] Caleb Robinson, Anthony Ortiz, Kolya Malkin, Blake Elias, **Andi Peng**, Dan Morris, Bistra Dilkina, and Nebojsa Jojic. Human-machine collaboration for fast land-cover mapping. In *Tackling Climate Change with Machine Learning Workshop* at the *33rd Conference on Neural Information Processing Systems* (NeurIPS CCAI 2019). Vancouver, Canada.

WORK AND RESEARCH EXPERIENCE

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

Sep 2018-19 AI Resident, **Microsoft Research** Redmond, WA
Collaborators: Ece Kamar, Besmira Nushi, Nebojsa Jojic, Emre Kiciman, Kori Inkpen
See: Partnership on AI Report on Algorithmic Risk Assessment Tools.

Jan-Sep 2018 Policy Intern, **White House Office of Science and Technology Policy (OSTP)** Washington, DC
Research Associate, **National Institute of Standards and Technology (NIST)**
Under the U.S. CTO, contributed to national quantum+AI strategy and helped stand up the Quantum Economic Development Consortium.

Spring 2018 Undergraduate Researcher, **Yale Cognitive Science Department** New Haven, CT
Advisor: Brian Scassellati
Integrated ML + political science approaches to understanding terrorism

Spring 2018 Undergraduate Researcher, **Yale Computer Science Department** New Haven, CT
Advisor: Joan Feigenbaum
The impact of risk assessment tools on procedural justice in criminology decision-making.

Summer 2017 Security Engineering Intern, **Facebook eCrime Team** Menlo Park, CA
Threat modeling to aid investigators in proactive and responsive queries. Collaborated with law enforcement on counter-terrorism, sex trafficking, and state-sponsored information cases.

Spring 2017 Undergraduate Researcher, **Yale Computer Science Department** New Haven, CT
Advisor: Brian Scassellati
RL for multi-agent Sphero control. Automatic path initialization and P- or PID-control for navigation.

Fall 2016 Global Affairs Capstone, **U.S. Institute of Peace** New Haven, CT and Washington, DC
Advisor: William Casey King
Early-detection of Boko Haram attacks in Nigeria using financial modeling and sentiment analysis.

Summer 2016 MARTI Researcher, **NASA Glenn Research Center** Cleveland, OH
Advisors: Jeffrey Chin and Justin Gray
Full system modeling and feasibility study of the Hyperloop.

TALKS AND PRESENTATIONS

Oct 2019 *What You See Is What You Get? The Impact of Representation Criteria on Human Bias in Hiring* [C2]
Conference session, HCOMP 2019: "Recruiting the Crowd". Skamania Lodge, WA.

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

May 2019 *Human-AI Collaboration for Social Good* [C3]
Presentation, Microsoft AI for Good. Redmond, WA.

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

Jan 2017 *Conceptual Sizing and Feasibility Study for a Magnetic Plane Concept* [C1]
Conference session, SciTech 2017: "Hyperloop and Future High-Speed Transportation Concept". Grapevine, TX.

Aug 2016 *Conceptual Feasibility Study of the Hyperloop for Next-Generation Transport* [C1]
Presentation to NASA Administration (Aeronautics Research Mission Directorate). Cleveland, OH.

June 2014 *U.S.-China Relations and the Role of International Development*
Invited talk, Hubei University for Nationalities School of International Studies. Hubei, China.

TEACHING

Fall 2017 Teaching Assistant, **CPSC 100 (CS50): Introduction to Computer Science** Yale

Spring 2017 Teaching Assistant, **CPSC 223: Data Structures and Programming Techniques** Yale

Fall 2015-16 Head Teaching Assistant, **CPSC 100 (CS50): Introduction to Computer Science** Yale

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.

Spring 2016 Peer Tutor, **CPSC 202: Mathematical Tools for Computer Science** Yale

PROFESSIONAL SERVICE

Reviewer CHI 2020
2016-2018 Student Advisory Committee, Yale Computer Science Department
2015-2018 Mentor, Yale FLOAT (Women and Minorities in CS)

LEADERSHIP AND COMMUNITY SERVICE

2016-18 Student Advisory Board, **Yale Jackson Institute for Global Affairs**

Implemented recommendations to included establishing a pre-registration system, eliminating tracks within the major, and creating a new quantitative core sequence.

2017 Student Advisory Board, **Yale Brady-Johnson Program in Grand Strategy**

2016-17 Peer Liaison, **Yale Asian-American Cultural Center**

Served as the sole upperclassman mentor in Berkeley College (one of 14 residential colleges at Yale). Organized diversity initiatives, programming, and events across the university at large.

2016-17 Captain, **Yale Women's Club Soccer**

2016-17 Executive Board, **Yale Psi Chi Chapter (international honor society in psychology)**

2013-16 Deputy Executive Director, **Teaching Peace Initiative**

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

LETTER WRITERS

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