
AI DEBATE 2

MOVING AI FORWARD: AN INTERDISCIPLINARY APPROACH

PRE-READINGS

A PREPRINT

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ABSTRACT

Pre-readings recommended to the audience before *AI DEBATE 2 - Moving AI Forward: An Interdisciplinary Approach*. **Confirmed speakers:** *Ryan Calo, Yejin Choi, Daniel Kahneman, Celeste Kidd, Christof Koch, Luis Lamb, Fei-Fei Li, Adam Marblestone, Margaret Mitchell, Robert Osazuwa Ness, Judea Pearl, Francesca Rossi, Ken Stanley, Rich Sutton, Doris Tsao, Barbara Tversky.* **Moderator and co-organizer:** Gary Marcus. Hashtag : *#AIDebate2*.

WebPage: <https://montrealartificialintelligence.com/aidebate2/>.

RSVP for the live streaming event at <https://aidebate.eventbrite.ca>.

1 Ryan Calo's Pre-Readings

Preliminary Remark Title at AI DEBATE 2: *Artificial Intelligence Policy: Not Just A Matter of Principles*
Artificial Intelligence Policy: A Primer and Roadmap, Ryan Calo, 2017: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3015350
Homepage: <https://twitter.com/rcalo>

2 Yejin Choi's Pre-Readings

Preliminary Remark Title at AI DEBATE 2: *Commonsense AI: Cracking the Longstanding Challenge in AI*
Keynote at the Stanford Human-Centered AI (HAI) Conference on Triangulating Intelligence: Melding Neuroscience, Psychology, and AI: <https://www.youtube.com/watch?v=19ZaK0IzsVY?t=1680>
Homepage: <https://homes.cs.washington.edu/~yejin/>

3 Daniel Kahneman's Pre-Readings

Preliminary Remark Title at AI DEBATE 2: *How People Think about the Counterfactual and the Normal*

*Founding Chairman at MONTREAL.AI and QUÉBEC.AI <http://www.montreal.ai>.

4 Celeste Kidd's Pre-Readings

Preliminary Remark Title at AI DEBATE 2: *Profound impacts of AI (and its biases) on human beliefs*

The Psychology and Neuroscience of Curiosity, Kidd and Hayden, Neuron, 2015: <http://www.celestekidd.com/papers/KiddHayden2015.pdf>.

Homepage: www.kiddlab.com

5 Christof Koch's Pre-Readings

Preliminary Remark Title at AI DEBATE 2: *Don't look (anymore) at neuroscience for help with AI*

Homepage: <https://christofkoch.com/>

6 Luis Lamb's Pre-Readings

Preliminary Remark Title at AI DEBATE 2: *Neurosymbolic AI: The 3rd Wave*

Neurosymbolic AI: The 3rd Wave, Artur d'Avila Garcez and Luis Lamb, 2020: <https://arxiv.org/abs/2012.05876>.

Homepage: <http://www.inf.ufrgs.br/~lamb>

7 Fei-Fei Li's Pre-Readings

Preliminary Remark Title at AI DEBATE 2: *In search of the next AI North Star: a tale of two kittens*

8 Adam Marblestone's Pre-Readings

Preliminary Remark Title at AI DEBATE 2: *Leveraging neuro-technology for AI*

Toward an Integration of Deep Learning and Neuroscience, Marblestone et al., 2016: <https://www.frontiersin.org/articles/10.3389/fncom.2016.00094/full>.

Homepage: www.adammarblestone.org

9 Gary Marcus's Pre-Readings

Preliminary Remark Title at AI DEBATE 2: *The Next Decade in AI*

The Next Decade in AI: Four Steps Towards Robust Artificial Intelligence, Gary Marcus, 2020: <https://arxiv.org/abs/2002.06177v3>.

Homepage: <http://rebooting.ai/>

10 Robert Ness's Pre-Readings

Preliminary Remark Title at AI DEBATE 2: *Causal Reasoning with (Deep) Probabilistic Programming*

Integrating Markov processes with structural causal modeling enables counterfactual inference in complex systems, Ness et al., 2019: <https://papers.nips.cc/paper/2019/file/2d44e06a7038f2dd98f0f54c4be35e22-Paper.pdf>.

Homepage: <https://www.altdeep.ai>

11 Judea Pearl’s Pre-Readings

Preliminary Remark Title at AI DEBATE 2: *The Domestication of Causal Reasoning: Cultural and Methodological Implications*

The Seven Tools of Causal Inference, Judea Pearl, 2016: <https://ucla.in/2HI2yyx>.

Radical Empiricism and Machine Learning Research, Judea Pearl, 2020: <https://ucla.in/32YKcWy>.

Data versus Science: Contesting the Soul of Data-Science, Judea Pearl, 2020: <https://ucla.in/3iEDRV0>.

Homepage: http://bayes.cs.ucla.edu/jp_home.html

12 Francesca Rossi’s Pre-Readings

Preliminary Remark Title at AI DEBATE 2: *Thinking Fast and Slow in AI: Towards more general and trustworthy AI*

Thinking fast and slow in AI (AAAI blue-sky ideas track, 2021), Booch et al., 2020: <https://arxiv.org/abs/2010.06002>.

13 Kenneth Stanley’s Pre-Readings

Preliminary Remark Title at AI DEBATE 2: *Open-Endedness, Evolution, and AI*

Open-endedness: The last grand challenge you’ve never heard of, Stanley et al., 2017: <https://www.oreilly.com/radar/open-endedness-the-last-grand-challenge-youve-never-heard-of/>.

14 Richard Sutton’s Pre-Readings

Preliminary Remark Title at AI DEBATE 2: *Reinforcement Learning is the Computational Theory of Intelligence*

The Bitter Lesson, Rich Sutton, 2019: <http://www.incompleteideas.net/IncIdeas/BitterLesson.html>.

Homepage: <http://richsutton.com>

15 Doris Tsao’s Pre-Readings

Preliminary Remark Title at AI DEBATE 2: *How the brain builds a model of the world: insights from neuroscience*

The macaque face patch system: a turtle’s underbelly for the brain, Janis K. Hesse and Doris Y. Tsao, 2020: <https://www.nature.com/articles/s41583-020-00393-w?proof=t>.

Homepage: <https://www.tsaolab.caltech.edu/>

16 Barbara Tversky’s Pre-Readings

Preliminary Remark Title at AI DEBATE 2: *Thinking with the Body and the World*

Mind in Motion: How Action Shapes Thought, Barbara Tversky, Basic Books, 2019.