

CMCP 2020 Virtual Business Conference: Hacking Potential Bias in Artificial Intelligence

Wednesday, September 23, 2020

10:00 am - 11:00 am

The expanding use of Artificial Intelligence (AI) and similar technology presents both ethical and technical challenges at the intersection of diversity, consumer rights, privacy and other issues. Explore the implications and potential solutions with a panel of experts.

Learning objectives:

During this program, you will:

- Learn basic AI concepts as a foundation for the discussion
- Become aware that we may not always know or understand how AI-based decision systems actually make decisions
- Learn how data, human, and cultural biases introduce errors in AI
- Participate in a Q+A discussion with the panel

PROGRAM OUTLINE:

TOPIC #1:

- AI presents tremendous economic growth opportunities (“estimated to contribute \$15.7 trillion to the global economy by 2030 according to PwC research.”).
 - Great resource on AI+Bias:
https://haas.berkeley.edu/wp-content/uploads/UCB_Playbook_R10_V2_spreads2.pdf
- This technology is used across various disciplines from [healthcare](#) to education and it is showing no sign of slowing down. What is clear from the advantages of using AI within business is that a majority of companies are actively working on a roadmap for handling data ([68 percent](#)), yet only 11 percent of these companies have completed this task.
 - Source: <https://www.forbes.com/sites/julianvigo/2019/06/06/why-machine-learning-is-the-future-of-business-culture/#688d0fcd2bab>
- AI is a broad topic with implications on the future of work, healthcare, but today we are going to get into specifically the potential for bias in AI and how companies / governments can address it.
 - A recent study conducted by the research firm [Savanta](#) surveyed 5,000 consumers around the world about their views of AI, morality, ethical behavior, and empathy. The results demonstrate that over half of the respondents believe that AI is biased and less than one-third of the respondents felt comfortable with businesses using AI to interact with them.

Discussion Points/Questions

- **Demystify AI: What is AI? How is it being used right now by companies/governments in ways that touch our lives every day?**
 - “Artificial Intelligence (AI) is the concept of having machines “think like humans” — in other words, perform tasks like reasoning, planning, learning, and understanding language. While no one is expecting parity with human intelligence today or in the near future, AI has big implications in how we live our lives. The brains behind artificial intelligence is a technology called machine learning, which is designed to make our jobs easier and more productive.”
Source: <https://www.salesforce.com/products/einstein/ai-deep-dive/>
 - Machine learning (ML) is an application of AI that allows systems to learn and improve without being directly programmed.
Source: <https://www.forbes.com/sites/julianvigo/2019/06/06/why-machine-learning-is-the-future-of-business-culture/#688d0fcd2bab>

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- “Today, AI generally is thought to refer to ‘machines that respond to stimulation consistent with traditional responses from humans, given the human capacity for contemplation, judgment, and intention.’”
Sources:
<https://www.brookings.edu/research/what-is-artificial-intelligence/>
<https://towardsdatascience.com/ai-machine-learning-deep-learning-explained-simply-7b553da5b960>
- **Are AI systems biased? How do biases get injected into AI?**
 - Human element to creating AI and training AI/ML with potential biased data--the people and the data/code can be biased.
 - Data sets are coded or annotated and fed into the AI/ML to train it. People are involved in the process and their conscious/subconscious biases are injected into all of this.
Source: <https://www.brookings.edu/blog/techtank/2019/01/03/artificial-intelligence-and-bias-four-key-challenges/>
- **How does biased AI impact businesses, governments, judicial systems that implement it?**
 - Examples of biases in AI. Particularly interesting cases include:
 - Facial recognition use case ([law enforcement misidentification](#))
 - Recruiting use case
 - Other use case in the judiciary (e.g., sentencing)
COMPAS: <https://www.propublica.org/article/machine-bias-risk-assessments-in-criminal-sentencing>

TOPIC #2:

Discussion Points/Questions (Role of Lawyers and Recommendations)

- **What are the obligations (ethical and otherwise) for these entities to address these biases?**
- **How can AI biases be mitigated or remedied?**
 - How to address the “black box” problem?
<https://www.wired.co.uk/article/ai-bias-black-box-sandra-wachter>
 - AI Legal/Policy frameworks
 - Federal/State Laws
 - EU Framework
<https://ec.europa.eu/futurium/en/ai-alliance-consultation/guidelines/1>
 - Diversity is needed among those working in AI
 - Fundamental to mitigating bias in AI
 - AI should not replace the “human element”
 - <https://www.forbes.com/sites/forbestechcouncil/2019/10/30/why-ai-needs-human-input-and-always-will/#4b773dc45ff7>
 - Audit and oversight
 - Transparency
 - <https://ec.europa.eu/futurium/en/ai-alliance-consultation/guidelines/1>
 - https://ai.bsa.org/wp-content/uploads/2019/09/AIHLEG_EthicsGuidelinesforTrustworthyAI-ENpdf.pdf
 - Technical tools can assist

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ADDITIONAL RESOURCES:

- <https://www.brookings.edu/research/algorithmic-bias-detection-and-mitigation-best-practices-and-policies-to-reduce-consumer-harms/>
- <https://news.bloomberglaw.com/tech-and-telecom-law/insight-facial-recognition-is-a-threat-to-people-of-color>
- <https://www.mckinsey.com/featured-insights/artificial-intelligence/tackling-bias-in-artificial-intelligence-and-in-humans>
- <https://haas.berkeley.edu/equity/industry/playbooks/mitigating-bias-in-ai/>
- <https://www.nytimes.com/2020/06/24/technology/facial-recognition-arrest.html>
- <https://podcasts.apple.com/us/podcast/wrongfully-accused-by-an-algorithm/id1200361736?i=1000486946788?i=1000486946788>