AI Policy Matters

Larry Medsker (George Washington University; lrm@gwu.edu)
DOI: 10.1145/3320254.3320262

Abstract

AI Policy is a regular column in AI Matters featuring summaries and commentary based on postings that appear twice a month in the AI Matters blog (https://sigai.acm.org/aimatters/blog/). Selected posts are summarized in issues of *AI Matters*.

Introduction

The SIGAI Public Policy goals are to

- promote discussion of policies related to AI through posts in the AI Matters blog on the 1st and 15th of each month,
- help identify external groups with common interests in AI Public Policy,
- encourage SIGAI members to partner in policy initiatives with these organizations, and
- disseminate public policy ideas to the SIGAI membership through articles in the newsletter.

I welcome everyone to make blog comments so we can develop a rich knowledge base of information and ideas representing the SIGAI members.

Issues for 2019

Initial topics for the SIGAI Policy Blog are the following:

Facebook continues to draw attention to the general issue of data privacy and the role of personal data in business models. See NY Times on Facebook Privacy and FaceBook Partners.

Facial recognition software is known to be flawed, having side effects of bias, unwanted surveillance, and other problems. The Safe Face Pledge, developed by the Algorithmic Justice League and Georgetown University Law Center of Privacy & Technology, is an example of emerging efforts to make organizations aware of problems with facial recognition products, for example in autonomous weapons systems and law enforcement agencies. The Safe Face Pledge asks that companies commit to safety in business practices and promote public policy for broad regulation and government oversight on facial recognition applications.

"Autonomous" Things – The R&D for "autonomous" vehicles and other devices that dominate our daily lives pose challenges for technologies as well as for ethics and policy considerations. In 2018, we discussed language that aims at safety and degrees of autonomy rather than having, possibly unattainable, goals of completely autonomous things. A better approach may be the correct balance between technology and humans in hybrid devices and systems. See, for example, the Unmanned Integrated Systems Roadmap, 2017-2042 and Ethically Aligned Design. In a recent interview, Dr. Harold Szu, a co-founder and former governor of the International Neural Network Society, discusses research ideas that better mimic human thinking and that could dramatically reduce the time to develop autonomous technology. He discusses a possible new level of brain-style computing that incorporates fuzzy membership functions into autonomous control systems. Autonomous technology incorporating human characteristics, along with safety policies and earlier arrival of brain-style technologies, could usher in the next big economic boom.

The Future of Work and Education is a topic that not only tries to predict the workforce of the future but also how society needs to prepare for it. Many experts believe that our current school systems are not up to the challenge and that industry and government programs are needed for the challenges emerging in just a few years. See, for example, writing by the Ford Foundation and the World Economic Forum, as well as discussions at the recent EAAI-19 and AAAI-19 meetings. Opportunities and innovation in education and training for the workforce of the future rely crucially on public policy about workers in the era of increasing use of AI and other automation tech-

nologies. An important issue is who will provide training that is timely (by 2030), practical, and affordable for workers who will need to transition to the anticipated new types of jobs. The stakeholders along with workers are the schools, employers, unions, and community groups. Even if more jobs are created than lost, work in the AI future is disproportionately available to the range of people in the current and near-future workforce.

We welcome your feedback and discussions as we enter the 2019 world of AI and policy!

American AI Initiative (AAII)

President Trump issued an Executive Order on February 11, 2019, entitled "Maintaining American Leadership In Artificial Intelligence". The full text is at AAII.

The American AI Initiative order of course needs analysis and discussion of implementation details. Two sections of the Executive Order give hope for opportunities to provide public input: Sec (5)(a)(1) Within 90 days of the date of this order, the OMB Director shall publish a notice in the Federal Register inviting the public to identify additional requests for access or quality improvements for Federal data and models that would improve AI R&D and testing. These actions by OMB will help to identify data sets that will facilitate non-Federal AI R&D and testing; and Sec (6)(b) (b) To help ensure public trust in the development and implementation of AI applications, OMB shall issue a draft version of the memorandum for public comment before it is finalized. Please stay tuned for ways that our ACM US Technology Policy Committee (USTPC) can help us provide our feedback on the implementation of the Executive Order.

A summary and analysis report is available from the Center for Data Innovation: Executive Order Will Help Ensure U.S. Leadership in AI. They comment that the administration "needs to do more than reprogram existing funds for AI research, skill development, and infrastructure development" and "should ask Congress for significant funding increases to

- expand these research efforts;
- implement light-touch regulation for AI;
- resist calls to implement roadblocks or speed bumps for this technology, including export restrictions;
- rapidly expand adoption of AI within government;
- implement comprehensive reforms to the nation's workforce training and adjustment policies."

On Overpromising AI

A recent article Artificial intelligence is nowhere near the real thing, says German AI chief, by Anna Kelly, gives policy-worthy ideas. "In his 20 years as head of Germany's biggest AI research lab Wolfgang Wahlster has seen the tech hype machine splutter three times. As he hands over to a new CEO, he warns colleagues: Don't over-promise. The computer scientist who has just ended a 20-year stint as CEO of the German Research Centre for Artificial Intelligence says that "[warning] greatly underestimates the distance between AI and its human counterpart. We're years away from a game changer in the field. I always warn people, one should be a bit careful with what they claim. Every day you work on AI, you see the big gap between human intelligence and AI".

For AI policy, we should remember to look out for overpromising, but we also need to be mindful of the time frame for making effective policy and fully engage now. This effort importantly informs policymakers about the real opportunities to make AI successful. A recent article in *The Conversation* by Ben Shneiderman "What alchemy and astrology can teach artificial intelligence researchers," gives insightful information and advice on how to avoid being distracted away "...from where the real progress is already happening: in systems that enhance rather than replace human capabilities." Shneiderman recommends that technology designers shift "from trying to replace or simulate human behavior in machines to building wildly successful applications that people love to use."

Follow the Data

The Ethical Machine – Big Ideas for Designing Fairer AI and Algorithms is a "project that presents ideas to encourage a discussion about designing fairer algorithms" of the

Shorenstein Center on Media, Politics, and Public Policy, Harvard Kennedy School. The November 27, 2018, publication is Follow the Data! Algorithmic Transparency Starts with Data Transparency by Julia Stoyanovich and Bill Howe. Their focus is local and municipal governments and NGOs that deliver vital human services in health, housing, and mobility.

In the article, they give a welcome emphasis on the role of data instead of the common focus on just algorithms. They write, "data is used to customize generic algorithms for specific situations," that is to say that algorithms are trained using data. The same algorithm may exhibit radically different behavior - "make different predictions; make a different number of mistakes and even different kinds of mistakes when trained on two different data sets. In other words, without access to the training data, it is impossible to know how an algorithm would actually behave."

US and European Policy

Adam Eisgrau, ACM Director of Global Policy and Public Affairs, published an update on the ACM US and Europe Policy Committees in the November 29 ACM MemberNet. Key points are:

- The ACM US Technology Policy Committee submitted comments to the National Telecommunications and Information Administration.
- Chairs of ACM's Europe Council and ACM Europe Technology Policy Committee together wrote to the chief of staff of the European Comission's influential Scientific Advice Mechanism group offering the assistance of the ACM experts.
- Europe Technology Policy Committee Chair Oliver Grau was one of two experts chosen to conduct a deep dive briefing on AI technology for a lay audience of EC staff, industry professionals and other technology organization representatives. Adam encourages us to visit the ACM Public Policy Statements page for a complete list of both the US and Europe Policy Committees' policy products produced so far this year.

Larry Medsker is Research Professor of Physics and was founding director of the Data Science graduate program at The George Washington University. He is a faculty member in the GW Human-Technology Collaboration Lab and Ph.D. program.[a] Dr. Medsker is a former Dean of the Siena College School of Science, and Professor in Computer Science and in Physics. His research in AI includes work on artificial neural networks, hybrid intelligent systems, and the impacts of AI on society and policy.[b]. He is the Public Policy Officer for the ACM SIGAI.

[a] https://wesharescience.com/htc/
[b] http://humac-web.org/