SQUIRE PATTON BOGGS

The Game Is Afoot

A Survey of Congress' Interest in Regulating Artificial Intelligence and Related Technologies

Over the last few years, Congress has begun to recognize that artificial intelligence (AI) will transform nearly every aspect of society in the future – with the potential to achieve advances in autonomy, speed, scalability, predictability and information superiority that have previously been considered unattainable. In doing so, however, Congress has also become increasingly aware of this technology's policy implications, including accountability; transparency; privacy and potential algorithmic bias and discrimination; as well as job displacement. As such, congressional interest in regulating the technology's development and use has increased significantly.

Supporting Congress' increasing policy interest in AI is the bipartisan National Security Commission on Artificial Intelligence (NSCAI), which issued its initial report to Congress on July 31, 2019. Led by Chairman Eric Schmidt, formerly CEO of Google and Alphabet, and Vice Chairman Bob Work, the former Deputy Secretary of Defense, and supported by commissioners who are among the foremost experts in technology and public policy, the NSCAI was created by the Fiscal Year 2019 John S. McCain National Defense Authorization Act (P.L. 115-232) to help Congress consider how the development of AI and associated technologies can be advanced to comprehensively address the national security of the US. This mandate is construed to include economic security. Initial engagements that the Chair and Vice Chair had with House and Senate staff members on June 28, 2019 seemed very successful in helping the NSCAI establish itself as the go-to subject matter resource to Congress on matters relating to AI and related technologies.

Pending Legislation: Cautious Optimism

Over the last five years, members of Congress have filed more than 40 bills addressing AI. From that legislative activity, the broad contours of Congress' policy interest in AI have begun to emerge. As explicated in the AI Legislation Chart, those bills generally reflect that, while Congress has been cautiously optimistic in how AI is being or will be used in the public and private sectors, it remains strongly concerned about the implications of the technology on accountability, transparency, privacy, nondiscrimination and job displacement.

Two recently introduced bills seek to legislate ethical uses of AI technology in the commercial context. The Commercial Facial Recognition Privacy Act of 2019, a bipartisan bill introduced by Sen. Roy Blunt (R-MO) and co-sponsored by Sen. Brian Schatz (D-HI), members of the Senate Committee on Commerce, Science & Technology, would strengthen consumer protections by "prohibit[ing] certain entities from using facial recognition technology to identify or track an end user without obtaining the affirmative consent of the end user." The Algorithmic Accountability Act of 2019, a Democratic bill sponsored by Sens. Ron Wyden (D-OR) and Cory Booker (D-NJ), would address algorithmic biases in the AI-enabled marketplace, by "direct[ing] the Federal Trade Commission to require entities that use, store, or share personal information to conduct automated decision system impact assessments and data protection impact assessments."

Recently introduced bicameral, bipartisan legislation, sponsored by Senate AI Caucus co-founders Sen. Rob Portman (R-OH), Sen. Martin Heinrich (D-NM), Rep. Derek Kilmer (D-WA) and Rep. Peter King (D-NY), called the Deepfake Report Act of 2019, reflects the concern that some members of Congress have about the misuse of ever-evolving AI technology by malign actors, particularly through the prism of recent findings regarding election tampering. H.Res.153, "Supporting the development of guidelines for ethical development of AI," and the bipartisan AI JOBS Acts of 2018 and 2019, originally co-sponsored by Reps. Darren Soto (D-FL) and Raja Krishnamoorthi (D-IL), respectively, reflect congressional concern about potential ethical and labor-related implications of AI technology.

Heightened Legislative Activity – Defense and National Security

No federal agency has been more focused on effectively procuring and leveraging AI and related technology than the Department of Defense (DOD). With an R&D capability vastly unique among other agencies, the department has, over just the last few years, identified AI R&D as an area of strategic importance, set out an AI strategy for itself and realigned its acquisitions directorate to help it execute that strategy. Also, it has stood up a Joint Artificial Intelligence Center (JAIC) to help accelerate the delivery and adoption of AI to achieve mission impact at the desired scale. Additionally, the DOD has developed innovation units throughout the enterprise. Including the Defense Innovation Unit (DIU) and the National Security Innovation Network (NSIN) – those units extend the DOD's reach into all of the nation's major technology hubs to help it leverage commercially developed AI capability from the emerging technology innovation base. Furthermore, it has established alternative acquisition pathways to help it procure needed capability more rapidly and with greater agility. Otherwise, AI R&D done organically by the DOD (6.1 Basic research through 6.3 Advanced Technology Development) has been conducted by research organizations within the individual services, as well as the Defense Advanced Research Projects Agency (DARPA) and the Intelligence Advanced Research Projects Agency (IARPA), with the Undersecretary of Defense for Research & Engineering overseeing those initiatives.

Against this backdrop, to date, the defense authorization act has been the vehicle that Congress has used to enact the most salient AI-related legislative initiatives, including many that have effectuated the organizational reforms described above. Notably, Section 230 of last year's defense authorization act, and a standalone bill sponsored by Sen. Mike Rounds (R-SD) called the National Defense Accelerator Network Act of 2018 that inspired it, conceptualized a new innovation network comprised of businesses and academic institutions unaccustomed to doing business with the DOD. The network established under the defense bill was intended to help the DOD begin to close the digital and technological gap between the US and future competitors as to "emerging hardware products and technologies with national security applications." However, whether such an architecture might also help ensure alignment between investment decisions by federal agencies in private AI R&D and the development of AI applications that have been identified as national security priorities may warrant further consideration.

Such a hub-and-spoke architecture can help the DOD employ the kind of technology-pondering, -prospecting and -partnering activities that commercial venture capital (CVC) firms do over a 10-year time horizon to (1) identify long-term R&D trends in AI throughout the nation's emerging technology ecosystems and (2) ensure that private and public resources dedicated to those efforts align with and further national security priorities.

Many of the AI-related provisions in the House-passed Fiscal Year 2020 National Defense Authorization Act would help the DOD build up its workforce in areas that are vital to the effective design, development, procurement and operational use of AI technology – and address related ethics issues.

Important AI-related provisions in the Senate-passed bill appear designed to build on the Senate Armed Services Committee's interest in bringing AI and related technology to bear on cybersecurity challenges. The bill also conveys support for the public and private sectors to work together to address rapidly advancing AI capabilities of US adversaries and, as does the House-passed version, extends the effective date of the NSCAI to 2021.

AI Applications and Use Cases of Congressional Interest

As reflected in the AI Legislation chart, a review of the more than three dozen AI-related bills that members of Congress have introduced over the past five years suggests that, at this point, Congress has been mostly interested in just a few specific AI applications, namely, machine learning; computer vision, including facial and image recognition; natural language processing; and advanced data analytics. However, as Congress' understanding of these and other AI applications (and the policy implications of these applications) expands, in part with the assistance of the NSCAI, its regulatory interest in them will likely increase.

A review of those bills also indicates congressional interest in particular AI use cases, specifically, data system management and big-data processing solutions. Whether in a veterans' healthcare context or in the context of national defense or non-security-related business IT systems, members of Congress appear interested in enhancing the scale at which AI technologies can leverage currently existing data platforms or make legacy IT systems work better. While members of Congress have indicated support for AI's use in speech recognition, autonomous driving and diagnostics, they have also conveyed concern about surveillance and security, and deepfake video use cases involving facial and image recognition. For example, the House Select Committee on Intelligence held a hearing on June 13, 2019, titled "National Security Challenges of Artificial Intelligence, Manipulated Media, and Deepfakes," investigating the national security threats posed by such AI technology.[1] As Congress' understanding of these and other use cases (and the policy implications of these use cases) expands, in part with the assistance of the NSCAI, its regulatory interest in them will likely expand.

Most Involved Members

House of Representatives

In the House, Reps. Ralph Norman (R-SC), Darren Soto (D-FL) and Elise Stefanik (R-NY) have been especially vocal proponents of AI-related legislation. Rep. Norman introduced both the 2018 and 2019 Department of Energy Veterans' Health Initiative Acts, which support the use of AI in improving veterans' healthcare through advanced data analytics and natural language processing. He also co-sponsored the 2018 and 2019 AI JOBS Acts, which express congressional concern about AI technology's impact on the existing labor workforce. Rep. Soto introduced both the 2018 and 2019 AI JOBS Acts and served as an original co-sponsor of H.Res.153, "Supporting the development of guidelines for ethical development of artificial intelligence." He has been a supporter of AI development, while also requiring investigation into potential negative implications of the technology. Furthermore, Rep. Stefanik introduced the NSCAI Act of 2018, which established the NSCAI to review advances in AI to address national security concerns, including economic risk. She also co-sponsored the 2019 AI JOBS Act. As Ranking Member of the House Armed Services Subcommittee on Intelligence and Emerging Threats and Capabilities, she joined fellow subcommittee members in holding a hearing on the Department of Defense's AI structure, investments, and applications, on December 11, 2018.[2]

Reps. Soto and Stefanik are members of the Congressional Artificial Intelligence Caucus, which was founded by Rep. John Delaney (D-MD) and is co-chaired by Reps. Delaney, Pete Olson (R-TX) and Jerry McNerney (D-CA). The caucus informs policymakers of the technological, economic and social impacts of AI technological advancement and brings together AI experts in academia, government and the private sector to discuss the implications of these AI advancements. Rep. Delaney also introduced the Fundamentally Understanding the Usability and Realistic Evolution (FUTURE) of Artificial Intelligence Act of 2017, which Rep. Olson co-sponsored. Rep. McNerney introduced the 2019 AI in Government Act.

On May 9, 2019, House Financial Services Committee Chair Maxine Waters (D-CA) announced the creation of a Task Force on Artificial Intelligence to "make sure that responsible innovation is encouraged, and that regulators and the law are adapting to the changing landscape to best protect consumers, investors, and small businesses." She announced that Rep. Bill Foster (D-IL) would chair the task force, and its members will include Reps. Katie Porter (D-CA), Emanuel Cleaver (D-MO), Sean Casten (D-IL), Alma Adams (D-NC), Sylvia Garcia (D-TX) and Dean Phillips (D-NM). Rep. Cleaver also co-sponsored the FUTURE of Artificial Intelligence Act of 2017, and Rep. Garcia co-sponsored the Computer Science for All Act of 2019. In addition to her leadership of the task force, Chairwoman Waters held a House Financial Services Committee hearing on June 26, 2019, to investigate both the potential for AI applications in emerging fintech, as well as the need for guardrails and protections as AI technology becomes increasingly complex in this sector.[3]

Senate

In the Senate, Sens. Joni Ernst (R-IA), Brian Schatz (D-HI), Rob Portman (R-OH), Cory Gardner (R-CO) and Martin Heinrich (D-NM) have emerged as the most active members supporting AI-related legislation. Other members of the Senate have supported AI development through their membership in the Senate AI Caucus, which was established in March 2019.

Sen. Ernst introduced both the 2018 and 2019 Department of Energy Veterans' Health Initiative Acts, which would direct the Department of Energy to establish a research program in AI and high performance computing to solve big-data challenges in veterans' healthcare. She also introduced the Senate version of the NSCAI Act of 2018. In her capacity as Chairman of the Emerging Threats and Capabilities Subcommittee at the Senate Armed Services Committee, Sen. Ernst appears to be particularly interested in the national security implications of AI. On March 12, 2019, her subcommittee held a hearing on AI initiatives within the Department of Defense, hearing from witnesses from DARPA, the Defense Innovation Unit and the Office of the Department of Defense Chief Information Officer.[4] With her subcommittee colleague, Sen. Josh Hawley (R-MO), her subcommittee may be a focal point in ventilating the national security implications of the global development and proliferation of AI and related technologies, particularly among geopolitical competitors. An August 7, 2019, letter by Sen. Hawley, with Sens. Tom Cotton (R-AR) and Marco Rubio (R-FL), to Google CEO Sundar Pichai, probing that company's relationship with China's Huawei, indicates keen interest in this area that may result in aggressive legislative activity.

Sen. Heinrich has supported bills such as the Artificial Intelligence Initiative Act of 2019, which supports the development and implementation of AI technology in areas such as economic improvement and national security. He and Sen. Portman introduced the Armed Forces Digital Advantage Act in April 2019, which makes digital engineering, including AI technology, 5G telecommunications services and cloud computing, a core competency of the US armed forces.

1 "National Security Challenges of Artificial Intelligence, Manipulated Media, and Deepfakes," House Select Committee on Intelligence, June 13, 2019 (witnesses: Mrs. Danielle Citron, Professor of Law, University of Maryland Francis King Carey School of Law; Mr. Jack Clark, Policy Director, OpenAI; Dr. David Doermann, Professor, SUNY Empire Innovation and Director, Artificial Intelligence Institute, University at Buffalo; Mr. Clint Watts, Distinguished Research Fellow and Senior Fellow, Foreign Policy Research Institute and Alliance for Securing Democracy, German Marshall Fund).

2 "Department of Defense's Artificial Intelligence Structure, Investments, and Applications," House Armed Forces Subcommittee on Emerging Threats and Capabilities, December 11, 2018 (witnesses: Dr. Lisa Porter, Deputy Undersecretary of Defense For Research and Engineering, Department of Defense; Mr. Dana Deasy, Chief Information Officer, Department of Defense).

3 "Perspectives on Artificial Intelligence: Where We Are and the Next Frontier in Financial Services," House Financial Services Committee, June 26, 2019 (witnesses: Dr. Nicol Turner-Lee, Fellow, Governance Studies, Center for Technology Innovation, Brookings Institution; Dr. Bonnie Buchanan, Head of School of Finance and Accounting and Professor of Finance, Surrey Business School, University of Surrey; Dr. Douglas Merrill, Founder and CEO, ZestFinance; Mr. R. Jesse McWaters, Financial Innovation Lead, World Economic Forum).

4 "Artificial Intelligence Initiatives within the Department of Defense," Senate Armed Services Subcommittee on Emerging Threats and Capabilities, March 12, 2019 (witnesses: Dr. Peter T. Highnam, Deputy Director, Defense Advanced Research Projects Agency; Mr. Michael A. Brown, Director, Defense Innovation Unit; Lieutenant General John N.T. Shanahan, USAF, Director, Joint Artificial Intelligence Center, Office of the Department of Defense Chief Information Officer).

Sen. Schatz introduced the AI in Government Act of 2018, which would require the Office of Personnel Management to identify key skills and competencies needed for positions related to AI. The bill was co-sponsored by Sens. Portman and Gardner. Sens. Portman and Schatz also co-sponsored the Artificial Intelligence Initiative Act. Sen. Schatz has also introduced the Commercial Facial Recognition Privacy Act of 2019, which expresses concern about the use of facial recognition AI technology to track end users. Moreover, he co-sponsored the Deepfake Report Act of 2019, along with Sens. Ernst, Portman, Gardner and Gary Peters (D-MI), voicing security and privacy concerns about the rise of deepfake media. Sen. Gardner also co-sponsored the Department of Energy Veterans' Health Initiative Acts of 2018 and 2019.

Co-chaired by Sens. Portman and Heinrich, the Senate AI Caucus' goal is to help members of Congress connect with AI experts in academia, government and the private sector. Sen. Portman called AI "one of the most transformative technologies of all time." He added that "AI is a mix of promise and pitfall, which means, as policy makers, we need to be clear-eyed about its potential," reflecting Congress' cautious optimism toward the technology. Sens. Ernst, Schatz and Gardner, as well as Sen. Peters (D-MI), are also members of the Senate AI Caucus. Sens. Peters and Maria Cantwell (D-WA) should also be looked to as increasingly active legislators on AI and related technologies.

As members of the Senate Commerce, Science, and Transportation Subcommittee on Communications, Technology, Innovation and the Internet, Sens. Blunt, Gardner and Peters participated in a subcommittee hearing in December 2017 on the machine learning application of AI and examined the benefits of AI in the modern digital economy, as well as the practices in place to ensure proper use of this technology.[5] Likewise, Sens. Gardner, Peters and Schatz, as former members of the Subcommittee on Space, Science, and Competitiveness, participated in a hearing in November 2016 to examine the state of AI, including the technology's policy implications and effects on commerce.[6]

Conclusion

Over the last five years, members of Congress have filed more than 40 legislative initiatives addressing AI and related technologies. But of those initiatives, only those that were contained in defense authorization bills have been enacted. Moreover, while the nature of Congress' interest in AI, as reflected in those bills, is widespread, it appears remarkably tactical – addressing only discrete AI applications and use cases and highlighting only certain public policy implications.

However, many AI-related bills that have been filed but not enacted, as well as those that are being discussed but have not yet been filed, suggest that legislative activity related to AI may soon change. As Congress' understanding of AI and related technologies (and their policy implications) expands, Congress' desire to regulate how these technologies are used in the public and private sector will expand exponentially – in size and scope.

The potential for AI and related technology to fundamentally change modern society is, of course, self-evident. And Congress' interest in exploring the implications of AI on accountability, transparency, privacy, and potential algorithmic bias and discrimination, as well as widespread labor displacement, will only become more keen. For these reasons, engagement by all relevant stakeholders in the AI technology innovation base with Congress and federal agencies on AI and related technologies will be imperative. Such engagement must include not only Big Tech, but also emerging technology start-ups (late stage and early stage) and other venture-backed companies; university-affiliated, and other, research institutions; and VC, private equity and other actual or prospective domestic sources of private investment, etc. Additionally, such engagement must include not only the members themselves; it must extend to their key staff, who tend to have an understanding of emerging technology more nuanced and dynamic than do many of their principals.

Given the diffuse nature of the AI technology innovation base and the uniquely important role that purely commercial companies have (and will continue to have) as sources of technological innovation, nothing about such engagement will be obvious or easy. The newly created NSCAI will play a key role in that regard.

Strategic areas of focus of such engagement, to be discussed in future writings, should include (1) the current state and likely direction of AI and related technologies (narrow AI versus general AI); (2) how the public sector can use AI and related technologies safely and ethically to improve how government operates; (3) how AI and related technologies can be engineered and managed to work around or mitigate undesirable policy outcomes; and (4) what government funding-decision, resource allocation architecture would best ensure that strategic partnerships align private sector R&D resources with priority national security applications.

Please visit our Artificial Intelligence group page to learn more about how we can help your business.

Contacts

Pablo E. Carrillo
Of Counsel, Washington DC
T +1 202 457 6415
E pablo.carrillo@squirepb.com

John J. Deschauer Jr.
Partner, Washington DC
T +1 202 457 6338
E jack.deschauer@squirepb.com

Jeffrey L. Turner
Partner, Washington DC
T +1 202 457 6434
E jeff.turner@squirepb.com

5 "Digital Decision-Making: The Building Blocks of Machine Learning and Artificial Intelligence," House Commerce, Science, and Transportation Subcommittee on Communications, Technology, Innovation, and the Internet, December 12, 2017 (witnesses: Dr. Cindy Bethel, Associate Professor, Department of Computer Science and Engineering, Mississippi State University; Mr. Daniel Castro, Vice President, Information Technology and Innovation Foundation; Ms. Victoria Espinel, Chief Executive Officer, The Software Alliance; Dr. Edward Felten, Ph.D., Robert E. Kahn Professor of Computer Science and Public Affairs, Princeton University; Dr. Dario Gil, Ph.D., Vice President, IBM Research AI and IBM Q, IBM).

6 "The Dawn of Artificial Intelligence," House Commerce, Science, and Transportation Subcommittee on Space, Science, and Competitiveness, November 30, 2016 (witnesses: Dr. Eric Horvitz, Interim Co-Chair, Partnership on Artificial Intelligence; Managing Director, Microsoft Research Lab; Dr. Andrew Moore, Dean, School of Computer Science, Carnegie Mellon University; Dr. Andrew Futreal, Professor, Department of Genomic Medicine, University of Texas MD Anderson Cancer Center; Mr. Greg Brockman, Cofounder and Chief Technology Officer, OpenAI; Dr. Steve Chien, Senior Research Scientist, Autonomous Space Systems and Technical Group Supervisor, Artificial Intelligence Group, NASA Jet Propulsion Laboratory, California Institute of Technology).