Calendar No. 456

AI IN GOVERNMENT ACT OF 2019

R E P O R T

OF THE

COMMITTEE ON HOMELAND SECURITY AND GOVERNMENTAL AFFAIRS
UNITED STATES SENATE

TO ACCOMPANY

S. 1363

TO AUTHORIZE AN AI CENTER OF EXCELLENCE WITHIN THE GENERAL SERVICES ADMINISTRATION, AND FOR OTHER PURPOSES

JUNE 1, 2020.—Ordered to be printed

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116TH CONGRESS 2d Session	SENATE	REPORT 116–225

AI IN GOVERNMENT ACT OF 2019

JUNE 1, 2020.—Ordered to be printed

Mr. JOHNSON, from the Committee on Homeland Security and Governmental Affairs, submitted the following

R E P O R T

[To accompany S. 1363]

[Including cost estimate of the Congressional Budget Office]

The Committee on Homeland Security and Governmental Affairs, to which was referred the bill (S. 1363) to authorize an AI Center of Excellence within the General Services Administration, and for other purposes, having considered the same, reports favorably thereon with an amendment in the nature of a substitute and recommends that the bill, as amended, do pass.

CONTENTS

I. PURPOSE AND SUMMARY

S. 1363, the AI in Government Act of 2019, creates a new office in the General Services Administration (GSA), called the "AI Center of Excellence," to promote adoption, use, competency, and cohesion of Federal Government applications of artificial intelligence (AI) to enhance productivity and efficiency of government operations for the public benefit.

The bill also requires the Director of the Office of Management and Budget (OMB) to issue guidance for agency use of AI, requires

agencies to develop Governance Plans based on OMB's guidance, and requires agencies to make publicly available their respective Governance Plans on their agency websites.

Additionally, the bill requires the Director of the Office of Personnel Management (OPM) to identify skills and competencies necessary for Federal AI occupations, establish or update an existing occupational series for Federal AI occupations, estimate the current number of the Federal AI workforce, and prepare a three-year and ten-year forecast for Federal AI hiring needs.

II. BACKGROUND AND THE NEED FOR LEGISLATION

When used by the Federal Government, AI has the potential to solve complex problems, reduce administrative burdens, and optimize resource allocations.[1] Estimates show automating routine tasks alone could allow Federal agencies to deliver better, faster services; utilize up to 1.2 billion Federal employee labor hours for more critical tasks; and, potentially save the Federal Government up to $41.1 billion annually.[2] Currently, over 120 Federal agencies use some form of AI to improve their citizen services and public sector demand for AI solutions will continue to grow.[3] According to one study, "over two-thirds of U.S. federal agencies plan to make investments in AI technologies in the next year" and "82% of federal executives" agree their agency will integrate AI within the next two years.[4]

Notwithstanding AI's potential benefits for Federal agencies, some have raised concerns about the technology's susceptibility to developing or perpetuating bias, lack of transparency and ability to explain decisions, and the adequacy of AI talent to meet current and future demand.[5] To promote innovative uses of AI in the public sector while mitigating against potential risks and barriers to adoption, the AI in Government Act of 2019 codifies and expands existing Federal initiatives established in relation to the *American AI Initiative* ensuring continuity and sustained progress in public sector use of AI.

In September 2019, the White House Office of Science and Technology Policy held *The Summit on Artificial Intelligence in Government*, attended by 175 leaders from the Federal Government, industry, and institutions of higher education, to discuss how the Federal Government can promote the adoption of AI for the public benefit.[6] The *Summit* focused on the strategic objectives of the

[1] Hila Mehr, *Artificial Intelligence for Citizen Services and Government*, Harvard Kennedy School: Ash Center for Democratic Governance and Innovation (Aug. 2017), https://ash.harvard.edu/files/ash/files/artificial_intelligence_for_citizen_services.pdf.

[2] William D. Eggers, et. al, *AI-Augmented Government: Using Cognitive Technologies to Redesign Public Sector Work*, Deloitte University Press (2017), https://www2.deloitte.com/content/dam/insights/us/articles/3832_AI-augmented-government/DUP_AI-augmented-government.pdf.

[3] David Freeman Engstrom, et. al., *Government by Algorithm: AI Use by Federal Agencies* (February 3, 2020), https://www.youtube.com/watch?v=SnGUWHgLP-Q.

[4] Dominic Delmolino, *Technology Advances. Federal Impacts. Intelligent Enterprise Unleashed: Accenture Technology Vision 2018*. Accenture (2018), https://www.accenture.com/_ACNMEDIA/PDF-78/ACCENTURE-FEDERAL-SERVICES-TECHVISION-2018.PDF#ZOOM=50.

[5] Digital Decision-Making: The Building Blocks of Machine Learning and Artificial Intelligence: Hearing Before the S. Subcommittee on Communications, Technology, Innovation, and the Internet of the Comm. on Commerce, Science, and Transportation, 115th Cong. 33 (2017) (statement of Edward W. Felton, Robert E. Kahn Professor of Computer Science and Public Affairs, Princeton University).

[6] Office of Science and Technology Policy, The White House, *Summary of the 2019 White House Summit on Artificial Intelligence in Government* (Sept. 9, 2019), https://www.whitehouse.gov/wp-content/uploads/2019/09/Summary-of-White-House-Summit-on-AI-in-Government-September-2019.pdf.

American AI Initiative initiated by President Trump through an executive order on February 14, 2019.[7] The key findings of the *Summit* included: "leveraging experiences and best practices across government, industry, and academia . . . to accelerate AI use in government;" Center of Excellence models "can be an important mechanism for agencies to share AI expertise and best practices;" and increased adoption of AI in the Federal Government will require a skilled workforce.[8]

In response to this legislation, in October 2019, the GSA created the AI Center of Excellence to assist Federal agencies in realizing the benefits of AI and act upon the findings of the *Summit*.[9] The AI in Government Act of 2019 codifies GSA's AI Center of Excellence and mandates several responsibilities building on the findings of the *Summit*. To better leverage experience and best practices across sectors, the bill would require the AI Center of Excellence regularly convene stakeholders from agencies, industry, Federal laboratories, nonprofits, academia, and other entities facilitating cross-sector awareness of innovative AI applications, use cases, and other relevant information related to AI.

Additionally, to develop a better understanding of how Federal agencies currently deliver benefits to citizens through AI and plan to adhere to the principles outlined in the *American AI Initiative*, the bill requires the OMB Director to issue guidance to inform agencies' adoption and governance of AI. Agencies would be required to submit their Governance Plans to the OMB Director to address agencies' respective strategies for advancing innovative uses and reducing barriers to adoption while mitigating risks to civil liberties, privacy, civil rights, or other unintended consequences. The bill requires agencies to publicly post their Governance Plans on their respective agency websites, and requires the GSA Administrator to create and maintain a publicly available online repository for all the plans.

While official government AI workforce data does not exist, reports indicate a current shortage of AI experts.[10] The AI in Government Act of 2019 requires the OPM Director to identify skills and competencies related to Federal AI occupations, forecast three-year and ten-year hiring needs of the Federal AI workforce, and create a new occupational category or update an existing category to ensure that Federal agencies hire appropriately skilled workers. Additionally, to improve cohesion and competence of AI's use in Federal agencies, the bill ensures the AI Center of Excellence and Federal agencies have adequate AI talent to carry out their goals. The bill allows the GSA Administrator to make temporary or term appointments, appoint fellows from nonprofits, think tanks, aca-

[7] Exec. Order No. 13,859, 84 Fed. Reg. 3,967 (Feb. 14, 2019).

[8] Office of Science and Technology Policy, The White House, *Summary of the 2019 White House Summit on Artificial Intelligence in Government* (Sept. 9, 2019), https://www.whitehouse.gov/wp-content/uploads/2019/09/Summary-of-White-House-Summit-on-AI-in-Government-September-2019.pdf.

[9] Jack Corrigan, *GSA Offers More Details on Artificial Intelligence Center of Excellence*, Nextgov (Oct. 8, 2019), https://www.nextgov.com/emerging-tech/2019/10/gsa-offers-more-details-artificial-intelligence-center-excellence/160452/.

[10] Executive Office of the President of the United States, Select Committee on Artificial Intelligence, National Science & Technology Council, *The National Artificial Intelligence Research and Development Strategic Plan: 2019 Update* (June 2019), https://www.nitrd.gov/pubs/National-AI-RD-Strategy-2019.pdf.

demia, and industry, and detail AI Center of Excellence employees to other agencies.

<div align="center">III. LEGISLATIVE HISTORY</div>

Senator Brian Schatz (D–HI) introduced S. 1363, the AI in Government Act of 2019, on May 8, 2019, with Senator Rob Portman (R–OH), Senator Cory Gardner (R–CO), and Senator Kamala Harris (D–CA). The bill was referred to the Committee on Homeland Security and Governmental Affairs.

The Committee considered S. 1363 at a business meeting on November 6, 2019. During the business meeting, a substitute amendment was offered by Senator Portman and Ranking Member Gary Peters (D–MI). The amendment was adopted by voice vote. The bill, as amended, was reported favorably by voice vote *en bloc*. Senators present for the vote were Johnson, Portman, Paul, Lankford, Romney, Scott, Enzi, Hawley, Peters, Carper, Hassan, Sinema, and Rosen.

<div align="center">IV. SECTION-BY-SECTION ANALYSIS OF THE BILL, AS REPORTED</div>

Section 1. Short title

This section names the bill the "AI in Government Act of 2019."

Section 2. Definitions

This section includes definitions of the terms "Administrator," "agency," "artificial intelligence," "Director," "institute of higher education," and "nonprofit organization."

Section 3. AI Center of Excellence

This section establishes an office within the GSA called the "AI Center of Excellence" to enhance productivity and efficiency of the use of AI by the Federal Government.

This section outlines the AI Center of Excellence's duties and requires it to regularly convene stakeholders from agencies, industry, Federal laboratories, academia, and others to discuss developments and trends in AI technology and disseminate information to agencies and on a publicly available website. The AI Center of Excellence is required to advise and provide technical expertise to the Federal Government on the acquisition and procurement of AI and assist agencies in applying management and use of data in AI applications. The AI Center of Excellence is required to consult with other Federal entities currently operating programs, creating standards and guidelines, and funding internal projects to coordinate between the public and private sector. This section also requires the AI Center of Excellence to advise the Director of OMB on the development of policy related to the use of AI technology by agencies and the Director of Office of Science and Technology Policy (OSTP) on policy related to research and national investment in artificial intelligence.

Under this section, the GSA Administrator would be required to provide necessary staff, resources, and administrative support to the AI Center of Excellence through the appointment of temporary or term employees and fellows from nonprofits, think tanks, academia, and industry, and also would allow the Administrator to de-

tail AI Center of Excellence employees to agencies on a reimbursable or non-reimbursable basis.

The GSA Administrator is required to provide an annual briefing to Congress on the AI Center of Excellence's activities for the preceding year, including a summary and description of specific projects undertaken; recommendations for agencies to support the development and deployment of AI to promote knowledge of AI among the Federal workforce; and any other information deemed relevant by the Administrator.

This section would sunset ten years after the date of the enactment of the legislation.

Section 4. Guidance for agency use of artificial intelligence

This section would require the OMB Director, in coordination with the OSTP Director, and in consultation with the GSA Administrator and any other agencies or stakeholders as determined by the Director, to issue a memorandum not later than 270 days after the date of enactment of this bill to the head of each agency related to the development of agency policies for AI.

This section also mandates OMB's guidance provide direction on the development of policies related to the acquisition and use of AI technologies at Federal agencies, recommendations to remove barriers to innovation and the adoption of AI at Federal agencies while protecting civil liberties, privacy, civil rights, and economic and national security, and best practices for identifying, assessing, and mitigating unintended consequences related to the use of AI by the Federal Government.

This section would also require OMB to issue draft guidance subject to public comment not later than 180 days after the enactment of this legislation. Upon OMB's issuance of final guidance, this section requires the heads of each agency using or anticipating the use of AI at their respective agencies submit to the Director and post publicly online the agency's plan to achieve consistency with OMB guidance. The section requires the Director to update guidance every two years.

Section 5. Update of occupational series for artificial intelligence

Not later than one year after the date of enactment of this bill, the OPM Director must identify skills needed for positions in AI, establish a new or update an existing occupational series relating to Federal AI positions, estimate the current number of Federal positions related to AI, and prepare a three-year and ten-year forecast of the hiring needs of the Federal AI workforce. Additionally, this section requires the Director submit a comprehensive plan and timeline to complete this inquiry within 120 days after the enactment of this legislation to the Senate Homeland Security and Governmental Affairs and House Committee on Oversight and Reform.

V. EVALUATION OF REGULATORY IMPACT

Pursuant to the requirements of paragraph 11(b) of rule XXVI of the Standing Rules of the Senate, the Committee has considered the regulatory impact of this bill and determined that the bill will have no regulatory impact within the meaning of the rules. The Committee agrees with the Congressional Budget Office's statement that the bill contains no intergovernmental or private-sector

mandates as defined in the Unfunded Mandates Reform Act (UMRA) and would impose no costs on state, local, or tribal governments.

VI. CONGRESSIONAL BUDGET OFFICE COST ESTIMATE

U.S. CONGRESS,
CONGRESSIONAL BUDGET OFFICE,
Washington, DC, January 6, 2020.

Hon. RON JOHNSON,
Chairman, Committee on Homeland Security and Governmental Affairs, U.S. Senate, Washington, DC.

DEAR MR. CHAIRMAN: The Congressional Budget Office has prepared the enclosed cost estimate for S. 1363, the AI in Government Act of 2019.

If you wish further details on this estimate, we will be pleased to provide them. The CBO staff contact is Matthew Pickford.

Sincerely,

PHILLIP L. SWAGEL,
Director.

Enclosure.

S. 1363, AI in Government Act of 2019
As ordered reported by the Senate Committee on Homeland Security and Governmental Affairs on November 6, 2019

By Fiscal Year, Millions of Dollars	2020	2020-2024	2020-2029
Direct Spending (Outlays)	0	0	0
Revenues	0	0	0
Increase or Decrease (-) in the Deficit	0	0	0
Spending Subject to Appropriation (Outlays)	*	10	not estimated

Statutory pay-as-you-go procedures apply?	No	**Mandate Effects**	
Increases on-budget deficits in any of the four consecutive 10-year periods beginning in 2030?	No	Contains intergovernmental mandate?	No
		Contains private-sector mandate?	No

* = between zero and $500,000.

S. 1363 would establish an Artificial Intelligence Center of Excellence within the General Services Administration (GSA) to promote federal efforts to develop artificial intelligence (AI) and apply it to government agencies. AI allows computer systems to perform tasks that normally require human intelligence, such as visual perception, speech recognition, decisionmaking, and translating between languages. The bill also would require the Office of Science and Technology Policy to issues guidance to federal agencies on AI acquisition and best practices. Finally, the Office of Personnel Management would establish an AI jobs series.

Using information from GSA and other agencies about current efforts to use AI and the scope of S. 1363, CBO estimates that implementing S. 1363 would cost around $2 million annually, primarily

for about four to five full-time new employees to manage the proposed new center and about $1 million to run the website.

The CBO staff contact for this estimate is Matthew Pickford. The estimate was reviewed by H. Samuel Papenfuss, Deputy Director of Budget Analysis.

VII. CHANGES IN EXISTING LAW MADE BY THE BILL, AS REPORTED

In compliance with paragraph 12 of rule XXVI of the Standing Rules of the Senate, changes in existing law made by the bill, the Committee notes that no changes in existing law are made by S. 1363 as ordered reported.

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