

Calendar No. 142

117TH CONGRESS }
1st Session }

SENATE

{ REPORT
117-40

ARTIFICIAL INTELLIGENCE TRAINING FOR
THE ACQUISITION WORKFORCE ACT

R E P O R T

OF THE

COMMITTEE ON HOMELAND SECURITY AND
GOVERNMENTAL AFFAIRS
UNITED STATES SENATE

TO ACCOMPANY

S. 2551

TO REQUIRE THE DIRECTOR OF THE OFFICE OF
MANAGEMENT AND BUDGET TO ESTABLISH OR OTHERWISE
PROVIDE AN ARTIFICIAL INTELLIGENCE TRAINING PROGRAM
FOR THE ACQUISITION WORKFORCE, AND FOR OTHER PURPOSES



OCTOBER 5, 2021.—Ordered to be printed

U.S. GOVERNMENT PUBLISHING OFFICE

29-010

WASHINGTON : 2021

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ARTIFICIAL INTELLIGENCE TRAINING FOR THE ACQUISITION WORKFORCE ACT

OCTOBER 5, 2021.—Ordered to be printed

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

R E P O R T

[To accompany S. 2551]

[Including cost estimate of the Congressional Budget Office]

The Committee on Homeland Security and Governmental Affairs, to which was referred the bill (S. 2551) to require the Director of the Office of Management and Budget to establish or otherwise provide an artificial intelligence training program for the acquisition workforce, and for other purposes, having considered the same, reports favorably thereon without amendment and recommends that the bill do pass.

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I. PURPOSE AND SUMMARY

S. 2551, the Artificial Intelligence Training for the Workforce Act, or the “AI Training Act,” requires the Office of Management and Budget (OMB) to establish or otherwise provide a training program on artificial intelligence (AI) for the federal acquisition workforce, in order to ensure that the workforce has knowledge of the capabilities and risks associated with AI. The bill defines artificial intelligence and the covered workforce members targeted for the training, including program and procurement personnel, and others

as designated by the head of the executive agency to participate. The Director of OMB, in coordination with the Administrator of General Services and others determined relevant by the Director, must develop and provide the training program to the covered workforce not later than one year after the date of enactment.

Additionally, S. 2551 outlines topics to be covered in the AI training program, including introductory concepts; the science underlying AI and how it works; benefits of AI for the federal government; the risks posed by AI and ways to mitigate these risks to ensure it is reliable, safe and trustworthy; and future trends in AI, including trends for homeland and national security and innovation. The bill requires the training program to be updated not less frequently than every two years, in order to incorporate new information and ensure the program continues to satisfy requirements. An interactive format for the training involving technologists, scholars, and other experts is encouraged, and metrics on participation and feedback must be maintained. The bill contains a sunset provision effective ten years after the date of enactment.

II. BACKGROUND AND NEED FOR THE LEGISLATION

As the federal government ramps up investment in AI, employees who acquire and manage this technology need basic training on its capabilities and risks. The need for workforce training on AI has been recognized by experts such as the National Security Commission on Artificial Intelligence (NSCAI).¹ NSCAI is particularly concerned with the implications of an under-trained federal acquisition workforce, noting: “Government agencies that rely solely on contractors for digital expertise will become incapable of understanding the underlying technology well enough to make successful acquisition decisions independent of contractors.”² The AI Training Act addresses the need to develop an acquisition workforce that is prepared to engage with the technical and ethical implications of AI as the United States seeks to maintain a global advantage with this technology.

Although multiple executive orders have promoted the use of AI across the federal government,³ there has not been a concerted effort to train the civilian workforce that identifies, develops, buys, and manages AI capabilities to support the mission. While informal groups exist, such as the General Services Administration’s AI Community of Practice,⁴ they are no substitute for a structured and ongoing program that ensures proper government adoption of AI. Market research predicts that the federal government will spend nearly \$1 billion on AI by 2023, which will greatly increase productivity and improve engagement with the public if the federal workforce learns to use it effectively.⁵

¹National Security Commission on Artificial Intelligence, First Quarter Recommendations (Mar. 2020) (<https://www.nscai.gov/wp-content/uploads/2021/01/Summary-of-NSCAI-Q1-Recommendations.pdf>).

²National Security Commission on Artificial Intelligence, Final Report (Mar. 2021) (<https://www.nscai.gov/wp-content/uploads/2021/03/Full-Report-Digital-1.pdf>).

³Exec. Order No. 13960, 85 Fed. Reg. 78939 (Dec. 3, 2020); see also Exec. Order No. 13859, 84 Fed. Reg. 3967 (Feb. 11, 2019).

⁴IA Digital.gov, Artificial Intelligence Community (<https://digital.gov/communities/artificial-intelligence/>) (accessed Sept. 24, 2021).

⁵Nextgov, *The Case to Increase Workforce Training for Artificial Intelligence* (Aug. 19, 2020) (<https://www.nextgov.com/ideas/2020/08/case-increase-workforce-training-artificial-intelligence/167782/>).

Along with positive impacts for agencies and society, there are parallel causes of concern that AI can, if improperly or maliciously applied, result in invasions of privacy and have discriminatory effects.⁶ The ethical use of AI is an especially urgent issue.⁷

III. LEGISLATIVE HISTORY

Chairman Gary Peters (D–MI) introduced S. 2551, the AI Training Act, on July 29, 2021, with Senator Portman (R–OH). The bill was referred to the Senate Committee on Homeland Security and Governmental Affairs. The Committee considered S. 2551 at a business meeting on August 4, 2021. The Committee ordered the bill reported favorably without amendment by voice vote *en bloc*. Senators present for the vote were: Peters, Carper, Hassan, Sinema, Rosen, Padilla, Ossoff, Portman, Johnson, Lankford, Romney, Scott, and Hawley.

IV. SECTION-BY-SECTION ANALYSIS OF THE BILL, AS REPORTED

Section 1. Short title

This section provides that the bill may be cited as the “AI Training Act.”

Section 2. Artificial intelligence training programs

Subsection (a) defines “artificial intelligence,” “AI training program,” “covered workforce,” “Director,” and “executive agency.”

Subsection (b)(1) requires the Director of the Office of Management and Budget, in coordination with the Administrator of General Services and others, to develop and implement or otherwise provide an AI training program for the covered workforce.

Subsection (b)(2) states the purpose of the AI training program as ensuring that the covered workforce has knowledge of the capabilities and risks associated with AI.

Subsection (b)(3) prescribes information to be covered in the AI training program, including the science underlying AI and how it works; introductory concepts related to AI; ways in which AI can benefit the federal government; the risks posed by AI, including discrimination and risks to privacy; ways to mitigate these risks and efforts to create and identify AI that is reliable, safe, and trustworthy; and future trends in AI, including trends for homeland and national security and innovation.

Subsection (b)(4) requires the Director of OMB to update the training program not less frequently than once every two years in order to incorporate new information and ensure that the AI training program continues to satisfy the requirements of (b)(3).

Subsection (b)(5) encourages the Director of OMB to include interactive learning in the AI training program involving technologists, scholars, and other private, public and nonprofit sector experts.

⁶Brookings Institution Report, *Protecting Privacy in an AI-driven World* (Feb. 10, 2020) (<https://www.brookings.edu/research/protecting-privacy-in-an-ai-driven-world/>).

⁷Government Accountability Office, *Artificial Intelligence: An Accountability Framework for Federal Agencies and Other Entities* (GAO–21–519SP) (Jun. 30, 2021); Government Accountability Office, *Facial Recognition Technology: Federal Law Enforcement Agencies Should Better Assess Privacy and Other Risks* (GAO–21–518) (Jun. 29, 2021); see also *Forensic Technology: Algorithms Strengthen Forensic Analysis, but Several Factors Can Affect Outcomes* (GAO–21–435SP) (Jul. 6, 2021).

Subsection (b)(6) requires the Director of OMB to track metrics on participation and feedback related to the AI training program. Subsection (b)(7) holds that Section 2 shall cease to have effect 10 years after enactment.

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, September 28, 2021.

Hon. GARY C. PETERS,
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. 2551, the Artificial Intelligence Training for the Acquisition Workforce Act.

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

Sincerely,

PHILLIP L. SWAGEL,
Director.

Enclosure.

S. 2551, Artificial Intelligence Training for the Acquisition Workforce Act			
As ordered reported by the Senate Committee on Homeland Security and Governmental Affairs on August 4, 2021			
By Fiscal Year, Millions of Dollars	2021	2021-2026	2021-2031
Direct Spending (Outlays)	0	0	0
Revenues	0	0	0
Increase or Decrease (-) in the Deficit	0	0	0
Spending Subject to Appropriation (Outlays)	0	9	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 2032?	No	Contains intergovernmental mandate?	No
		Contains private-sector mandate?	No

Artificial Intelligence (AI) allows computer systems to perform tasks that require human intelligence. S. 2551 would require the Office of Management and Budget (OMB) to establish a training

program to provide federal procurement officials with an introductory understanding of the operational benefits and privacy risks of AI.

Using information from OMB and other agencies about current efforts to use AI across the federal government, CBO anticipates that OMB would need five full-time employees to create and manage the training program. CBO estimates that staff salaries and technology costs to deliver the training would total \$2 million annually. Accounting for the time needed to hire new employees and develop the training, CBO estimates that implementing the bill would cost \$9 million over the 2021–2026 period; such spending would be subject to the availability of appropriations. For this estimate, CBO assumes that the bill will be enacted in fiscal year 2022.

The CBO staff contact for this estimate is Aldo Prosperi. The estimate was reviewed by Leo Lex, Deputy Director of Budget Analysis.

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

This legislation would make no change in existing law, within the meaning of clauses (a) and (b) of subparagraph 12 of rule XXVI of the Standing Rules of the Senate, because this legislation would not repeal or amend any provision of current law.