

**Calendar No. 727**118<sup>TH</sup> CONGRESS  
2<sup>D</sup> SESSION**S. 4769**

To require the Director of the National Institute of Standards and Technology to develop voluntary guidelines and specifications for internal and external assurances of artificial intelligence systems, and for other purposes.

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**IN THE SENATE OF THE UNITED STATES**

JULY 24, 2024

Mr. HICKENLOOPER (for himself and Mrs. CAPITO) introduced the following bill; which was read twice and referred to the Committee on Commerce, Science, and Transportation

DECEMBER 18 (legislative day, DECEMBER 16), 2024

Reported by Ms. CANTWELL, with amendments

[Omit the part struck through and insert the part printed in *italic*]

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**A BILL**

To require the Director of the National Institute of Standards and Technology to develop voluntary guidelines and specifications for internal and external assurances of artificial intelligence systems, and for other purposes.

1       *Be it enacted by the Senate and House of Representa-*  
2       *tives of the United States of America in Congress assembled,*

1 **SECTION 1. SHORT TITLE.**

2 This Act may be cited as the “Validation and Evalua-  
3 tion for Trustworthy (VET) Artificial Intelligence Act” or  
4 the “VET Artificial Intelligence Act”.

5 **SEC. 2. PURPOSES.**

6 The purposes of this Act are—

7 (1) to develop consensus-driven, evidence-based  
8 voluntary ~~guidelines~~ *technical guidelines* and speci-  
9 fications for internal and external assurances  
10 through the testing, evaluation, validation, and  
11 verification of artificial intelligence systems, as ap-  
12 propriate based on the intended application, use-  
13 case, and risk profile of the artificial intelligence sys-  
14 tem;

15 (2) to use meaningful assurance to supplement  
16 methodologies used to build trust in artificial intel-  
17 ligence systems, increase adoption of artificial intel-  
18 ligence systems, and provide for accountability and  
19 governance of artificial intelligence systems; and

20 (3) to further the goals of the Artificial Intel-  
21 ligence Risk Management Framework, including any  
22 successor framework, published by the National In-  
23 stitute of Standards and Technology and the Artifi-  
24 cial Intelligence Safety Institute pursuant to section  
25 22A(c) of the National Institute of Standards and  
26 Technology Act (15 U.S.C. 278h–1(c)).

1 **SEC. 3. DEFINITIONS.**

2 In this Act:

3 (1) ~~ARTIFICIAL INTELLIGENCE.~~—The term “ar-  
 4 tificial intelligence” has the meaning given the term  
 5 in section 5002 of the National Artificial Intelligence  
 6 Initiative Act of 2020 (15 U.S.C. 9401).

7 (2) ~~ARTIFICIAL INTELLIGENCE SYSTEM.~~—The  
 8 term “artificial intelligence system” has the meaning  
 9 given such term in section 7223 of the Advancing  
 10 American AI Act (40 U.S.C. 11301 note). *term “ar-*  
 11 *tificial intelligence system” means a machine-based*  
 12 *system that, for explicit or implicit objectives, infers,*  
 13 *from the input the system receives, how to generate*  
 14 *outputs, such as predictions, content, recommenda-*  
 15 *tions, or decisions, that can influence physical or vir-*  
 16 *tual environments.*

17 (3) ~~DEPLOYER.~~—The term “deployer” means  
 18 an entity that operates an artificial intelligence sys-  
 19 tem for internal use or for use by a third party.

20 (4) ~~DEVELOPER.~~—The term “developer”—  
 21 (A) means an entity that builds, designs,  
 22 codes, produces, trains, or owns an artificial in-  
 23 telligence system for internal use or for use by  
 24 a third party; and

1 (B) does not include an entity that is sole-  
2 ly a deployer of the artificial intelligence sys-  
3 tem.

4 (54) DIRECTOR.—The term “Director” means  
5 the Director of the National Institute of Standards  
6 and Technology.

7 (65) EXTERNAL ARTIFICIAL INTELLIGENCE AS-  
8 SURANCE.—The term “external artificial intelligence  
9 assurance” means an independent and impartial  
10 evaluation of an artificial intelligence system con-  
11 ducted by a nonaffiliated third party in accordance  
12 with the voluntary assurance ~~guidelines~~ *technical*  
13 *guidelines* and specifications described in section 4  
14 or consensus-driven voluntary standards, for the  
15 purpose of—

16 (A) verifying claims with respect to the  
17 functionality and testing of the artificial intel-  
18 ligence system, including verifying whether it is  
19 fit for its intended purpose; or

20 (B) identifying any significant error or in-  
21 consistency in the testing, risk management  
22 processes, or internal governance, any substan-  
23 tial vulnerability, or any negative societal im-  
24 pact of the artificial intelligence system.

1           (76) INTERNAL ARTIFICIAL INTELLIGENCE AS-  
 2           SURANCE.—The term “internal artificial intelligence  
 3           assurance” means an independent evaluation of an  
 4           artificial intelligence system conducted by the party  
 5           being evaluated with an internal reporting structure  
 6           that encourages impartial evaluations and prevents  
 7           conflicts of interest, for the purpose of—

8                   (A) verifying claims with respect to the  
 9                   functionality and testing of the artificial intel-  
 10                  ligence system, including verifying whether it is  
 11                  fit for its intended purpose; or

12                  (B) identifying any significant error or in-  
 13                  consistency in the testing, risk management  
 14                  ~~processes, or internal governance, any substan-~~  
 15                  ~~tial vulnerability, or any negative societal im-~~  
 16                  ~~paet of the artificial intelligence system.~~ *process,*  
 17                  *or internal governance or any substantial vul-*  
 18                  *nerability of the artificial intelligence system.*

19           (87) NONAFFILIATED THIRD PARTY.—The term  
 20           “nonaffiliated third party” with respect to the eval-  
 21           uation of an artificial intelligence system, means a  
 22           person who—

23                   (A) is not related by common ownership or  
 24                   affiliated by common corporate control with the

1 developer or deployer of the artificial intel-  
2 ligence system;

3 (B) can demonstrate financial independ-  
4 ence from the developer or deployer of the arti-  
5 ficial intelligence system;

6 (C) does not employ any individual, who is  
7 also employed by the developer or deployer of  
8 the artificial intelligence system; and

9 (D) is a qualified evaluator of artificial in-  
10 telligence systems ~~as determined by the vol-~~  
11 ~~untary guidelines and specifications rec-~~  
12 ~~ommended under section 4(b)(6)~~, with—

13 (i) demonstrated expertise in relevant  
14 technical domains, including—

15 (I) data privacy and security  
16 principles; and

17 (II) risk management practices in  
18 artificial intelligence *systems*; and

19 (ii) familiarity with the relevant de-  
20 tails regarding the type of artificial intel-  
21 ligence system being evaluated.

22 (98) SECRETARY.—The term “Secretary”  
23 means the Secretary of Commerce.

1 **SEC. 4. VOLUNTARY ASSURANCE GUIDELINES TECHNICAL**  
 2 **GUIDELINES AND SPECIFICATIONS FOR ARTI-**  
 3 **FICIAL INTELLIGENCE SYSTEMS.**

4 (a) VOLUNTARY ~~GUIDELINES~~ *TECHNICAL GUIDE-*  
 5 *LINES* AND SPECIFICATIONS FOR ASSURANCE.—Not later  
 6 than 1 year after the date of the enactment of this Act,  
 7 the Director, in collaboration with public and private sec-  
 8 tor organizations, including the National Science Founda-  
 9 tion and the Department of Energy, shall develop ~~and pe-~~  
 10 ~~riodically~~ *and, not less frequently than every 2 years, shall*  
 11 *review and* update as the Director considers appropriate,  
 12 a set of voluntary ~~guidelines~~ *technical guidelines* and speci-  
 13 fications for internal artificial intelligence assurance and  
 14 external artificial intelligence assurance.

15 (b) CONTENTS.—The ~~guidelines~~ *technical guidelines*  
 16 and specifications required by subsection (a) shall—

17 (1) identify consensus-driven, voluntary stand-  
 18 ards for internal artificial intelligence assurance and  
 19 external artificial intelligence assurance that ad-  
 20 dress—

21 (A) safeguards for consumer privacy;

22 (B) methods to assess and mitigate harms  
 23 to individuals by artificial intelligence systems;

24 (C) dataset quality;

25 (D) documentation, disclosure, and prove-  
 26 nance communications to external parties; and

1 (E) governance and process controls;

2 (2) provide ~~guidelines~~ *technical guidelines*, best  
3 practices, methodologies, procedures, and processes,  
4 as appropriate, for internal artificial intelligence as-  
5 surance and external artificial intelligence assurance  
6 that effectively address the elements listed in para-  
7 graph (1);

8 (3) establish common definitions and character-  
9 izations for testing, evaluating, verifying, and vali-  
10 dating methods for internal artificial intelligence as-  
11 surance and external artificial intelligence assurance;

12 (4) recommend criteria or approaches for a de-  
13 veloper or deployer to determine the frequency and  
14 circumstances under which internal artificial intel-  
15 ligence assurance and external artificial intelligence  
16 assurance activities should be conducted, accounting  
17 for the relevant risk and use-case profile of the arti-  
18 ficial intelligence system, and any additional cir-  
19 cumstance under which an assurance should be con-  
20 ducted;

21 (5) recommend criteria or approaches for a de-  
22 veloper or deployer to determine the scope of inter-  
23 nal artificial intelligence assurance and external arti-  
24 ficial intelligence assurance conducted through test-  
25 ing and evaluating, accounting for the relevant risk



1 and use-case profile of the artificial intelligence sys-  
2 tem, including the minimum information or technical  
3 resources that should be provided to the party con-  
4 ducting the assurance to enable assurance activities;

5 ~~(6) recommend the appropriate qualifications,~~  
6 ~~expertise, professional licensing, and accountability~~  
7 ~~that a party conducting internal artificial intel-~~  
8 ~~ligence assurance or external artificial intelligence~~  
9 ~~assurance should have with respect to—~~

10 ~~(A) the type of artificial intelligence system~~  
11 ~~under evaluation; and~~

12 ~~(B) the internal and external assurance~~  
13 ~~processes;~~

14 ~~(7) provide guidance for the manner in which~~  
15 ~~a developer or deployer may disclose, as appropriate,~~  
16 ~~the results of an internal or external assurance or~~  
17 ~~carry out corrective actions with respect to an artifi-~~  
18 ~~cial intelligence system following the completion of~~  
19 ~~an internal or external assurance of such system,~~  
20 ~~and guidance on the manner in which a developer or~~  
21 ~~deployer may properly document any corrective ac-~~  
22 ~~tion taken;~~

23 ~~(8) align with the voluntary consensus stand-~~  
24 ~~ards, including international standards, identified~~

1 pursuant to paragraph (1) to the fullest extent possible;  
2

3 (98) incorporate the relevant voluntary consensus standards identified pursuant to paragraph  
4 (1) and industry best practices to the fullest extent  
5 possible;  
6

7 (109) not prescribe or otherwise require—

8 (A) the use of any specific solution; or

9 (B) the use of any specific information or  
10 any communications technology product or service;  
11 and

12 (110) recommend methods to protect the confidentiality of sensitive information, including personal data and proprietary knowledge of an artificial intelligence system, that may be obtained during the assurance process.  
13  
14  
15  
16

17 (c) STAKEHOLDER OUTREACH.—In developing the  
18 voluntary ~~guidelines~~ *technical guidelines* and specifications  
19 required by subsection (a), the Director shall—

20 (1) solicit public comment on at least 1 draft of  
21 the ~~guidelines~~ *technical guidelines* and specifications,  
22 and provide a reasonable period of not less than 30  
23 days for the submission of comments by interested  
24 stakeholders;

1           (2) make each *complete* draft of the voluntary  
2 ~~guidelines~~ *technical guidelines* and specifications de-  
3 veloped under subsection (a) available to the public  
4 on the website of the National Institute of Stand-  
5 ards and Technology; and

6           (3) convene workshops, roundtables, and other  
7 public forums, as the Director considers appropriate,  
8 to consult with relevant stakeholders in industry,  
9 academia, civil society, consumer advocacy, work-  
10 force development organizations, labor organizations,  
11 conformance assessment bodies, and any other sec-  
12 tor the Director considers appropriate, on the devel-  
13 opment of the voluntary ~~guidelines~~ *technical guide-*  
14 *lines* and specifications.

15       (d) PUBLICATION.—The Director shall publish the  
16 voluntary ~~guidelines~~ *technical guidelines* and specifications  
17 required by sub ~~section (a)~~— *section (a) as a standalone*  
18 *framework or document available to the public on the*  
19 *website of the National Institute of Standards and Tech-*  
20 *nology.*

21           ~~(1) as a standalone framework or document~~  
22 ~~available to the public on the website of the National~~  
23 ~~Institute of Standards and Technology; or~~

24           ~~(2) as a component of—~~

1           ~~(A) any successor of the Artificial Intel-~~  
 2           ~~ligence Risk Management Framework developed~~  
 3           ~~and updated pursuant to section 22A(e) of the~~  
 4           ~~National Institute of Standards and Technology~~  
 5           ~~Act (15 U.S.C. 278h-1(e)); or~~

6           ~~(B) any guidance issued by the Artificial~~  
 7           ~~Intelligence Safety Institute.~~

8 **SEC. 5. QUALIFICATIONS ADVISORY COMMITTEE.**

9           (a) ADVISORY COMMITTEE.—Not later than 90 days  
 10 after the date on which the Director publishes the vol-  
 11 untary ~~guidelines~~ *technical guidelines* and specifications  
 12 required under section 4(a), the Secretary shall establish  
 13 the Artificial Intelligence Assurance Qualifications Advi-  
 14 sory Committee (referred to in this section as the “Advi-  
 15 sory Committee”).

16           (b) MEMBERSHIP.—The Secretary shall appoint to  
 17 the Advisory Committee not more than ~~15 individuals~~ *20*  
 18 *individuals* with expertise relating to artificial intelligence  
 19 systems, including at least 1 representative from each of  
 20 the following:

21           (1) Institutions of higher education.

22           (2) Organizations developing artificial intel-  
 23 ligence systems.

24           (3) Organizations deploying artificial intel-  
 25 ligence systems.

1           (4) Organizations assessing artificial intel-  
2           ligence systems.

3           (5) Consumers or consumer advocacy groups.

4           (6) Public health organizations.

5           (7) Public safety organizations.

6           (8) Civil rights organizations.

7           (9) Professional accreditation organizations.

8           (10) Workforce development organizations.

9           (11) Labor organizations.

10          (12) *Nonprofit assurance professional organiza-*  
11          *tions.*

12          (c) DUTIES.—The Advisory Committee shall—

13           (1) review and assess case studies from entities  
14           that provide licensure, certification, or accreditation  
15           to independent organizations with a primary mission  
16           of verifying compliance with applicable statutes, reg-  
17           ulations, standards, or guidelines; and

18           (2) determine the applicability of the case stud-  
19           ies reviewed and assessed under paragraph (1) to  
20           the development, maintenance, and use of artificial  
21           intelligence systems for the purpose of developing  
22           recommendations under subsection (d).

23          (d) RECOMMENDATIONS.—Not later than 1 year  
24          after the date on which the Secretary establishes the Advi-  
25          sory Committee under this section, the Advisory Com-

1 mittee shall submit to the Secretary and Congress and  
 2 make publicly available a report that includes rec-  
 3 ommendations for the Secretary to consider regarding—

4           (1) the qualifications, expertise, professional li-  
 5 censing, independence, and accountability that a  
 6 party conducting an assurance of an artificial intel-  
 7 ligence system should have, including with respect to  
 8 the type of artificial intelligence system under eval-  
 9 uation and the internal and external assurance proc-  
 10 esses; and

11           (2) whether accreditation for internal artificial  
 12 intelligence assurance and external artificial intel-  
 13 ligence assurance can be met through a combination  
 14 of existing licensure, certification, or accreditation  
 15 programs.

16       (e) **TERMINATION.**—The Advisory Committee shall  
 17 terminate not later than 1 year after the date on which  
 18 the Advisory Committee submits the recommendations re-  
 19 quired under subsection (d).

20 **SEC. 6. STUDY AND REPORT ON ENTITIES THAT CONDUCT**  
 21 **ASSURANCES OF ARTIFICIAL INTELLIGENCE**  
 22 **SYSTEMS.**

23       (a) **STUDY.**—Not later than 90 days after the date  
 24 on which the Director publishes the voluntary ~~guidelines~~  
 25 *technical guidelines* and specifications required under sec-

1 tion 4(a), the Secretary shall commence a study to evalu-  
2 ate the capabilities of the sector of entities that conduct  
3 internal artificial intelligence assurances and external arti-  
4 ficial intelligence assurances.

5 (b) CONSIDERATIONS.—In carrying out the study re-  
6 quired by subsection (a), the Secretary shall—

7 (1) assess the capabilities of the sector of enti-  
8 ties described in subsection (a) with respect to per-  
9 sonnel, technical tools, evaluation methods, com-  
10 puting infrastructure, and physical infrastructure  
11 and whether such capabilities are adequate for pro-  
12 viding internal artificial intelligence assurances or  
13 external artificial intelligence assurances that com-  
14 port with the voluntary ~~guidelines~~ *technical guide-*  
15 *lines* and specifications required under section 4(a);

16 (2) review the features, best practices, and safe-  
17 guards employed by such entities to maintain the in-  
18 tegrity of confidential or proprietary information of  
19 a developer or deployer during an internal artificial  
20 intelligence assurance or an external artificial intel-  
21 ligence assurance;

22 (3) assess the market demand for internal arti-  
23 ficial intelligence assurances and external artificial  
24 intelligence assurances and the availability of such  
25 assurers; and

1           (4) assess the feasibility of leveraging an exist-  
2           ing facility accredited by the Director under the Na-  
3           tional Voluntary Laboratory Accreditation Program  
4           established under ~~section~~ *part* 285 of title 15, Code  
5           of Federal Regulations, to conduct external assur-  
6           ances of artificial intelligence systems.

7           (c) REPORT.—Not later than 1 year after the date  
8           on which the Secretary commences the study required by  
9           subsection (a), the Secretary shall submit to the appro-  
10          priate committees of Congress and the head of any Fed-  
11          eral agency that the Secretary considers relevant, a report  
12          that contains the results of the study required by sub-  
13          section (a), including—

14                (1) recommendations for improving the capa-  
15                bilities and the availability of the entities assessed in  
16                the study;

17                (2) descriptions of the features, best practices,  
18                and safeguards of the entities studied and the effec-  
19                tiveness of such features, practices, or safeguards at  
20                implementing the voluntary ~~guidelines~~ *technical*  
21                *guidelines* and specifications required under section  
22                4(a) and at maintaining the integrity of confidential  
23                and proprietary information, as described under sub-  
24                section (b)(2); and



1           (3) any conclusions drawn from the assessment  
2           of the facilities described in subsection (b)(4).

3           (d) APPROPRIATE COMMITTEES OF CONGRESS DE-  
4 FINED.—In this section, the term the “appropriate com-  
5 mittees of Congress” means—

6           (1) the Committee of Commerce, Science, and  
7           Transportation of the Senate; and

8           (2) the Committee on Science, Space, and  
9           Technology of the House of Representatives.

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