

119TH CONGRESS  
1ST SESSION

**S.** \_\_\_\_\_

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

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

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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,*

3       **SECTION 1. SHORT TITLE.**

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

7       **SEC. 2. PURPOSES.**

8       The purposes of this Act are—

1           (1) to develop consensus-driven, evidence-based  
2           voluntary technical guidelines and specifications for  
3           internal and external assurances through the testing,  
4           evaluation, validation, and verification of artificial  
5           intelligence systems, as appropriate based on the in-  
6           tended application, use-case, and risk profile of the  
7           artificial intelligence system;

8           (2) to use meaningful assurance to supplement  
9           methodologies used to build trust in artificial intel-  
10          ligence systems, increase adoption of artificial intel-  
11          ligence systems, and provide for accountability and  
12          governance of artificial intelligence systems; and

13          (3) to further the goals of the Artificial Intel-  
14          ligence Risk Management Framework, including any  
15          successor framework, published by the National In-  
16          stitute of Standards and Technology and the Artifi-  
17          cial Intelligence Safety Institute pursuant to section  
18          22A(c) of the National Institute of Standards and  
19          Technology Act (15 U.S.C. 278h–1(c)).

20 **SEC. 3. DEFINITIONS.**

21       In this Act:

22           (1) **ARTIFICIAL INTELLIGENCE SYSTEM.**—The  
23           term “artificial intelligence system” means a ma-  
24           chine-based system that, for explicit or implicit ob-  
25           jectives, infers, from the input the system receives,

1       how to generate outputs, such as predictions, con-  
2       tent, recommendations, or decisions, that can influ-  
3       ence physical or virtual environments.

4               (2) DEPLOYER.—The term “deployer” means  
5       an entity that operates an artificial intelligence sys-  
6       tem for internal use or for use by a third party.

7               (3) DEVELOPER.—The term “developer”—

8                       (A) means an entity that builds, designs,  
9                       codes, produces, trains, or owns an artificial in-  
10                      telligence system for internal use or for use by  
11                      a third party; and

12                     (B) does not include an entity that is sole-  
13                     ly a deployer of the artificial intelligence sys-  
14                     tem.

15               (4) DIRECTOR.—The term “Director” means  
16       the Director of the National Institute of Standards  
17       and Technology.

18               (5) EXTERNAL ARTIFICIAL INTELLIGENCE AS-  
19       Surance.—The term “external artificial intelligence  
20       assurance” means an independent and impartial  
21       evaluation of an artificial intelligence system con-  
22       ducted by a nonaffiliated third party in accordance  
23       with the voluntary assurance technical guidelines  
24       and specifications described in section 4 or con-

1       sensus-driven voluntary standards, for the purpose  
2       of—

3               (A) verifying claims with respect to the  
4               functionality and testing of the artificial intel-  
5               ligence system, including verifying whether it is  
6               fit for its intended purpose; or

7               (B) identifying any significant error or in-  
8               consistency in the testing, risk management  
9               processes, or internal governance, any substan-  
10              tial vulnerability, or any negative societal im-  
11              pact of the artificial intelligence system.

12             (6) INTERNAL ARTIFICIAL INTELLIGENCE AS-  
13             SURANCE.—The term “internal artificial intelligence  
14             assurance” means an independent evaluation of an  
15             artificial intelligence system conducted by the party  
16             being evaluated with an internal reporting structure  
17             that encourages impartial evaluations and prevents  
18             conflicts of interest, for the purpose of—

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

23               (B) identifying any significant error or in-  
24               consistency in the testing, risk management  
25               process, or internal governance or any substan-

1            tial vulnerability of the artificial intelligence  
2            system.

(7) NONAFFILIATED THIRD PARTY.—The term “nonaffiliated third party” with respect to the evaluation of an artificial intelligence system, means a person who—

(A) is not related by common ownership or affiliated by common corporate control with the developer or deployer of the artificial intelligence system;

(B) can demonstrate financial independence from the developer or deployer of the artificial intelligence system;

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

(D) is a qualified evaluator of artificial intelligence systems, with—

19 (i) demonstrated expertise in relevant  
20 technical domains, including—

(I) data privacy and security principles; and

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

1 (ii) familiarity with the relevant de-  
2 tails regarding the type of artificial intel-  
3 ligence system being evaluated.

4 (8) SECRETARY.—The term “Secretary” means  
5 the Secretary of Commerce.

6 **SEC. 4. VOLUNTARY ASSURANCE TECHNICAL GUIDELINES**  
7 **AND SPECIFICATIONS FOR ARTIFICIAL IN-**  
8 **TELLIGENCE SYSTEMS.**

9 (a) VOLUNTARY TECHNICAL GUIDELINES AND SPEC-  
10 IFICATIONS FOR ASSURANCE.—Not later than 1 year after  
11 the date of the enactment of this Act, the Director, in col-  
12 laboration with public and private sector organizations, in-  
13 cluding the National Science Foundation and the Depart-  
14 ment of Energy, shall develop and, not less frequently  
15 than every 2 years, shall review and update as the Director  
16 considers appropriate, a set of voluntary technical guide-  
17 lines and specifications for internal artificial intelligence  
18 assurance and external artificial intelligence assurance.

19 (b) CONTENTS.—The technical guidelines and speci-  
20 fications required by subsection (a) shall—

21 (1) identify consensus-driven, voluntary stand-  
22 ards for internal artificial intelligence assurance and  
23 external artificial intelligence assurance that ad-  
24 dress—

25 (A) safeguards for consumer privacy;

1 (B) methods to assess and mitigate harms  
2 to individuals by artificial intelligence systems;

3 (C) dataset quality;

4 (D) documentation, disclosure, and prove-  
5 nance communications to external parties; and

6 (E) governance and process controls;

7 (2) provide technical guidelines, best practices,  
8 methodologies, procedures, and processes, as appro-  
9 priate, for internal artificial intelligence assurance  
10 and external artificial intelligence assurance that ef-  
11 fectively address the elements listed in paragraph  
12 (1);

13 (3) establish common definitions and character-  
14 izations for testing, evaluating, verifying, and vali-  
15 dating methods for internal artificial intelligence as-  
16 surance and external artificial intelligence assurance;

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

1           (5) recommend criteria or approaches for a de-  
2     veloper or deployer to determine the scope of inter-  
3     nal artificial intelligence assurance and external arti-  
4     ficial intelligence assurance conducted through test-  
5     ing and evaluating, accounting for the relevant risk  
6     and use-case profile of the artificial intelligence sys-  
7     tem, including the minimum information or technical  
8     resources that should be provided to the party con-  
9     ducting the assurance to enable assurance activities;

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

19          (7) align with the voluntary consensus stand-  
20     ards, including international standards, identified  
21     pursuant to paragraph (1) to the fullest extent pos-  
22     sible;

23          (8) incorporate the relevant voluntary consensus  
24     standards identified pursuant to paragraph (1) and  
25     industry best practices to the fullest extent possible;



1 (9) not prescribe or otherwise require—

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

3 (B) the use of any specific information or  
4 any communications technology product or serv-  
5 ice; and

6 (10) recommend methods to protect the con-  
7 fidentiality of sensitive information, including per-  
8 sonal data and proprietary knowledge of an artificial  
9 intelligence system, that may be obtained during the  
10 assurance process.

11 (c) STAKEHOLDER OUTREACH.—In developing the  
12 voluntary technical guidelines and specifications required  
13 by subsection (a), the Director shall—

14 (1) solicit public comment on at least 1 draft of  
15 the technical guidelines and specifications, and pro-  
16 vide a reasonable period of not less than 30 days for  
17 the submission of comments by interested stake-  
18 holders;

19 (2) make each complete draft of the voluntary  
20 technical guidelines and specifications developed  
21 under subsection (a) available to the public on the  
22 website of the National Institute of Standards and  
23 Technology; and

24 (3) convene workshops, roundtables, and other  
25 public forums, as the Director considers appropriate,

1 to consult with relevant stakeholders in industry,  
2 academia, civil society, consumer advocacy, work-  
3 force development organizations, labor organizations,  
4 conformance assessment bodies, and any other sec-  
5 tor the Director considers appropriate, on the devel-  
6 opment of the voluntary technical guidelines and  
7 specifications.

8 (d) PUBLICATION.—The Director shall publish the  
9 voluntary technical guidelines and specifications required  
10 by subsection (a) as a standalone framework or document  
11 available to the public on the website of the National Insti-  
12 tute of Standards and Technology.

13 **SEC. 5. QUALIFICATIONS ADVISORY COMMITTEE.**

14 (a) ADVISORY COMMITTEE.—Not later than 90 days  
15 after the date on which the Director publishes the vol-  
16 untary technical guidelines and specifications required  
17 under section 4(a), the Secretary shall establish the Artifi-  
18 cial Intelligence Assurance Qualifications Advisory Com-  
19 mittee (referred to in this section as the “Advisory Com-  
20 mittee”).

21 (b) MEMBERSHIP.—The Secretary shall appoint to  
22 the Advisory Committee not more than 20 individuals with  
23 expertise relating to artificial intelligence systems, includ-  
24 ing at least 1 representative from each of the following:

25 (1) Institutions of higher education.

1           (2) Organizations developing artificial intel-  
2           ligence systems.

3           (3) Organizations deploying artificial intel-  
4           ligence systems.

5           (4) Organizations assessing artificial intel-  
6           ligence systems.

7           (5) Consumers or consumer advocacy groups.

8           (6) Public health organizations.

9           (7) Public safety organizations.

10          (8) Civil rights organizations.

11          (9) Professional accreditation organizations.

12          (10) Workforce development organizations.

13          (11) Labor organizations.

14          (12) Nonprofit assurance professional organiza-  
15          tions.

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

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

22           (2) determine the applicability of the case stud-  
23           ies reviewed and assessed under paragraph (1) to  
24           the development, maintenance, and use of artificial

1 intelligence systems for the purpose of developing  
2 recommendations under subsection (d).

3 (d) RECOMMENDATIONS.—Not later than 1 year  
4 after the date on which the Secretary establishes the Advi-  
5 sory Committee under this section, the Advisory Com-  
6 mittee shall submit to the Secretary and Congress and  
7 make publicly available a report that includes rec-  
8 ommendations for the Secretary to consider regarding—

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

16 (2) whether accreditation for internal artificial  
17 intelligence assurance and external artificial intel-  
18 ligence assurance can be met through a combination  
19 of existing licensure, certification, or accreditation  
20 programs.

21 (e) TERMINATION.—The Advisory Committee shall  
22 terminate not later than 1 year after the date on which  
23 the Advisory Committee submits the recommendations re-  
24 quired under subsection (d).

1 **SEC. 6. STUDY AND REPORT ON ENTITIES THAT CONDUCT**  
2 **ASSURANCES OF ARTIFICIAL INTELLIGENCE**  
3 **SYSTEMS.**

4 (a) STUDY.—Not later than 90 days after the date  
5 on which the Director publishes the voluntary technical  
6 guidelines and specifications required under section 4(a),  
7 the Secretary shall commence a study to evaluate the ca-  
8 pabilities of the sector of entities that conduct internal ar-  
9 tificial intelligence assurances and external artificial intel-  
10 ligence assurances.

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

13 (1) assess the capabilities of the sector of enti-  
14 ties described in subsection (a) with respect to per-  
15 sonnel, technical tools, evaluation methods, com-  
16 puting infrastructure, and physical infrastructure  
17 and whether such capabilities are adequate for pro-  
18 viding internal artificial intelligence assurances or  
19 external artificial intelligence assurances that com-  
20 port with the voluntary technical guidelines and  
21 specifications required under section 4(a);

22 (2) review the features, best practices, and safe-  
23 guards employed by such entities to maintain the in-  
24 tegrity of confidential or proprietary information of  
25 a developer or deployer during an internal artificial

1 intelligence assurance or an external artificial intel-  
2 ligence assurance;

3 (3) assess the market demand for internal arti-  
4 ficial intelligence assurances and external artificial  
5 intelligence assurances and the availability of such  
6 assurers; and

7 (4) assess the feasibility of leveraging an exist-  
8 ing facility accredited by the Director under the Na-  
9 tional Voluntary Laboratory Accreditation Program  
10 established under part 285 of title 15, Code of Fed-  
11 eral Regulations, to conduct external assurances of  
12 artificial intelligence systems.

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

20 (1) recommendations for improving the capa-  
21 bilities and the availability of the entities assessed in  
22 the study;

23 (2) descriptions of the features, best practices,  
24 and safeguards of the entities studied and the effec-  
25 tiveness of such features, practices, or safeguards at

1 implementing the voluntary technical guidelines and  
2 specifications required under section 4(a) and at  
3 maintaining the integrity of confidential and propri-  
4 etary information, as described under subsection  
5 (b)(2); and

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

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

11 (1) the Committee of Commerce, Science, and  
12 Transportation of the Senate; and

13 (2) the Committee on Science, Space, and  
14 Technology of the House of Representatives.