118TH CONGRESS
2D 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.

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

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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 guidelines and specifications for internal

3   and external assurances through the testing, evalua-

4   tion, validation, and verification of artificial intel-

5   ligence 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.—The term ''ar-

23   tificial intelligence'' has the meaning given the term

24   in section 5002 of the National Artificial Intelligence

25   Initiative Act of 2020 (15 U.S.C. 9401).

1   (2) ARTIFICIAL INTELLIGENCE SYSTEM.—The
2   term "artificial intelligence system" has the meaning
3   given such term in section 7223 of the Advancing
4   American AI Act (40 U.S.C. 11301 note).

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

8   (4) DEVELOPER.—The term "developer"—

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

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

16 (5) DIRECTOR.—The term "Director" means
17 the Director of the National Institute of Standards
18 and Technology.

19 (6) EXTERNAL ARTIFICIAL INTELLIGENCE AS-
20 SURANCE.—The term "external artificial intelligence
21 assurance" means an independent and impartial
22 evaluation of an artificial intelligence system con-
23 ducted by a nonaffiliated third party in accordance
24 with the voluntary assurance guidelines and speci-

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1 fications described in section 4 or consensus-driven

2 voluntary standards, for the purpose 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 (7) 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   processes, or internal governance, any substan-

1 tial vulnerability, or any negative societal im-

2 pact of the artificial intelligence system.

3 (8) NONAFFILIATED THIRD PARTY.—The term

4 "nonaffiliated third party" with respect to the eval-

5 uation of an artificial intelligence system, means a

6 person who—

7 (A) is not related by common ownership or

8 affiliated by common corporate control with the

9 developer or deployer of the artificial intel-

10 ligence system;

11 (B) can demonstrate financial independ-

12 ence from the developer or deployer of the arti-

13 ficial intelligence system;

14 (C) does not employ any individual, who is

15 also employed by the developer or deployer of

16 the artificial intelligence system; and

17 (D) is a qualified evaluator of artificial in-

18 telligence systems as determined by the vol-

19 untary guidelines and specifications rec-

20 ommended under section 4(b)(6), with—

21 (i) demonstrated expertise in relevant

22 technical domains, including—

23 (I) data privacy and security

24 principles; and

1   (II) risk management practices in
2   artificial intelligence; and

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

6   (9) SECRETARY.—The term "Secretary" means
7 the Secretary of Commerce.

SEC. 4. VOLUNTARY ASSURANCE GUIDELINES AND SPECI-
FICATIONS FOR ARTIFICIAL INTELLIGENCE
SYSTEMS.

11 (a) VOLUNTARY GUIDELINES AND SPECIFICATIONS
12 FOR ASSURANCE.—Not later than 1 year after the date
13 of the enactment of this Act, the Director, in collaboration
14 with public and private sector organizations, including the
15 National Science Foundation and the Department of En-
16 ergy, shall develop and periodically update as the Director
17 considers appropriate, a set of voluntary guidelines and
18 specifications for internal artificial intelligence assurance
19 and external artificial intelligence assurance.

20 (b) CONTENTS.—The guidelines and specifications
21 required by subsection (a) shall—

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

7

1   (A) safeguards for consumer privacy;

2   (B) methods to assess and mitigate harms

3   to individuals by artificial intelligence systems;

4   (C) dataset quality;

5   (D) documentation, disclosure, and prove-

6   nance communications to external parties; and

7   (E) governance and process controls;

8   (2) provide guidelines, best practices, meth-

9 odologies, procedures, and processes, as appropriate,

10 for internal artificial intelligence assurance and ex-

11 ternal artificial intelligence assurance that effectively

12 address the elements listed in paragraph (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;

8

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) recommend the appropriate qualifications,
11 　expertise, professional licensing, and accountability
12 　that a party conducting internal artificial intel-
13 　ligence assurance or external artificial intelligence
14 　assurance should have with respect to—
15 　　　　　(A) the type of artificial intelligence system
16 　　　under evaluation; and
17 　　　　　(B) the internal and external assurance
18 　　　processes;
19 　　　(7) provide guidance for the manner in which a
20 　developer or deployer may disclose, as appropriate,
21 　the results of an internal or external assurance or
22 　carry out corrective actions with respect to an artifi-
23 　cial intelligence system following the completion of
24 　an internal or external assurance of such system,
25 　and guidance on the manner in which a developer or

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1 deployer may properly document any corrective ac-

2 tion taken;

3 (8) align with the voluntary consensus stand-

4 ards, including international standards, identified

5 pursuant to paragraph (1) to the fullest extent pos-

6 sible;

7 (9) incorporate the relevant voluntary consensus

8 standards identified pursuant to paragraph (1) and

9 industry best practices to the fullest extent possible;

10 (10) not prescribe or otherwise require—

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

12 (B) the use of any specific information or

13 any communications technology product or serv-

14 ice; and

15 (11) recommend methods to protect the con-

16 fidentiality of sensitive information, including per-

17 sonal data and proprietary knowledge of an artificial

18 intelligence system, that may be obtained during the

19 assurance process.

20 (c) STAKEHOLDER OUTREACH.—In developing the

21 voluntary guidelines and specifications required by sub-

22 section (a), the Director shall—

23 (1) solicit public comment on at least 1 draft of

24 the guidelines and specifications, and provide a rea-

1 sonable period of not less than 30 days for the sub-

2 mission of comments by interested stakeholders;

3 (2) make each draft of the voluntary guidelines

4 and specifications developed under subsection (a)

5 available to the public on the website of the National

6 Institute of Standards and Technology; and

7 (3) convene workshops, roundtables, and other

8 public forums, as the Director considers appropriate,

9 to consult with relevant stakeholders in industry,

10 academia, civil society, consumer advocacy, work-

11 force development organizations, labor organizations,

12 conformance assessment bodies, and any other sec-

13 tor the Director considers appropriate, on the devel-

14 opment of the voluntary guidelines and specifica-

15 tions.

16 (d) PUBLICATION.—The Director shall publish the

17 voluntary guidelines and specifications required by sub-

18 section (a)—

19 (1) as a standalone framework or document

20 available to the public on the website of the National

21 Institute of Standards and Technology; or

22 (2) as a component of—

23 (A) any successor of the Artificial Intel-

24 ligence Risk Management Framework developed

25 and updated pursuant to section 22A(c) of the

1   National Institute of Standards and Technology

2   Act (15 U.S.C. 278h–1(c)); or

3   (B) any guidance issued by the Artificial

4   Intelligence Safety Institute.

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

6   (a) ADVISORY COMMITTEE.—Not later than 90 days

7 after the date on which the Director publishes the vol-

8 untary guidelines and specifications required under section

9 4(a), the Secretary shall establish the Artificial Intel-

10 ligence Assurance Qualifications Advisory Committee (re-

11 ferred to in this section as the ''Advisory Committee'').

12   (b) MEMBERSHIP.—The Secretary shall appoint to

13 the Advisory Committee not more than 15 individuals with

14 expertise relating to artificial intelligence systems, includ-

15 ing at least 1 representative from each of the following:

16   (1) Institutions of higher education.

17   (2) Organizations developing artificial intel-

18   ligence systems.

19   (3) Organizations deploying artificial intel-

20   ligence systems.

21   (4) Organizations assessing artificial intel-

22   ligence systems.

23   (5) Consumers or consumer advocacy groups.

24   (6) Public health organizations.

25   (7) Public safety organizations.

1   (8) Civil rights organizations.

2   (9) Professional accreditation organizations.

3   (10) Workforce development organizations.

4   (11) Labor organizations.

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

6   (1) review and assess case studies from entities

7   that provide licensure, certification, or accreditation

8   to independent organizations with a primary mission

9   of verifying compliance with applicable statutes, reg-

10   ulations, standards, or guidelines; and

11   (2) determine the applicability of the case stud-

12   ies reviewed and assessed under paragraph (1) to

13   the development, maintenance, and use of artificial

14   intelligence systems for the purpose of developing

15   recommendations under subsection (d).

16   (d) RECOMMENDATIONS.—Not later than 1 year

17 after the date on which the Secretary establishes the Advi-

18 sory Committee under this section, the Advisory Com-

19 mittee shall submit to the Secretary and Congress and

20 make publicly available a report that includes rec-

21 ommendations for the Secretary to consider regarding—

22   (1) the qualifications, expertise, professional li-

23   censing, independence, and accountability that a

24   party conducting an assurance of an artificial intel-

25   ligence system should have, including with respect to

1 the type of artificial intelligence system under eval-

2 uation and the internal and external assurance proc-

3 esses; and

4 　　(2) whether accreditation for internal artificial

5 intelligence assurance and external artificial intel-

6 ligence assurance can be met through a combination

7 of existing licensure, certification, or accreditation

8 programs.

9 (e) TERMINATION.—The Advisory Committee shall

10 terminate not later than 1 year after the date on which

11 the Advisory Committee submits the recommendations re-

12 quired under subsection (d).

13 **SEC. 6. STUDY AND REPORT ON ENTITIES THAT CONDUCT**

14 **ASSURANCES OF ARTIFICIAL INTELLIGENCE**

15 **SYSTEMS.**

16 (a) STUDY.—Not later than 90 days after the date

17 on which the Director publishes the voluntary guidelines

18 and specifications required under section 4(a), the Sec-

19 retary shall commence a study to evaluate the capabilities

20 of the sector of entities that conduct internal artificial in-

21 telligence assurances and external artificial intelligence as-

22 surances.

23 (b) CONSIDERATIONS.—In carrying out the study re-

24 quired by subsection (a), the Secretary shall—

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

10   (2) review the features, best practices, and safe-
11   guards employed by such entities to maintain the in-
12   tegrity of confidential or proprietary information of
13   a developer or deployer during an internal artificial
14   intelligence assurance or an external artificial intel-
15   ligence assurance;

16   (3) assess the market demand for internal arti-
17   ficial intelligence assurances and external artificial
18   intelligence assurances and the availability of such
19   assurers; and

20   (4) assess the feasibility of leveraging an exist-
21   ing facility accredited by the Director under the Na-
22   tional Voluntary Laboratory Accreditation Program
23   established under section 285 of title 15, Code of
24   Federal Regulations, to conduct external assurances
25   of artificial intelligence systems.

1   (c) REPORT.—Not later than 1 year after the date

2 on which the Secretary commences the study required by

3 subsection (a), the Secretary shall submit to the appro-

4 priate committees of Congress and the head of any Fed-

5 eral agency that the Secretary considers relevant, a report

6 that contains the results of the study required by sub-

7 section (a), including—

8   (1) recommendations for improving the capa-

9   bilities and the availability of the entities assessed in

10   the study;

11   (2) descriptions of the features, best practices,

12   and safeguards of the entities studied and the effec-

13   tiveness of such features, practices, or safeguards at

14   implementing the voluntary guidelines and specifica-

15   tions required under section 4(a) and at maintaining

16   the integrity of confidential and proprietary informa-

17   tion, as described under subsection (b)(2); and

18   (3) any conclusions drawn from the assessment

19   of the facilities described in subsection (b)(4).

20   (d) APPROPRIATE COMMITTEES OF CONGRESS DE-

21 FINED.—In this section, the term the "appropriate com-

22 mittees of Congress" means—

23   (1) the Committee of Commerce, Science, and

24   Transportation of the Senate; and

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

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