

119TH CONGRESS
2D SESSION

S. 3952

To establish artificial intelligence standards, metrics, and evaluation tools, to support artificial intelligence research, development, and capacity building activities, to promote innovation in the artificial intelligence industry by ensuring companies of all sizes can succeed and thrive, and for other purposes.

IN THE SENATE OF THE UNITED STATES

FEBRUARY 26, 2026

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

A BILL

To establish artificial intelligence standards, metrics, and evaluation tools, to support artificial intelligence research, development, and capacity building activities, to promote innovation in the artificial intelligence industry by ensuring companies of all sizes can succeed and thrive, 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; TABLE OF CONTENTS.**

4 (a) SHORT TITLE.—This Act may be cited as the
5 “Future of Artificial Intelligence Innovation Act of 2026”.

1 (b) TABLE OF CONTENTS.—The table of contents for
 2 this Act is as follows:

Sec. 1. Short title; table of contents.

Sec. 2. Sense of Congress.

TITLE I—VOLUNTARY ARTIFICIAL INTELLIGENCE STANDARDS,
 METRICS, EVALUATION TOOLS, TESTBEDS, AND INTER-
 NATIONAL COOPERATION

Sec. 100. Definitions.

Subtitle A—Center for Artificial Intelligence Standards and Innovation and
 Testbeds

Sec. 101. Center for Artificial Intelligence Standards and Innovation.

Sec. 102. Interagency coordination and program to facilitate artificial intel-
 ligence testbeds.

Sec. 103. National Institute of Standards and Technology and Department of
 Energy testbed to identify, test, and synthesize new materials.

Sec. 104. Coordination, reimbursement, and savings provisions.

Sec. 105. Progress report.

Subtitle B—International Cooperation

Sec. 111. International coalitions on innovation, development, and alignment of
 standards with respect to artificial intelligence.

Subtitle C—Identifying Regulatory Barriers to Innovation

Sec. 121. Comptroller General of the United States identification of risks and
 obstacles relating to artificial intelligence and Federal agencies.

TITLE II—ARTIFICIAL INTELLIGENCE RESEARCH,
 DEVELOPMENT, CAPACITY BUILDING ACTIVITIES

Sec. 201. Public data for artificial intelligence systems.

Sec. 202. Federal grand challenges in artificial intelligence.

TITLE III—RESEARCH SECURITY AND OTHER MATTERS

Sec. 301. Research security.

Sec. 302. Expansion of authority to hire critical technical experts.

Sec. 303. Certifications and audits of temporary fellows.

3 **SEC. 2. SENSE OF CONGRESS.**

4 It is the sense of Congress that policies affecting arti-
 5 ficial intelligence should maximize the potential, develop-
 6 ment, and use of artificial intelligence to benefit all private
 7 and public stakeholders.

1 **TITLE I—VOLUNTARY ARTIFI-**
 2 **CIAL INTELLIGENCE STAND-**
 3 **ARDS, METRICS, EVALUATION**
 4 **TOOLS, TESTBEDS, AND**
 5 **INTERNATIONAL COOPERA-**
 6 **TION**

7 **SEC. 100. DEFINITIONS.**

8 In this title:

9 (1) **ARTIFICIAL INTELLIGENCE.**—The term “ar-
 10 tificial intelligence” has the meaning given such
 11 term in section 5002 of the National Artificial Intel-
 12 ligence Initiative Act of 2020 (15 U.S.C. 9401).

13 (2) **ARTIFICIAL INTELLIGENCE MODEL.**—The
 14 term “artificial intelligence model” means a compo-
 15 nent of an artificial intelligence system that is—

16 (A) derived using mathematical, computa-
 17 tional, statistical, or machine-learning tech-
 18 niques; and

19 (B) used as part of an artificial intel-
 20 ligence system to produce outputs from a given
 21 set of inputs.

22 (3) **ARTIFICIAL INTELLIGENCE SYSTEM.**—The
 23 term “artificial intelligence system” means an engi-
 24 neered or machine-based system that—

(A) can, for a given set of objectives, generate outputs such as predictions, recommendations, or decisions influencing real or virtual environments; and

(B) is designed to operate with varying levels of autonomy.

(4) CRITICAL INFRASTRUCTURE.—The term “critical infrastructure” has the meaning given such term in section 1016(e) of the Uniting and Strengthening America by Providing Appropriate Tools Required to Intercept and Obstruct Terrorism (USA PATRIOT ACT) Act of 2001 (42 U.S.C. 5195c(e)).

(5) FEDERAL LABORATORY.—The term “Federal laboratory” has the meaning given such term in section 4 of the Stevenson-Wydler Technology Innovation Act of 1980 (15 U.S.C. 3703).

(6) FOUNDATION MODEL.—The term “foundation model” means an artificial intelligence model trained on broad data at scale and is adaptable to a wide range of downstream tasks.

(7) NATIONAL LABORATORY.—The term “National Laboratory” has the meaning given such term in section 2 of the Energy Policy Act of 2005 (42 U.S.C. 15801).

(8) **TESTBED.**—The term “testbed” means a facility or mechanism, virtual or otherwise, equipped for conducting rigorous, transparent, and replicable testing of tools and technologies, including artificial intelligence systems, to help evaluate the functionality, trustworthiness, usability, and performance of those tools or technologies.

Subtitle A—Center for Artificial Intelligence Standards and Innovation and Testbeds

SEC. 101. CENTER FOR ARTIFICIAL INTELLIGENCE STANDARDS AND INNOVATION.

The National Institute of Standards and Technology Act (15 U.S.C. 271 et seq.) is amended by inserting after section 22A (15 U.S.C. 278h–1) the following:

“SEC. 22B. CENTER FOR ARTIFICIAL INTELLIGENCE STANDARDS AND INNOVATION.

“(a) **DEFINITIONS.**—In this section:

“(1) **AGENCY.**—The term ‘agency’ has the meaning given the term ‘Executive agency’ in section 105 of title 5, United States Code.

“(2) **ARTIFICIAL INTELLIGENCE.**—The term ‘artificial intelligence’ has the meaning given such term in section 5002 of the National Artificial Intelligence Initiative Act of 2020 (15 U.S.C. 9401).

1 “(3) ARTIFICIAL INTELLIGENCE BLUE-
2 TEAMING.—The term ‘artificial intelligence blue-
3 teaming’ means an effort to conduct operational vul-
4 nerability evaluations and provide mitigation tech-
5 niques to entities who have a need for an inde-
6 pendent technical review of the security posture of
7 an artificial intelligence system.

8 “(4) ARTIFICIAL INTELLIGENCE RED-
9 TEAMING.—The term ‘artificial intelligence red-
10 teaming’ means structured adversarial testing efforts
11 of an artificial intelligence system.

12 “(5) FEDERAL LABORATORY.—The term ‘Fed-
13 eral laboratory’ has the meaning given such term in
14 section 4 of the Stevenson-Wydler Technology Inno-
15 vation Act of 1980 (15 U.S.C. 3703).

16 “(6) FOUNDATION MODEL.—The term ‘founda-
17 tion model’ means an artificial intelligence model
18 trained on broad data at scale and is adaptable to
19 a wide range of downstream tasks.

20 “(7) SYNTHETIC CONTENT.—The term ‘syn-
21 thetic content’ means information, such as images,
22 videos, audio clips, and text, that has been signifi-
23 cantly modified or generated by algorithms, includ-
24 ing by an artificial intelligence system.

1 “(8) TESTBED.—The term ‘testbed’ means a
 2 facility or mechanism, virtual or otherwise, equipped
 3 for conducting rigorous, transparent, and replicable
 4 testing of tools and technologies, including artificial
 5 intelligence systems, to help evaluate the
 6 functionality, trustworthiness, usability, and per-
 7 formance of those tools or technologies.

8 “(9) WATERMARKING.—The term
 9 ‘watermarking’ means the act of embedding prove-
 10 nance and authenticity information that is intended
 11 to be difficult to remove, into outputs generated by
 12 artificial intelligence systems or in original content,
 13 including outputs such as text, images, audio, vid-
 14 eos, software code, or any other digital content or
 15 data, for the purposes of verifying and maintaining
 16 the authenticity, integrity, and reliability of the out-
 17 put or the identity or characteristics of its prove-
 18 nance, modifications, or conveyance.

19 “(b) ESTABLISHMENT OF CENTER FOR ARTIFICIAL
 20 INTELLIGENCE STANDARDS AND INNOVATION.—

21 “(1) IN GENERAL.—Not later than 90 days
 22 after the date of the enactment of the Future of Ar-
 23 tificial Intelligence Innovation Act of 2026, the Di-
 24 rector shall establish a center on artificial intel-
 25 ligence within the Institute.

1 “(2) DESIGNATION.—The center established
2 pursuant to paragraph (1) shall be known as the
3 ‘Center for Artificial Intelligence Standards and In-
4 novation’ (in this section the ‘Center’).

5 “(3) MISSION.—The mission of the Center is to
6 assist the private sector and agencies in developing
7 voluntary best practices for the robust assessment of
8 artificial intelligence systems, which may be contrib-
9 uted to or inform the work on such practices in
10 standards development organizations.

11 “(c) FUNCTIONS.—

12 “(1) IN GENERAL.—The functions of the Cen-
13 ter, which the Center shall carry out in coordination
14 with the laboratories of the Institute, include the fol-
15 lowing:

16 “(A) Using publicly available or voluntarily
17 provided information, assessing artificial intel-
18 ligence systems and developing guidelines and
19 best practices to measure and improve the se-
20 cure development, deployment, and use of artifi-
21 cial intelligence technology.

22 “(B) Supporting artificial intelligence red-
23 teaming, sharing best practices, and coordi-
24 nating on building testbeds and test environ-

1 ments with allies and international partners of
2 the United States.

3 “(C) Developing and publishing physical
4 and cybersecurity tools, methodologies, best
5 practices, voluntary guidelines, and other sup-
6 porting information to assist persons who main-
7 tain systems used to create or train artificial in-
8 telligence models with discovering and miti-
9 gating vulnerabilities and attacks, including ma-
10 nipulation through data poisoning, including
11 those that may be exploited by foreign adver-
12 saries.

13 “(D) Establishing artificial intelligence
14 blue-teaming capabilities to support mitigation
15 approaches and partnering with industry to ad-
16 dress the reliability of artificial intelligence sys-
17 tems.

18 “(E) Developing tools, methodologies, best
19 practices, and voluntary guidelines for detecting
20 synthetic content, authenticating content and
21 tracking of the provenance of content, labeling
22 original and synthetic content, such as by
23 watermarking, and evaluating software and sys-
24 tems relating to detection and labeling of syn-
25 thetic content.

1 “(F) Coordinating or developing metrics
2 and methodologies for testing artificial intel-
3 ligence systems, including the following:

4 “(i) Cataloging existing artificial intel-
5 ligence metrics and evaluation methodolo-
6 gies used in industry and academia.

7 “(ii) Testing the efficacy of existing
8 metrics and evaluations.

9 “(iii) Documenting tools that assess
10 reliability, accuracy, and robustness.

11 “(G) Coordinating with counterpart inter-
12 national institutions, partners, and allies to
13 support global interoperability in the develop-
14 ment of research and testing of standards relat-
15 ing to artificial intelligence.

16 “(H) Producing resources for Federal
17 agencies to conduct their own evaluations of ar-
18 tificial intelligence systems to best fulfill their
19 missions.

20 “(I) Convening meetings on a semiannual
21 basis with Federal agencies and the private sec-
22 tor—

23 “(i) to share information and best
24 practices on building artificial intelligence
25 evaluations; and

1 “(ii) to accelerate the development
2 and adoption of national standards for ar-
3 tificial intelligence systems in sectors in-
4 cluding, biotechnology, agriculture, and
5 health care.

6 “(J) Examining safeguards and best prac-
7 tices to secure artificial intelligence systems
8 from cyber attacks.

9 “(K) Examining safeguards and best prac-
10 tices to protect against unintended use of artifi-
11 cial intelligence for the purpose of developing
12 chemical, biological, radiological, nuclear, and
13 energy-security threats or hazards.

14 “(L) Providing, in consultation with the
15 Secretary of Homeland Security and the Direc-
16 tor of the Cybersecurity and Information Secu-
17 rity Agency, a toolkit for best practices in an-
18 ticipating, responding to, and recovering from
19 cybersecurity incidents involving artificial intel-
20 ligence systems. Such toolkit may include guid-
21 ance on remediating and responding to known
22 artificial intelligence-specific vulnerabilities.

23 “(M) Developing, and curating, in con-
24 sultation with the Secretary of Labor, a list of
25 high-priority occupations for training for the

1 advancement and deployment of artificial intel-
2 ligence.

3 “(N) Developing best practices on min-
4 imum data quality standards for the use of bio-
5 logical, material science, chemical, physical, and
6 other scientific areas in artificial intelligence
7 model training.

8 “(O) Examining, in consultation with the
9 heads of other relevant Federal agencies, the
10 vulnerabilities in the supply chain of hardware,
11 including semiconductors and microelectronics,
12 that are critical to enabling the development
13 and deployment of artificial intelligence.

14 “(P) Examining ways in which artificial in-
15 telligence may be used by the Federal Govern-
16 ment in combating fraud and other unfair or
17 deceptive practices.

18 “(Q) Identify proven, scalable, and inter-
19 operable techniques and metrics to promote the
20 development of artificial intelligence.

21 “(d) CENTER FOR ARTIFICIAL INTELLIGENCE
22 STANDARDS AND INNOVATION CONSORTIUM.—

23 “(1) ESTABLISHMENT.—

24 “(A) IN GENERAL.—Not later than 180
25 days after the date of the enactment of the Fu-

1 ture of Artificial Intelligence Innovation Act of
2 2026, the Director shall establish a consortium
3 of stakeholders from academic or research com-
4 munities, Federal laboratories, private industry,
5 including companies of all sizes with different
6 roles in the use of artificial intelligence systems,
7 including developers, deployers, evaluators,
8 users, and civil society with expertise in matters
9 relating to artificial intelligence to support the
10 Center in carrying out the functions set forth
11 under subsection (c).

12 “(B) DESIGNATION.—The consortium es-
13 tablished pursuant to subparagraph (A) shall be
14 known as the ‘Center for Artificial Intelligence
15 Standards and Innovation Consortium’.

16 “(2) CONSULTATION.—The Director shall con-
17 sult with the consortium established under this sub-
18 section not less frequently than quarterly.

19 “(3) ANNUAL REPORTS TO CONGRESS.—Not
20 later than 1 year after the date of the enactment of
21 the Future of Artificial Intelligence Innovation Act
22 of 2026 and not less frequently than once each year
23 thereafter, the Director shall submit to the Com-
24 mittee on Commerce, Science, and Transportation of
25 the Senate and the Committee on Science, Space,

1 and Technology of the House of Representatives a
2 report summarizing the contributions of the mem-
3 bers of the consortium established under this sub-
4 section in support the efforts of the Center.

5 “(e) VOLUNTARY ARTIFICIAL INTELLIGENCE TEST-
6 ING STANDARDS.—In carrying out the functions under
7 subsection (c), the Director shall support and contribute
8 to the development of voluntary, consensus-based technical
9 standards for testing artificial intelligence system compo-
10 nents, including by addressing, as the Director considers
11 appropriate, the following:

12 “(1) Physical infrastructure for training or de-
13 veloping artificial intelligence models and systems,
14 including cloud infrastructure.

15 “(2) Physical infrastructure for operating artifi-
16 cial intelligence systems, including cloud infrastruc-
17 ture.

18 “(3) Data for training artificial intelligence
19 models.

20 “(4) Data for evaluating the functionality and
21 trustworthiness of trained artificial intelligence mod-
22 els and systems.

23 “(5) Trained or partially trained artificial intel-
24 ligence models and any resulting software systems or
25 products.

1 “(6) Human-in-the-loop testing of artificial in-
2 telligence models and systems.

3 “(f) MATTERS RELATING TO DISCLOSURE AND AC-
4 CESS.—

5 “(1) FOIA EXEMPTION.—Any confidential con-
6 tent, as deemed confidential by the contributing pri-
7 vate sector person, shall be exempt from public dis-
8 closure under section 552(b)(3) of title 5, United
9 States Code.

10 “(2) LIMITATION ON ACCESS TO CONTENT.—
11 Access to a contributing private sector person’s vol-
12 untarily provided confidential content, as deemed
13 confidential by the contributing private sector person
14 shall be limited to the private sector person and the
15 Center.

16 “(3) AGGREGATED INFORMATION.—The Direc-
17 tor may make aggregated, deidentified information
18 available to contributing companies, the public, and
19 other agencies, as the Director considers appro-
20 priate, in support of the purposes of this section.

21 “(g) RULE OF CONSTRUCTION.—Nothing in this sec-
22 tion shall be construed to provide the Director any en-
23 forcement authority that was not in effect on the day be-
24 fore the date of the enactment of the Future of Artificial
25 Intelligence Innovation Act of 2026.

1 “(h) PROHIBITION ON ACCESS TO RESOURCES FOR
2 ENTITIES UNDER CONTROL OF CERTAIN FOREIGN GOV-
3 ERNMENTS.—

4 “(1) DEFINITIONS.—In this subsection:

5 “(A) COVERED NATION.—The term ‘cov-
6 ered nation’ has the meaning given that term in
7 section 4872 of title 10, United States Code.

8 “(B) OWNERSHIP, CONTROL, OR INFLU-
9 ENCE OF THE GOVERNMENT OF A COVERED NA-
10 TION.—The term ‘ownership, control, or influ-
11 ence of the government of a covered nation’,
12 with respect to an entity, means the govern-
13 ment of a covered nation—

14 “(i) has the power to direct or decide
15 matters affecting the entity’s management
16 or operations in a manner that could—

17 “(I) result in unauthorized access
18 to classified information; or

19 “(II) adversely affect perform-
20 ance of a contract or agreement re-
21 quiring access to classified informa-
22 tion; and

23 “(ii) exercises that power—

24 “(I) directly or indirectly;

1 “(II) through ownership of the
2 entity’s securities, by contractual ar-
3 rangements, or other similar means;

4 “(III) by the ability to control or
5 influence the election or appointment
6 of one or more members to the enti-
7 ty’s governing board (such as the
8 board of directors, board of managers,
9 or board of trustees) or its equivalent;
10 or

11 “(IV) prospectively (such as by
12 not currently exercising the power,
13 but could).

14 “(2) IN GENERAL.—An entity under the owner-
15 ship, control, or influence of the government of a
16 covered nation may not access any of the resources
17 of the Center.

18 “(3) CRITERIA FOR IDENTIFICATION.—The Di-
19 rector, working with the heads of the relevant Fed-
20 eral agencies, shall establish criteria to determine if
21 any entity that seeks to utilize the resources of the
22 Center is under the ownership, control, or influence
23 of the government of a covered nation.”.

1 **SEC. 102. INTERAGENCY COORDINATION AND PROGRAM TO**
 2 **FACILITATE ARTIFICIAL INTELLIGENCE**
 3 **TESTBEDS.**

4 (a) DEFINITIONS.—In this section:

5 (1) APPROPRIATE COMMITTEES OF CON-
 6 GRESS.—The term “appropriate committees of Con-
 7 gress” means—

8 (A) the Committee on Commerce, Science,
 9 and Transportation and the Committee on En-
 10 ergy and Natural Resources of the Senate; and

11 (B) the Committee on Science, Space, and
 12 Technology of the House of Representatives.

13 (2) DIRECTOR.—The term “Director” means
 14 the Director of the National Science Foundation.

15 (3) INSTITUTE.—The term “Institute” means
 16 the National Institute of Standards and Technology.

17 (4) SECRETARY.—The term “Secretary” means
 18 the Secretary of Energy.

19 (5) UNDER SECRETARY.—The term “Under
 20 Secretary” means the Under Secretary of Commerce
 21 for Standards and Technology.

22 (b) PROGRAM REQUIRED.—Not later than 1 year
 23 after the date of the enactment of this Act, the Under
 24 Secretary and the Secretary, in coordination with the Di-
 25 rector, shall jointly establish a testbed program to encour-
 26 age collaboration and support partnerships between the

1 National Laboratories, Federal laboratories, the National
2 Institute of Standards and Technology, the National Arti-
3 ficial Intelligence Research Resource pilot program estab-
4 lished by the Director, or any successor program, and pub-
5 lic and private sector entities, including companies of all
6 sizes, to conduct tests, evaluations, and security or vulner-
7 ability risk assessments, and to support research and de-
8 velopment, of artificial intelligence systems, including
9 measurement methodologies developed by the Institute, in
10 order to develop standards and encourage development of
11 a third-party ecosystem.

12 (c) ACTIVITIES.—In carrying out the program re-
13 quired by subsection (b), the Under Secretary and the Sec-
14 retary—

15 (1) may use the advanced computing resources,
16 testbeds, and expertise of the National Laboratories,
17 Federal laboratories, the Institute, the National
18 Science Foundation, and private sector entities to
19 run tests and evaluations on the capabilities and
20 limitations of artificial intelligence systems;

21 (2) shall use existing solutions to the maximum
22 extent practicable;

23 (3) shall develop automated and reproducible
24 tests and evaluations for artificial intelligence sys-
25 tems to the extent that is practicable;

1 (4) shall assess the computational resources
2 necessary to run tests and evaluations of artificial
3 intelligence systems;

4 (5) shall research methods to effectively mini-
5 mize the computational resources needed to run
6 tests, evaluations, and security assessments of artifi-
7 cial intelligence systems;

8 (6) shall where practicable, develop tests and
9 evaluations for artificial intelligence systems that are
10 designed for high-, medium-, and low-computational
11 intensity;

12 (7) shall prioritize assessments by identifying
13 security vulnerabilities of artificial intelligence sys-
14 tems, including the establishment of and utilization
15 of existing classified testbeds, at the National Lab-
16 oratories if necessary, including with respect to—

17 (A) autonomous offensive cyber capabili-
18 ties;

19 (B) cybersecurity vulnerabilities in the ar-
20 tificial intelligence software ecosystem and be-
21 yond;

22 (C) chemical, biological, radiological, nu-
23 clear, critical infrastructure, and energy-secu-
24 rity threats or hazards; and

1 (D) such other capabilities as the Under
2 Secretary or the Secretary determines nec-
3 essary; and

4 (8) shall organize a hackathon to test artificial
5 intelligence systems security risks and
6 vulnerabilities.

7 (d) CONSIDERATION GIVEN.—In carrying out the ac-
8 tivities required by subsection (c), the Under Secretary
9 and the Secretary shall take under consideration the appli-
10 cability of any tests, evaluations, and risk assessments to
11 artificial intelligence systems trained using primarily bio-
12 logical sequence data that could be used to enhance an
13 artificial intelligence system’s ability to contribute to the
14 creation of a pandemic or biological weapon, including
15 those systems used for gene synthesis.

16 (e) METRICS.—The Under Secretary and the Sec-
17 retary shall jointly develop metrics to assess—

18 (1) the effectiveness of the program in encour-
19 aging collaboration and supporting partnerships as
20 described in subsection (b); and

21 (2) the impact of the program on public and
22 private sector integration and use of artificial intel-
23 ligence systems.

24 (f) USE OF EXISTING PROGRAM.—In carrying out
25 the program required by subsection (b), the Under Sec-

1 retary, the Secretary, and the Director may use a program
2 that was in effect on the day before the date of the enact-
3 ment of this Act.

4 (g) EVALUATION AND FINDINGS.—Not later than 3
5 years after the start of the program required by subsection
6 (b), the Under Secretary and the Secretary shall jointly—

7 (1) evaluate the success of the program in en-
8 couraging collaboration and supporting partnerships
9 as described in subsection (b), using the metrics de-
10 veloped pursuant to subsection (e);

11 (2) evaluate the success of the program in en-
12 couraging public and private sector integration and
13 use of artificial intelligence systems by using the
14 metrics developed pursuant to subsection (e); and

15 (3) submit to the appropriate committees of
16 Congress the evaluation supported pursuant to para-
17 graph (1) and the findings of the Under Secretary,
18 the Secretary, and the Director with respect to the
19 testbed program.

20 (h) CONSULTATION.—In carrying out subsection (b),
21 the Under Secretary and the Secretary shall consult, as
22 the Under Secretary and the Secretary consider appro-
23 priate, with the following:

1 (1) Industry, including private artificial intel-
 2 ligence laboratories, companies of all sizes, and rep-
 3 resentatives from the United States financial sector.

4 (2) Academia and institutions of higher edu-
 5 cation.

6 (3) Civil society.

7 (i) ESTABLISHMENT OF VOLUNTARY FOUNDATION
 8 MODELS TEST PROGRAM.—In carrying out the program
 9 under subsection (b), the Under Secretary and the Sec-
 10 retary shall, jointly carry out a test program to provide
 11 vendors of foundation models, as well as vendors of artifi-
 12 cial intelligence virtual agents and robots that incorporate
 13 foundation models, the opportunity to voluntarily test
 14 foundation models across a range of modalities, such as
 15 models that ingest and output text, images, audio, video,
 16 software code, and mixed modalities.

17 (j) MATTERS RELATING TO DISCLOSURE AND AC-
 18 CESS.—

19 (1) LIMITATION ON ACCESS TO CONTENT.—Ac-
 20 cess to a contributing private sector person’s volun-
 21 tarily provided confidential content, as deemed con-
 22 fidential by the contributing private sector person,
 23 shall be limited to the contributing private sector
 24 person and the Institute.

1 (2) AGGREGATED INFORMATION.—The Under
2 Secretary and the Secretary may make aggregated,
3 deidentified information available to contributing
4 companies, the public, and other agencies, as the
5 Under Secretary considers appropriate, in support of
6 the purposes of this section.

7 (3) FOIA EXEMPTION.—Any confidential con-
8 tent, as deemed confidential by the contributing pri-
9 vate sector person, shall be exempt from public dis-
10 closure under section 552(b)(3) of title 5, United
11 States Code.

12 (k) RULE OF CONSTRUCTION.—Nothing in this sec-
13 tion shall be construed to require a person to disclose any
14 information, including information—

15 (1) relating to a trade secret or other protected
16 intellectual property right;

17 (2) that is confidential business information; or

18 (3) that is privileged.

19 (l) SUNSET.—The programs required by subsections
20 (b) and (i) and the requirements of this section shall ter-
21 minate on the date that is 7 years after the date of the
22 enactment of this Act.

1 **SEC. 103. NATIONAL INSTITUTE OF STANDARDS AND TECH-**
2 **NOLOGY AND DEPARTMENT OF ENERGY**
3 **TESTBED TO IDENTIFY, TEST, AND SYN-**
4 **THESIZE NEW MATERIALS.**

5 (a) IN GENERAL.—The Secretary of Commerce, act-
6 ing through the Under Secretary of Commerce for Stand-
7 ards and Technology, and the Secretary of Energy may
8 use the program established under section 102(b) to ad-
9 vance materials science and energy storage and optimiza-
10 tion and to support advanced manufacturing for the ben-
11 efit of the United States economy through the use of arti-
12 ficial intelligence, autonomous laboratories, and artificial
13 intelligence integrated with emerging technologies, such as
14 quantum hybrid computing and robotics.

15 (b) SUPPORT FOR ACCELERATED TECHNOLOGIES.—
16 The Secretary of Commerce and the Secretary of Energy
17 shall ensure that technologies accelerated under subsection
18 (a) are supported by advanced algorithms and models, un-
19 certainty quantification, and software and workforce de-
20 velopment tools to produce benchmark data, model com-
21 parison tools, and best practices guides.

22 (c) PUBLIC-PRIVATE PARTNERSHIPS.—In carrying
23 out subsection (a), the Secretary of Commerce and the
24 Secretary of Energy shall, in consultation with industry,
25 civil society, and academia, enter into such public-private

1 partnerships as the Secretaries jointly determine appro-
 2 priate.

3 (d) RESOURCES.—In carrying out this section, the
 4 Secretaries may—

5 (1) use science and technology resources from
 6 the Manufacturing USA Program, the Hollings
 7 Manufacturing Extension Partnership, the National
 8 Laboratories, Federal laboratories, and the private
 9 sector; and

10 (2) the program established under section
 11 102(b).

12 **SEC. 104. COORDINATION, REIMBURSEMENT, AND SAVINGS**
 13 **PROVISIONS.**

14 (a) COORDINATION AND DUPLICATION.—The Sec-
 15 retary of Commerce shall take such actions as may be nec-
 16 essary to ensure no duplication of activities carried out
 17 under this subtitle with the activities of—

18 (1) research entities of the Department of En-
 19 ergy, including—

20 (A) the National Laboratories; and

21 (B) the Advanced Scientific Computing
 22 Research program; and

23 (2) relevant industries.

24 (b) NATIONAL LABORATORY RESOURCES.—Any ad-
 25 vanced computing resources, testbeds, expertise, or other

1 resources of the Department of Energy or the National
2 Laboratories that are provided to the National Science
3 Foundation, the National Institute of Standards and
4 Technology, or any other applicable entities under this
5 subtitle shall be provided—

6 (1) on a reimbursable basis; and

7 (2) pursuant to a reimbursable agreement.

8 (c) WAIVER.—The Secretary may waive the require-
9 ments set forth in subsection (b) if the Secretary deter-
10 mines the waiver is necessary or appropriate to carry out
11 the missions of the Department of Commerce.

12 (d) SAVINGS PROVISION.—Nothing in this subtitle
13 shall be construed—

14 (1) to modify any requirement or authority pro-
15 vided under section 5501 of the National Artificial
16 Intelligence Initiative Act of 2020 (15 U.S.C. 9461);
17 or

18 (2) to allow the Secretary of Commerce (includ-
19 ing the Under Secretary of Commerce for Standards
20 and Technology or the Director of the Center for
21 Artificial Intelligence Standards and Innovation) or
22 the Director of the National Science Foundation to
23 use monetary resources of the Department of En-
24 ergy or any National Laboratory.

1 **SEC. 105. PROGRESS REPORT.**

2 (a) IN GENERAL.—Not later than 1 year after the
3 date of the enactment of this Act, the Under Secretary
4 of Commerce for Standards and Technology shall, in co-
5 ordination with the Secretary of Commerce and the Sec-
6 retary of Energy, submit to Congress a report on the im-
7 plementation of sections 102 and 103.

8 (b) CONTENTS.—The report submitted pursuant to
9 subsection (a) shall include the following:

10 (1) A description of the reimbursable agree-
11 ments, statements of work, and associated project
12 schedules and deliverables for the testbed program
13 established pursuant to section 102(b) and section
14 103(a).

15 (2) Details on the total amount of reimbursable
16 agreements entered into pursuant to section 104(b).

17 (3) Such additional information as the Under
18 Secretary determines appropriate.

19 **Subtitle B—International**
20 **Cooperation**

21 **SEC. 111. INTERNATIONAL COALITIONS ON INNOVATION,**
22 **DEVELOPMENT, AND ALIGNMENT OF STAND-**
23 **ARDS WITH RESPECT TO ARTIFICIAL INTEL-**
24 **LIGENCE.**

25 (a) IN GENERAL.—The Under Secretary of Com-
26 merce for Standards and Technology (in this section re-

1 ferred to as the “Under Secretary”) and the Secretary of
2 Energy (in this section referred to as the “Secretary”)
3 shall jointly lead information exchange and coordination
4 among Federal agencies and communication from Federal
5 agencies to the private sector of the United States and
6 like-minded governments of foreign countries to ensure ef-
7 fective Federal engagement in the development and use
8 of international technical standards for artificial intel-
9 ligence.

10 (b) REQUIREMENTS.—To support private sector-led
11 engagement and ensure effective Federal engagement in
12 the development and use of international technical stand-
13 ards for artificial intelligence, the Under Secretary shall
14 seek to form alliances or coalitions with like-minded gov-
15 ernments of foreign countries—

16 (1) to support the private sector-led develop-
17 ment and adoption of standards or alignment with
18 respect to artificial intelligence;

19 (2) to encourage technical standards developed
20 in the United States to be adopted by international
21 standards organizations and to advocate for inter-
22 national approaches to governance of artificial intel-
23 ligence that promote innovation and counter influ-
24 ence from foreign adversaries;

1 (3) to facilitate international collaboration on
2 innovation, science, and advancement in artificial in-
3 telligence research and development, including data
4 sharing, expertise, and resources;

5 (4) to develop the government-to-government
6 infrastructure to support the activities described in
7 paragraphs (1) through (3), using existing bilateral
8 and multilateral agreements to the extent prac-
9 ticable;

10 (5) to work with like-minded governments on
11 identifying best practices to maintain cybersecurity
12 of artificial intelligence models; and

13 (6) to work in coordination with the Secretary
14 of State, the National Security Council, and the Na-
15 tional Science Foundation to develop, implement,
16 and share information on complementary technology
17 protection measures, including in basic research and
18 higher education, to mitigate risks of exploitation by
19 foreign adversaries.

20 (c) CRITERIA FOR PARTICIPATION.—In forming an
21 alliance or coalition of like-minded governments of foreign
22 countries under subsection (b), the Secretary of Com-
23 merce, the Secretary of Energy, the Secretary of State,
24 and the Director, in consultation with the heads of rel-

1 evant agencies, shall jointly establish technology trust cri-
2 teria—

3 (1) to ensure all partner countries have a high
4 level of scientific and technological advancement;
5 and

6 (2) to support the principles for international
7 standards development as detailed in the Committee
8 Decision on World Trade Organization Agreement
9 on Technical Barriers to Trade (Annex 2 of Part 1
10 of G/TBT/1), on international standards, such as
11 transparency, openness, and consensus-based deci-
12 sion making.

13 (d) CONSULTATION ON INNOVATION AND ADVANCE-
14 MENTS IN ARTIFICIAL INTELLIGENCE.—In forming an al-
15 liance or coalition under subsection (b), the Director, the
16 Secretary of Commerce, and the Secretary of State shall
17 consult with the Secretary of Energy and the Director of
18 the National Science Foundation on approaches to innova-
19 tion and advancements in artificial intelligence.

20 (e) SECURITY AND PROTECTION OF INTELLECTUAL
21 PROPERTY.—The Director, the Secretary of Commerce,
22 the Secretary of Energy, and the Secretary of State shall
23 jointly ensure that an alliance or coalition formed under
24 subsection (b) is only undertaken with countries that—

1 (1) have in place sufficient intellectual property
2 protections, safety standards, and risk management
3 approaches relevant to innovation and artificial intel-
4 ligence; and

5 (2) develop and coordinate research security
6 measures, export controls, and intellectual property
7 protections relevant to innovation, development, and
8 standard-setting relating to artificial intelligence.

9 (f) LIMITATION ON ELIGIBILITY OF THE PEOPLE'S
10 REPUBLIC OF CHINA.—

11 (1) IN GENERAL.—The People's Republic of
12 China is not eligible to participate in an alliance or
13 coalition of like-minded governments of foreign coun-
14 tries under subsection (b) until the United States
15 Trade Representative determines in a report to Con-
16 gress required by section 421 of the U.S.-China Re-
17 lations Act of 2000 (22 U.S.C. 6951) that the Peo-
18 ple's Republic of China has come into compliance
19 with the commitments it made in connection with its
20 accession to the World Trade Organization.

21 (2) REPORT REQUIRED.—Upon the submission
22 of a report described in paragraph (1), the officials
23 specified in paragraph (3) shall jointly submit to
24 Congress a report that includes the following:

1 (A) A detailed justification for why govern-
2 ment-to-government information exchange and
3 coordination with the Government of the Peo-
4 ple's Republic of China is in the national secu-
5 rity interests of the United States.

6 (B) An assessment of the risks and poten-
7 tial effects of such coordination, including any
8 potential for the transfer under an alliance or
9 coalition described in paragraph (1) of tech-
10 nology or intellectual property capable of harm-
11 ing the national security interests of the United
12 States.

13 (C) A detailed justification for how the of-
14 ficials specified in paragraph (3) intend to ad-
15 dress human rights concerns in any scientific
16 and technology collaboration proposed to be
17 conducted by such an alliance or coalition.

18 (D) An assessment of the extent to which
19 those officials will be able to continuously mon-
20 itor the commitments made by the People's Re-
21 public of China in participating in such an alli-
22 ance or coalition.

23 (E) Such other information relating to
24 such an alliance or coalition as those officials
25 consider appropriate.

1 (3) OFFICIALS SPECIFIED.—The officials speci-
 2 fied in this paragraph are the following:

3 (A) The Director.

4 (B) The Secretary of Commerce.

5 (C) The Secretary of Energy.

6 (D) The Secretary of State.

7 (g) RULE OF CONSTRUCTION.—Nothing in this sec-
 8 tion shall be construed—

9 (1) to prohibit a person (as defined in section
 10 551 of title 5, United States Code) from partici-
 11 pating in an international standards body; or

12 (2) to constrain separate engagement with
 13 emerging economies on artificial intelligence.

14 **Subtitle C—Identifying Regulatory** 15 **Barriers to Innovation**

16 **SEC. 121. COMPTROLLER GENERAL OF THE UNITED**
 17 **STATES IDENTIFICATION OF RISKS AND OB-**
 18 **STACLES RELATING TO ARTIFICIAL INTEL-**
 19 **LIGENCE AND FEDERAL AGENCIES.**

20 (a) REPORT REQUIRED.—Not later than 1 year after
 21 the date of the enactment of this Act, the Comptroller
 22 General of the United States shall submit to Congress a
 23 report on regulatory impediments to innovation in artifi-
 24 cial intelligence systems.

1 (b) CONTENTS.—The report submitted pursuant to
2 subsection (a) shall include the following:

3 (1) Significant examples of Federal statutes
4 and regulations that directly affect the innovation of
5 artificial intelligence systems, including the ability of
6 companies of all sizes to compete in artificial intel-
7 ligence, which should also account for the effect of
8 voluntary standards and best practices developed
9 with contributions from the Federal Government.

10 (2) An evaluation of the progress in government
11 adoption of artificial intelligence and use of artificial
12 intelligence to improve the quality of government
13 services.

14 (3) An evaluation of, and examples of, where
15 artificial intelligence assists Federal agencies deliver
16 services to the public, including towards combating
17 fraud, and ways to increase opportunities for in-
18 creased use of such artificial intelligence systems by
19 the Federal Government.

20 (4) Examples of Federal laws and regulations
21 relating to infrastructure and energy that unduly
22 burden artificial intelligence systems.

23 (5) Based on the findings of the Comptroller
24 General with respect to paragraphs (1) through (5),
25 such recommendations as the Comptroller General

1 may have for legislative or administrative action to
2 increase the rate of innovation in artificial intel-
3 ligence systems.

4 **TITLE II—ARTIFICIAL INTEL-**
5 **LIGENCE RESEARCH, DEVEL-**
6 **OPMENT, CAPACITY BUILD-**
7 **ING ACTIVITIES**

8 **SEC. 201. PUBLIC DATA FOR ARTIFICIAL INTELLIGENCE**
9 **SYSTEMS.**

10 (a) IN GENERAL.—Title LI of the National Artificial
11 Intelligence Initiative Act of 2020 (15 U.S.C. 9411 et
12 seq.) is amended by adding at the end the following new
13 section:

14 **“SEC. 5103A. PUBLIC DATA FOR ARTIFICIAL INTELLIGENCE**
15 **SYSTEMS.**

16 “(a) LIST OF PRIORITIES.—

17 “(1) IN GENERAL.—To expedite the develop-
18 ment of artificial intelligence systems in the United
19 States, the Director of the Office of Science and
20 Technology Policy (in this section referred to as the
21 ‘Director’) shall, acting through the National
22 Science and Technology Council and the Interagency
23 Committee and in consultation with the Advisory
24 Committee on Data for Evidence Building estab-
25 lished under section 315 of title 5, United States

Code, develop a list of priorities for Federal investment in creating or improving curated, publicly available Federal Government data for training and evaluating artificial intelligence systems and identify an appropriate location to host curated datasets.

“(2) REQUIREMENTS.—

“(A) IN GENERAL.—The list developed pursuant to paragraph (1) shall—

“(i) prioritize data that will advance novel artificial intelligence systems in the public interest;

“(ii) prioritize datasets that are the result of scientific research that was funded by the Federal Government; and

“(iii) prioritize datasets unlikely to independently receive sufficient private sector support to enable their creation, absent Federal funding.

“(B) DATASETS IDENTIFIED.—In carrying out subparagraph (A)(ii), the Director shall identify 20 datasets to be prioritized.

“(3) CONSIDERATIONS.—In developing the list under paragraph (1), the Director shall consider the following:

1 “(A) Applicability to the initial list of soci-
2 etal, national, and geostrategic challenges set
3 forth by subsection (b) of section 10387 of the
4 Research and Development, Competition, and
5 Innovation Act (42 U.S.C. 19107), or any suc-
6 cessor list.

7 “(B) Applicability to the initial list of key
8 technology focus areas set forth by subsection
9 (c) of such section, or any successor list.

10 “(C) Applicability to other major United
11 States economic sectors, such as agriculture,
12 health care, transportation, manufacturing, bio-
13 technology, communications, weather services,
14 and positive utility to small- and medium-sized
15 United States businesses.

16 “(D) Opportunities to improve datasets in
17 effect before the date of the enactment of the
18 Future of Artificial Intelligence Innovation Act
19 of 2026.

20 “(E) Inclusion of data representative of
21 the entire population of the United States.

22 “(F) Potential national security threats to
23 releasing datasets, consistent with the United
24 States Government approach to data flows.

25 “(G) Requirements of laws in effect.

1 “(H) Applicability to the priorities listed in
2 the National Artificial Intelligence Research
3 and Development Strategic Plan of the Na-
4 tional Science and Technology Council, dated
5 October 2016, and subsequent updates, and the
6 priorities listed in Winning the Race, America’s
7 AI Action Plan, dated July 2025.

8 “(I) Ability to use data already made avail-
9 able to the National Artificial Intelligence Re-
10 search Resource Pilot program or any successor
11 program.

12 “(J) Coordination with other Federal open
13 data efforts, as applicable.

14 “(K) Requirements for researchers funded
15 by the Federal Government to disclose non-
16 proprietary, nonsensitive datasets that are used
17 by artificial intelligence models during the
18 course of research and development.

19 “(L) Opportunities for the National
20 Science Foundation to maintain integrated,
21 interoperable, and multimodal datasets readily
22 providing access to scientific and engineering
23 demonstration projects.

24 “(4) PUBLIC INPUT.—Before finalizing the list
25 required by paragraph (1), the Director shall imple-

1 ment public comment procedures for receiving input
2 and comment from private industry, academia, civil
3 society, and other relevant stakeholders.

4 “(b) INTERAGENCY COMMITTEE.—In carrying out
5 this section, the Interagency Committee—

6 “(1) may establish or leverage existing initia-
7 tives, including through public-private partnerships,
8 for the creation or improvement of curated datasets
9 identified in the list developed pursuant to sub-
10 section (a)(1), including methods for addressing
11 data scarcity;

12 “(2) may apply the priorities set forth in the
13 list developed pursuant to subsection (a)(1) to the
14 enactment of Federal public access and open govern-
15 ment data policies;

16 “(3) shall ensure consistency with Federal pro-
17 visions of law relating to privacy, including the tech-
18 nology and privacy standards applied to the National
19 Secure Data Service under section 10375(f) of the
20 Research and Development, Competition, and Inno-
21 vation Act (42 U.S.C. 19085(f)); and

22 “(4) shall ensure that no data sharing is per-
23 mitted with any country that the Secretary of Com-
24 merce, in consultation with the Secretary of Defense,
25 the Secretary of State, the Secretary of Energy, and

1 the Director of National Intelligence, determines to
2 be engaged in conduct that is detrimental to the na-
3 tional security or foreign policy of the United States.

4 “(c) AVAILABILITY OF DATASETS.—Datasets that
5 are created or improved pursuant to this section—

6 “(1) shall, in the case of a dataset created or
7 improved by a Federal agency, be made available to
8 the comprehensive data inventory developed and
9 maintained by the Federal agency pursuant to sec-
10 tion 3511(a) of title 44, United States Code, in ac-
11 cordance with all applicable regulations; and

12 “(2) may be made available to the National Ar-
13 tificial Intelligence Research Resource pilot program
14 established by the Director of the National Science
15 Foundation, and the applicable programs established
16 by the Department of Energy, in accordance with
17 Executive Order 14110 (88 Fed. Reg. 75191; relat-
18 ing to safe, secure, and trustworthy development and
19 use of artificial intelligence), or any successor pro-
20 gram.

21 “(d) REPORT.—Not later than 1 year after the date
22 of the enactment of the Future of Artificial Intelligence
23 Innovation Act of 2026, the Director shall, acting through
24 the National Science and Technology Council and the
25 Interagency Committee, submit to the Committee on Com-

1 merce, Science, and Transportation of the Senate and the
2 Committee on Science, Space, and Technology of the
3 House of Representatives a report that includes—

4 “(1) best practices in developing publicly
5 curated artificial intelligence datasets;

6 “(2) lessons learned and challenges encountered
7 in developing the curated artificial intelligence
8 datasets;

9 “(3) principles used for artificial intelligence-
10 ready data;

11 “(4) recommendations relating to artificial in-
12 telligence-ready data standards and potential proc-
13 esses for development of such standards;

14 “(5) recommendations for maintaining and ex-
15 panding the availability of high-quality data sets;

16 “(6) recommendations for methods to increase
17 incentives for researchers support by the Federal
18 Government to release high-quality publicly available
19 datasets, that protects against risks to disclosure of
20 personally identifiable information and national and
21 economic security risks; and

22 “(7) recommendations for establishing secure
23 compute environments at the National Science
24 Foundation to enable secure artificial intelligence

1 use cases for controlled access to restricted Federal
2 data.

3 “(e) RULES OF CONSTRUCTION.—

4 “(1) IN GENERAL.—Nothing in this section
5 shall be construed to require the Federal Govern-
6 ment or other contributors to disclose any informa-
7 tion—

8 “(A) relating to a trade secret or other
9 protected intellectual property right;

10 “(B) that is confidential business informa-
11 tion; or

12 “(C) that is privileged.

13 “(2) DISCLOSURE TO PUBLIC DATASETS.—Ex-
14 cept as specifically provided for in this section, noth-
15 ing in this section shall be construed to prohibit the
16 head of a Federal agency from withholding informa-
17 tion from a public dataset.”.

18 (b) CLERICAL AMENDMENTS.—The table of contents
19 at the beginning of section 2 of the William M. (Mac)
20 Thornberry National Defense Authorization Act for Fiscal
21 Year 2021 and the table of contents at the beginning of
22 title LI of such Act are both amended by inserting after
23 the items relating to section 5103 the following new item:

“5103A. Public data for artificial intelligence systems.”.

1 **SEC. 202. FEDERAL GRAND CHALLENGES IN ARTIFICIAL IN-**
2 **TELLIGENCE.**

3 (a) IN GENERAL.—Title LI of the National Artificial
4 Intelligence Initiative Act of 2020 (15 U.S.C. 9411 et
5 seq.), as amended by section 201, is further amended by
6 adding at the end the following new section:

7 **“SEC. 5107. FEDERAL GRAND CHALLENGES IN ARTIFICIAL**
8 **INTELLIGENCE.**

9 “(a) ESTABLISHMENT OF PROGRAM.—

10 “(1) IN GENERAL.—Not later than 1 year after
11 the date of the enactment of the Future of Artificial
12 Intelligence Innovation Act of 2026, the Director of
13 the Office of Science and Technology Policy (acting
14 through the National Science and Technology Coun-
15 cil) and the Interagency Committee may establish a
16 program to award prizes, using the authorities and
17 processes established under section 24 of the Steven-
18 son-Wylder Technology Innovation Act of 1980 (15
19 U.S.C. 3719), to eligible participants as determined
20 by the co-chairs of the Interagency Committee pur-
21 suant to subsection (e).

22 “(2) PURPOSES.—The purposes of the program
23 required by paragraph (1) are as follows:

24 “(A) To expedite the development of artifi-
25 cial intelligence systems in the United States.

1 “(B) To stimulate artificial intelligence re-
 2 search, development, and commercialization
 3 that solves or advances specific, well-defined,
 4 and measurable challenges in 1 or more of the
 5 categories established pursuant to subsection
 6 (b).

7 “(b) FEDERAL GRAND CHALLENGES IN ARTIFICIAL
 8 INTELLIGENCE.—

9 “(1) LIST OF PRIORITIES.—The Director of the
 10 Office of Science and Technology Policy (acting
 11 through the National Science and Technology Coun-
 12 cil) and the Interagency Committee and in consulta-
 13 tion with industry, civil society, and academia, shall
 14 identify, and annually review and update as the Di-
 15 rector considers appropriate, a list of priorities for
 16 Federal grand challenges in artificial intelligence
 17 pursuant to the purposes set forth under subsection
 18 (a)(2).

19 “(2) INITIAL LIST.—

20 “(A) CONTENTS.—The list established
 21 pursuant to paragraph (1) may include the fol-
 22 lowing priorities:

23 “(i) To overcome challenges with engi-
 24 neering of and applied research on micro-
 25 electronics, including through integration

1 of artificial intelligence with emerging
2 technologies, such as neuromorphic and
3 quantum computing, or with respect to the
4 physical limits on transistors, advanced
5 interconnects, and memory elements.

6 “(ii) To promote transformational or
7 long-term advancements in computing and
8 artificial intelligence technologies
9 through—

10 “(I) next-generation algorithm
11 design;

12 “(II) next-generation compute
13 capability;

14 “(III) generative and adaptive
15 artificial intelligence for design appli-
16 cations;

17 “(IV) photonics-based micro-
18 processors and optical communication
19 networks, including electrophotonics;

20 “(V) the chemistry and physics
21 of new materials;

22 “(VI) biotechnology, such as
23 modeling a single cell;

24 “(VII) energy use or energy effi-
25 ciency;

1 “(VIII) techniques to establish
2 cryptographically secure content prov-
3 enance information; or

4 “(IX) safety and controls for ar-
5 tificial intelligence applications.

6 “(iii) To promote explainability and
7 mechanistic interpretability of artificial in-
8 telligence systems.

9 “(iv) To advance fundamental under-
10 standing of artificial intelligence, including
11 through breakthroughs in theoretical, com-
12 putational, and experimental methods that
13 discover new and transformative paradigms
14 that explain the advanced capabilities of
15 artificial intelligence in domains such as
16 the following:

17 “(I) Interpretability.

18 “(II) Control.

19 “(III) Steerability.

20 “(IV) Robustness against foreign
21 adversaries.

22 “(v) To develop artificial intelligence
23 solutions, including through integration
24 among emerging technologies such as
25 neuromorphic and quantum computing to

1 overcome barriers relating to innovations
2 in advanced manufacturing in the United
3 States, including areas such as—

4 “(I) materials, nanomaterials,
5 and composites;

6 “(II) rapid, complex design;

7 “(III) sustainability and environ-
8 mental impact of manufacturing oper-
9 ations;

10 “(IV) predictive maintenance of
11 machinery;

12 “(V) improved part quality;

13 “(VI) process inspections;

14 “(VII) worker safety; and

15 “(VIII) robotics.

16 “(vi) To develop artificial intelligence
17 solutions in sectors of the economy, such
18 as expanding the use of artificial intel-
19 ligence in maritime vessels, including in
20 navigation and in the design of propulsion
21 systems and fuels.

22 “(vii) To develop artificial intelligence
23 solutions to improve border security, in-
24 cluding solutions relevant to the detection

1 of fentanyl, illicit contraband, and other il-
2 legal activities.

3 “(viii) To develop artificial intelligence
4 for science applications.

5 “(ix) To develop cybersecurity for ar-
6 tificial intelligence-related intellectual prop-
7 erty, such as artificial intelligence systems
8 and artificial intelligence algorithms, in-
9 cluding robustness, resilience, and security
10 from foreign adversaries.

11 “(x) To develop artificial intelligence
12 solutions to modernize code and software
13 systems that are deployed in government
14 agencies and critical infrastructure and are
15 at risk of maintenance difficulties due to
16 code obsolescence or challenges finding ex-
17 pertise in outdated code bases.

18 “(xi) To develop solutions to reduce
19 the energy consumption in developing, de-
20 ploying, and maintain data-efficient and
21 high-performance artificial intelligence
22 models.

23 “(xii) To develop methods to prevent
24 misuse of artificial intelligence systems for
25 malicious purposes.

1 “(xiii) To find applications of artificial
2 intelligence in wireless communications
3 systems, including cellular networks and
4 cybersecurity efforts.

5 “(xiv) To advance the capabilities of
6 artificial intelligence, robotics, and automa-
7 tion for physical laboratory infrastructure
8 and cloud laboratories.

9 “(3) CONSULTATION ON IDENTIFICATION AND
10 SELECTION OF GRAND CHALLENGES.—The Director
11 of the Office of Science and Technology Policy, the
12 Director of the National Institute of Standards and
13 Technology, the Director of the Defense Advanced
14 Research Projects Agency, such agency heads as the
15 Director of the Office of Science and Technology
16 Policy considers relevant, and the National Artificial
17 Intelligence Advisory Committee shall each identify
18 and select artificial intelligence research and devel-
19 opment grand challenges in which eligible partici-
20 pants will compete to solve or advance for prize
21 awards under subsection (a).

22 “(4) PUBLIC INPUT ON IDENTIFICATION.—The
23 Director of the Office of Science and Technology
24 Policy shall also seek public input on the identifica-

1 tion of artificial intelligence research and develop-
 2 ment grand challenges under subsection (a).

3 “(5) PROBLEM STATEMENTS; SUCCESS
 4 METRICS.—For each priority for a Federal grand
 5 challenge identified under paragraph (1) and the
 6 grand challenges identified and selected under para-
 7 graph (3), the Director of the Office of Science and
 8 Technology Policy shall—

9 “(A) establish a specific and well-defined
 10 grand challenge problem statement and ensure
 11 that such problem statement is published on a
 12 website linking out to relevant prize competition
 13 listings on the website Challenge.gov, or suc-
 14 cessor website, that is managed by the General
 15 Services Administration; and

16 “(B) establish and publish on the website
 17 Challenge.gov, or successor website, clear tar-
 18 gets, success metrics, and validation protocols
 19 for the prize competitions designed to address
 20 each grand challenge, in order to provide spe-
 21 cific benchmarks that will be used to evaluate
 22 submissions to the prize competition.

23 “(c) FEDERAL INVESTMENT INITIATIVES AUTHOR-
 24 IZED.—Subject to the availability of amounts appropriated
 25 for this purpose, the Secretary of Commerce, the Sec-

1 retary of Transportation, the Director of the National
 2 Science Foundation may, consistent with the missions or
 3 responsibilities of each Federal agency, establish 1 or more
 4 prize competitions under section 24 of the Stevenson-
 5 Wydler Technology Innovation Act of 1980 (15 U.S.C.
 6 3719), challenge-based acquisitions, or other research and
 7 development investments that each agency head deems ap-
 8 propriate consistent with the list of priorities established
 9 pursuant to subsection (b)(1).

10 “(d) REQUIREMENTS.—

11 “(1) IN GENERAL.—The Director of the Office
 12 of Science and Technology Policy shall develop re-
 13 quirements for—

14 “(A) the process for prize competitions
 15 under subsections (a) and (c), including eligi-
 16 bility criteria for participants, consistent with
 17 the requirements under paragraph (2); and

18 “(B) testing, judging, and verification pro-
 19 cedures for submissions to receive a prize award
 20 under subsection (c).

21 “(2) ELIGIBILITY REQUIREMENT AND JUDG-
 22 ING.—

23 “(A) ELIGIBILITY.—In accordance with
 24 the requirement described in section 24(g)(3) of
 25 the Stevenson-Wydler Technology Innovation

1 Act of 1980 (15 U.S.C. 3719(g)(3)), a recipient
2 of a prize award under subsection (c)—

3 “(i) that is a private entity shall be
4 incorporated in and maintain a primary
5 place of business in the United States; and

6 “(ii) who is an individual, whether
7 participating singly or in a group, shall be
8 a citizen or permanent resident of the
9 United States.

10 “(B) JUDGES.—In accordance with section
11 24(k) of the Stevenson-Wydler Technology In-
12 novation Act of 1980 (15 U.S.C. 3719(k)), a
13 judge of a prize competition under subsection
14 (c) may be an individual from the private sec-
15 tor.

16 “(3) AGENCY LEADERSHIP.—Each agency head
17 carrying out an investment initiative under sub-
18 section (c) shall ensure that—

19 “(A) for each prize competition or invest-
20 ment initiative carried out by the agency head
21 under such subsection, there is—

22 “(i) a positive impact on the economic
23 competitiveness of the United States;

24 “(ii) a benefit to United States indus-
25 try;

1 “(iii) to the extent possible, leveraging
 2 of the resources and expertise of industry
 3 and philanthropic partners in shaping the
 4 investments; and

5 “(iv) in a case involving development
 6 and manufacturing, use of advanced manu-
 7 facturing in the United States; and

8 “(B) all research conducted for purposes of
 9 the investment initiative is conducted in the
 10 United States.

11 “(e) REPORTS.—

12 “(1) NOTIFICATION OF WINNING SUBMIS-
 13 SION.—Not later than 60 days after the date on
 14 which a prize is awarded under subsection (c), the
 15 agency head awarding the prize shall submit to the
 16 Committee on Commerce, Science, and Transpor-
 17 tation of the Senate, the Committee on Science,
 18 Space, and Technology of the House of Representa-
 19 tives, and such other committees of Congress as the
 20 agency head considers relevant a report that de-
 21 scribes the winning submission to the prize competi-
 22 tion and its benefits to the United States.

23 “(2) BIENNIAL REPORT.—

24 “(A) IN GENERAL.—Not later than 2 years
 25 after the date of the enactment of the Future

1 of Artificial Intelligence Innovation Act of
2 2026, and biennially thereafter, the heads of
3 agencies described in subsection (c) shall sub-
4 mit to the Committee on Commerce, Science,
5 and Transportation of the Senate, the Com-
6 mittee on Science, Space, and Technology of
7 the House of Representatives, and such other
8 committees of Congress as the agency heads
9 consider relevant a report that includes—

10 “(i) a description of the activities car-
11 ried out by the agency heads under this
12 section;

13 “(ii) a description of the active com-
14 petitions and the results of completed com-
15 petitions under subsection (c); and

16 “(iii) efforts to provide information to
17 the public on active competitions under
18 subsection (c) to encourage participation.

19 “(B) PUBLIC ACCESSIBILITY.—The agency
20 heads described in subsection (c) shall make the
21 biennial report required under subparagraph
22 (A) publicly accessible, including by posting the
23 biennial report on a website in an easily acces-
24 sible location, such as the GovInfo website of
25 the Government Publishing Office.

1 “(f) ACCESSIBILITY.—In carrying out any competi-
 2 tion under subsection (c), the head of an agency shall post
 3 the active prize competitions and available prize awards
 4 under subsection (b) to Challenge.gov, or successor
 5 website, after the grand challenges are selected and the
 6 prize competitions are designed pursuant to subsections
 7 (c) and (e) to ensure the prize competitions are widely ac-
 8 cessible to eligible participants.

9 “(g) SUNSET.—This section shall terminate on the
 10 date that is 5 years after the date of the enactment the
 11 Future of Artificial Intelligence Innovation Act of 2026.”.

12 (b) COMPTROLLER GENERAL OF THE UNITED
 13 STATES STUDIES AND REPORTS.—

14 (1) INITIAL STUDY.—

15 (A) IN GENERAL.—Not later than 1 year
 16 after the date of enactment of this Act, the
 17 Comptroller General of the United States shall
 18 conduct a study of Federal prize competitions,
 19 which shall include an assessment of the effi-
 20 cacy and impact of prize competitions generally.

21 (B) ELEMENTS.—The study conducted
 22 under subparagraph (A) shall include, to the
 23 extent practicable, the following:

24 (i) A survey of all existing, current
 25 and ongoing Federal prize competitions

1 carried out under authorities enacted be-
2 fore the date of the enactment of this Act.

3 (ii) An assessment of those existing,
4 current, and ongoing Federal prize com-
5 petitions that includes addressing—

6 (I) whether and what technology
7 or innovation would have been devel-
8 oped in the absence of the prize com-
9 petitions;

10 (II) whether the prize competi-
11 tions shortened the timeframe for the
12 development of the technology or in-
13 novation;

14 (III) whether the prize competi-
15 tion was cost effective;

16 (IV) what, if any, other benefits
17 were gained from conducting the prize
18 competitions;

19 (V) whether the use of a more
20 traditional policy tool such as a grant
21 or contract have resulted in the devel-
22 opment of a similar technology or in-
23 novation;

24 (VI) whether prize competitions
25 might be designed differently in a way

1 that would result in a more effective
2 or revolutionary technology being de-
3 veloped;

4 (VII) what are appropriate
5 metrics that could be used for deter-
6 mining the success of a prize competi-
7 tion, and whether those metrics differ
8 when evaluating near-term and long-
9 term impacts of prize competitions;
10 and

11 (VIII) suggested best practices of
12 prize competitions.

13 (C) CONGRESSIONAL BRIEFING.—Not later
14 than 540 days after the date of the enactment
15 of this Act, the Comptroller General shall pro-
16 vide the Committee on Science, Space, and
17 Technology and the Committee on Energy and
18 Natural Resources of the Senate and the Com-
19 mittee on Energy and Commerce of the House
20 of Representatives a briefing on the findings of
21 the Comptroller General with respect to the
22 study conducted under subparagraph (A).

23 (D) REPORT.—Not later than 540 days
24 after the date of the enactment of this Act, the
25 Comptroller General shall submit to the con-

gressional committees specified in subparagraph (C) a report on the findings and recommendations of Comptroller General from the study conducted under subparagraph (A).

(2) INTERIM STUDY.—

(A) IN GENERAL.—The Comptroller General of the United States shall conduct a study of the Federal prize challenges implemented under section 5108 of the of the National Artificial Intelligence Initiative Act of 2020, as added by subsection (a), which shall include an assessment of the efficacy and effect of such prize competitions.

(B) ELEMENTS.—The study conducted under subparagraph (A) shall include, to the extent practicable, the following:

(i) A survey of all Federal prize competitions implemented under section 5108 of the of the National Artificial Intelligence Initiative Act of 2020, as added by subsection (a).

(ii) An assessment of the Federal prize competitions implemented such section, which shall include addressing the

1 same considerations as set forth under
2 paragraph (1)(B)(ii).

3 (iii) An assessment of the efficacy, im-
4 pact, and cost-effectiveness of prize com-
5 petitions implemented under section 5108
6 of the of the National Artificial Intelligence
7 Initiative Act of 2020, as added by sub-
8 section (a), compared to other Federal
9 prize competitions.

10 (C) CONGRESSIONAL BRIEFING.—Not later
11 than 1 year after completing the study required
12 by subparagraph (A), the Comptroller General
13 shall provide the Committee on Science, Space,
14 and Technology and the Committee on Energy
15 and Natural Resources of the Senate and the
16 Committee on Energy and Commerce of the
17 House of Representatives a briefing on the find-
18 ings of the Comptroller General with respect to
19 the study conducted under subparagraph (A).

20 (D) REPORT.—Not later than 180 days
21 after the date of the enactment of this Act, the
22 Comptroller General shall submit to the con-
23 gressional committees specified in subparagraph
24 (C) a report on the findings and recommenda-

1 tions of the Comptroller General with respect to
2 the study conducted under subparagraph (A).

3 (c) CLERICAL AMENDMENTS.—The table of contents
4 at the beginning of section 2 of the William M. (Mac)
5 Thornberry National Defense Authorization Act for Fiscal
6 Year 2021 and the table of contents at the beginning of
7 title LI of such Act, as amended by section 201, are both
8 amended by inserting after the items relating to section
9 5107 the following new item:

“5107. Federal grand challenges in artificial intelligence.”.

10 **TITLE III—RESEARCH SECURITY** 11 **AND OTHER MATTERS**

12 **SEC. 301. RESEARCH SECURITY.**

13 The activities authorized under this Act shall be car-
14 ried out in accordance with the provision of subtitle D of
15 title VI of the Research and Development, Competition,
16 and Innovation Act (42 U.S.C. 19231 et seq.; enacted as
17 part of division B of Public Law 117–167) and section
18 223 of the William M. (Mac) Thornberry National De-
19 fense Authorization Act for Fiscal Year 2021 (42 U.S.C.
20 6605).

21 **SEC. 302. EXPANSION OF AUTHORITY TO HIRE CRITICAL** 22 **TECHNICAL EXPERTS.**

23 (a) IN GENERAL.—Subsection (b) of section 6 of the
24 National Institute of Standards and Technology Act (15

1 U.S.C. 275) is amended, in the second sentence, by strik-
 2 ing “15” and inserting “30”.

3 (b) MODIFICATION OF SUNSET.—Subsection (c) of
 4 such section is amended by striking “under section (b)
 5 shall expire on the date that is 5 years after the date of
 6 the enactment of this section” and inserting “under sub-
 7 section (b) shall expire on December 30, 2035”.

8 **SEC. 303. CERTIFICATIONS AND AUDITS OF TEMPORARY**
 9 **FELLOWS.**

10 (a) DEFINITIONS.—In this section:

11 (1) AGENCY.—The term “agency” has the
 12 meaning given such term in section 3502 of title 44,
 13 United States Code.

14 (2) COMMITTEES OF JURISDICTION.—The term
 15 “committees of jurisdiction” means—

16 (A) the Committee on Commerce, Science,
 17 and Transportation and the Committee on En-
 18 ergy and Natural Resources of the Senate; and

19 (B) the Committee on Energy and Com-
 20 merce and the Committee on Science, Space,
 21 and Technology of the House of Representa-
 22 tives.

23 (3) CRITICAL AND EMERGING TECH-
 24 NOLOGIES.—The term “critical and emerging tech-
 25 nologies” means a subset of artificial intelligence

1 and other critical and emerging technologies in-
2 cluded in the list of such technologies identified and
3 maintained by the National Science and Technology
4 Council of the Office of Science and Technology Pol-
5 icy.

6 (4) INHERENTLY GOVERNMENTAL FUNCTION.—

7 The term “inherently governmental function” has
8 the meaning given such term in section 5 of the
9 Federal Activities Inventory Reform Act of 1998
10 (Public Law 105–270; 31 U.S.C. 501 note) and in-
11 cludes the meaning given such term in subpart 7.5
12 of part 7 of the Federal Acquisition Regulation, or
13 successor regulation.

14 (5) TEMPORARY FELLOW.—The term “tem-

15 porary fellow”, with respect to an agency, means a
16 fellow, contractor, consultant, or any other person
17 performing work for the agency who is not a Federal
18 Government employee.

19 (b) CERTIFICATION.—

20 (1) IN GENERAL.—Prior to performing any

21 work for an agency under this Act relating to artifi-
22 cial intelligence and other critical and emerging
23 technologies, a temporary fellow and the head of the
24 agency shall sign a certification that the temporary

1 fellow will not perform any inherently governmental
2 functions.

3 (2) SUBMITTAL.—Not later than 30 days after
4 the date on which the head of an agency signs a cer-
5 tification under paragraph (1), the head of the agen-
6 cy shall submit a copy of the certification to the Di-
7 rector of the Office of Management and Budget and
8 the chairpersons and ranking members of the com-
9 mittees of jurisdiction.

10 (c) AUDIT.—

11 (1) IN GENERAL.—For each agency using a
12 temporary fellow to carry out this Act, the inspector
13 general of the agency shall perform an annual audit
14 of the use of temporary fellows by the agency, which
15 includes—

16 (A) the number of temporary fellows used
17 by the agency;

18 (B) the entities paying any temporary fel-
19 low for their work for the agency;

20 (C) the work temporary fellows are per-
21 forming for the agency;

22 (D) the authorities under which the agency
23 hired the temporary fellows; and

1 (E) whether the temporary fellows and the
2 agency are complying with the requirements of
3 section (b).

4 (2) SUBMITTAL TO CONGRESS.—Not later than
5 30 days after the date on which the inspector gen-
6 eral of an agency completes an audit under para-
7 graph (1), the head of the agency shall submit to the
8 chairpersons and ranking members of the commit-
9 tees of jurisdiction and the Director of the Office of
10 Management and Budget a report containing the
11 findings of inspector general with respect to the
12 audit.

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