

119TH CONGRESS
2D SESSION

H. R. 8516

To make certain improvements relating to artificial intelligence, and for other purposes.

IN THE HOUSE OF REPRESENTATIVES

APRIL 27, 2026

Mr. LIEU (for himself and Mr. OBERNOLTE) introduced the following bill; which was referred to the Committee on Science, Space, and Technology, and in addition to the Committees on Energy and Commerce, Agriculture, Oversight and Government Reform, Education and Workforce, the Judiciary, and Ways and Means, for a period to be subsequently determined by the Speaker, in each case for consideration of such provisions as fall within the jurisdiction of the committee concerned

A BILL

To make certain improvements relating to artificial intelligence, 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 “American Leadership in AI Act”.

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

Sec. 1. Short title; table of contents.

TITLE I—STRENGTHENING STANDARDS, TESTING, AND
EVALUATIONS

Subtitle A—Center for AI Standards and Innovation

Sec. 101. Center for AI Standards and Innovation.

Subtitle B—Support for Artificial Intelligence and Other Critical and Emerging Technologies by the National Institute of Standards and Technology.

Sec. 111. Definitions.

Sec. 112. United States participation in organizations developing standards and specifications for artificial intelligence and other critical and emerging technologies.

Sec. 113. Pilot program to support standards meetings for artificial intelligence and other critical and emerging technologies in the United States.

Subtitle C—Research on Development Best Practices by the National
Institute of Standards and Technology

Sec. 121. Research on development best practices by the National Institute of Standards and Technology.

TITLE II—BUILD RESEARCH INFRASTRUCTURE AND SPUR
GROUNDBREAKING RESEARCH

Subtitle A—National Artificial Intelligence Research Resource

Sec. 201. National Artificial Intelligence Research Resource.

Subtitle B—National Artificial Intelligence Research Resource Pilot Program

Sec. 211. National Artificial Intelligence Research Resource pilot program.

Subtitle C—Prize Competitions for Artificial Intelligence Research and
Development

Sec. 221. Prize competitions for artificial intelligence research and development.

Subtitle D—Grants to Perform Research Regarding the Use of Generative
Artificial Intelligence in Health Care

Sec. 231. Grants to perform research regarding the use of generative artificial intelligence in health care.

Subtitle E—Department of Agriculture and National Science Foundation
Research and Development Coordination

Sec. 241. Department of Agriculture and National Science Foundation research and development coordination.

Subtitle F—Department of Energy Artificial Intelligence Research Program

Sec. 251. Department of Energy artificial intelligence research program.

TITLE III—MODERNIZING FEDERAL AI GOVERNANCE,
PROCUREMENT, AND SECURITY

Subtitle A—Federal Standards for Artificial Intelligence

Sec. 301. Federal standards for artificial intelligence.

Subtitle B—AI Leadership to Enable Accountable Deployment

- Sec. 311. Definitions.
- Sec. 312. Chief Artificial Intelligence Officers Council.
- Sec. 313. Agency artificial intelligence officers.
- Sec. 314. Agency coordination on artificial intelligence.
- Sec. 315. GAO reports.
- Sec. 316. Post-enactment guidance from the Director.
- Sec. 317. Sunset.

Subtitle C—AI Incident Reporting and Security Enhancement

- Sec. 321. Activities to support voluntary vulnerability and incident tracking associated with artificial intelligence.

TITLE IV—PROTECTING WORKERS AND EMPOWERING SMALL BUSINESSES

Subtitle A—AI Workforce Research Hub

- Sec. 401. AI Workforce Research Hub.

Subtitle B—Small Business Artificial Intelligence Advancement

- Sec. 411. Resources for small businesses to utilize artificial intelligence.

TITLE V—SAFEGUARDING AMERICANS AND DETERRING HARMFUL DEEPFAKES

Subtitle A—Disrupting Explicit Forged Images and Non-Consensual Edits

- Sec. 501. Civil action relating to disclosure of intimate images.
- Sec. 502. Severability; rule of construction.

Subtitle B—AI Fraud Deterrence

- Sec. 511. Financial crimes and artificial intelligence.
- Sec. 512. AI impersonation of Federal officials.

Subtitle C—AI Whistleblower Protection

- Sec. 521. Definitions.
- Sec. 522. Anti-retaliation protection for AI whistleblowers.

TITLE VI—EXPANDING EDUCATION, LITERACY, AND INCLUSION

Subtitle A—Codifying AI Literacy Efforts of the AI Task Force

- Sec. 601. AI literacy efforts of the AI Task Force.

Subtitle B—New Collar Jobs Tax Credit

- Sec. 611. Employee cybersecurity education.
- Sec. 612. Cybersecurity training incentive for Government contracts.

Subtitle C—Literacy in Future Technologies Artificial Intelligence

- Sec. 621. Preparing K–12 educators and students for an AI literate future.

Subtitle D—Expanding AI Voices Through Capacity Building

Sec. 631. Expanding capacity in artificial intelligence science.

Subtitle E—NSF AI Education

Sec. 641. Scholarships and fellowships in artificial intelligence.

Sec. 642. Community college and area career and technical educational school centers of AI excellence.

Sec. 643. Awards for research on artificial intelligence in education.

Sec. 644. National STEM Teacher Corps.

1 TITLE I—STRENGTHENING
2 STANDARDS, TESTING, AND
3 EVALUATIONS

4 Subtitle A—Center for AI
5 Standards and Innovation

6 SEC. 101. CENTER FOR AI STANDARDS AND INNOVATION.

7 (a) DEFINITIONS.—Section 5002 of the National Ar-
8 tificial Intelligence Initiative Act of 2020 (15 U.S.C. 9401;
9 as enacted as part of division E of the William M. (Mac)
10 Thornberry National Defense Authorization Act for Fiscal
11 Year 2021; Public Law 116–283) is amended—

12 (1) by redesignating paragraphs (4), (5), (6),
13 (7), (8), (9), (10), and (11) as paragraphs (6), (8),
14 (9), (10), (11), (12), (13), and (14), respectively;

15 (2) by inserting after paragraph (3) the fol-
16 lowing new paragraphs:

17 “(4) ARTIFICIAL INTELLIGENCE RED
18 TEAMING.—The term ‘artificial intelligence red
19 teaming’ means a structured testing in a controlled
20 environment simulating real-world conditions, using

1 adversarial methods to find flaws and vulnerabilities
2 in an artificial intelligence system and identify risks,
3 flaws, and vulnerabilities of artificial intelligence sys-
4 tems, such as harmful outputs from such system,
5 unforeseen or undesirable system behaviors, limita-
6 tions, and potential risks associated with the misuse
7 of such system.

8 “(5) ARTIFICIAL INTELLIGENCE SYSTEM.—The
9 term ‘artificial intelligence system’—

10 “(A) means any data system, software, ap-
11 plication, tool, or utility that operates in whole
12 or in part using dynamic or static machine
13 learning algorithms or other forms of artificial
14 intelligence, whether—

15 “(i) the data system, software, appli-
16 cation, tool, or utility is established pri-
17 marily for the purpose of researching, de-
18 veloping, or implementing artificial intel-
19 ligence technology; or

20 “(ii) artificial intelligence capability is
21 integrated into another system or agency
22 business process, operational activity, or
23 technology system; and

24 “(B) does not include any common com-
25 mercial product within which artificial intel-

1 ligence is embedded, such as a word processor
2 or map navigation system.”; and

3 (3) by inserting after paragraph (6), as so re-
4 designated, the following new paragraph:

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

9 (b) ESTABLISHMENT.—Title LIII of division E of the
10 William M. (Mac) Thornberry National Defense Author-
11 ization Act for Fiscal Year 2021 (Public Law 116–283;
12 134 Stat. 4523) is amended by adding at the end the fol-
13 lowing new section:

14 **“SEC. 5304. CENTER FOR AI STANDARDS AND INNOVATION.**

15 “(a) ESTABLISHMENT.—

16 “(1) IN GENERAL.—Subject to the availability
17 of appropriations, the Director of the National Insti-
18 tute of Standards and Technology (in this section
19 referred to as the ‘Director’) shall establish a center
20 on artificial intelligence, to be known as the ‘Center
21 for AI Standards and Innovation’ (in this section re-
22 ferred to as the ‘Center’), to ensure continued
23 United States leadership in research, development,
24 and evaluation of the reliability, robustness, resil-

1 ience, security, and safety of artificial intelligence
2 systems.

3 “(2) PURPOSES.—The purposes of the Center
4 are as follows:

5 “(A) To advance the measurement science
6 for artificial intelligence reliability, robustness,
7 resilience, security, and safety.

8 “(B) To support the National Institute of
9 Standards and Technology laboratories as such
10 laboratories carry out artificial intelligence ac-
11 tivities related to robustness, resilience, and
12 safety in accordance with section 22A of the
13 National Institute of Standards and Technology
14 Act (15 U.S.C. 278h–1).

15 “(C) To collaborate with the private sector,
16 standards development organizations, civil soci-
17 ety, and Federal agencies in supporting the de-
18 velopment of voluntary best practices and tech-
19 nical standards for evaluating the reliability,
20 robustness, resilience, security, and safety-re-
21 lated challenges and remediations of artificial
22 intelligence systems.

23 “(D) To increase the understanding of
24 State, local, and Tribal governments, institu-
25 tions of higher education, private sector enti-

ties, and the public of the reliability, robustness, resilience, security, and safety-related challenges and remediations of artificial intelligence.

“(3) DIRECTOR.—The Director or appropriate designee shall serve as the Director of the Center.

“(4) CONSULTATION AND COORDINATION.—In establishing the Center, the Director shall—

“(A) coordinate with—

“(i) the Director of the National Science Foundation;

“(ii) the Director of the Office of Science and Technology Policy;

“(iii) the Secretary of Energy;

“(iv) the Secretary of Defense; and

“(v) the Secretary of Homeland Security; and

“(B) consult with the heads of such other Federal agencies as the Director considers appropriate.

“(5) ACTIVITIES.—The activities of the Center may include the following:

“(A) Conducting evaluations and benchmarking of the capabilities and limitations of artificial intelligence over time.

1 “(B) Conducting measurement research to
2 inform the development of recommended best
3 practices, benchmarks, methodologies, proce-
4 dures, voluntary consensus-based technical
5 standards, and other resources for the evalua-
6 tion and assurance of reliable, robust, resilient,
7 secure, and safe artificial intelligence systems
8 and reduce the risk of the misuse of such sys-
9 tems, including relating to the following:

10 “(i) Common definitions and charac-
11 terizations for aspects of artificial intel-
12 ligence reliability, robustness, resiliency,
13 security, and safety, and the measurement
14 of such that are applicable across many
15 sectors and use cases.

16 “(ii) The reliability, robustness, resil-
17 ience, security, and safety of artificial in-
18 telligence systems and use cases, including
19 the ability for such systems to withstand
20 unexpected inputs and adversarial attacks.

21 “(iii) Testing, evaluation, validation,
22 and verification methods for risk manage-
23 ment, including measurement of and assur-
24 ance for accuracy, transparency, reliability,
25 security, verifiability, and safety through-

1 out the lifecycle of artificial intelligence
2 systems, including through artificial intel-
3 ligence red teaming.

4 “(iv) Reference use cases for artificial
5 intelligence systems and criteria for assess-
6 ing safety risk in each such use case.

7 “(C) Providing to relevant Federal agen-
8 cies and National Institute of Standards and
9 Technology laboratories, as appropriate, input
10 and support for artificial intelligence risk man-
11 agement regarding reliability, robustness, resil-
12 ience, security, and safety-related topics.

13 “(D) Engaging with, or supporting the en-
14 gagement of the United States Government
15 with, international standards organizations,
16 multilateral organizations, and organizations
17 and topically relevant bodies among allies and
18 partners to support international collaboration
19 with respect to activities described in this para-
20 graph.

21 “(E) As appropriate, and in coordination
22 with ongoing National Institute of Standards
23 and Technology activities, coordinating Federal
24 research, development, demonstration, and
25 standards engagement related to artificial intel-

1 ligence reliability, robustness, resilience, secu-
2 rity, and safety.

3 “(6) REQUIREMENTS.—In carrying out the ac-
4 tivities described in paragraph (5), the Director shall
5 carry out the following:

6 “(A) Support research that assesses and
7 mitigates reliability, robustness, resilience, secu-
8 rity, and safety risks of artificial intelligence
9 systems across several timescales, including de-
10 monstrable safety risks that arise from the use
11 and misuse of such systems.

12 “(B) Assess scenarios in which such sys-
13 tems could be deployed to create risks for eco-
14 nomic or national security.

15 “(C) Leverage computing resources, access
16 to open datasets, open source software, and
17 other resources from industry, the government,
18 nonprofit organizations (as such term is defined
19 in section 201 of title 35, United States Code),
20 Federal laboratories, and institutions of higher
21 education to advance the mission of the Center,
22 as appropriate.

23 “(D) Leverage existing Federal invest-
24 ments to advance the mission of the Center.

1 “(E) Avoid unnecessary duplication with
2 National Institute of Standards and Technology
3 laboratory activities authorized under section
4 22A of the National Institute of Standards and
5 Technology Act (15 U.S.C. 278h–1).

6 “(7) REPORT.—For each fiscal year beginning
7 with fiscal year 2027, not later than 90 days after
8 the President submits a budget for such fiscal year
9 pursuant to section 1105 of title 31, United States
10 Code, the Director shall submit to the Committee on
11 Science, Space, and Technology of the House of
12 Representatives and the Committee on Commerce,
13 Science, and Transportation of the Senate a report
14 that includes the following:

15 “(A) A summarized budget in support of
16 the Center for such fiscal year.

17 “(B) A description of the goals, priorities,
18 and metrics for guiding and evaluating the ac-
19 tivities of the Center.

20 “(b) ESTABLISHMENT OF CONSORTIUM.—

21 “(1) IN GENERAL.—The Director shall establish
22 a consortium (in this section referred to as the ‘Con-
23 sortium’) of stakeholders from academic or research
24 communities, Federal laboratories, private industry,
25 and civil society in matters relating to artificial intel-

1 ligence reliability, robustness, resilience, security,
2 and safety to support the following:

3 “(A) The Center, in carrying out the ac-
4 tivities specified in subsection (a)(5).

5 “(B) The National Institute of Standards
6 and Technology in carrying out section 22A of
7 the National Institute of Standards and Tech-
8 nology Act (15 U.S.C. 278h–1).

9 “(2) GOALS.—In addition to supporting the
10 Center in carrying out activities under subsection
11 (a)(5), the goals of the Consortium are the following:

12 “(A) To evaluate the needs of stake-
13 holders, including industry and civil society.

14 “(B) Identify where gaps remain in the ac-
15 tivities of the Center, including relating to
16 measurement research and support for stand-
17 ards development, and provide recommenda-
18 tions to the Center on how to address such
19 gaps.

20 “(3) REPORT.—Not later than two years after
21 the date of the enactment of this section, the Direc-
22 tor shall submit to the Committee on Science, Space,
23 and Technology of the House of Representatives and
24 the Committee on Commerce, Science, and Trans-
25 portation of the Senate a report summarizing the

1 contributions of the members of the Consortium in
2 support the efforts of the Center.

3 “(c) SCIENTIFIC INTEGRITY.—The Director shall en-
4 sure the Center, Consortium, and staff adhere to policies
5 and procedures established pursuant to section 1009 of
6 the America COMPETES Act (42 U.S.C. 6620), includ-
7 ing by providing mechanisms for an employee or associate
8 of the National Institute of Standards and Technology,
9 a member of the Consortium, a private sector entity, re-
10 searcher, or student affiliated with the Center or Consor-
11 tium, an employee of an agency working with the Center,
12 or a member of the public to report violations of such poli-
13 cies by confidential and anonymous means.

14 “(d) SECURITY.—This section shall be carried out in
15 accordance with the provision of subtitle D of title VI of
16 the Research and Development, Competition, and Innova-
17 tion Act (42 U.S.C. 19231 et seq.; enacted as part of divi-
18 sion B of Public Law 117–167) and section 223 of the
19 William M. (Mac) Thornberry National Defense Author-
20 ization Act for Fiscal Year 2021 (42 U.S.C. 6605).

21 “(e) LIMITATION.—Information shared by an entity
22 with, or provided to, the Director for the purpose of the
23 activities described in this section may not be used by any
24 Federal, State, local, or Tribal department or agency to
25 regulate the activity of such entity.

1 “(f) PROHIBITIONS.—Nothing in this section may be
2 construed to—

3 “(1) provide the Director any enforcement au-
4 thority that was not in effect on the day before the
5 date of the enactment of this section;

6 “(2) confer any regulatory authority to any
7 Federal, State, Tribal, or local department or agen-
8 cy;

9 “(3) require any private sector entity to share
10 data, including proprietary information, with the Di-
11 rector, the Center, or the Consortium; or

12 “(4) modify any regulatory requirement to re-
13 port or submit information to a Federal, State, Trib-
14 al or local department or agency.

15 “(g) SUNSET.—This section shall terminate on the
16 date that is six years after the date of the enactment of
17 this section.

18 “(h) AUTHORIZATION OF APPROPRIATIONS.—There
19 is to be authorized to be appropriated to the Director
20 \$10,000,000 for fiscal year 2027 to carry out this sec-
21 tion.”.

22 (c) HIRING CRITICAL TECHNICAL EXPERTS UP-
23 DATE.—Subsection (c) of section 6 of the National Insti-
24 tute of Standards and Technology Act (15 U.S.C. 275)
25 is amended by striking “section (b) shall expire on the

1 date that is 5 years” and inserting “subsection (b) shall
2 expire on the date that is 7 years”.

3 (d) CLERICAL AMENDMENTS.—The tables of con-
4 tents in section 2(b) and title LIII of the William M.
5 (Mac) Thornberry National Defense Authorization Act for
6 Fiscal Year 2021 are amended by inserting after the items
7 relating to section 5303 the following new items:

“Sec. 5304. Center for AI Standards and Innovation.”.

8 **Subtitle B—Support for Artificial**
9 **Intelligence and Other Critical**
10 **and Emerging Technologies by**
11 **the National Institute of Stand-**
12 **ards and Technology**

13 **SEC. 111. DEFINITIONS.**

14 In this subtitle:

15 (1) COVERED ARTIFICIAL INTELLIGENCE AND
16 OTHER CRITICAL AND EMERGING TECHNOLOGIES.—
17 The term “covered artificial intelligence and other
18 critical and emerging technologies” means a subset
19 of artificial intelligence and other critical and emerg-
20 ing technologies included in the list of such tech-
21 nologies identified and maintained by the National
22 Science and Technology Council of the Office of
23 Science and Technology Policy as the Director con-
24 siders appropriate for purposes of this subtitle.

1 (2) DIRECTOR.—The term “Director” means
2 the Director of the National Institute of Standards
3 and Technology.

4 **SEC. 112. UNITED STATES PARTICIPATION IN ORGANIZA-**
5 **TIONS DEVELOPING STANDARDS AND SPECI-**
6 **FICATIONS FOR ARTIFICIAL INTELLIGENCE**
7 **AND OTHER CRITICAL AND EMERGING TECH-**
8 **NOLOGIES.**

9 (a) BRIEFING REQUIRED.—

10 (1) IN GENERAL.—Not later than 1 year after
11 the date of the enactment of this Act, the Director
12 shall provide to Congress a briefing to assist in the
13 evaluation and identification of opportunities for
14 Federal Government support for industry-led efforts
15 in the development of technical standards for artifi-
16 cial intelligence and other critical and emerging
17 technologies.

18 (2) INTERAGENCY CONSULTATION.—In pre-
19 paring the briefing required by paragraph (1), the
20 Director shall consult with the heads of such Fed-
21 eral agencies as the Director considers relevant.

22 (3) ELEMENTS.—The briefing provided pursu-
23 ant to paragraph (1) shall include the following:

24 (A) An overview of standards activities re-
25 lating to artificial intelligence and other critical

1 and emerging technologies and information
2 about the following:

3 (i) Key technical standards that are
4 the subject of ongoing activity.

5 (ii) Key standards bodies hosting
6 these activities.

7 (iii) Any Federal agency that is par-
8 ticipating in these activities.

9 (B) An analysis identifying where partici-
10 pation by United States industry and Federal
11 agencies in standards activities in artificial in-
12 telligence and other critical and emerging tech-
13 nologies would be facilitated or enhanced by
14 conducting standards meetings hosted in the
15 United States.

16 (C) Recommendations for effectively in-
17 forming United States industry and Federal
18 agencies on ongoing standardization activities
19 with the objective of increasing participation of
20 such industry and agencies in such activities.

21 (4) FEDERAL AGENCY NOTICE REQUIRE-
22 MENT.—

23 (A) IN GENERAL.—Using the mechanism
24 established pursuant to subparagraph (B), each
25 head of a Federal agency shall transmit to the

1 Director notice of the participation of their re-
2 spective Federal agency in a standards activity
3 relating to artificial intelligence and other crit-
4 ical and emerging technologies.

5 (B) MECHANISM.—The Director shall, in
6 coordination with the Director of the Office of
7 Management and Budget, develop a mechanism
8 for reporting participation by Federal agencies
9 in standards activities.

10 (b) WEB PORTAL.—

11 (1) IN GENERAL.—In order to inform United
12 States industry and Federal agencies about existing
13 and ongoing international efforts to develop tech-
14 nical standards for artificial intelligence and other
15 critical and emerging technologies and opportunities
16 for participation in such efforts, the Director shall
17 establish an accessible web portal to help such indus-
18 try and agencies navigate and participate in such ef-
19 forts.

20 (2) CONTENTS.—The web portal established
21 pursuant to paragraph (1) shall include regularly
22 updated lists of the following:

23 (A) International efforts described in para-
24 graph (1) and information on opportunities for
25 participation in such efforts.

1 (B) Information on accessing standards,
2 both in development and published, for artificial
3 intelligence and other critical and emerging
4 technologies.

5 (3) ADMINISTRATION.—The Director may inter
6 into such cooperative agreements with such non-
7 governmental organizations as the Director considers
8 appropriate to establish the web portal required by
9 paragraph (1).

10 **SEC. 113. PILOT PROGRAM TO SUPPORT STANDARDS MEET-**
11 **INGS FOR ARTIFICIAL INTELLIGENCE AND**
12 **OTHER CRITICAL AND EMERGING TECH-**
13 **NOLOGIES IN THE UNITED STATES.**

14 (a) PILOT PROGRAM REQUIRED.—

15 (1) IN GENERAL.—Not later than 180 days
16 after the date of the enactment of this Act, and sub-
17 ject to the availability of appropriated funds, the Di-
18 rector shall, in coordination with the heads of such
19 other Federal agencies as the Director considers ap-
20 propriate, establish a pilot program on supporting
21 standards meetings for artificial intelligence and
22 other critical and emerging technologies in the
23 United States by awarding grants to eligible entities
24 described in subsection (b) hosting meetings of orga-
25 nizations described in paragraph (1) of such sub-

1 section to support the hosting of such meetings in
2 the United States.

3 (2) ADMINISTRATION.—The Director may carry
4 out the pilot program required by paragraph (1) by
5 entering into such cooperative agreements with such
6 nongovernmental organizations as the Director con-
7 siderers appropriate to establish and administer the
8 pilot program.

9 (b) ELIGIBLE ENTITIES.—For purposes of the pilot
10 program required by subsection (a), an eligible entity is—

11 (1) an organization that is developing standards
12 and specifications for artificial intelligence and other
13 critical and emerging technologies for at least 1
14 technical standard that affects the interests of 1 or
15 more Federal agencies; or

16 (2) an entity that hosts an organization de-
17 scribed in paragraph (1).

18 (c) GRANTS.—

19 (1) IN GENERAL.—In carrying out the pilot
20 program required by subsection (a), the Director
21 shall award grants to eligible entities to host meet-
22 ings as described in such subsection.

23 (2) USE OF FUNDS.—An eligible entity receiv-
24 ing a grant under this subsection to host a meeting
25 in the United States may use the amount of the

1 grant for such costs as the Director considers rea-
2 sonable for hosting the meeting in the United
3 States, but not more than fifty percent of antici-
4 pated cost of hosting the meeting and not more than
5 a maximum amount that the Director shall establish
6 for purposes of this subsection. Such costs may in-
7 clude the following:

8 (A) Costs related to the preparation and
9 planning of meetings described in subsection
10 (a).

11 (B) Meeting venue-related expenses.

12 (C) Such other costs that may support the
13 eligible entity in conducting a standards meet-
14 ing in the United States.

15 (3) CONSIDERATIONS.—In deciding whether to
16 award a grant under this subsection to an eligible
17 entity to host a meeting, the Director may consider
18 the extent to which the eligible entity—

19 (A) is or hosts an organization that admin-
20 isters technical standards activity in artificial
21 intelligence and other critical and emerging
22 technologies that involves United States-based
23 participants, including but not limited to par-
24 ticipants from Federal agencies of the United
25 States;

1 (B) has a demonstrable history of partici-
2 pating in or hosting successful meetings; and

3 (C) has a stable or growing participant
4 base.

5 (d) GUIDANCE.—

6 (1) IN GENERAL.—The Director shall develop
7 and periodically update guidance for the pilot pro-
8 gram carried out under this section.

9 (2) ELEMENTS.—The guidance developed and
10 updated pursuant to paragraph (1) shall cover the
11 following:

12 (A) Eligibility for grants awarded under
13 the pilot program.

14 (B) How grants are awarded under sub-
15 section (c).

16 (C) The duration and amounts of grants
17 awarded under subsection (c).

18 (D) The merit review process for the pilot
19 program.

20 (E) Priority areas for technical standards
21 activity.

22 (F) Means for recipients of grants under
23 the pilot program to report expenses relating to
24 other costs described in subsection (c)(2)(C).

1 (G) Such additional matters as the Direc-
2 tor determines appropriate for purposes of the
3 pilot program.

4 (e) BRIEFINGS FOR CONGRESS.—

5 (1) IN GENERAL.—During the third year of the
6 pilot program carried out under this section and in
7 each subsequent year of the pilot program, the Di-
8 rector shall provide Congress with a briefing on the
9 pilot program.

10 (2) ELEMENTS.—Each briefing provided pursu-
11 ant to paragraph (1) shall include the following:

12 (A) An assessment of the effectiveness of
13 the pilot program with respect to improving the
14 hosting of standards meetings in the United
15 States.

16 (B) Identification of the recipients of
17 grants under the pilot program.

18 (C) The geographic distribution of
19 attendees at meetings supported with grants
20 under the pilot program.

21 (D) A summary of the expenses for which
22 the amounts of grants awarded under the pilot
23 program were used.

24 (f) RECOMMENDATIONS FOR PERMANENT IMPLE-
25 MENTATION.—If, before the date that is 2 years after the

1 date of the enactment of this Act, the Director determines
2 that providing support as described in subsection (a) is
3 feasible and advisable, the Director shall, not later than
4 2 years after the date of the enactment of this Act—

5 (1) develop recommendations for such legisla-
6 tive or administrative action as the Director con-
7 siders appropriate to establish a permanent imple-
8 mentation of the pilot program; and

9 (2) submit to Congress the recommendations
10 developed pursuant to paragraph (1).

11 (g) TERMINATION.—The pilot program required by
12 subsection (a)(1) shall terminate on the date that is 5
13 years after the date of the enactment of this Act.

14 (h) AUTHORIZATION OF APPROPRIATIONS.—There is
15 authorized to be appropriated to carry out this section
16 \$5,000,000 for the period of fiscal years 2027 through
17 2031.

1 Subtitle C—Research on Develop-
2 ment Best Practices by the Na-
3 tional Institute of Standards
4 and Technology

5 SEC. 121. RESEARCH ON DEVELOPMENT BEST PRACTICES
6 BY THE NATIONAL INSTITUTE OF STANDARDS
7 AND TECHNOLOGY.

8 Section 22A of the National Institute of Standards
 9 and Technology Act (15 U.S.C. 278h–1) is amended—

10 (1) by redesignating subsection (h) as sub-
 11 section (i); and

12 (2) by inserting after subsection (g) the fol-
 13 lowing new subsection:

14 “(h) ASSESSMENT OF THE PRACTICES OF ARTIFI-
 15 CIAL INTELLIGENCE DEVELOPMENT.—

16 “(1) IN GENERAL.—The Director of the Na-
 17 tional Institute of Standards and Technology (in this
 18 subsection referred to as the ‘Director’) shall, sub-
 19 ject to the availability of appropriations, develop,
 20 and periodically update, in collaboration with other
 21 public and private sector organizations, voluntary
 22 guidance for practices and guidelines relating to the
 23 development, release, and assessment of artificial in-
 24 telligence systems. Such guidelines shall satisfy the
 25 following:

1 “(A) Define methods and guidelines for de-
2 veloping reasonable risk tolerances for various
3 use cases of artificial intelligence systems based
4 on the following:

5 “(i) The risks associated with the in-
6 tended and unintended applications, use
7 cases, and outcomes of the artificial intel-
8 ligence system at issue, based on the
9 guidelines specified in the voluntary risk
10 management framework for trustworthy
11 artificial intelligence systems, or successor
12 framework, authorized under subsection
13 (c), which may include different categories
14 of risk, such as the following:

15 “(I) Security risks, including
16 threats to national security.

17 “(II) Economic risks, including
18 threats to economic opportunities.

19 “(III) Social risks, including in-
20 fringement upon constitutional rights,
21 privileges, or liberties.

22 “(ii) Such other factors as the Direc-
23 tor determines appropriate and consistent
24 with this subsection.

“(B) Categorize and list practices and norms for communicating relevant characteristics, including robustness, resilience, security, safety, fairness, privacy, validation, reliability, accountability, and usability, of artificial intelligence systems, and including any characteristics identified by the voluntary risk management framework for trustworthy artificial intelligence systems, or successor framework, authorized under subsection (c). Such practices and norms may relate to the following:

“(i) Documentation of training and evaluation datasets, such as information and statistics about a dataset’s size, curation, annotation, and sources, and the protocols for a dataset’s selection, creators, provenance, processing, augmentation, filters, inclusion of personally identifiable information, and intellectual property usage.

“(ii) Documentation of model information, such as a model’s development stages, training objectives, training strategies, inference objectives, capabilities, reproducibility of capabilities, input and out-

1 put modalities, components, size, and ar-
2 chitecture.

3 “(iii) Evaluation of benchmarks for
4 multi-metric assessments, such as an as-
5 sessment of an appropriate combination of
6 robustness, resilience, security, safety, fair-
7 ness, privacy, accuracy, validity, reliability,
8 accountability, usability, transparency, effi-
9 ciency, and calibration, and any character-
10 istics identified by the voluntary risk man-
11 agement framework for trustworthy artifi-
12 cial intelligence systems, or successor
13 framework, authorized under subsection
14 (c).

15 “(iv) Metrics and methodologies for
16 evaluations of artificial intelligence sys-
17 tems, such as establishing evaluation
18 datasets.

19 “(v) Public reporting of artificial in-
20 telligence systems’ capabilities, limitations,
21 and possible areas of appropriate and inap-
22 propriate use.

23 “(vi) Disclosure of security practices,
24 such as artificial intelligence red teaming
25 and third-party assessments, that were

1 used in the development of an artificial in-
2 telligence system.

3 “(vii) How to release to the public
4 components of an artificial intelligence sys-
5 tem or information about an artificial in-
6 telligence system, including aspects of the
7 model, associated training data, and li-
8 cense agreements.

9 “(viii) Approaches and channels for
10 collaboration and knowledge-sharing of
11 best practices across industry, govern-
12 ments, civil society, and academia.

13 “(ix) Such other categories as the Di-
14 rector determines appropriate and con-
15 sistent with this subsection.

16 “(C) For each practice and norm cat-
17 egorized and listed in accordance with subpara-
18 graph (B), provide recommendations and prac-
19 tices for utilizing such practice or norm.

20 “(2) IMPLEMENTATION.—In conducting the Di-
21 rector’s duties under paragraph (1), the Director
22 shall carry out the following:

23 “(A) Update the voluntary risk manage-
24 ment framework for trustworthy artificial intel-
25 ligence systems, or successor framework, au-

1 thorized under subsection (c) as the Director
2 determines appropriate.

3 “(B) Ensure that voluntary guidance de-
4 veloped in paragraph (1) is based on inter-
5 national standards and industry best practices
6 to the extent possible and practical.

7 “(C) Not prescribe or otherwise require the
8 use of specific information or communications
9 technology products or services.

10 “(D) Collaborate with public, industry, and
11 academic entities as the Director determines
12 appropriate, including conducting periodic out-
13 reach to receive public input from public, indus-
14 try, and academic stakeholders.

15 “(3) REPORT.—In conducting the Director’s
16 duties under paragraph (1), the Director shall, not
17 later than 18 months after the date of the enact-
18 ment of this subsection, brief the Committee on
19 Science, Space, and Technology of the House of
20 Representatives and the Committee on Commerce,
21 Science, and Transportation of the Senate on the
22 following:

23 “(A) New or updated materials, programs,
24 or systems that were produced as a result of
25 carrying out this subsection.

1 “(B) Policy recommendations of the Direc-
2 tor that could facilitate and improve commu-
3 nication and coordination between the private
4 sector and relevant Federal agencies regarding
5 implementing the recommended practices iden-
6 tified in this subsection.

7 “(4) ARTIFICIAL INTELLIGENCE RED TEAMING
8 DEFINED.—In this subsection, the term ‘artificial in-
9 telligence red teaming’ means a structured testing of
10 adversarial efforts to find flaws and vulnerabilities in
11 an artificial intelligence system and identify risks,
12 flaws, and vulnerabilities of artificial intelligence sys-
13 tems, such as harmful outputs from such system,
14 unforeseen or undesirable system behaviors, limita-
15 tions, and potential risks associated with the misuse
16 of such system.”.

1 **TITLE II—BUILD RESEARCH IN-**
2 **FRASTRUCTURE AND SPUR**
3 **GROUNDBREAKING RE-**
4 **SEARCH**

5 **Subtitle A—National Artificial**
6 **Intelligence Research Resource**

7 **SEC. 201. NATIONAL ARTIFICIAL INTELLIGENCE RESEARCH**
8 **RESOURCE.**

9 (a) NAIRR STEERING SUBCOMMITTEE.—Section
10 5103 of the William M. (Mac) Thornberry National De-
11 fense Authorization Act for Fiscal Year 2021 (15 U.S.C.
12 9413) is amended—

13 (1) by redesignating subsection (e) as sub-
14 section (f); and

15 (2) by inserting after subsection (d) the fol-
16 lowing:

17 “(e) NAIRR STEERING SUBCOMMITTEE.—

18 “(1) DEFINITION.—In this subsection, the
19 terms ‘NAIRR’, ‘National Artificial Intelligence Re-
20 search Resource’, ‘Operating Entity’, ‘Program
21 Management Office’, and ‘resources of the NAIRR’
22 have the meanings given the terms in section 5601.

23 “(2) ESTABLISHMENT.—There is established
24 within the Interagency Committee a Steering Sub-
25 committee for the National Artificial Intelligence Re-

1 search Resource (referred to in this section as the
2 ‘NAIRR Steering Subcommittee’).

3 “(3) CHAIR AND ASSISTANT CHAIRS.—The
4 NAIRR Steering Subcommittee shall be chaired by
5 the Director of the Office of Science and Technology
6 Policy. The Director of the Office of Science and
7 Technology Policy may establish assistant chairs of
8 the NAIRR Steering Subcommittee based on mem-
9 bers of the NAIRR Steering Subcommittee rotating
10 into the assistant chair positions on a predetermined
11 schedule.

12 “(4) MEMBERSHIP.—The Director of the Office
13 of Science and Technology Policy shall select mem-
14 bers of the Interagency Committee to serve on the
15 NAIRR Steering Subcommittee that the Director de-
16 termines—

17 “(A) have substantial expertise;

18 “(B) have substantially funded or con-
19 ducted artificial intelligence research and devel-
20 opment; or

21 “(C) have some other significant relation-
22 ship with the NAIRR.

23 “(5) CHANGES TO NAIRR STEERING SUB-
24 COMMITTEE COMPOSITION.—Not less frequently
25 than once a year, the Director of the Office of

1 Science and Technology Policy shall review the com-
2 position of the NAIRR Steering Subcommittee and
3 update such composition, which may include adding
4 or removing members from the NAIRR Steering
5 Subcommittee, if necessary.

6 “(6) SUBCOMMITTEES AND WORKING
7 GROUPS.—The NAIRR Steering Subcommittee may
8 establish subcommittees, working groups, or other
9 permanent or temporary bodies of certain members
10 of the NAIRR Steering Subcommittee.

11 “(7) DUTIES.—The NAIRR Steering Sub-
12 committee shall—

13 “(A) coordinate with the National Science
14 Foundation and the Program Management Of-
15 fice to—

16 “(i) oversee and approve the operating
17 plan for the NAIRR;

18 “(ii) review the budget for the
19 NAIRR;

20 “(iii) develop and release a request for
21 proposals to solicit bids for the Operating
22 Entity, including establishing the terms
23 and conditions and functions of the Oper-
24 ating Entity; and

1 “(iv) develop and release funding op-
2 portunities for resources of the NAIRR;

3 “(B) work with the Program Management
4 Office to establish criteria for the Operating
5 Entity, review candidates, and select an entity
6 to act as the Operating Entity;

7 “(C) identify resources that could be fed-
8 erated, participate in resource provider selection
9 and funding, and provide direction to the Oper-
10 ating Entity about resource allocation and how
11 those resources should be made accessible via
12 the NAIRR;

13 “(D) define key performance indicators for
14 the NAIRR, in conjunction with the Program
15 Management Office and any relevant Advisory
16 Committees established under section 5602(c);

17 “(E) evaluate NAIRR performance against
18 the key performance indicators defined under
19 subparagraph (D) on a periodic basis and not
20 less frequently than once every year;

21 “(F) develop an annual report, transmitted
22 to the Director of the Office of Science and
23 Technology Policy and publicly released, on the
24 progress of the National Artificial Intelligence
25 Research Resource that includes—

1 “(i) a summary of the results of the
 2 evaluation conducted under subparagraph
 3 (E); and

4 “(ii) any recommendations for
 5 changes to the NAIRR; and

6 “(G) oversee a periodic independent assess-
 7 ment of the NAIRR.

8 “(8) PROVISION OF RESOURCES OF THE
 9 NAIRR.—Each agency comprising the NAIRR Steer-
 10 ing Subcommittee is authorized to provide the Oper-
 11 ating Entity with resources of the NAIRR or fund-
 12 ing for resources of the NAIRR.”.

13 (b) IN GENERAL.—The National Artificial Intel-
 14 ligence Initiative Act of 2020 (15 U.S.C. 9401 et seq.)
 15 is amended by adding at the end the following:

16 **“TITLE LVI—NATIONAL ARTIFI-**
 17 **CIAL INTELLIGENCE RE-**
 18 **SEARCH RESOURCE**

“Sec. 5601. Definitions.

“Sec. 5602. Establishment; governance.

“Sec. 5603. Resources of the NAIRR.

“Sec. 5604. NAIRR processes and procedures.

“Sec. 5605. NAIRR funding.

19 **“SEC. 5601. DEFINITIONS.**

20 “In this title:

21 “(1) ADVISORY COMMITTEE.—The term ‘Advi-
 22 sory Committee’ means any Advisory Committee es-
 23 tablished under section 5602(c).

1 “(2) AI TESTBED.—The term ‘AI testbed’
2 means a testbed described in section 22A(g) of the
3 National Institute of Standards and Technology Act
4 (15 U.S.C. 278h–1(g)).

5 “(3) EXECUTIVE AGENCY.—The term ‘Execu-
6 tive agency’ has the meaning given such term in sec-
7 tion 105 of title 5, United States Code.

8 “(4) NATIONAL ARTIFICIAL INTELLIGENCE RE-
9 SEARCH RESOURCE; NAIRR.—The terms ‘National
10 Artificial Intelligence Research Resource’ and
11 ‘NAIRR’ have the meaning given the term ‘National
12 Artificial Intelligence Research Resource’ in section
13 5106(g).

14 “(5) OPERATING ENTITY.—The term ‘Oper-
15 ating Entity’ means the Operating Entity selected
16 by the Program Management Office as described in
17 section 5602(b)(3)(A).

18 “(6) PROGRAM MANAGEMENT OFFICE.—The
19 term ‘Program Management Office’ means the Pro-
20 gram Management Office established under section
21 5602(b).

22 “(7) RESOURCE OF THE NAIRR.—The term ‘re-
23 source of the NAIRR’ means a resource described in
24 section 5603(b).

1 “(8) NAIRR STEERING SUBCOMMITTEE.—The
2 term ‘NAIRR Steering Subcommittee’ means the
3 NAIRR Steering Subcommittee established under
4 section 5103(e).

5 “(9) STEM.—The term ‘STEM’ means science,
6 technology, engineering, and mathematics, including
7 computer science.

8 **“SEC. 5602. ESTABLISHMENT; GOVERNANCE.**

9 “(a) ESTABLISHMENT.—Not later than one year
10 after the date of the enactment of this section, the Direc-
11 tor of the National Science Foundation, in coordination
12 with the NAIRR Steering Subcommittee, shall establish
13 the National Artificial Intelligence Research Resource
14 to—

15 “(1) spur innovation and advance the develop-
16 ment of artificial intelligence to stimulate cutting-
17 edge research and propel the strategic development
18 of artificial intelligence capabilities;

19 “(2) improve access to artificial intelligence re-
20 sources for researchers and students of artificial in-
21 telligence;

22 “(3) improve capacity for artificial intelligence
23 research in the United States; and

1 “(4) support the testing, benchmarking, and
2 evaluation of artificial intelligence systems developed
3 and deployed in the United States.

4 “(b) PROGRAM MANAGEMENT OFFICE.—

5 “(1) ESTABLISHMENT.—The Director of the
6 National Science Foundation shall establish within
7 the National Science Foundation a Program Man-
8 agement Office to oversee the day-to-day functions
9 of the NAIRR and shall appoint an individual to
10 head the Program Management Office.

11 “(2) STAFF.—

12 “(A) IN GENERAL.—The head of the Pro-
13 gram Management Office may identify staff
14 and direct all employees of the Program Man-
15 agement Office, in accordance with the applica-
16 ble provisions of title 5, United States Code.

17 “(B) REPRESENTATION AND REQUIRE-
18 MENTS.—The staff of the Program Manage-
19 ment Office—

20 “(i) may include representation from
21 other Federal agencies providing support
22 for NAIRR resources; and

23 “(ii) shall include not fewer than
24 three full-time employees.

1 “(3) DUTIES.—The duties of the Program
2 Management Office shall include—

3 “(A) in coordination with the NAIRR
4 Steering Subcommittee and any relevant Advisory
5 Committee as appropriate—

6 “(i) developing the funding opportunity and soliciting bids for the Operating
7 Entity, which will be responsible for operation of the National Artificial Intelligence
8 Research Resource;
9 Research Resource;

10 “(ii) selecting, through a competitive
11 and transparent process, a nongovernmental organization, which may be an
12 independent legal entity or a consortium of
13 1 or more partners (which may include
14 federally funded research and development
15 centers), to be designated the Operating
16 Entity;
17 Entity;

18 “(iii) overseeing compliance with the
19 contractual obligations of the Operating
20 Entity;
21 Entity;

22 “(iv) establishing evaluation criteria
23 for the NAIRR;

24 “(v) overseeing asset allocation and
25 utilization;

1 “(vi) identifying an external inde-
2 pendent evaluation entity;

3 “(vii) assessing the performance of
4 the Operating Entity on not less than an
5 annual basis and, if such performance is
6 unsatisfactory, ending the agreement with
7 such Operating Entity and selecting a new
8 Operating Entity in accordance with clause
9 (ii);

10 “(viii) developing multi-agency fund-
11 ing opportunities for the selection of
12 NAIRR resources; and

13 “(ix) coordinating resource contribu-
14 tions from participating Federal agencies;
15 and

16 “(B) delegating, with appropriate over-
17 sight, operational tasks to the Operating Enti-
18 ty, including—

19 “(i) coordinating the provisioning of
20 resources of the NAIRR;

21 “(ii) maintaining a portal and associ-
22 ated services for users to access resources
23 of the NAIRR;

24 “(iii) developing policies and proce-
25 dures for the NAIRR;

1 “(iv) hiring and managing a staff (in-
2 cluding experts in cyber infrastructure
3 management, data science, research de-
4 sign, privacy, ethics, and legal and policy
5 matters) to support the operations of the
6 NAIRR;

7 “(v) continually modernizing NAIRR
8 infrastructure;

9 “(vi) recommending key performance
10 indicators for the NAIRR, in coordination
11 with the NAIRR Steering Subcommittee
12 and any relevant Advisory Committee;

13 “(vii) publishing publicly available an-
14 nual reports reviewing the performance of
15 the NAIRR, the resources of the NAIRR,
16 and the NAIRR governance structures;

17 “(viii) establishing and administering
18 training to new users on accessing a re-
19 source of the NAIRR, research design, and
20 issues related to privacy, ethics, safety, and
21 trustworthiness of artificial intelligence
22 systems;

23 “(ix) facilitating connections to AI
24 testbeds; and

1 “(x) making educational resources of
2 the NAIRR available to other Federal
3 agencies, and to Congress, for the purpose
4 of educating Federal Government officials
5 and employees about artificial intelligence.

6 “(c) ADVISORY COMMITTEES.—The head of the Pro-
7 gram Management Office, acting through the Director of
8 the Operating Entity, shall establish Advisory Committees
9 to provide advice to the Operating Entity and the Program
10 Management Office. Any such Advisory Committees shall
11 be comprised of members from government agencies, the
12 private sector, academia, and public interest groups.
13 Chapter 10 of title 5, United States Code, shall not apply
14 to any such Advisory Committee.

15 **“SEC. 5603. RESOURCES OF THE NAIRR.**

16 “(a) IN GENERAL.—The head of the Program Man-
17 agement Office, acting through the Director of the Oper-
18 ating Entity and in coordination with the NAIRR Steering
19 Subcommittee and any relevant Advisory Committee,
20 shall—

21 “(1) coordinate and provision resources of the
22 NAIRR;

23 “(2) establish processes to manage the procure-
24 ment of new resources of the NAIRR, and intake of

1 in-kind contribution of resources of the NAIRR,
2 from Federal agencies or other entities;

3 “(3) establish policies on and review resources
4 of the NAIRR for concerns related to ethics and pri-
5 vacy;

6 “(4) retire resources of the NAIRR no longer
7 available or needed; and

8 “(5) publicly report a summary of categories of
9 available resources of the NAIRR, categories of
10 sources of such resources of the NAIRR, and issues
11 related to resources of the NAIRR.

12 “(b) RESOURCES OF THE NAIRR.—The NAIRR
13 shall offer resources that include, at a minimum, all of
14 the following, subject to the availability of appropriations:

15 “(1) A mix of computational resources, includ-
16 ing—

17 “(A) on-premises, cloud-based, hybrid, and
18 emergent resources;

19 “(B) public cloud providers providing ac-
20 cess to popular computational and storage serv-
21 ices for NAIRR users;

22 “(C) an open source software environment
23 for the NAIRR;

1 “(D) an application programming interface
2 providing structured access to artificial intel-
3 ligence models; and

4 “(E) other types of computational re-
5 sources.

6 “(2) Data, including by—

7 “(A)(i) in coordination with the National
8 Institute of Standards and Technology and con-
9 sistent with the guidance of the National
10 Science and Technology Council titled ‘Desir-
11 able Characteristics of Data Repositories for
12 Federally Funded Data,’ dated May 2022, or
13 any successor document, publishing interoper-
14 ability standards for data repositories based on
15 the data sharing and documentation standards
16 and guidelines produced under section 22A of
17 the National Institute of Standards and Tech-
18 nology Act (15 U.S.C. 278h–1); and

19 “(ii) selecting and developing, through a
20 competitive bidding process, data repositories to
21 be available to NAIRR users;

22 “(B) establishing acceptable criteria for
23 datasets used as resources of the NAIRR;

1 “(C) identifying and providing access to
2 existing curated datasets of value and interest
3 to the NAIRR user community;

4 “(D) establishing an artificial intelligence
5 open data commons to facilitate community
6 sharing and curation of data, code, and models;

7 “(E) coordinating with the Interagency
8 Council on Statistical Policy to explore options
9 to make Federal statistical data available to
10 NAIRR users, including through the standard
11 application process established under section
12 3583(a) of title 44, United States Code; and

13 “(F) other types of computational re-
14 sources.

15 “(3) Educational tools and services, including
16 by—

17 “(A) facilitating and curating educational
18 and training materials;

19 “(B) providing technical training and user
20 support; and

21 “(C) providing targeted outreach and pro-
22 gramming strategies to increase participation in
23 STEM fields.

24 “(4) AI testbeds, including by—

1 “(A) in coordination with the National In-
2 stitute of Standards and Technology, facili-
3 tating access to artificial intelligence testbeds
4 through which researchers can measure, bench-
5 mark, test, or evaluate engineering or algo-
6 rithmic developments; and

7 “(B) developing a comprehensive catalog of
8 open AI testbeds.

9 **“SEC. 5604. NAIRR PROCESSES AND PROCEDURES.**

10 “(a) USER ELIGIBILITY.—

11 “(1) ELIGIBLE USERS.—Subject to paragraph
12 (3), the following users shall be eligible for access to
13 the NAIRR:

14 “(A) A researcher, educator, or student
15 based in the United States that is affiliated
16 with an entity described in paragraph (2).

17 “(B) An employee of an entity described in
18 clause (iii) or (iv) of paragraph (2)(B) with a
19 demonstrable mission-need.

20 “(2) ENTITIES DESCRIBED.—An entity de-
21 scribed in this paragraph is an entity that satisfies
22 the following:

23 “(A) Is based in the United States.

24 “(B) Is one of the following:

1 “(i) An institution of higher edu-
2 cation.

3 “(ii) A nonprofit institution (as such
4 term is defined in section 4 of the Steven-
5 son-Wydler Technology Innovation Act of
6 1980 (15 U.S.C. 3703)).

7 “(iii) An Executive agency.

8 “(iv) A federally funded research and
9 development center.

10 “(v) A small business concern (as
11 such term is defined in section 3 of the
12 Small Business Act (15 U.S.C. 632), not-
13 withstanding section 121.103 of title 13,
14 Code of Federal Regulations) that has re-
15 ceived funding from an Executive agency,
16 including through the Small Business In-
17 novation Research Program or the Small
18 Business Technology Transfer Program
19 (as described in section 9 of the Small
20 Business Act (15 U.S.C. 638)).

21 “(vi) A category of entity that the Di-
22 rector of the National Science Foundation
23 and the Director of the Office of Science
24 and Technology Policy, after consultation
25 with the NAIRR Steering Subcommittee

1 and any relevant Advisory Committee, de-
2 termine shall be eligible.

3 “(vii) A consortium composed of enti-
4 ties described in clauses (i) through (vi).

5 “(3) EXCLUDED ENTITIES.—

6 “(A) IN GENERAL.—No individual is au-
7 thorized to be an eligible user under paragraph
8 (1) if the individual is employed by a foreign
9 country that is listed in section 4872(f)(2) of
10 title 10, United States Code, or is otherwise au-
11 thorized by such country to act for or on its be-
12 half.

13 “(B) ENFORCEMENT.—The Director of the
14 National Science Foundation shall ensure that
15 individuals authorized as eligible users meet the
16 requirements of subparagraph (A).

17 “(b) PRIVACY, ETHICS, CIVIL RIGHTS AND CIVIL
18 LIBERTIES, SAFETY, AND TRUSTWORTHINESS.—

19 “(1) IN GENERAL.—

20 “(A) REQUIREMENTS.—The head of the
21 Program Management Office, acting through
22 the Director of the Operating Entity and in
23 consultation with any relevant Advisory Com-
24 mittee, shall establish requirements, a review
25 process for applications, and a process for au-

1 diting resources of the NAIRR and research
2 conducted using resources of the NAIRR on
3 matters related to privacy, ethics, safety, secu-
4 rity, and trustworthiness of artificial intel-
5 ligence systems developed using resources of the
6 NAIRR.

7 “(B) FEDERAL STATISTICAL DATA.—Any
8 auditing process required under subparagraph
9 (A) for Federal statistical data included in a re-
10 source of the NAIRR shall be completed by the
11 head of a designated statistical agency (as de-
12 fined in section 3576(e) of title 44, United
13 States Code), in coordination with the Chief
14 Statistician of the United States, consistent
15 with relevant law.

16 “(2) CONSISTENCY.—The head of the Program
17 Management Office shall ensure the requirements
18 and processes described in paragraph (1) are con-
19 sistent with the policies of the Office of Management
20 and Budget policy and relevant policies of other Ex-
21 ecutive agencies. The head of the Program Manage-
22 ment Office shall coordinate with the Senior Agency
23 Official for Privacy and the General Counsel of the
24 National Science Foundation in ensuring compliance

1 with applicable privacy law and policy and Federal
2 laws and regulations.

3 “(3) AVAILABILITY.—The head of the Program
4 Management Office, acting through the Director of
5 the Operating Entity, shall—

6 “(A) when determining access to computa-
7 tional resources of the NAIRR, take into con-
8 sideration the extent to which the access relates
9 to privacy, ethics, safety, security, risk mitiga-
10 tion, and trustworthiness of artificial intel-
11 ligence systems, or other topics that dem-
12 onstrate that a project is in the public interest;

13 “(B) ensure that a significant percentage
14 of the annual allotment of computational re-
15 sources of the NAIRR is provided to projects
16 the primary focus of which is related to any of
17 the topics described in subparagraph (A); and

18 “(C) to the extent that demand for access
19 to computational resources of the NAIRR ex-
20 ceeds availability, consider, on a priority basis,
21 projects focusing on any of the topics described
22 in subparagraph (A) when ranking applications
23 for such access.

24 “(c) SCIENTIFIC INTEGRITY.—

1 “(1) IN GENERAL.—The head of the Program
2 Management Office, acting through the Director of
3 the Operating Entity and in consultation with any
4 relevant Advisory Committee, shall develop guidance
5 for—

6 “(A) addressing concerns related to mat-
7 ters of scientific integrity, including matters re-
8 lated to the effects or impacts of research and
9 potential research enabled by the NAIRR; and

10 “(B) mechanisms for an employee of the
11 Operating Entity, an employee of the Program
12 Management Office, a member of the NAIRR
13 Steering Subcommittee or an Advisory Com-
14 mittee, a researcher or student affiliated with a
15 NAIRR user described in subsection (a)(1), an
16 employee of a provider of a resource of the
17 NAIRR, an employee of a NAIRR funding
18 agency, or a member of the public to report vio-
19 lations of the guidance developed under this
20 paragraph, including by confidential and anony-
21 mous means.

22 “(2) CONSISTENCY WITH GOVERNMENT POLI-
23 CIES ON SCIENTIFIC INTEGRITY.—The guidance de-
24 veloped under paragraph (1)(A) shall be published in
25 a publicly accessible location on the website of the

1 NAIRR. Such policies shall, to the degree prac-
2 ticable, be consistent with—

3 “(A) the Presidential memorandum enti-
4 tled ‘Restoring Trust in Government Through
5 Scientific Integrity and Evidence-Based Policy-
6 making’, dated January 27, 2021, or successor
7 document; and

8 “(B) reports produced pursuant to such
9 Presidential memorandum (including the re-
10 ports entitled ‘Protecting the Integrity of Gov-
11 ernment Science’, dated January 2022, and ‘A
12 Framework for Federal Scientific Integrity Pol-
13 icy and Practice’, dated January 2023, pub-
14 lished by the National Science and Technology
15 Council, or successor documents).

16 “(d) SYSTEM SECURITY AND USER ACCESS CON-
17 TROLS.—The head of the Program Management Office,
18 acting through the Director of the Operating Entity and
19 in consultation with the NAIRR Steering Subcommittee,
20 the Director of the Office of Management and Budget, the
21 Director of the National Institute of Standards and Tech-
22 nology, and the Director of the Cybersecurity and Infra-
23 structure Security Agency—

24 “(1) shall establish minimum security require-
25 ments for all persons interacting with the NAIRR,

1 consistent with the most recent version of the Cyber-
2 security Framework, or successor document, main-
3 tained by the National Institute of Standards and
4 Technology; and

5 “(2) may establish tiers of security require-
6 ments and user access controls beyond the minimum
7 requirements relative to security risks.

8 “(e) FEE SCHEDULE.—The head of the Program
9 Management Office, acting through the Director of the
10 Operating Entity, may establish a fee schedule for access
11 to the NAIRR. Fees charged under this subsection may
12 be retained and used for the purposes of this title. The
13 Operating Entity may only charge fees in such fee sched-
14 ule. Such fee schedule—

15 “(1) may differ by type of eligible user and type
16 of affiliated entity described in subsection (a);

17 “(2) shall include a free tier of access based on
18 appropriated funds and anticipated costs and de-
19 mand;

20 “(3) may include cost-based charges for eligible
21 users to purchase resources of the NAIRR beyond
22 the resources included in a free or subsidized tier;
23 and

24 “(4) shall ensure that the primary purpose of
25 the NAIRR is to support research.

1 “(f) RESEARCH SECURITY.—The head of the Pro-
2 gram Management Office, acting through the Director of
3 the Operating Entity and in consultation with the NAIRR
4 Steering Subcommittee and the Director of the Office of
5 Science and Technology Policy, shall—

6 “(1) ensure conformance with the requirements
7 of National Security Presidential Memorandum-33
8 (relating to supported research and development na-
9 tional policy), issued January 2021, and its imple-
10 mentation guidance on research security and re-
11 search integrity, or any successor policy document or
12 guidance, by establishing NAIRR operating prin-
13 ciples that emphasize the research integrity prin-
14 ciples of openness, reciprocity, and transparency;
15 and

16 “(2) designate a member of the leadership team
17 for the Operating Entity as a research security point
18 of contact with responsibility for overseeing conform-
19 ance with the National Security Presidential Memo-
20 randum-33 and its implementation guidance, or any
21 successor policy document or guidance.

22 **“SEC. 5605. NAIRR FUNDING.**

23 “To carry out this title, to the maximum extent prac-
24 ticable, the NAIRR is authorized to accept and use dona-

1 tions of cash, services, and personal property from the pri-
 2 vate sector.”.

3 (c) CONFORMING AMENDMENTS.—The table of con-
 4 tents in section 2(b) of the William M. (Mac) Thornberry
 5 National Defense Authorization Act for Fiscal Year 2021
 6 (Public Law 116–283; 134 Stat. 3388) is amended by in-
 7 serting after the items relating to title LV the following:

“TITLE LVI—NATIONAL ARTIFICIAL INTELLIGENCE RESEARCH
 RESOURCE

“Sec. 5601. Definitions.

“Sec. 5602. Establishment; governance.

“Sec. 5603. Resources of the NAIRR.

“Sec. 5604. NAIRR processes and procedures.

“Sec. 5605. NAIRR funding.”.

8 **Subtitle B—National Artificial In-**
 9 **telligence Research Resource**
 10 **Pilot Program**

11 **SEC. 211. NATIONAL ARTIFICIAL INTELLIGENCE RESEARCH**
 12 **RESOURCE PILOT PROGRAM.**

13 (a) PARTNERSHIPS.—As part of the National Artifi-
 14 cial Intelligence Research Resource pilot program (in this
 15 section referred to as the “Program”), the Director of the
 16 National Science Foundation (in this section referred to
 17 as the “Director”) shall partner with leading technology
 18 companies to increase access to world-class private sector
 19 computing, models, data, and software resources in the re-
 20 search community.

21 (b) CONNECTION.—The Director shall ensure the
 22 Program is operationally capable of connecting research-

1 ers and educators in the United States to critical AI re-
2 sources.

3 **Subtitle C—Prize Competitions for**
4 **Artificial Intelligence Research**
5 **and Development**

6 **SEC. 221. PRIZE COMPETITIONS FOR ARTIFICIAL INTEL-**
7 **LIGENCE RESEARCH AND DEVELOPMENT.**

8 (a) DEFINITIONS.—In this section:

9 (1) DIRECTOR.—Except as otherwise expressly
10 provided, the term “Director” means the Director of
11 the National Science Foundation.

12 (2) NONPROFIT ORGANIZATION.—The term
13 “nonprofit organization” has the meaning given
14 such term in section 201 of title 35, United States
15 Code.

16 (b) ESTABLISHMENT OF PROGRAM.—

17 (1) IN GENERAL.—Not later than 12 months
18 after the date of enactment of this Act, the Director,
19 in coordination with the Interagency Committee es-
20 tablished under section 5103 of the National Artifi-
21 cial Intelligence Initiative Act of 2020 (15 U.S.C.
22 9413), shall establish a program (in this section re-
23 ferred to as the “AI Grand Challenges Program”) to
24 award prizes, utilizing the authorities and processes
25 established under section 24 of the Stevenson-

1 Wydler Technology Innovation Act of 1980 (15
2 U.S.C. 3719), to eligible participants as determined
3 by the Director pursuant to subsection (e) to stimu-
4 late artificial intelligence research, development, and
5 commercialization that solves or advances specific,
6 well-defined, and measurable grand challenges in 1
7 or more of the following categories:

8 (A) National security.

9 (B) Cybersecurity.

10 (C) Health.

11 (D) Energy.

12 (E) Environment.

13 (F) Transportation.

14 (G) Agriculture and rural development.

15 (H) Education and workforce training.

16 (I) Manufacturing.

17 (J) Space and aerospace.

18 (K) Quantum computing, including molec-
19 ular modeling and simulation.

20 (L) Materials science.

21 (M) Supply chain resilience.

22 (N) Disaster preparedness.

23 (O) Natural resources management.

24 (P) Cross cutting challenges in artificial
25 intelligence, including robustness,

1 interpretability, explainability, transparency,
2 safety, privacy, content provenance, and bias
3 mitigation.

4 (2) ROTATORS.—Participants in the Rotator
5 Program of the National Science Foundation may
6 support the development and implementation of the
7 AI Grand Challenges Program.

8 (c) GRAND CHALLENGES SELECTION AND GRAND
9 CHALLENGES INFORMATION.—

10 (1) IN GENERAL.—

11 (A) CONSULTATION ON IDENTIFICATION
12 AND SELECTION.—The Director shall consult
13 with the Director of the Office of Science and
14 Technology Policy, the Director of the National
15 Institute of Standards and Technology, the Di-
16 rector of the Defense Advanced Research
17 Projects Agency, the heads of relevant Federal
18 agencies, and the National Artificial Intelligence
19 Advisory Committee to identify and select arti-
20 ficial intelligence research and development
21 grand challenges in which eligible participants
22 will compete to solve or advance for prize
23 awards under subsection (b).

24 (B) PUBLIC INPUT ON IDENTIFICATION.—

25 The Director shall also seek public input on the

1 identification of artificial intelligence research
2 and development grand challenges.

3 (2) PROBLEM STATEMENTS; SUCCESS
4 METRICS.—For each grand challenge selected under
5 paragraph (1) and the grand challenge under para-
6 graph (3), the Director shall—

7 (A) establish a specific and well-defined
8 grand challenge problem statement and ensure
9 that such problem statement is published on the
10 National Science Foundation website linking
11 out to relevant prize competition listings on the
12 website Challenge.gov that is managed by the
13 General Services Administration; and

14 (B) establish and publish on the website
15 Challenge.gov clear targets, success metrics,
16 and validation protocols for the prize competi-
17 tions designed to address each grand challenge,
18 in order to provide specific benchmarks that
19 will be used to evaluate submissions to the prize
20 competition.

21 (3) GRAND CHALLENGE FOR ARTIFICIAL INTEL-
22 LIGENCE-ENABLED CANCER BREAKTHROUGHS.—

23 (A) REQUIRED PRIZE COMPETITION.—Not
24 later than 1 year after the date of enactment of
25 this Act, the Director, in consultation with the

1 Director of the Office of Science and Tech-
2 nology Policy and the Director of the National
3 Institutes of Health, shall establish not less
4 than 1 grand challenge in which eligible partici-
5 pants will compete in a prize competition to
6 solve or advance solutions for prize awards
7 under subsection (b) that seek to advance med-
8 ical breakthroughs to address 1 or more of the
9 most lethal forms of cancer and related
10 comorbidities. The grand challenge shall relate
11 to detection, diagnostics, treatments, thera-
12 peutics, or other innovations in artificial intel-
13 ligence to increase the total quality-adjusted life
14 years of those affected or likely to be affected
15 by cancer.

16 (B) PRIZE AMOUNT.—In carrying out the
17 prize competition under subparagraph (A), the
18 Director shall award not less than \$10,000,000
19 in cash prize awards to each winner.

20 (4) AMBITIOUS AND ACHIEVABLE GOALS.—
21 Grand challenges selected under paragraph (1) and
22 the grand challenge under paragraph (3) shall be
23 ambitious but achievable goals that utilize science,
24 technology, and innovation to solve or advance solu-
25 tions to problems to benefit the United States.

1 (d) ADDITIONAL CONSULTATION.—The Director may
2 consult with, and incorporate effective practices from,
3 other entities that have developed successful large-scale
4 technology demonstration prize competitions, including
5 the Defense Advanced Research Projects Agency, the Na-
6 tional Aeronautics and Space Administration, other Fed-
7 eral agencies, private sector enterprises, and nonprofit or-
8 ganizations, in the development and implementation of the
9 AI Grand Challenges Program and related prize competi-
10 tions, including on the requirements under subsection (e).

11 (e) REQUIREMENTS.—

12 (1) IN GENERAL.—The Director shall develop
13 requirements for—

14 (A) the prize competition process, includ-
15 ing eligibility criteria for participants, con-
16 sistent with the requirements under paragraph
17 (2); and

18 (B) testing, judging, and verification pro-
19 cedures for submissions to receive a prize award
20 under the AI Grand Challenges Program.

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

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

1 1980 (15 U.S.C. 3719(g)(3)), a recipient of a
2 prize award under the AI Grand Challenges
3 Program—

4 (i) that is a private entity shall be in-
5 corporated in and maintain a primary
6 place of business in the United States; and

7 (ii) who is an individual, whether par-
8 ticipating singly or in a group, shall be a
9 citizen or permanent resident of the United
10 States.

11 (B) JUDGES.—In accordance with section
12 24(k) of the Stevenson-Wydler Technology In-
13 novation Act of 1980 (15 U.S.C. 3719(k)), a
14 judge of a prize competition under the AI
15 Grand Challenges Program may be an indi-
16 vidual from the private sector.

17 (f) PRIZE AMOUNT.—

18 (1) IN GENERAL.—In carrying out the AI
19 Grand Challenges Program, the Director—

20 (A) shall award not less than \$1,000,000
21 in cash prize awards to each winner of the prize
22 competitions, except as provided in subsection
23 (c)(3); and

24 (B) may also utilize non-cash awards.

1 (2) LARGER AWARDS.—The Director may
2 award prizes under the AI Grand Challenges Pro-
3 gram that are more than \$50,000,000, pursuant to
4 the requirements under section 24(m)(4)(A) of the
5 Stevenson-Wydler Technology Innovation Act of
6 1980 (15 U.S.C. 3719(m)(4)(A)).

7 (g) FUNDING.—

8 (1) IN GENERAL.—In accordance with section
9 24(m)(1) of the Stevenson-Wydler Technology Inno-
10 vation Act of 1980 (15 U.S.C. 3719(m)(1)), the Di-
11 rector may request and accept funds from other
12 Federal agencies, State, United States territory,
13 local, or Tribal government agencies, for-profit enti-
14 ties, and nonprofit organizations to support the AI
15 Grand Challenges Program.

16 (2) PROHIBITION ON CONSIDERATION FOR SUP-
17 PORT.—The Director may not consider any support
18 provided by an agency or entity under paragraph (1)
19 in determining the winners of prize awards under
20 subsection (b).

21 (h) REPORTS.—

22 (1) NOTIFICATION OF WINNING SUBMISSION.—
23 Not later than 60 days after the date on which a
24 prize is awarded under the AI Grand Challenges
25 Program, the Director shall submit to the Com-

1 mittee on Commerce, Science, and Transportation of
2 the Senate, the Committee on Science, Space, and
3 Technology of the House of Representatives, and
4 other relevant committees of Congress a report that
5 describes the winning submission to the prize com-
6 petition and its benefits to the United States.

7 (2) BIENNIAL REPORT.—

8 (A) IN GENERAL.—Not later than 2 years
9 after the date of enactment of this Act, and bi-
10 ennially thereafter, the Director shall submit to
11 the Committee on Commerce, Science, and
12 Transportation of the Senate, the Committee on
13 Science, Space, and Technology of the House of
14 Representatives, and other relevant committees
15 of Congress a report that includes—

16 (i) a description of the activities car-
17 ried out under this Act;

18 (ii) a description of the active com-
19 petitions and the results of completed com-
20 petitions under the AI Grand Challenges
21 Program; and

22 (iii) efforts to provide information to
23 the public about the AI Grand Challenges
24 Program to encourage participation.

1 (B) PUBLIC ACCESSIBILITY.—The Director
2 shall make the biennial report required under
3 subparagraph (A) publicly accessible, including
4 by posting the biennial report on the website of
5 the National Science Foundation in an easily
6 accessible location.

7 (i) ACCESSIBILITY.—In carrying out the AI Grand
8 Challenges Program, the Director shall post the active
9 prize competitions and available prize awards under sub-
10 section (b) to Challenge.gov after the grand challenges are
11 selected and the prize competitions are designed pursuant
12 to subsections (c) and (e) to ensure the prize competitions
13 are widely accessible to eligible participants.

14 **Subtitle D—Grants to Perform Re-**
15 **search Regarding the Use of**
16 **Generative Artificial Intel-**
17 **ligence in Health Care**

18 **SEC. 231. GRANTS TO PERFORM RESEARCH REGARDING**
19 **THE USE OF GENERATIVE ARTIFICIAL INTEL-**
20 **LIGENCE IN HEALTH CARE.**

21 (a) IN GENERAL.—The Director of the National In-
22 stitutes of Health shall establish a grant program to
23 award grants to eligible entities to perform research re-
24 garding the use of generative artificial intelligence in
25 health care.

1 (b) PERMISSIBLE RESEARCH.—Research funded pur-
2 suant to a grant under this section may include research
3 regarding the use of generative artificial intelligence to—

4 (1) improve the ability of health care practi-
5 tioners to record comprehensive notes or ask medi-
6 cally relevant questions during an appointment with
7 a patient;

8 (2) reduce the administrative or documentation
9 burden on clinicians;

10 (3) expedite the health insurance claims proc-
11 ess;

12 (4) improve the efficiency and quality of cus-
13 tomer service in the health care sector; or

14 (5) otherwise improve health care, as deter-
15 mined appropriate by the Director of the National
16 Institutes of Health.

17 (c) PRIORITY.—In awarding grants under this sec-
18 tion, the Director of the National Institutes of Health
19 shall give priority to eligible entities that—

20 (1) encourage the adoption and deployment of
21 generative artificial intelligence across the health
22 care sector;

23 (2) invest in workforce development of clinicians
24 and administrators;

1 (3) mitigate burnout in the health care work-
2 force; or

3 (4) improve the availability of patient care for
4 members of a medically underserved population.

5 (d) DEFINITIONS.—In this section:

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

10 (2) ELIGIBLE ENTITY.—The term “eligible enti-
11 ty” means—

12 (A) an institution of higher education (as
13 such term is defined in section 101 of the High-
14 er Education Act of 1965 (20 U.S.C. 1001));

15 (B) an organization described in subsection
16 (c)(3) of section 501 of the Internal Revenue
17 Code of 1986 and exempt from tax under sub-
18 section (a) of such section; or

19 (C) an agency of—

20 (i) the Federal Government;

21 (ii) a State;

22 (iii) a unit of local government; or

23 (iv) an Indian Tribe.

24 (3) GENERATIVE ARTIFICIAL INTELLIGENCE.—

25 The term “generative artificial intelligence” means

1 artificial intelligence that, in response to a prompt,
 2 uses data to produce text, media, computer code, or
 3 other content.

4 (4) MEDICALLY UNDERSERVED POPULATION.—

5 The term “medically underserved population” has
 6 the meaning given such term in section 330(b) of
 7 the Public Health Service Act (42 U.S.C. 254b(b)).

8 **Subtitle E—Department of Agri-**
 9 **culture and National Science**
 10 **Foundation Research and De-**
 11 **velopment Coordination**

12 **SEC. 241. DEPARTMENT OF AGRICULTURE AND NATIONAL**
 13 **SCIENCE FOUNDATION RESEARCH AND DE-**
 14 **VELOPMENT COORDINATION.**

15 (a) IN GENERAL.—The Secretary of Agriculture (in
 16 this section referred to as the “Secretary”) and the Direc-
 17 tor of the National Science Foundation (in this section
 18 referred to as the “Director”) shall carry out cross-cutting
 19 and collaborative research and development activities fo-
 20 cused on the joint advancement of Department of Agri-
 21 culture and National Science Foundation mission require-
 22 ments and priorities.

23 (b) MEMORANDA OF UNDERSTANDING.—The Sec-
 24 retary and the Director shall coordinate the activities
 25 under subsection (a) through the establishment of memo-

1 randa of understanding or other appropriate interagency
2 agreements. Such memoranda or agreements, as the case
3 may be, shall require the use of a competitive, merit review
4 process, as appropriate. Such activities may include com-
5 ponents proposed by Federal agencies, institutions of
6 higher education, non-profit institutions, and other appro-
7 priate entities, as determined appropriate under the
8 memoranda or agreements.

9 (c) COORDINATION.—In carrying out the activities
10 under subsection (a), the Secretary and the Director
11 may—

12 (1) conduct collaborative research in a variety
13 of focus areas, such as—

14 (A) plant, animal, and microbial biology
15 relevant to agricultural challenges;

16 (B) food and nutrition security;

17 (C) rural economic revitalization;

18 (D) cyber-physical systems;

19 (E) smart and connected communities;

20 (F) advanced sensors and models of soil
21 and plant processes;

22 (G) nano-biosensing and analytical tech-
23 nologies to improve food safety, water quality,
24 biosecurity, plant and animal diseases, and soil
25 health;

1 (H) monitoring of food- or water-borne
2 pathogens, allergens, and accidental, natural, or
3 intentional bio- or chemical contaminants;

4 (I) key emerging technology areas such as
5 artificial intelligence, machine learning, automa-
6 tion, robotics, digital agriculture, and informa-
7 tion and communication technology for agricul-
8 tural uses;

9 (J) development and testing of new preci-
10 sion agriculture tools; and

11 (K) workforce needs, education, and devel-
12 opment;

13 (2) promote collaboration, open community-
14 based development, and data and information shar-
15 ing between Federal agencies, institutions of higher
16 education, community colleges, area career and tech-
17 nical education schools, nonprofit institutions, and
18 other appropriate entities by providing the necessary
19 access and secure data and information transfer ca-
20 pabilities;

21 (3) support research infrastructure, including
22 new facilities, equipment and broadband deployment,
23 as the Secretary and Director determine necessary;

24 (4) develop translational technologies for com-
25 mercial utilization;

1 (5) organize education, training, and research
2 initiatives relating to science, technology, engineer-
3 ing, and mathematics (STEM) education and work-
4 force development, which may include—

5 (A) activities supported by the Cooperative
6 Extension System;

7 (B) industrial partnership programs;

8 (C) workshops for educating preschool
9 through grade 12 teachers on how to increase
10 agricultural literacy;

11 (D) development of agricultural-based
12 science curricula for kindergarten through
13 grade 12 students; and

14 (E) distribution of resources for educators
15 to implement curricula, such as the workshops
16 developed under subparagraph (C);

17 (6) award grants to institutions of higher edu-
18 cation, community colleges, area career and tech-
19 nical education schools, or eligible nonprofit institu-
20 tions (or consortia thereof), to establish a Center for
21 Agricultural Research, Education, and Workforce
22 Development; and

23 (7) facilitate relationships between public and
24 private entities to carry out the activities specified in

1 paragraphs (1) through (6) upon the termination of
2 any agreement entered into under subsection (b).

3 (d) AGREEMENTS.—In carrying out the activities
4 under subsection (a), the Secretary and the Director are
5 authorized to—

- 6 (1) carry out reimbursable agreements between
7 the Department of Agriculture, the National Science
8 Foundation, and other entities in order to maximize
9 the effectiveness of research and development; and
10 (2) collaborate with other Federal agencies, as
11 appropriate.

12 (e) REPORT.—Not later than two years after the date
13 of the enactment of this Act, the appropriate committees
14 of Congress, a report detailing the following:

15 (1) Interagency coordination between each Fed-
16 eral agency involved in the research and development
17 activities carried out under this section.

18 (2) Potential opportunities to expand the tech-
19 nical capabilities of the Department of Agriculture
20 and the National Science Foundation.

21 (3) Collaborative research achievements.

22 (4) Areas of future mutually beneficial suc-
23 cesses.

1 (5) Continuation of coordination activities be-
2 tween the Department of Agriculture and the Na-
3 tional Science Foundation.

4 (f) RESEARCH SECURITY.—The activities authorized
5 under this section shall be applied in a manner consistent
6 with subtitle D of title VI of the Research and Develop-
7 ment, Competition, and Innovation Act (42 U.S.C. 19231
8 et seq.; enacted as part of division B of Public Law 117–
9 167).

10 (g) DEFINITIONS.—In this section:

11 (1) APPROPRIATE COMMITTEES OF CON-
12 GRESS.—The term “appropriate committees of Con-
13 gress” means each of the following committees:

14 (A) The Committee on Agriculture of the
15 House of Representatives.

16 (B) The Committee on Science, Space, and
17 Technology of the House of Representatives.

18 (C) The Committee on Commerce, Science,
19 and Transportation of the Senate.

20 (D) The Committee on Agriculture, Nutri-
21 tion, and Forestry of the Senate.

22 (2) AREA CAREER AND TECHNICAL EDUCATION
23 SCHOOL.—The term “area career and technical edu-
24 cation school” has the meaning given such term in

1 section 3 of the Carl D. Perkins Career and Tech-
 2 nical Education Act of 2006 (20 U.S.C. 2302).

3 (3) COMMUNITY COLLEGE.—The term “commu-
 4 nity college” has the meaning given such term in
 5 section 3167B of the Energy Science Education En-
 6 hancement Act (42 U.S.C. 7381c–3).

7 (4) INSTITUTION OF HIGHER EDUCATION.—The
 8 term “institution of higher education” has the
 9 meaning given such term in section 101 of the High-
 10 er Education Act of 1965 (20 U.S.C. 1001).

11 **Subtitle F—Department of Energy**
 12 **Artificial Intelligence Research**
 13 **Program**

14 **SEC. 251. DEPARTMENT OF ENERGY ARTIFICIAL INTEL-**
 15 **LIGENCE RESEARCH PROGRAM.**

16 (a) IN GENERAL.—Title LV of the National Artificial
 17 Intelligence Initiative Act of 2020 (Public Law 116–283)
 18 is amended to read as follows:

19 **“TITLE LV—DEPARTMENT OF**
 20 **ENERGY ARTIFICIAL INTEL-**
 21 **LIGENCE RESEARCH PRO-**
 22 **GRAM**

“Sec. 5501. Department of Energy artificial intelligence research program.

“Sec. 5502. Ensuring energy security for data centers and computing re-
 sources.

1 **“SEC. 5501. DEPARTMENT OF ENERGY ARTIFICIAL INTEL-**
2 **LIGENCE RESEARCH PROGRAM.**

3 “(a) IN GENERAL.—The Secretary shall carry out a
4 cross-cutting research and development program to ad-
5 vance artificial intelligence tools, systems, capabilities, and
6 workforce needs and develop artificial intelligence capabili-
7 ties for the purposes of advancing the missions of the De-
8 partment (in this section referred to as the ‘program’).
9 In carrying out such program, the Secretary shall coordi-
10 nate across all relevant offices and programs of the De-
11 partment, including the Office of Science, the Office of
12 Energy Efficiency and Renewable Energy, the Office of
13 Nuclear Energy, the Office of Fossil Energy, the Office
14 of Electricity, the Office of Cybersecurity, Energy Secu-
15 rity, Emergency Response, and the Advanced Research
16 Projects Agency-Energy.

17 “(b) RESEARCH AREAS.—In carrying out the pro-
18 gram, the Secretary shall award financial assistance to eli-
19 gible entities to carry out research projects on topics in-
20 cluding the following:

21 “(1) The application of artificial intelligence
22 systems to improve large-scale simulations of natural
23 and other phenomena.

24 “(2) The study of applied mathematics, com-
25 puter science, and statistics, including foundations
26 of methods and systems of artificial intelligence,

1 causal and statistical inference, and the development
2 of algorithms for artificial intelligence systems.

3 “(3) The analysis of existing and new large-
4 scale datasets from science and engineering experi-
5 ments and simulations, including energy simulations
6 and sponsored research activities, and, as deter-
7 mined by the Secretary, other priorities of the De-
8 partment that utilize artificial intelligence tools and
9 techniques.

10 “(4) The development of operation and control
11 systems that enhance automated, intelligent deci-
12 sion-making capabilities.

13 “(5) The development of advanced computing
14 hardware and computer architecture tailored to arti-
15 ficial intelligence systems, including the following:

16 “(A) The codesign of software and com-
17 putational hardware.

18 “(B) Energy-efficient computing hardware
19 and algorithms for artificial intelligence train-
20 ing and inference.

21 “(C) Mechanisms to improve the energy ef-
22 ficiency of data centers, including relevant en-
23 ergy efficiency benchmarks for such centers.

24 “(6) The aggregation, curation, and distribu-
25 tion of standardized datasets for emerging artificial

1 intelligence research fields and applications, includ-
2 ing methods for addressing data scarcity.

3 “(7) The development of advanced artificial in-
4 telligence systems for pressing scientific, energy, and
5 national security applications.

6 “(8) The development of trustworthy artificial
7 intelligence systems, including the following:

8 “(A) Algorithmic explainability.

9 “(B) Analytical methods for identifying
10 and mitigating bias in artificial intelligence sys-
11 tems.

12 “(C) Safety and robustness, including as-
13 surance, verification, validation, security, and
14 control.

15 “(c) TECHNOLOGY TRANSFER.—In carrying out the
16 program, the Secretary shall support technology transfer
17 of artificial intelligence systems for the benefit of society
18 and United States economic competitiveness.

19 “(d) FACILITY USE AND UPGRADES.—In carrying
20 out the program, the Secretary shall carry out the fol-
21 lowing:

22 “(1) Make available high-performance com-
23 puting infrastructure at National Laboratories for
24 the development and use of advanced artificial intel-
25 ligence systems.

1 “(2) Make any upgrades necessary to enhance
2 the use of existing computing facilities for artificial
3 intelligence systems, including upgrades to hardware
4 and other resources necessary for developing, train-
5 ing, and evaluating advanced artificial intelligence
6 technologies.

7 “(3) Establish new computing capabilities nec-
8 essary to manage data and conduct high perform-
9 ance computing that enables the development and
10 use of advanced artificial intelligence systems.

11 “(4) Maintain and improve, as needed, net-
12 working infrastructure, data input and output mech-
13 anisms, and data analysis, storage, and service capa-
14 bilities.

15 “(5) Facilitate the development of unclassified
16 and classified high-performance computing systems
17 and artificial intelligence platforms through Depart-
18 ment-owned infrastructure data and computing fa-
19 cilities.

20 “(6) Provide other resources necessary for the
21 Department to develop, train, and evaluate advanced
22 artificial intelligence systems and related tech-
23 nologies.

24 “(e) TESTBEDS FOR NEXT-GENERATION COMPUTING
25 PLATFORMS AND INFRASTRUCTURE.—

1 “(1) IN GENERAL.—In carrying out the pro-
2 gram, the Secretary shall establish at least one data
3 center testbed for the development and assessment
4 of hardware and algorithms for energy-efficient and
5 energy-flexible artificial intelligence training and in-
6 ference.

7 “(2) ACTIVITIES.—In carrying out the testbed
8 established under paragraph (1), the Secretary shall
9 carry out the following:

10 “(A) Test and evaluate new software,
11 hardware, codesign of hardware and software,
12 algorithms, networking, and other artificial in-
13 telligence-based technologies and applications to
14 improve energy efficiency across the artificial
15 intelligence ecosystem.

16 “(B) Carry out cooperative research
17 projects with industry, including end user com-
18 panies, hardware systems vendors, artificial in-
19 telligence developers, data center developers and
20 operators, energy utilities, and other appro-
21 priate stakeholders.

22 “(f) AGGREGATION, CURATION, AND DISTRIBUTION
23 OF ARTIFICIAL INTELLIGENCE TRAINING DATASETS.—In
24 carrying out activities described in subsection (b)(6), the
25 Secretary shall develop methods, platforms, protocols, and

1 other tools required for efficient, responsible, and effective
2 aggregation, generation, curation, and distribution of arti-
3 ficial intelligence training and inference datasets, includ-
4 ing the following:

5 “(1) Assembling, aggregating, and curating
6 large-scale training data for advanced artificial intel-
7 ligence systems, including outputs from research
8 programs of the Department and other open science
9 data, with the goal of developing comprehensive sci-
10 entific artificial intelligence training databases and
11 testing and validation data.

12 “(2) Developing dataset documentation and
13 metadata protocols and visualization tools, taking
14 into account appropriate standards and guidelines to
15 promote interoperability and consistency in docu-
16 mentation.

17 “(3) Developing and implementing appropriate
18 data management plans for the ethical, responsible,
19 and secure use of classified and unclassified sci-
20 entific data.

21 “(4) Identifying, curating, and safely distrib-
22 uting, as appropriate based on the application, the
23 following:

24 “(A) Scientific and experimental depart-
25 mental datasets.

1 “(B) Sponsored research activities that are
2 needed for the training of foundational and
3 adapted downstream artificial intelligence sys-
4 tems.

5 “(5) Partnering with stakeholders to curate
6 critical datasets that reside outside the Department
7 but are determined by the Secretary to be critical to
8 optimizing the capabilities of advanced artificial in-
9 telligence systems relevant to the missions of the De-
10 partment.

11 “(g) DEVELOPMENT OF ADVANCED ARTIFICIAL IN-
12 TELLIGENCE SYSTEMS FOR PRESSING SCIENTIFIC, EN-
13 ERGY, AND NATIONAL SECURITY APPLICATIONS.—In car-
14 rying out subsection (b)(7), the Secretary shall carry out
15 the following:

16 “(1) Develop innovative concepts in applied
17 mathematics, computer science, engineering, and
18 other science disciplines needed for advanced artifi-
19 cial intelligence systems.

20 “(2) Develop best-in-class advanced artificial in-
21 telligence systems, model derivatives that support
22 downstream use cases, and other technologies to
23 solve pressing scientific, energy, and national secu-
24 rity challenges.

1 “(3) Carry out cooperative research projects
2 with industry, including end user companies, hard-
3 ware systems vendors, and artificial intelligence soft-
4 ware companies, to advance artificial intelligence
5 technologies relevant to the missions of the Depart-
6 ment and mitigate risks associated with such tech-
7 nologies.

8 “(4) In coordination with the Secretary of Com-
9 merce and the Secretary of Homeland Security, re-
10 search counter-adversarial artificial intelligence solu-
11 tions to predict, prevent, mitigate, and respond to
12 threats to critical infrastructure, energy security,
13 and nuclear nonproliferation, and biological and
14 chemical threats.

15 “(5) In coordination with energy utilities, State
16 energy offices, data center developers and operators,
17 and other key stakeholders the Secretary determines
18 appropriate, carry out research to examine how arti-
19 ficial intelligence technologies may be impacted by or
20 applied to energy supply bottlenecks, energy demand
21 projections, site reliability challenges, and data cen-
22 ter operational flexibilities.

23 “(6) Establish crosscutting research efforts to
24 understand and mitigate artificial intelligence-related

1 risks, including the establishment of unclassified and
2 classified data platforms across the Department.

3 “(h) SHARED RESOURCES FOR ARTIFICIAL INTEL-
4 LIGENCE.—

5 “(1) IN GENERAL.—As part of the program,
6 the Secretary shall identify, support, and sustain
7 shared resources and enabling tools that have the
8 potential to accelerate the pace of scientific discovery
9 and technological innovation with respect to the mis-
10 sions of the Department relating to science, energy,
11 and national security.

12 “(2) CONSULTATION.—In carrying out para-
13 graph (1), the Secretary shall consult with relevant
14 experts in the Federal Government, industry, energy
15 utilities, academia, State energy offices, and the Na-
16 tional Laboratories.

17 “(3) FOCUS.—Shared resources and enabling
18 tools referred to in paragraph (1) shall include the
19 following:

20 “(A) Scientific data and knowledge bases
21 for training artificial intelligence systems.

22 “(B) Benchmarks and competitions for
23 evaluating advances in artificial intelligence sys-
24 tems.

1 “(C) Platform technologies that lower the
2 cost of generating training data or enable the
3 generation of training data.

4 “(D) High-performance computing, includ-
5 ing hybrid computing systems that integrate ar-
6 tificial intelligence and high-performance com-
7 puting.

8 “(E) The combination of artificial intel-
9 ligence and scientific automation, such as cloud
10 labs and self-driving labs.

11 “(F) Tools that enable artificial intel-
12 ligence to solve inverse design problems.

13 “(G) Testbeds for accelerating progress at
14 the intersection of artificial intelligence and
15 cyberphysical systems.

16 “(H) Testbeds for testing and evaluating
17 artificial intelligence-based technologies and ap-
18 plications to improve energy efficiency across
19 artificial intelligence systems, in accordance
20 with subsection (e).

21 “(4) INTERAGENCY COORDINATION.—The Sec-
22 retary shall ensure coordination with, and avoid un-
23 necessary duplication of, activities to provide shared
24 resources with the National Science Foundation, the
25 agencies participating in the Interagency Committee

1 established under section 5103 of this Act, and the
2 Networking and Information Technology Research
3 and Development Program authorized under section
4 101 of the High Performance Computing Act of
5 1991 (15 U.S.C. 5511).

6 “(i) ARTIFICIAL INTELLIGENCE RESEARCH INSTI-
7 TUTES.—The Secretary shall support on a competitive,
8 merit-reviewed basis not fewer than two multidisciplinary
9 artificial intelligence research institutes pursuant to sec-
10 tion 5201 of this Act.

11 “(j) RESEARCH TO IMPROVE ENERGY PERMITTING
12 PROCESSES.—In consultation with the Federal Permitting
13 Improvement Steering Council established under section
14 41002(a) of the FAST Act (42 U.S.C. 4370m–1(a)), the
15 Secretary shall carry out research and development activi-
16 ties to evaluate the potential for utilizing artificial intel-
17 ligence to improve Federal permitting processes for en-
18 ergy-related projects, including critical materials (as such
19 term is defined in section 7002 of title VII of division Z
20 of the Consolidated Appropriations Act, 2021 (Public Law
21 116–260; 30 U.S.C. 1606)) projects, by building tools to
22 improve future reviews and analyzing data from past envi-
23 ronmental and other permitting reviews to inform more
24 flexible and effective categorical exclusions.

25 “(k) RISK MANAGEMENT.—

1 “(1) IN GENERAL.—The Secretary shall review
2 agency policies for risk management in artificial in-
3 telligence related projects and issue, as necessary,
4 policies and principles that are consistent with the
5 framework developed under section 22A of the Na-
6 tional Institute of Standards and Technology Act
7 (15 U.S.C. 278h–1(c)).

8 “(2) TAXONOMY.—The Secretary, in consulta-
9 tion with the Secretary of Homeland Security, the
10 Secretary of Defense, the Director of National Intel-
11 ligence, the Director of the National Security Agen-
12 cy, and the Director of the National Institute of
13 Standards and Technology, shall develop a taxonomy
14 of safety and security risks associated with artificial
15 intelligence systems relevant to the missions of the
16 Department.

17 “(1) STEM EDUCATION AND WORKFORCE DEVELOP-
18 MENT.—As part of the program, the Secretary, in coordi-
19 nation with the Director of the National Science Founda-
20 tion, may develop the required workforce, and hire and
21 train researchers to meet the rising demand for artificial
22 intelligence talent, including by carrying out the following:

23 “(1) Providing training, grants, and research
24 opportunities, including experiential learning experi-

ences for undergraduate and graduate students in advanced artificial intelligence systems.

“(2) Carrying out public awareness campaigns regarding artificial intelligence related career paths.

“(3) Assisting institutions of higher education to establish new degree and certificate programs in artificial intelligence-related disciplines.

“(m) ADMINISTRATION.—

“(1) RESEARCH SECURITY.—The activities authorized under this section shall be applied in a manner consistent with subtitle D of title VI of the Research and Development, Competition, and Innovation Act (42 U.S.C. 19231 et seq.; enacted as part of division B of Public Law 117–167).

“(2) CYBERSECURITY.—The Secretary shall ensure the integration of robust cybersecurity measures into all artificial intelligence research-to-deployment efforts authorized under this section to protect the integrity and confidentiality of collected and analyzed data.

“(3) ETHICAL CONSIDERATIONS.—Taking into account the guidance issued pursuant to section 10343(c) of the Research and Development, Competition, and Innovation Act (42 U.S.C. 19052(c)), the Secretary shall issue guidance governing the eth-

1 ical, safe, and responsible conduct of research activi-
2 ties funded by the Department and performed at
3 National Laboratories and user facilities.

4 “(n) DATA PRIVACY AND SHARING.—The Secretary
5 shall review agency policies for data sharing with other
6 public and private sector organizations and issue, as nec-
7 essary, policies and principles that are consistent with the
8 standards and guidelines submitted under section 22A of
9 the National Institute of Standards and Technology Act
10 (15 U.S.C. 278h–1(e)). In addition, the Secretary shall
11 establish a streamlined mechanism for approving research
12 projects or partnerships that require sharing sensitive
13 public or private data with the Department.

14 “(o) PARTNERSHIPS.—

15 “(1) FEDERAL PARTNERSHIPS.—The Secretary
16 may request, accept, and provide funds from other
17 Federal departments and agencies, State, United
18 States territory, local, or Tribal government agen-
19 cies, private sector for-profit entities, and nonprofit
20 entities, to be available to the extent provided by ap-
21 propriations Acts, to support a research project or
22 partnership carried out under this section. The Sec-
23 retary may not give any special consideration to any
24 agency or entity in return for a donation.

1 “(2) PARTNERSHIPS WITH PRIVATE ENTI-
2 TIES.—

3 “(A) IN GENERAL.—The Secretary shall
4 seek to establish partnerships with private com-
5 panies and nonprofit organizations in carrying
6 out this section.

7 “(B) REQUIREMENT.—In carrying out
8 subparagraph (A), the Secretary shall protect
9 any information submitted to or shared by the
10 Department consistent with applicable laws and
11 regulations.

12 “(p) STAKEHOLDER ENGAGEMENT.—In carrying out
13 the activities authorized in this section, the Secretary shall
14 carry out the following:

15 “(1) Collaborate with a range of stakeholders,
16 including small businesses, institutes of higher edu-
17 cation, industry, and the National Laboratories.

18 “(2) Leverage the collective body of knowledge
19 from existing artificial intelligence and machine
20 learning research.

21 “(3) Engage with other Federal departments
22 and agencies, research communities, and potential
23 users of information produced under this section.

24 “(q) STRATEGIC PLAN.—

1 “(1) IN GENERAL.—In carrying out the pro-
2 gram, the Secretary shall develop a strategic plan
3 with specific short-term and long-term goals and re-
4 source needs to advance applications in artificial in-
5 telligence for science, energy, and national security
6 to support the missions of the Department. The
7 strategic plan shall be consistent with the following:

8 “(A) The 2023 National Laboratory work-
9 shop report entitled ‘Advanced Research Direc-
10 tions on AI for Science, Energy, and Security’.

11 “(B) The 2024 National Laboratory work-
12 shop report entitled ‘AI for Energy’.

13 “(C) The strategic plan required under
14 section 5103 of division E of this Act (15
15 U.S.C. 9413).

16 “(2) REPORT TO CONGRESS.—Not later than
17 one year after the date of the enactment of this sec-
18 tion, the Director shall submit to the Committee on
19 Science, Space, and Technology of the House of
20 Representatives and the Committee of Energy and
21 Natural Resources of the Senate the strategic plan
22 required under paragraph (1), and shall notify such
23 committees of any substantial updates to such plan
24 in subsequent years.

25 “(r) DEFINITIONS.—In this section:

1 “(1) DEPARTMENT.—The term ‘Department’
2 means the Department of Energy.

3 “(2) ELIGIBLE ENTITIES.—The term ‘eligible
4 entities’ means any of the following:

5 “(A) An institution of higher education.

6 “(B) A National Laboratory.

7 “(C) A Federal research agency.

8 “(D) A State research agency.

9 “(E) A nonprofit research organization.

10 “(F) A private sector entity.

11 “(G) A consortium of two or more entities
12 described in subparagraphs (A) through (F).

13 “(3) NATIONAL LABORATORY.—The term ‘Na-
14 tional Laboratory’ has the meaning given such term
15 in section 2 of the Energy Policy Act of 2005 (42
16 U.S.C. 15801).

17 “(4) NONPROFIT ORGANIZATION.—The term
18 ‘nonprofit organization’ has the meaning given such
19 term in section 201 of title 35, United States Code.

20 “(5) SECRETARY.—The term ‘Secretary’ means
21 the Secretary of Energy.

22 “(6) TESTBED.—The term ‘testbed’ means any
23 platform, facility, or environment that enables the
24 testing and evaluation of scientific theories and new
25 technologies, including hardware, software, or field

1 environments in which structured frameworks can be
2 implemented to conduct tests to assess the perform-
3 ance, reliability, safety, and security of a wide range
4 of items, including prototypes, systems, applications,
5 artificial intelligence systems, instruments, computa-
6 tional tools, devices, and other technological innova-
7 tions.

8 “(s) AUTHORIZATION OF APPROPRIATIONS.—There
9 are authorized to be appropriated to the Secretary to carry
10 out this section \$300,000,000 for each of fiscal years 2027
11 through 2032.

12 **“SEC. 5502. ENSURING ENERGY SECURITY FOR DATA CEN-**
13 **TERS AND COMPUTING RESOURCES.**

14 “Not later than one year after the date of the enact-
15 ment of this section, the Secretary of Energy shall submit
16 to Congress a report that includes the following:

17 “(1) An assessment of the following:

18 “(A) The growth of computing data cen-
19 ters and advanced computing electrical power
20 load in the United States.

21 “(B) Potential risks of growth in com-
22 puting centers or growth in the required elec-
23 trical power to United States energy security
24 and national security.

1 “(C) The extent to which emerging tech-
2 nologies, such as artificial intelligence and ad-
3 vanced computing, may impact hardware and
4 software systems used at data and computing
5 centers.

6 “(D) Cost, performance, reliability, avail-
7 ability, space requirements, emissions, and sup-
8 ply chain issues for current technologies, includ-
9 ing renewable diesel, natural gas, renewable
10 natural gas, fuel cells, nuclear energy, battery
11 storage, enhanced geothermal, long-duration en-
12 ergy storage, and other potentially viable tech-
13 nologies available to support regional data cen-
14 ter expansion and for backup power.

15 “(2) Recommendations for the following:

16 “(A) Resources and capabilities that the
17 Department of Energy may provide to promote
18 access to energy resources by data centers, ad-
19 vanced computing hardware and algorithms,
20 and artificial intelligence systems (as defined in
21 section 7223 of the Advancing American AI Act
22 (40 U.S.C. 11301 note; Public Law 117–263)).

23 “(B) Policy changes to ensure domestic de-
24 ployment of data center and advanced com-

puting resources to prevent offshoring of
United States data and resources.

“(C) Improving the energy efficiency of
data centers, advanced computing hardware
and algorithms, and artificial intelligence sys-
tems.”.

(b) CLERICAL AMENDMENTS.—The tables of con-
tents in section 2(b) and title LV of the William M. (Mac)
Thornberry National Defense Authorization Act for Fiscal
Year 2021 are amended by inserting after the items relat-
ing to section 5501 the following new items:

“Sec. 5502. Ensuring energy security for data centers and computing re-
sources.”.

TITLE III—MODERNIZING FED- ERAL AI GOVERNANCE, PRO- CUREMENT, AND SECURITY

Subtitle A—Federal Standards for Artificial Intelligence

SEC. 301. FEDERAL STANDARDS FOR ARTIFICIAL INTEL- LIGENCE.

(a) IN GENERAL.—Title LIII of division E of the
William M. (Mac) Thornberry National Defense Author-
ization Act for Fiscal Year 2021 (Public Law 116–283;
134 Stat. 4523) is amended by adding at the end the fol-
lowing new section:

1 **“SEC. 5305. FEDERAL STANDARDS FOR ARTIFICIAL INTEL-**
2 **LIGENCE.**

3 “(a) IN GENERAL.—The Director of the National In-
4 stitute of Standards and Technology (in this section re-
5 ferred to as the ‘Director’) shall—

6 “(1) develop standards and guidelines, includ-
7 ing minimum requirements, for artificial intelligence
8 systems used or operated by an agency or by a con-
9 tractor of an agency or other organization on behalf
10 of an agency, other than national security systems;

11 “(2) develop standards and guidelines, includ-
12 ing minimum requirements, for managing risks asso-
13 ciated with artificial intelligence systems for all
14 agency operations and assets, but such standards
15 and guidelines shall not apply to national security
16 systems;

17 “(3) develop standards and guidelines, includ-
18 ing minimum requirements, for authenticating,
19 tracking provenance, and labeling synthetic content
20 generated by an agency or by a contractor of an
21 agency or other organization on behalf of an agency,
22 other than national security systems; and

23 “(4) conduct research and development pursu-
24 ant to section 5301 to inform the development of
25 standards and guidelines for activities described in
26 this section.

1 “(b) STANDARDS AND GUIDELINES.—In developing
2 standards and guidelines required by subsection (a), the
3 Director shall—

4 “(1) provide standards and guidelines, prac-
5 tices, profiles, and tools consistent with the frame-
6 work under subsection (c) of section 22A of the Na-
7 tional Institute of Standards and Technology Act
8 (15 U.S.C. 278h–1), and information on how agen-
9 cies can leverage such framework to reduce risks
10 caused by agency implementation in the develop-
11 ment, procurement, and use of artificial intelligence
12 systems;

13 “(2) provide standards and guidelines that—

14 “(A) are consistent with Circular A–119 of
15 the Office of Management and Budget; and

16 “(B) enable conformity assessment;

17 “(3) recommend training on standards and
18 guidelines for each agency responsible for procuring
19 artificial intelligence;

20 “(4) develop and periodically revise performance
21 indicators and measures for agency artificial intel-
22 ligence related standards and guidelines;

23 “(5) provide standards and guidelines, including
24 minimum requirements, for developing profiles for

1 agency use of artificial intelligence consistent with
2 such framework;

3 “(6) develop profiles for framework use for an
4 entity that is a small business concern (as such term
5 is defined in section 3 of the Small Business Act (15
6 U.S.C. 632));

7 “(7) evaluate artificial intelligence policies and
8 practices developed for national security systems to
9 assess potential application by agencies to strength-
10 en risk management of artificial intelligence systems;
11 and

12 “(8) periodically assess the effectiveness of
13 standards and guidelines developed under this sec-
14 tion and undertake revisions as appropriate.

15 “(c) READINESS.—For standards and guidelines de-
16 veloped pursuant to subsection (a) that are deemed by the
17 Director to be at a readiness level sufficient for standard-
18 ization, the Director shall—

19 “(1) submit such standards and guidelines to
20 the Secretary of Commerce for promulgation under
21 section 11331 of title 40, United States Code;

22 “(2) where practicable and appropriate, provide
23 technical review and assistance to agencies; and

1 “(3) evaluate the effectiveness and sufficiency
2 of, and challenges to, agency implementation of such
3 standards and guidelines.

4 “(d) TESTING AND EVALUATION OF ARTIFICIAL IN-
5 TELLIGENCE ACQUISITIONS.—

6 “(1) STUDY.—Subject to the availability of ap-
7 propriations, the Director shall complete a study to
8 review the existing and forthcoming voluntary tech-
9 nical standards for the testing, evaluation,
10 verification, and validation of artificial intelligence
11 acquisitions.

12 “(2) TESTING AND EVALUATION STANDARDS.—
13 Not later than 90 days after the date of the comple-
14 tion of the study required by paragraph (1), the Di-
15 rector shall—

16 “(A) develop standards and guidelines for
17 the testing, evaluation, verification, and valida-
18 tion of artificial intelligence acquisitions pursu-
19 ant to this section;

20 “(B) convene relevant stakeholders to fa-
21 cilitate such development;

22 “(C) continuously update such standards
23 and guidelines; and

24 “(D) review and make recommendations to
25 the head of each agency on risk management

1 policies and principles for relevant artificial in-
2 telligence acquisitions.

3 “(e) DEFINITIONS.—In this section:

4 “(1) AGENCY.—The term ‘agency’ means any
5 department, independent establishment, Government
6 corporation, or other agency of the executive branch
7 of the Federal Government.

8 “(2) NATIONAL SECURITY SYSTEM.—The term
9 ‘national security system’ has the meaning given
10 such term in section 3552 of title 44, United States
11 Code.

12 “(3) PROFILE.—The term ‘profile’ means an
13 implementation of the artificial intelligence risk
14 management functions, categories, and subcategories
15 for a specific setting or application based on the re-
16 quirements, risk tolerance, and resources of the user
17 of the framework at issue.

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

23 (b) CLERICAL AMENDMENTS.—The tables of con-
24 tents in section 2(b) and title LIII of the William M.
25 (Mac) Thornberry National Defense Authorization Act for

1 Fiscal Year 2021 are amended by inserting after the items
2 relating to section 5304, as added by section 101(b), the
3 following new items:

“Sec. 5305. Federal standards for artificial intelligence.”.

4 **Subtitle B—AI Leadership to**
5 **Enable Accountable Deployment**

6 **SEC. 311. DEFINITIONS.**

7 In this subtitle:

8 (1) AGENCY.—The term “agency” has the
9 meaning given the term in section 3502 of title 44,
10 United States Code.

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

15 (3) ARTIFICIAL INTELLIGENCE SYSTEM.—The
16 term “artificial intelligence system”—

17 (A) means any data system, software, ap-
18 plication, tool, or utility that operates in whole
19 or in part using dynamic or static machine
20 learning algorithms or other forms of artificial
21 intelligence, whether—

22 (i) the data system, software, applica-
23 tion, tool, or utility is established primarily
24 for the purpose of researching, developing,

1 or implementing artificial intelligence tech-
2 nology; or

3 (ii) artificial intelligence capability is
4 integrated into another system or agency
5 business process, operational activity, or
6 technology system; and

7 (B) does not include any common commer-
8 cial product within which artificial intelligence
9 is embedded, such as a word processor or map
10 navigation system.

11 (4) CHIEF ARTIFICIAL INTELLIGENCE OFFI-
12 CER.—The term “Chief Artificial Intelligence Offi-
13 cer” means an official designated by the head of an
14 agency pursuant to section 313(b)(1).

15 (5) COUNCIL.—The term “Council” means the
16 Chief Artificial Intelligence Officers Council estab-
17 lished under section 312(a).

18 (6) DIRECTOR.—The term “Director” means
19 the Director of the Office of Management and Budg-
20 et.

21 (7) RELEVANT CONGRESSIONAL COMMIT-
22 TEES.—The term “relevant congressional commit-
23 tees” means the Committee on Homeland Security
24 and Governmental Affairs of the Senate and the

1 Committee on Oversight and Government Reform of
2 the House of Representatives.

3 **SEC. 312. CHIEF ARTIFICIAL INTELLIGENCE OFFICERS**
4 **COUNCIL.**

5 (a) ESTABLISHMENT.—Not later than 90 days after
6 the date of the enactment of this Act, the Director shall
7 establish a Chief Artificial Intelligence Officers Council.

8 (b) DUTIES.—The Council shall—

9 (1) promote artificial intelligence innovation
10 and responsible design, development, and applica-
11 tion;

12 (2) oversee compliance with Governmentwide
13 requirements, including existing requirements for
14 agencies to inventory and publish use cases of artifi-
15 cial intelligence;

16 (3) develop recommendations for, and advise
17 agencies on, best practices for the design, acquisi-
18 tion, development, modernization, use, operation,
19 sharing, risk management, auditing, and perform-
20 ance of artificial intelligence technologies while en-
21 suring privacy, security, and the protection of civil
22 rights and civil liberties;

23 (4) share experiences, ideas, and promising
24 practices, including work process redesign and the
25 development of performance measures to optimize

1 Federal Government use of and investments in arti-
2 ficial intelligence;

3 (5) in coordination with the Director of the Of-
4 fice of Personnel Management, assess and monitor
5 the hiring, training, classification, and professional
6 development needs of the Federal workforce relating
7 to artificial intelligence;

8 (6) examine and track the costs and benefits of
9 artificial intelligence use in the Federal Government,
10 and make recommendations for any limits that
11 should be placed on the acquisition, development,
12 and use of artificial intelligence and the capabilities
13 of artificial intelligence;

14 (7) help improve the abilities of agencies to un-
15 derstand artificial intelligence and intervene in cri-
16 sis;

17 (8) review and analyze already deployed artifi-
18 cial intelligence systems within the Federal Govern-
19 ment for potential harm; and

20 (9) assist the Director, as necessary, in—

21 (A) identifying, developing, coordinating,
22 and overseeing multi-agency projects and other
23 initiatives to improve Government performance;

1 (B) monitoring and managing risks relat-
2 ing to developing, obtaining, or using artificial
3 intelligence, including by—

4 (i) promoting the development and
5 use of efficient, common, and shared ap-
6 proaches to key processes that improve the
7 delivery of services for the public;

8 (ii) soliciting and providing perspec-
9 tives on matters of concern to the Council,
10 as appropriate, from and to—

11 (I) the Chief Financial Officers
12 Council;

13 (II) the Chief Human Capital Of-
14 ficers Council;

15 (III) the Chief Acquisition Offi-
16 cers Council;

17 (IV) the Chief Information Offi-
18 cers Council;

19 (V) the Chief Data Officers
20 Council;

21 (VI) other interagency councils;

22 (VII) other key groups of the
23 Federal Government;

24 (VIII) industry;

25 (IX) academia;

1 (X) State, local, Tribal, terri-
2 torial, and international governments;
3 and

4 (XI) other individuals and enti-
5 ties, as determined necessary by the
6 Director;

7 (iii) creating a framework for how
8 agencies can reduce risk in the design, de-
9 velopment, and use of artificial intelligence
10 systems; and

11 (iv) implementing measurements and
12 producing specific guidance on use cases
13 for which the Federal Government should
14 not be developing, procuring, or using arti-
15 ficial intelligence systems;

16 (C) ensuring artificial intelligence systems
17 used and procured by agencies are and have
18 been responsibly developed and evaluated such
19 that the artificial intelligence systems are trans-
20 parent and secure, do not infringe on privacy,
21 and promote civil interests;

22 (D) continually monitoring the capabilities
23 of artificial intelligence systems used and pro-
24 cured by the Federal Government; and

1 (E) ensuring accountability for the use and
2 procurement of artificial intelligence systems
3 that result in flawed, inaccurate, or biased deci-
4 sions that would impact individuals.

5 (c) MEMBERSHIP OF CAIOC.—

6 (1) CHAIR.—The Director shall serve as the
7 chair of the Council.

8 (2) COCHAIR.—The cochair of the Council shall
9 be—

10 (A) nominated by a majority of the mem-
11 bers of the Council; and

12 (B) designated as the cochair of the Coun-
13 cil by the Director.

14 (3) MEMBERS.—Members of the Council shall
15 include—

16 (A) the Chief Artificial Intelligence Officer
17 of each agency described in section 901(b) of
18 title 31, United States Code;

19 (B) a representative from an agency
20 with—

21 (i) advisory experience in scientific
22 and technological issues that require atten-
23 tion at the highest level of Government;
24 and

1 (ii) a role working with agencies to
 2 create strategies, plans, policies and pro-
 3 grams for science and technology, includ-
 4 ing artificial intelligence; and

5 (C) other members, as determined nec-
 6 essary by the Director.

7 (4) STANDING COMMITTEES; WORKING
 8 GROUPS.—The Council shall have the authority to
 9 establish standing committees and working groups
 10 as necessary to consider items of concern to the
 11 Council.

12 (d) ADMINISTRATIVE SUPPORT.—The Administrator
 13 of General Services shall provide administrative support
 14 for the Council.

15 **SEC. 313. AGENCY ARTIFICIAL INTELLIGENCE OFFICERS.**

16 (a) DUTIES OF AGENCIES.—The head of each agency
 17 shall ensure the responsible research, development, acqui-
 18 sition, application, governance, and use of artificial intel-
 19 ligence by the agency that is consistent with democratic
 20 values, including—

- 21 (1) privacy;
- 22 (2) civil rights and civil liberties;
- 23 (3) information security;
- 24 (4) nondiscrimination;
- 25 (5) transparency; and

1 (6) trustworthiness.

2 (b) CHIEF ARTIFICIAL INTELLIGENCE OFFICER.—

3 (1) IN GENERAL.—Not later than 45 days after
4 the date of the enactment of this Act, the head of
5 each agency shall designate a Chief Artificial Intel-
6 ligence Officer with responsibility for—

7 (A) promoting artificial intelligence innova-
8 tion and use within the agency to further the
9 agency’s effectiveness and efficiency;

10 (B) providing input on the decision proc-
11 esses for annual and multi-year planning, pro-
12 gramming, budgeting, and execution decisions,
13 related reporting requirements, and reports re-
14 lating to artificial intelligence of the agency;

15 (C) participating in internal control proc-
16 esses or entities convened for the purpose of re-
17 viewing artificial intelligence acquisitions
18 throughout the acquisition life cycle;

19 (D) producing a risk management plan for
20 agency-specific use cases of artificial intel-
21 ligence, including—

22 (i) a procedure for classifying risk lev-
23 els in agency use of artificial intelligence;
24 and

1 (ii) specific guidance on use cases for
2 which the agency should not developing,
3 procuring, or using artificial intelligence
4 systems;

5 (E) in coordination with other responsible
6 officials of the agency—

7 (i) assessing and addressing agency
8 personnel requirements and professional
9 development requirements relating to arti-
10 ficial intelligence;

11 (ii) developing and overseeing agency
12 processes regarding the design, acquisition,
13 development, modernization, use, data
14 management, operation, sharing, and au-
15 diting of artificial intelligence systems by
16 the agency, including existing requirements
17 to inventory and publish agency use cases;

18 (iii) ensuring artificial intelligence
19 policies of the agency comply with the Con-
20 stitution of the United States and Govern-
21 mentwide requirements;

22 (iv) ensuring all artificial intelligence
23 systems used and procured by the agency
24 are and have been responsibly developed
25 and evaluated such that the systems are

1 transparent and secure, do not infringe on
2 privacy, and promote civil interests;

3 (v) continually monitoring the capa-
4 bilities and impacts of artificial intelligence
5 systems used and procured by the agency;
6 and

7 (vi) ensuring accountability for the
8 use and procurement of artificial intel-
9 ligence systems that result in flawed, inac-
10 curate, or biased decisions that would im-
11 pact individuals;

12 (F) helping to improve the ability of the
13 agency to understand artificial intelligence and
14 to intervene in crisis;

15 (G) reviewing and analyzing already de-
16 ployed artificial intelligence systems of the
17 agency for potential harm; and

18 (H) performing other functions relating to
19 artificial intelligence, as determined by the Di-
20 rector or the head of the agency.

21 (2) STRUCTURE.—The Director shall issue
22 guidance on the appropriate reporting structure,
23 qualifications, and seniority level for the role of a
24 Chief Artificial Intelligence Officer.

1 (3) SENIORITY.—With respect to the Chief Ar-
2 tificial Intelligence Officer of any agency described
3 in section 901(b) of title 31, United States Code, the
4 Chief Artificial Intelligence Officer shall be an execu-
5 tive with a position classified above GS–15 of the
6 General Schedule or the equivalent.

7 (4) ROLES.—The head of each agency shall en-
8 sure that the Chief Artificial Intelligence Officer of
9 the agency has a significant role in—

10 (A) the decision processes for all annual
11 and multi-year planning, programming, budg-
12 eting, and execution decisions, related reporting
13 requirements, and reports relating to artificial
14 intelligence of the agency; and

15 (B) the management, governance, acquisi-
16 tion, and oversight processes of the agency re-
17 lating to artificial intelligence.

18 (5) FULL-TIME EMPLOYEE.—

19 (A) IN GENERAL.—To the extent prac-
20 ticable, each Chief Artificial Intelligence Officer
21 designated under paragraph (1) shall be a full-
22 time employee of the agency on the date of the
23 designation.

24 (B) JUSTIFICATION.—If the head of an
25 agency designates a Chief Artificial Intelligence

1 Officer of the agency who is not a full-time em-
2 ployee on the date of the designation, the head
3 of the agency shall provide the Comptroller
4 General of the United States a justification for
5 the designation of an individual who is not a
6 full-time employee, such as a lack of qualified
7 personnel.

8 (C) INCLUSION IN REPORT.—The Comp-
9 troller General of the United States shall in-
10 clude each justification provided by the head of
11 an agency under subparagraph (B) in the re-
12 port required under section 316(a).

13 (c) INFORMING CONGRESS.—Not later than 60 days
14 after the date of the enactment of this Act, the head of
15 each agency shall—

16 (1) inform the relevant congressional commit-
17 tees of the appointment of a Chief Artificial Intel-
18 ligence Officer pursuant to subsection (b); and

19 (2) if relevant, provide to the relevant congres-
20 sional committees a full description of any authori-
21 ties and responsibilities of the individual serving as
22 the Chief Artificial Intelligence Officer that are per-
23 formed in addition to the authorities and responsibil-
24 ities of the individual in the role of the Chief Artifi-
25 cial Intelligence Officer.

1 **SEC. 314. AGENCY COORDINATION ON ARTIFICIAL INTEL-**
2 **LIGENCE.**

3 (a) ESTABLISHMENT.—Not later than 120 days after
4 the date of the enactment of this Act, the Director shall
5 issue guidance directing the head of each agency described
6 in section 901(b) of title 31, United States Code, to estab-
7 lish within the agency an Artificial Intelligence Coordina-
8 tion Board to—

9 (1) coordinate artificial intelligence issues of the
10 agency; and

11 (2) to the extent applicable to the agency, pub-
12 lish a statement of principles and goals relating to
13 artificial intelligence.

14 (b) CONTENTS.—The guidance issued under sub-
15 section (a) shall—

16 (1) define the structure and activities of Artifi-
17 cial Intelligence Coordination Boards of agencies;
18 and

19 (2) ensure that the membership of the Artificial
20 Intelligence Coordination Board of an agency may
21 include, to the extent applicable to the agency—

22 (A) the deputy head of the agency;

23 (B) the Chief Artificial Intelligence Officer
24 of the agency, who shall serve as the chair of
25 the Artificial Intelligence Coordination Board of
26 the agency;

1 (C) the chief information officer of the
2 agency;

3 (D) the chief acquisition officer of the
4 agency;

5 (E) the senior procurement executive of
6 the agency;

7 (F) the chief data officer of the agency;

8 (G) the chief human capital officer of the
9 agency;

10 (H) the chief financial officer of the agen-
11 cy;

12 (I) the senior agency official for privacy of
13 the agency;

14 (J) the senior agency official for civil
15 rights and civil liberties of the agency; and

16 (K) other individuals, as determined by the
17 Director.

18 (c) STRATEGY.—

19 (1) IN GENERAL.—The head of each agency
20 shall establish an artificial intelligence strategy for
21 the responsible and trustworthy adoption of artificial
22 intelligence by the agency to better achieve the mis-
23 sion of the agency to serve the people of the United
24 States.

1 (2) CONTENTS.—The strategy required under
2 paragraph (1) shall include the following:

3 (A) Defined roles and responsibilities for
4 the use and oversight of artificial intelligence by
5 the agency, including oversight of compliance
6 with relevant laws, regulations, standards, and
7 guidance.

8 (B) Defined values, ethics, and principles
9 to foster public trust and responsible use of ar-
10 tificial intelligence by the agency.

11 (C) The standards, regulations, invest-
12 ments, practices, and other items the agency
13 will use to improve trust and safety and ensure
14 that artificial intelligence systems are designed,
15 developed, and deployed in a manner that pro-
16 tects the rights and safety of individuals.

17 (D) How the agency will oversee artificial
18 intelligence systems and applications to identify
19 and mitigate risk and prevent harm, including
20 with respect to privacy, civil rights, civil lib-
21 erties, and information security.

22 (E) The considerations and safeguards the
23 agency will use to protect the rights and safety
24 of the public with respect to artificial intel-

1 ligence, including mitigation of algorithmic dis-
2 crimination.

3 (F) The domains or areas in which the
4 agency uses or anticipates using artificial intel-
5 ligence.

6 (G) The steps the agency will take to
7 strengthen workforce knowledge to maximize
8 the value artificial intelligence can bring to mis-
9 sion outcomes while mitigating any associated
10 risks.

11 (H) How and under what conditions the
12 agency can use artificial intelligence to improve
13 the interactions of the agency with the public
14 and the fulfillment of the mission of the agency,
15 while protecting against harmful impacts on
16 agency employees or the public.

17 (I) How the agency will coordinate and
18 work across components, offices, and programs
19 of the agency on artificial intelligence-related
20 matters.

21 (J) How the agency will engage in inter-
22 agency governance and coordination with re-
23 spect to artificial intelligence, including to lever-
24 age shared resources, expertise, and lessons
25 learned to better leverage artificial intelligence

1 to improve Federal Government operations and
2 mitigate the risks of artificial intelligence.

3 (K) How the agency will promote the use
4 and availability of data to support the artificial
5 intelligence efforts of the agency in accordance
6 with statutory, regulatory, and policy require-
7 ments.

8 (L) How the agency will work with the pri-
9 vate sector to ensure that procured artificial in-
10 telligence systems or capabilities include protec-
11 tions to safeguard the rights and safety of indi-
12 viduals and to secure Federal Government data
13 and other information.

14 (M) An outline of specific actions to imple-
15 ment the strategy of the agency and desired
16 outcomes.

17 **SEC. 315. GAO REPORTS.**

18 (a) IN GENERAL.—Not later than two years after the
19 date of the enactment of this Act, the Comptroller General
20 of the United States shall submit to the relevant congres-
21 sional committees a report on—

22 (1) the implementation and effectiveness of Ar-
23 tificial Intelligence Coordination Boards established
24 pursuant to guidance issued under section 314(a);

1 (2) an assessment of agency implementation
2 and the effectiveness of Chief Artificial Intelligence
3 Officers;

4 (3) recommendations for improving the imple-
5 mentation and effectiveness of Artificial Intelligence
6 Coordination Boards established pursuant to guid-
7 ance issued under section 314(a) and Chief Artificial
8 Intelligence Officers;

9 (4) an analysis by the Comptroller General of
10 the United States with respect to the costs and ben-
11 efits of—

12 (A) the Federal implementation of artifi-
13 cial intelligence; and

14 (B) the activities of the Artificial Intel-
15 ligence Coordination Boards established pursu-
16 ant to guidance issued under section 314(a);

17 (5) an assessment of the extent to which select
18 agencies appropriately consider the costs and bene-
19 fits of the design, development, deployment, and
20 continuous monitoring of artificial intelligence;

21 (6) an assessment of jobs that could be at risk
22 of dislocation and opportunities of other jobs with
23 the Federal Government and the economy of the
24 United States as a result of technological develop-
25 ments with respect to artificial intelligence, including

1 potential effects on blue collar and white collar occu-
2 pational categories;

3 (7) an inventory of artificial intelligence use
4 cases of each agency, including an assessment of
5 how each agency protects privacy and mitigates bias
6 in the use by the agency of artificial intelligence; and

7 (8) other relevant matters, as determined by
8 the Comptroller General of the United States.

9 (b) ADDITIONAL REPORT.—Not later than two years
10 after the date of the enactment of this Act, the Comp-
11 troller General of the United States shall submit to the
12 relevant congressional committees a report on the impact
13 of biased datasets on Federal use and implementation of
14 artificial intelligence systems.

15 **SEC. 316. POST-ENACTMENT GUIDANCE FROM THE DIREC-**
16 **TOR.**

17 Not later than five years after the date of the enact-
18 ment of this Act, the Director shall—

19 (1) consider technological and other develop-
20 ments, current and future requirements, and options
21 for artificial intelligence governance; and

22 (2) issue a directive to agencies—

23 (A) updating leadership roles, organiza-
24 tional structures, and other matters relating to

1 artificial intelligence, as determined relevant by
2 the Director; and

3 (B) that includes an action plan and
4 timeline for implementation.

5 **SEC. 317. SUNSET.**

6 Beginning on the date that is 90 days after the date
7 of issuance of the directive under section 316, this subtitle
8 shall have no force or effect.

9 **Subtitle C—AI Incident Reporting**
10 **and Security Enhancement**

11 **SEC. 321. ACTIVITIES TO SUPPORT VOLUNTARY VULNER-**
12 **ABILITY AND INCIDENT TRACKING ASSOCI-**
13 **ATED WITH ARTIFICIAL INTELLIGENCE.**

14 (a) UPDATE TO NATIONAL VULNERABILITY DATA-
15 BASE.—The Director of the National Institute of Stand-
16 ards and Technology, in coordination with industry stake-
17 holders, standards development organizations, and appro-
18 priate Federal agencies, as appropriate, shall carry out the
19 following:

20 (1) Establish or identify common definitions
21 and any characteristics of artificial intelligence secu-
22 rity vulnerabilities that make utilization of the Na-
23 tional Vulnerability Database inappropriate for the
24 management of such vulnerabilities, and develop

1 processes and procedures for vulnerability manage-
2 ment of such vulnerabilities.

3 (2) Support the development of standards and
4 guidance for technical vulnerability management
5 processes related to artificial intelligence.

6 (3) Consistent with paragraphs (1) and (2), as
7 appropriate, initiate a process to update the Insti-
8 tute's processes and procedures associated with the
9 National Vulnerability Database to ensure such
10 Database and associated vulnerability management
11 processes incorporate artificial intelligence security
12 vulnerabilities to the greatest extent practicable.

13 (b) ASSESSING VOLUNTARY TRACKING OF SUBSTAN-
14 TIAL ARTIFICIAL INTELLIGENCE SECURITY AND SAFETY
15 INCIDENTS.—

16 (1) IN GENERAL.—The Director of the National
17 Institute of Standards and Technology, in consulta-
18 tion with the Director of the Cybersecurity and In-
19 frastructure Security Agency of the Department of
20 Homeland Security, shall convene a multi-stake-
21 holder process to consider the development of a
22 process relating to the voluntary collection, report-
23 ing, and tracking of substantial artificial intelligence
24 security incidents and substantial artificial intel-
25 ligence safety incidents.

1 (2) ACTIVITIES.—In carrying out paragraph
2 (1), the Director of the National Institute of Stand-
3 ards and Technology shall convene appropriate rep-
4 resentatives of industry, academia, nonprofit organi-
5 zations, standards development organizations, civil
6 society groups, Sector Risk Management Agencies,
7 and appropriate Federal departments and agencies
8 to carry out the following:

9 (A) Establish common definitions and
10 characterizations for relevant aspects of sub-
11 stantial artificial intelligence security incidents
12 and substantial artificial intelligence safety inci-
13 dents, which may include the following:

14 (i) Classifications that sufficiently dif-
15 ferentiate between the following:

16 (I) Artificial intelligence security
17 incidents.

18 (II) Artificial intelligence safety
19 incidents.

20 (ii) Taxonomies to classify incidents
21 referred to in clause (i) based on relevant
22 characteristics, impacts, or other appro-
23 priate criteria.

24 (B) Assess the usefulness and cost-effec-
25 tiveness of an effort to voluntarily track sub-

1 stantial artificial intelligence security incidents
2 and substantial artificial intelligence safety inci-
3 dents.

4 (C) Identify and provide guidelines, best
5 practices, methodologies, procedures, and proc-
6 esses for tracking and reporting substantial ar-
7 tificial intelligence security incidents and sub-
8 stantial artificial intelligence safety incidents
9 across different sectors and use cases.

10 (D) Support the development of standard-
11 ized reporting and documentation mechanisms,
12 including automated mechanisms, that would
13 help provide information, including public infor-
14 mation, regarding substantial artificial intel-
15 ligence security incidents and substantial artifi-
16 cial intelligence safety incidents.

17 (E) Support the development of norms for
18 reporting of substantial artificial intelligence se-
19 curity incidents and substantial artificial intel-
20 ligence safety incidents, taking into account
21 when it is appropriate to publicly disclose such
22 incidents.

23 (3) REPORT.—Not later than three years after
24 the date of the enactment of this Act, the Director
25 of the National Institute of Standards and Tech-

1 nology shall submit to Congress a report on a proc-
2 ess relating to the voluntary collection, reporting,
3 and tracking of substantial artificial intelligence se-
4 curity incidents and substantial artificial intelligence
5 safety incidents under paragraph (1). Such report
6 shall include the following:

7 (A) Findings from the multi-stakeholder
8 process referred to in such paragraph.

9 (B) An assessment of and recommenda-
10 tions for establishing reporting and collection
11 mechanisms by which industry, academia, non-
12 profit organizations, standards development or-
13 ganizations, civil society groups, and appro-
14 priate public sector entities may voluntarily
15 share standardized information regarding sub-
16 stantial artificial intelligence security incidents
17 and substantial artificial intelligence safety inci-
18 dents.

19 (c) LIMITATION.—Nothing in this section provides
20 the Director of the National Institute of Standards and
21 Technology with any enforcement authority that was not
22 in effect on the day before the date of the enactment of
23 this section.

24 (d) DEFINITIONS.—In this section:

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

5 (2) ARTIFICIAL INTELLIGENCE SECURITY VUL-
6 NERABILITY.—The term “artificial intelligence secu-
7 rity vulnerability” means a weakness in an artificial
8 intelligence system, system security procedures, in-
9 ternal controls, or implementation that could be ex-
10 ploited or triggered by a threat source.

11 (3) ARTIFICIAL INTELLIGENCE SYSTEM.—The
12 term “artificial intelligence system”—

13 (A) means any data system, software, ap-
14 plication, tool, or utility that operates in whole
15 or in part using dynamic or static machine
16 learning algorithms or other forms of artificial
17 intelligence, whether—

18 (i) the data system, software, applica-
19 tion, tool, or utility is established primarily
20 for the purpose of researching, developing,
21 or implementing artificial intelligence tech-
22 nology; or

23 (ii) artificial intelligence capability is
24 integrated into another system or agency

1 business process, operational activity, or
2 technology system; and

3 (B) does not include any common commer-
4 cial product within which artificial intelligence
5 is embedded, such as a word processor or map
6 navigation system.

7 (4) NONPROFIT ORGANIZATION.—The term
8 “nonprofit organization” has the meaning given
9 such term in section 201 of title 35, United States
10 Code.

11 (5) SECTOR RISK MANAGEMENT AGENCY.—The
12 term “Sector Risk Management Agency” has the
13 meaning given such term in section 2200 of the
14 Homeland Security Act of 2002 (6 U.S.C. 650).

15 (6) THREAT SOURCE.—The term “threat
16 source” means any of the following:

17 (A) An intent and method targeted at the
18 intentional exploitation of a vulnerability.

19 (B) A situation and method that may acci-
20 dentally trigger a vulnerability.

1 **TITLE IV—PROTECTING WORK-**
2 **ERS AND EMPOWERING**
3 **SMALL BUSINESSES**

4 **Subtitle A—AI Workforce Research**
5 **Hub**

6 **SEC. 401. AI WORKFORCE RESEARCH HUB.**

7 (a) IN GENERAL.—There is established in the De-
8 partment of Labor the AI Workforce Research Hub (in
9 this section referred to as the “Hub”).

10 (b) DUTIES.—The Secretary of Labor, acting
11 through the Hub and in collaboration with the Commis-
12 sioner of the Bureau of Labor Statistics, the Director of
13 the U.S. Census Bureau, and the Director of the Bureau
14 of Economic Analysis, shall carry out the following:

15 (1) Evaluate the impact of AI on the labor mar-
16 ket and the experience of United States workers.

17 (2) Produce recurring evaluations of such im-
18 pact.

19 (3) Conduct scenario planning for a range of
20 potential levels of such impact.

21 (4) Identify insights to inform workforce and
22 education policy with respect to such impact.

23 (c) AI DEFINED.—In this section, the term “AI” has
24 the meaning given the term “artificial intelligence” in sec-

tion 5002 of the National Artificial Intelligence Initiative Act of 2020 (15 U.S.C. 9401).

Subtitle B—Small Business Artificial Intelligence Advancement

SEC. 411. RESOURCES FOR SMALL BUSINESSES TO UTILIZE ARTIFICIAL INTELLIGENCE.

Section 22A of the National Institute of Standards and Technology Act (15 U.S.C. 278h–1) is amended—

(1) by redesignating subsection (h) as subsection (i); and

(2) by inserting after subsection (g) the following new subsection:

“(h) DEVELOPMENT OF RESOURCES FOR SMALL BUSINESSES IN UTILIZING ARTIFICIAL INTELLIGENCE.—

“(1) IN GENERAL.—The Director shall, in carrying out subsection (a), develop or identify, and disseminate (in accordance with paragraph (4)), resources for small business concerns (as defined in section 3 of the Small Business Act (15 U.S.C. 632)) relating to artificial intelligence. Such resources may include technical standards, best practices, benchmarks, methodologies, procedures, or processes for the understanding, adoption, or integration of artificial intelligence.

1 “(2) REQUIREMENTS.—The Director shall en-
2 sure that the resources described in paragraph (1)
3 satisfy the following requirements:

4 “(A) Are generally applicable and usable
5 by a wide range of small business concerns.

6 “(B) Include elements that promote basic
7 understanding, identification, and adoption of
8 proper use cases of artificial intelligence.

9 “(C) Include case studies of practical ap-
10 plication across a range of business sizes and
11 types.

12 “(D) Are technology-neutral and relevant
13 to technologies that are accessible and suitable
14 for small business concerns.

15 “(E) Are based on international voluntary
16 standards as applicable, and are consistent with
17 the Stevenson-Wydler Technology Innovation
18 Act of 1980 (15 U.S.C. 3701 et seq.).

19 “(F) Include recommendations and ref-
20 erences to existing Federal educational re-
21 sources, including the risk management frame-
22 work under subsection (c) and activities relating
23 to the national cybersecurity awareness and
24 education program under section 303 of the Cy-

1 bersecurity Enhancement Act of 2014 (15
2 U.S.C. 7443).

3 “(3) REVIEW AND UPDATE OF RESOURCES.—
4 Not later than two years after the date of the enact-
5 ment of this subsection and not less frequently than
6 once every two years thereafter, the Director shall
7 carry out the following:

8 “(A) Review the resources described in
9 paragraph (1).

10 “(B) Update such resources as the Direc-
11 tor considers appropriate.

12 “(4) DISSEMINATION AND USE OF TRAINING
13 RESOURCES.—The Director shall coordinate with the
14 Administrator of the Small Business Administration
15 regarding the distribution and use through the re-
16 source partners of the Small Business Administra-
17 tion of the resources described in paragraph (1).

18 “(5) VOLUNTARY RESOURCES.—The use of the
19 resources described in paragraph (1) shall be consid-
20 ered voluntary.

21 “(6) REPORT.—

22 “(A) IN GENERAL.—Not later than four
23 years after the date of the enactment of this
24 subsection, the Director shall submit to the
25 Committee on Science, Space, and Technology

1 of the House of Representatives and the Com-
2 mittee on Commerce, Science, and Transpor-
3 tation of the Senate a report on the develop-
4 ment, identification, dissemination, and use of
5 the resources described in paragraph (1), in-
6 cluding updates made pursuant to paragraph
7 (3).

8 “(B) CONTENTS.—The report under sub-
9 paragraph (A) shall include the following:

10 “(i) A list of the resources described
11 in paragraph (1), including updates made
12 pursuant to paragraph (3).

13 “(ii) Relevant feedback from recipi-
14 ents of such resources, and disseminators
15 of such resources pursuant to paragraph
16 (4).

17 “(iii) Recommendations to Congress
18 for further actions to help with the utiliza-
19 tion of artificial intelligence by small busi-
20 ness concerns.”.

1 **TITLE V—SAFEGUARDING AMER-**
2 **ICANS AND DETERRING**
3 **HARMFUL DEEPFAKES**

4 **Subtitle A—Disrupting Explicit**
5 **Forged Images and Non-Consen-**
6 **sual Edits**

7 **SEC. 501. CIVIL ACTION RELATING TO DISCLOSURE OF IN-**
8 **TIMATE IMAGES.**

9 (a) DEFINITIONS.—Section 1309 of the Consolidated
10 Appropriations Act, 2022 (15 U.S.C. 6851) is amended—

11 (1) in the section heading, by inserting “**OR**
12 **NONCONSENSUAL ACTIVITY INVOLVING DIG-**
13 **ITAL FORGERIES**” after “**INTIMATE IMAGES**”;
14 and

15 (2) in subsection (a)—

16 (A) in paragraph (2), by inserting “com-
17 petent,” after “conscious,”;

18 (B) by striking paragraph (3);

19 (C) by redesignating paragraph (4) as
20 paragraph (3);

21 (D) by redesignating paragraphs (5) and
22 (6) as paragraphs (6) and (7), respectively;

23 (E) by inserting after paragraph (3) the
24 following:

1 “(4) IDENTIFIABLE INDIVIDUAL.—The term
2 ‘identifiable individual’ means an individual whose
3 body appears in whole or in part in an intimate vis-
4 ual depiction or intimate digital forgery and who is
5 identifiable by virtue of the individual’s face, like-
6 ness, or other distinguishing characteristic, such as
7 a unique birthmark or other recognizable feature, or
8 from information displayed in connection with the
9 intimate visual depiction or intimate digital forgery.

10 “(5) INTIMATE DIGITAL FORGERY.—

11 “(A) IN GENERAL.—The term ‘intimate
12 digital forgery’ means any intimate visual depic-
13 tion of an identifiable individual that—

14 “(i) falsely represents, in whole or in
15 part—

16 “(I) the identifiable individual; or

17 “(II) the conduct or content that
18 makes the visual depiction intimate;

19 “(ii) is created through the use of
20 software, machine learning, artificial intel-
21 ligence, or any other computer-generated
22 or technological means, including by adapt-
23 ing, modifying, manipulating, or altering
24 an authentic visual depiction; and

1 “(iii) is indistinguishable from an au-
2 thentic visual depiction of the identifiable
3 individual when viewed as a whole by a
4 reasonable person.

5 “(B) LABELS, DISCLOSURE, AND CON-
6 TEXT.—Any visual depiction described in sub-
7 paragraph (A) constitutes an intimate digital
8 forgery for purposes of this paragraph regard-
9 less of whether a label, information disclosed
10 with the visual depiction, or the context or set-
11 ting in which the visual depiction is disclosed
12 states or implies that the visual depiction is not
13 authentic.”; and

14 (F) in paragraph (6)(A), as so redesign-
15 nated—

16 (i) in clause (i), by striking “or” at
17 the end;

18 (ii) in clause (ii)—

19 (I) in subclause (I), by striking
20 “individual;” and inserting “indi-
21 vidual; or”; and

22 (II) by striking subclause (III);
23 and

24 (iii) by adding at the end the fol-
25 lowing:

1 “(iii) an identifiable individual engag-
2 ing in sexually explicit conduct; and”.

3 (b) CIVIL ACTION.—Section 1309(b) of the Consoli-
4 dated Appropriations Act, 2022 (15 U.S.C. 6851(b)) is
5 amended—

6 (1) in paragraph (1)—

7 (A) by striking subparagraph (A) and in-
8 serting the following:

9 “(A) IN GENERAL.—Except as provided in
10 paragraph (5)—

11 “(i) an identifiable individual whose
12 intimate visual depiction is disclosed, in or
13 affecting interstate or foreign commerce or
14 using any means or facility of interstate or
15 foreign commerce, without the consent of
16 the identifiable individual, where such dis-
17 closure was made by a person who knows
18 or recklessly disregards that the identifi-
19 able individual has not consented to such
20 disclosure, may bring a civil action against
21 that person in an appropriate district court
22 of the United States for relief as set forth
23 in paragraph (3);

24 “(ii) an identifiable individual who is
25 the subject of an intimate digital forgery

1 may bring a civil action in an appropriate
2 district court of the United States for re-
3 lief as set forth in paragraph (3) against
4 any person that knowingly produced or
5 possessed the intimate digital forgery with
6 intent to disclose it, knowingly disclosed
7 the intimate digital forgery, or knowingly
8 solicited and received the intimate digital
9 forgery, if—

10 “(I) the identifiable individual
11 did not consent to such production or
12 possession with intent to disclose, dis-
13 closure, or solicitation and receipt;

14 “(II) the person knew or reck-
15 lessly disregarded that the identifiable
16 individual did not consent to such pro-
17 duction or possession with intent to
18 disclose, disclosure, or solicitation and
19 receipt; and

20 “(III) such production or posses-
21 sion with intent to disclose, disclosure,
22 or solicitation and receipt, is in or af-
23 fects interstate or foreign commerce
24 or uses any means or facility of inter-
25 state or foreign commerce; and

1 “(iii) an identifiable individual who is
2 the subject of an intimate digital forgery
3 may bring a civil action in an appropriate
4 district court of the United States for re-
5 lief as set forth in paragraph (3) against
6 any person that knowingly produced the
7 intimate digital forgery if—

8 “(I) the identifiable individual
9 did not consent to such production;

10 “(II) the person knew or reck-
11 lessly disregarded that the identifiable
12 individual—

13 “(aa) did not consent to
14 such production; and

15 “(bb) was harmed, or was
16 reasonably likely to be harmed,
17 by the production; and

18 “(III) such production is in or
19 affects interstate or foreign commerce
20 or uses any means or facility of inter-
21 state or foreign commerce.”; and

22 (B) in subparagraph (B)—

23 (i) in the subparagraph heading, by
24 inserting “IDENTIFIABLE” before “INDI-
25 VIDUALS”; and

1 (ii) by striking “an individual who is
2 under 18 years of age, incompetent, inca-
3 pacitated, or deceased, the legal guardian
4 of the individual” and inserting “an identi-
5 fiable individual who is under 18 years of
6 age, incompetent, incapacitated, or de-
7 ceased, the legal guardian of the identifi-
8 able individual”;

9 (2) in paragraph (2)—

10 (A) in subparagraph (A)—

11 (i) by inserting “identifiable” before
12 “individual”;

13 (ii) by striking “depiction” and insert-
14 ing “intimate visual depiction or intimate
15 digital forgery”; and

16 (iii) by striking “distribution” and in-
17 serting “disclosure, solicitation, or posses-
18 sion”; and

19 (B) in subparagraph (B)—

20 (i) by inserting “identifiable” before
21 “individual”;

22 (ii) by inserting “or intimate digital
23 forgery” after “depiction” each place it ap-
24 pears; and

1 (iii) by inserting “, solicitation, or
2 possession” after “disclosure”;

3 (3) by redesignating paragraph (4) as para-
4 graph (5);

5 (4) by striking paragraph (3) and inserting the
6 following:

7 “(3) RELIEF.—

8 “(A) IN GENERAL.—In a civil action filed
9 under this section, an identifiable individual
10 may recover—

11 “(i) damages as provided under sub-
12 paragraph (C); and

13 “(ii) the cost of the action, including
14 reasonable attorney fees and other litiga-
15 tion costs reasonably incurred.

16 “(B) PUNITIVE DAMAGES AND OTHER RE-
17 LIEF.—The court may, in addition to any other
18 relief available at law, award punitive damages
19 or order equitable relief, including a temporary
20 restraining order, a preliminary injunction, or a
21 permanent injunction ordering the defendant to
22 delete, destroy, or cease to display or disclose
23 the intimate visual depiction or intimate digital
24 forgery.

1 “(C) DAMAGES.—For purposes of subpara-
2 graph (A)(i), the identifiable individual may re-
3 cover—

4 “(i) liquidated damages in the amount
5 of—

6 “(I) \$150,000; or

7 “(II) \$250,000 if the conduct at
8 issue in the claim was—

9 “(aa) committed in relation
10 to actual or attempted sexual as-
11 sault, stalking, or harassment of
12 the identifiable individual by the
13 defendant; or

14 “(bb) the direct and prox-
15 imate cause of actual or at-
16 tempted sexual assault, stalking,
17 or harassment of the identifiable
18 individual by any person; or

19 “(ii) actual damages sustained by the
20 individual, which shall include any profits
21 of the defendant that are attributable to
22 the conduct at issue in the claim that are
23 not otherwise taken into account in com-
24 puting the actual damages.

1 “(D) CALCULATION OF DEFENDANT’S
2 PROFIT.—For purposes of subparagraph (C)(ii),
3 to establish the defendant’s profits, the identifi-
4 able individual shall be required to present
5 proof only of the gross revenue of the defend-
6 ant, and the defendant shall be required to
7 prove the deductible expenses of the defendant
8 and the elements of profit attributable to fac-
9 tors other than the conduct at issue in the
10 claim.

11 “(4) PRESERVATION OF PRIVACY.—In a civil
12 action filed under this section, the court may issue
13 an order to protect the privacy of a plaintiff, includ-
14 ing by—

15 “(A) permitting the plaintiff to use a pseu-
16 donym;

17 “(B) requiring the parties to redact the
18 personal identifying information of the plaintiff
19 from any public filing, or to file such documents
20 under seal; and

21 “(C) issuing a protective order for pur-
22 poses of discovery, which may include an order
23 indicating that any intimate visual depiction or
24 intimate digital forgery shall remain in the
25 care, custody, and control of the court.”;

1 (5) in paragraph (5)(A), as so redesignated—

2 (A) by striking “image” and inserting “vis-
3 ual depiction or intimate digital forgery”; and

4 (B) by striking “depicted” and inserting
5 “identifiable”; and

6 (6) by adding at the end the following:

7 “(6) STATUTE OF LIMITATIONS.—Any action
8 commenced under this section shall be barred unless
9 the complaint is filed not later than 10 years from
10 the later of—

11 “(A) the date on which the identifiable in-
12 dividual reasonably discovers the violation that
13 forms the basis for the claim; or

14 “(B) the date on which the identifiable in-
15 dividual reaches 18 years of age.

16 “(7) DUPLICATIVE RECOVERY BARRED.—No re-
17 lief may be ordered under paragraph (3) against a
18 person who is subject to a judgment under section
19 2255 of title 18, United States Code, for the same
20 conduct involving the same identifiable individual
21 and the same intimate visual depiction or intimate
22 digital forgery.”.

23 (c) CONTINUED APPLICABILITY OF FEDERAL,
24 STATE, AND TRIBAL LAW.—

1 (1) IN GENERAL.—This subtitle shall not be
2 construed to impair, supersede, or limit a provision
3 of Federal, State, or Tribal law.

4 (2) NO PREEMPTION.—Nothing in this subtitle
5 shall prohibit a State or Tribal government from
6 adopting and enforcing a provision of law governing
7 disclosure of intimate images or nonconsensual activ-
8 ity involving an intimate digital forgery, as defined
9 in section 1309(a) of the Consolidated Appropria-
10 tions Act, 2022 (15 U.S.C. 6851(a)), as amended by
11 this subtitle, that is at least as protective of the
12 rights of a victim as this subtitle.

13 **SEC. 502. SEVERABILITY; RULE OF CONSTRUCTION.**

14 (a) SEVERABILITY.—If any provision of this subtitle,
15 an amendment made by this subtitle, or the application
16 of such a provision or amendment to any person or cir-
17 cumstance, is held to be unconstitutional, the remaining
18 provisions of and amendments made by this subtitle, and
19 the application of the provision or amendment held to be
20 unconstitutional to any other person or circumstance, shall
21 not be affected thereby.

22 (b) RULE OF CONSTRUCTION.—Nothing in this sub-
23 title, or an amendment made by this subtitle, shall be con-
24 strued to limit or expand any law pertaining to intellectual
25 property.

1 **Subtitle B—AI Fraud Deterrence**

2 **SEC. 511. FINANCIAL CRIMES AND ARTIFICIAL INTEL-**
3 **LIGENCE.**

4 (a) MAIL FRAUD.—Section 1341 of title 18, United
5 States Code, is amended—

6 (1) by striking “\$1,000,000” and inserting
7 “\$2,000,000”; and

8 (2) by inserting after the period at the end the
9 following: “If the violation is committed with the as-
10 sistance of artificial intelligence, such person shall be
11 fined not more than \$1,000,000 or imprisoned not
12 more than 20 years, or both.”.

13 (b) WIRE FRAUD.—Section 1343 of title 18, United
14 States Code, is amended—

15 (1) by striking “\$1,000,000” and inserting
16 “\$2,000,000”; and

17 (2) by inserting after the period at the end the
18 following: “If the violation is committed with the as-
19 sistance of artificial intelligence, such person shall be
20 fined not more than \$1,000,000 or imprisoned not
21 more than 20 years, or both.”.

22 (c) BANK FRAUD.—Section 1344 of title 18, United
23 States Code, is amended—

24 (1) by striking “Whoever knowingly” and in-
25 serting the following:

1 “(a) IN GENERAL.—Whoever knowingly”; and

2 (2) by adding at the end the following:

3 “(b) ARTIFICIAL INTELLIGENCE.—Whoever commits
4 subsection (a) with the assistance of artificial intelligence
5 shall be fined not more than \$2,000,000 or imprisoned
6 not more than 30 years, or both.”.

7 (d) ARTIFICIAL INTELLIGENCE DEFINED.—

8 (1) IN GENERAL.—Section 1346 of title 18,
9 United States Code, is amended—

10 (A) by amending the section heading to
11 read as follows: “**Definitions**”;

12 (B) by striking “chapter, the term” and
13 inserting the following: “chapter—
14 “(1) the term”;

15 (C) by striking the period at the end and
16 inserting “; and”; and

17 (D) by adding at the end the following:

18 “(2) the term ‘artificial intelligence’ has the
19 meaning given such term in section 5002 of the Na-
20 tional Artificial Intelligence Initiative Act of 2020
21 (15 U.S.C. 9401).”.

22 (2) CLERICAL AMENDMENT.—The table of sec-
23 tions for chapter 63 of title 18, United States Code,
24 is amended by striking the item relating to section
25 1346 and inserting the following:

“1346. Definitions.”.

1 (e) MONEY LAUNDERING.—Section 1956 of title 18,
2 United States Code, is amended—

3 (1) in subsection (a)—

4 (A) in paragraph (1), in the continuation
5 text following subparagraph (B)(ii), by insert-
6 ing after “or both” the following: “, or, in the
7 case that such violation is committed with the
8 assistance of artificial intelligence, shall be
9 fined not more than \$1,000,000 or thrice the
10 value of the monetary instrument or funds in-
11 volved in the transaction, whichever is greater,
12 or imprisoned for not more than 20 years, or
13 both”;

14 (B) in paragraph (2), in the continuation
15 text following subparagraph (B)(ii), by insert-
16 ing after “or both” the following: “, or, in the
17 case that such violation is committed with the
18 assistance of artificial intelligence, shall be
19 fined not more than \$1,000,000 or thrice the
20 value of the monetary instrument or funds in-
21 volved in the transportation, transmission, or
22 transfer, whichever is greater, or imprisoned for
23 not more than 20 years, or both”; and

24 (C) in paragraph (3), in the continuation
25 text following subparagraph (C), by inserting

1 after “or both” the following: “, or, in the case
2 that such violation is committed with the assist-
3 ance of artificial intelligence, shall be fined
4 under this title, or imprisoned for not more
5 than 20 years, or both”; and

6 (2) in subsection (c)—

7 (A) in paragraph (8), by striking “and” at
8 the end;

9 (B) in paragraph (9), by striking the pe-
10 riod and inserting “; and”; and

11 (C) by adding at the end the following:

12 “(10) the term ‘artificial intelligence’ has the
13 meaning given such term in section 5002 of the Na-
14 tional Artificial Intelligence Initiative Act of 2020
15 (15 U.S.C. 9401).”.

16 **SEC. 512. AI IMPERSONATION OF FEDERAL OFFICIALS.**

17 Section 912 of title 18, United States Code, is
18 amended by inserting after “or both” the following: “, or,
19 in the case that such violation is committed with the as-
20 sistance of artificial intelligence (as such term is defined
21 in section 5002 of the National Artificial Intelligence Ini-
22 tiative Act of 2020 (15 U.S.C. 9401)), shall be fined not
23 more than \$1,000,000, or imprisoned not more than three
24 years, or both”.

Subtitle C—AI Whistleblower Protection

SEC. 521. DEFINITIONS.

In this subtitle:

(1) **AI SECURITY VULNERABILITY.**—The term “AI security vulnerability” means any failure or lapse in security that could potentially allow emerging artificial intelligence technology to be acquired by a person (including a foreign entity) by theft or other means.

(2) **AI VIOLATION.**—The term “AI violation” means—

(A) any violation of Federal law, including rules and regulations, related to or committed during the development, deployment, or use of artificial intelligence; or

(B) any failure to appropriately respond to a substantial and specific danger that the development, deployment, or use of artificial intelligence may pose to public safety, public health, or national security.

(3) **ARTIFICIAL INTELLIGENCE.**—The term “artificial intelligence” includes any of the following:

(A) An artificial system that performs tasks under varying and unpredictable cir-

1 cumstances without significant human over-
2 sight, or that can learn from experience and im-
3 prove performance when exposed to data sets.

4 (B) An artificial system developed in com-
5 puter software, physical hardware, or other con-
6 text that solves tasks requiring human-like per-
7 ception, cognition, planning, learning, commu-
8 nication, or physical action.

9 (C) An artificial system designed to think
10 or act like a human, including cognitive archi-
11 tectures and neural networks.

12 (D) A set of techniques, including machine
13 learning, that are designed to approximate a
14 cognitive task.

15 (E) An artificial system designed to act ra-
16 tionally, including an intelligent software agent
17 or embodied robot that achieves goals using
18 perception, planning, reasoning, learning, com-
19 municating, decision making, and acting.

20 (4) ARTIFICIAL SYSTEM.—The term “artificial
21 system”—

22 (A) means any data system, software, ap-
23 plication, tool, or utility that operates in whole
24 or in part using dynamic or static machine

learning algorithms or other forms of artificial intelligence, including in the case—

(i) the data system, software, application, tool, or utility is established primarily for the purpose of researching, developing, or implementing artificial intelligence technology; or

(ii) artificial intelligence capability is integrated into another system or agency business process, operational activity, or technology system; and

(B) does not include any common commercial product within which artificial intelligence is embedded, such as a word processor or map navigation system.

(5) COMMERCE; INDUSTRY OR ACTIVITY AFFECTING COMMERCE.—The terms “commerce” and “industry or activity affecting commerce” mean any activity, business, or industry in commerce or in which a labor dispute would hinder or obstruct commerce or the free flow of commerce, and include “commerce” and any “industry affecting commerce”, as defined in section 501 of the Labor Management Relations Act, 1947 (29 U.S.C. 142).

1 (6) COVERED INDIVIDUAL.—The term “covered
2 individual” includes—

3 (A) an employee, including a former em-
4 ployee; and

5 (B) an independent contractor, including a
6 former independent contractor.

7 (7) EMERGING ARTIFICIAL INTELLIGENCE
8 TECHNOLOGY.—The term “emerging artificial intel-
9 ligence technology”, with respect to an AI security
10 vulnerability, means any artificial system that exhib-
11 its a level of performance, complexity, or autonomy
12 that is comparable to or exceeds capabilities that are
13 generally considered state-of-the-art as of the time
14 of the AI security vulnerability.

15 (8) EMPLOYER.—The term “employer” means
16 any person (including any officer, employee, con-
17 tractor, subcontractor, agent, company, partnership,
18 or other individual or entity) engaged in commerce
19 or an industry or activity affecting commerce who
20 pays any compensation to a covered individual in ex-
21 change for the covered individual providing work to
22 the person.

1 **SEC. 522. ANTI-RETALIATION PROTECTION FOR AI WHIS-**
2 **TLEBLOWERS.**

3 (a) PROHIBITION AGAINST RETALIATION.—No em-
4 ployer may, directly or indirectly, discharge, demote, sus-
5 pend, threaten, blacklist, harass, or in any other manner
6 discriminate against a covered individual in the terms and
7 conditions of employment or post-employment of the cov-
8 ered individual (or the terms and conditions of work pro-
9 vided by the covered individual as an independent con-
10 tractor) because of any lawful act done by the covered in-
11 dividual—

12 (1) in providing information regarding an AI
13 security vulnerability or AI violation, or any conduct
14 that the covered individual reasonably believes con-
15 stitutes an AI security vulnerability or AI violation,
16 to—

17 (A) the appropriate regulatory official or
18 the Attorney General;

19 (B) a regulatory or law enforcement agen-
20 cy; or

21 (C) any Member of Congress or any com-
22 mittee of Congress;

23 (2) in initiating, testifying in, or assisting in
24 any investigation or judicial or administrative action
25 of an appropriate regulatory or law enforcement
26 agency or the Department of Justice, or any inves-

1 tigation of Congress, based upon or related to the
2 information described in paragraph (1); or

3 (3) in providing information regarding an AI
4 security vulnerability or AI violation, or any conduct
5 that the covered individual reasonably believes con-
6 stitutes an AI security vulnerability or AI violation,
7 to—

8 (A) a person with supervisory authority
9 over the covered individual at the employer of
10 the covered individual; or

11 (B) another individual working for the em-
12 ployer described in subparagraph (A) whom the
13 covered individual reasonably believes has the
14 authority to—

15 (i) investigate, discover, or terminate
16 the misconduct; or

17 (ii) take any other action to address
18 the misconduct.

19 (b) ENFORCEMENT.—

20 (1) IN GENERAL.—A covered individual who al-
21 leges such individual is aggrieved by a violation of
22 subsection (a) may seek relief under paragraph (3)
23 by—

1 (A) filing a complaint with the Secretary of
2 Labor in accordance with the requirements of
3 paragraph (2)(A); or

4 (B) if the Secretary of Labor has not
5 issued a final decision in accordance with such
6 paragraph within 180 days of the filing of such
7 complaint, and there is no showing that such a
8 delay is due to the bad faith of the covered indi-
9 vidual, bringing an action against the employer
10 at law or in equity in the appropriate district
11 court of the United States, which shall have ju-
12 risdiction over such an action without regard to
13 the amount in controversy.

14 (2) PROCEDURE.—

15 (A) DEPARTMENT OF LABOR COM-
16 PLAINTS.—

17 (i) IN GENERAL.—Except as provided
18 in clause (ii) and paragraph (3), a com-
19 plaint filed with the Secretary of Labor
20 under paragraph (1)(A) shall be governed
21 by the rules and procedures set forth in
22 section 42121(b) of title 49, United States
23 Code, including the legal burdens of proof
24 described in such section.

1 (ii) EXCEPTIONS.—With respect to a
2 complaint filed under paragraph (1)(A),
3 notification required under section
4 42121(b)(1) of title 49, United States
5 Code, shall be made to each person named
6 in the complaint, including the employer.

7 (B) DISTRICT COURT ACTIONS.—

8 (i) JURY TRIAL.—A party to an action
9 brought under paragraph (1)(B) shall be
10 entitled to trial by jury.

11 (ii) STATUTE OF LIMITATIONS.—

12 (I) IN GENERAL.—An action may
13 not be brought under paragraph
14 (1)(B)—

15 (aa) more than 6 years after
16 the date on which the violation of
17 subsection (a) occurs; or

18 (bb) more than 3 years after
19 the date on which facts material
20 to the right of action are known,
21 or reasonably should have been
22 known, by the covered individual
23 bringing the action.

24 (II) REQUIRED ACTION WITHIN
25 10 YEARS.—Notwithstanding sub-

1 clause (I), an action under paragraph
2 (1)(B) may not in any circumstance
3 be brought more than 10 years after
4 the date on which the violation occurs.

5 (3) RELIEF.—Relief for a covered individual
6 prevailing with respect to a complaint filed under
7 paragraph (1)(A) or an action under paragraph
8 (1)(B) shall include—

9 (A) reinstatement with the same seniority
10 status that the covered individual would have
11 had, but for the violation;

12 (B) two times the amount of back pay oth-
13 erwise owed to the covered individual, with in-
14 terest;

15 (C) the payment of compensatory damages,
16 which shall include compensation for litigation
17 costs, expert witness fees, and reasonable attor-
18 neys' fees; and

19 (D) any other appropriate remedy with re-
20 spect to the violation as determined by the Sec-
21 retary of Labor in a complaint under subpara-
22 graph (A) of paragraph (1) or by the court in
23 an action under subparagraph (B) of such
24 paragraph.

1 (c) NONENFORCEABILITY WAIVERS OF RIGHTS OR
2 REMEDIES.—The rights and remedies provided for in this
3 section may not be waived or altered by any contract,
4 agreement, policy form, or condition of employment (or
5 condition of work as an independent contractor), including
6 by any agreement requiring a covered individual to engage
7 in arbitration, mediation, or any other alternative dispute
8 resolution process prior to seeking relief under subsection
9 (b).

10 **TITLE VI—EXPANDING EDU-**
11 **CATION, LITERACY, AND IN-**
12 **CLUSION**

13 **Subtitle A—Codifying AI Literacy**
14 **Efforts of the AI Task Force**

15 **SEC. 601. AI LITERACY EFFORTS OF THE AI TASK FORCE.**

16 The Director of the National Science Foundation
17 shall take such actions as may be necessary to provide to
18 the STEM Teachers Corps Pilot Program and the Com-
19 puter Science for All Program of the Foundation general
20 support in accordance with the recommendations of the
21 AI Task Force established on February 20, 2024, of the
22 House of Representatives.

1 **Subtitle B—New Collar Jobs Tax**
2 **Credit**

3 **SEC. 611. EMPLOYEE CYBERSECURITY EDUCATION.**

4 (a) IN GENERAL.—Subpart D of part IV of sub-
5 chapter A of chapter 1 of the Internal Revenue Code of
6 1986 is amended by adding at the end the following new
7 section:

8 **“SEC. 45BB. EMPLOYEE CYBERSECURITY EDUCATION.**

9 “(a) IN GENERAL.—For purposes of section 38, the
10 employee cybersecurity education credit determined under
11 this section for the taxable year is an amount equal to
12 50 percent of the aggregate qualified employee cybersecu-
13 rity education expenses paid or incurred by the employer
14 during such taxable year.

15 “(b) LIMITATION.—The amount allowed as a credit
16 under subsection (a) for the taxable year with respect to
17 an employee shall not exceed \$5,000.

18 “(c) QUALIFIED EMPLOYEE CYBERSECURITY EDU-
19 CATION EXPENSES.—For purposes of this section, the
20 term ‘qualified employee cybersecurity education expenses’
21 means amounts paid or incurred for each employee who
22 earns a certificate or degree at the undergraduate or grad-
23 uate level or industry-recognized certification relating to
24 those specialty areas and work roles that are listed in
25 NCWF Work Roles in the document entitled, ‘NICE Cy-

bersecurity Workforce Framework (NCWF)', or any successor thereto, published by the National Initiative for Cybersecurity Education (NICE) of the National Institute of Standards and Technology.

“(d) CERTAIN RULES TO APPLY.—Rules similar to the rules of subsections (i)(1) and (k) of section 51 shall apply for purposes of this section.”.

(b) CREDIT MADE PART OF GENERAL BUSINESS CREDIT.—Subsection (b) of section 38 of such Code is amended—

(1) by striking “plus” at the end of paragraph (40),

(2) by striking the period at the end of paragraph (41) and inserting “, plus”, and

(3) by inserting after paragraph (41) the following new paragraph:

“(42) the employee cybersecurity education credit determined under section 45BB(a).”.

(c) DENIAL OF DOUBLE BENEFIT.—Subsection (a) of section 280C of such Code is amended by inserting “45BB(a),” after “45S(a),”.

(d) CLERICAL AMENDMENT.—The table of sections for subpart D of part IV of subchapter A of chapter 1 of such Code is amended by adding at the end the following new item:

“Sec. 45BB. Employee cybersecurity education.”.

1 (e) EFFECTIVE DATE.—The amendments made by
2 this section shall apply to taxable years beginning after
3 the date of the enactment of this Act.

4 **SEC. 612. CYBERSECURITY TRAINING INCENTIVE FOR GOV-**
5 **ERNMENT CONTRACTS.**

6 (a) IN GENERAL.—The head of an executive agency
7 shall award a five percent score increase to each competi-
8 tive proposal submitted by a qualified offeror for the eval-
9 uation of a competitive proposal received in response to
10 a solicitation for a contract valued in excess of
11 \$5,000,000.

12 (b) APPLICABILITY.—This section shall apply with
13 respect to any solicitation issued on or after the date of
14 the enactment of this Act.

15 (c) DEFINITIONS.—In this section:

16 (1) EXECUTIVE AGENCY.—The term “executive
17 agency” has the meaning given such term in section
18 102 of title 40, United States Code.

19 (2) QUALIFIED OFFEROR.—The term “qualified
20 offeror” means a business that has claimed the em-
21 ployee cybersecurity education credit under section
22 45BB of the Internal Revenue Code of 1986, as
23 added by section 611, at least once within the three-
24 year period preceding the date on which the business

1 submits a competitive proposal for a contract valued
2 in excess of \$5,000,000.

3 **Subtitle C—Literacy in Future**
4 **Technologies Artificial Intelligence**

5 **SEC. 621. PREPARING K-12 EDUCATORS AND STUDENTS**
6 **FOR AN AI LITERATE FUTURE.**

7 (a) SENSE OF CONGRESS.—It is the sense of Con-
8 gress that—

9 (1) AI literacy education is crucial not only for
10 developing a skilled workforce and positioning the
11 United States as a leader in this critical field, but
12 also for mitigating the ethical challenges associated
13 with AI;

14 (2) as strategic adversaries pursue AI tech-
15 nology for the purposes of surveillance,
16 weaponization, and economic competition, maintain-
17 ing United States leadership through an AI literate
18 public is essential;

19 (3) AI literacy education at the K–12 education
20 levels forms the foundation for success in this com-
21 petitive environment, and proficiency with these
22 technologies is becoming necessary to be an engaged
23 and informed citizen;

1 (4) AI technology is rapidly evolving, and cur-
2 rent best practices for learning and developing AI
3 literacy today may not be applicable in the future;

4 (5) awards made under this section should rec-
5 ognize the rapidly evolving nature of AI technology,
6 and identify and focus on those skills that will re-
7 main relevant to AI literacy considering likely
8 changes in AI capabilities; and

9 (6) awards made under this section should rec-
10 ognize student progression to more advanced topics
11 as they progress through K–12 education.

12 (b) AWARDS.—The Director may make awards on a
13 merit-reviewed, competitive basis to institutions of higher
14 education and nonprofit organizations (and consortia
15 thereof) to support research activities to develop edu-
16 cational curricula and evaluation methods for AI literacy
17 at the K–12 education level.

18 (c) USE OF AWARD FUNDS.—Activities funded by
19 awards made under this section may include the following:

20 (1) Formal and informal K–12 education cur-
21 riculum development focused on the essential abili-
22 ties and competencies necessary for AI literacy that
23 is learner-centered, project-based, and can be per-
24 sonalized in the classroom.

1 (2) Engaging State and local educational agen-
2 cies, principals, educators, and other school leaders
3 of students in kindergarten through grade 12, in
4 professional learning opportunities to—

5 (A) enhance AI literacy and proficiency;
6 and

7 (B) develop best practices.

8 (3) Developing AI literacy evaluation tools for
9 educators assessing proficiency in AI literacy.

10 (4) Designing and implementing professional
11 development courses and experiences in AI literacy,
12 including mentoring, for State and local educational
13 agencies, principals, educators, and other school
14 leaders that integrate in-person, virtual, and dis-
15 tance learning experiences.

16 (5) Development of hands-on learning tools to
17 assist in developing and improving AI literacy.

18 (6) Augmenting existing curriculum to incor-
19 porate AI literacy where appropriate, including re-
20 sponsible use of AI in learning.

21 (7) Additional activities determined appropriate
22 by the Director.

23 (d) IMPLEMENTATION.—The Director may carry out
24 this section by making awards through new or existing
25 programs.

1 (e) DEFINITIONS.—In this section:

2 (1) AI.—The term “AI” has the meaning given
3 the term “artificial intelligence” in section 5002 of
4 the National Artificial Intelligence Initiative Act of
5 2020 (15 U.S.C. 9401).

6 (2) AI LITERACY.—The term “AI literacy”
7 means having the age-appropriate knowledge and
8 ability to use AI effectively, to critically interpret
9 outputs, to solve problems in an AI-enabled world,
10 and to safely and ethically use AI.

11 (3) DIRECTOR.—The term “Director” means
12 the Director of the National Science Foundation.

13 (4) INSTITUTION OF HIGHER EDUCATION.—The
14 term “institution of higher education” has the
15 meaning given such term in section 101 of the High-
16 er Education Act of 1965 (20 U.S.C. 1001).

17 (5) K–12 EDUCATION.—The term “K–12 edu-
18 cation” means elementary schools and secondary
19 schools, as such terms are defined in section 8101
20 of the Elementary and Secondary Education Act of
21 1965 (20 U.S.C. 7801).

1 **Subtitle D—Expanding AI Voices**
2 **Through Capacity Building**

3 **SEC. 631. EXPANDING CAPACITY IN ARTIFICIAL INTEL-**
4 **LIGENCE SCIENCE.**

5 Section 5401 of the National Artificial Intelligence
6 Initiative Act of 2020 (15 U.S.C. 9451) is amended by—

7 (1) redesignating subsection (g) as subsection
8 (h); and

9 (2) inserting after subsection (f) the following
10 new subsection:

11 “(g) EXPANDING CAPACITY IN ARTIFICIAL INTEL-
12 LIGENCE.—

13 “(1) IN GENERAL.—The Director of the Na-
14 tional Science Foundation, in consultation with
15 agency heads the Director considers appropriate,
16 shall make awards on a competitive, merit-reviewed
17 basis to eligible institutions of higher education spec-
18 ified in paragraph (2) or nonprofit organizations (or
19 consortia thereof) to broaden participation in artifi-
20 cial intelligence research, education, and workforce
21 development by increasing the ability of the United
22 States to increase capacity and partnerships for arti-
23 ficial intelligence research and development.

24 “(2) ELIGIBLE INSTITUTIONS OF HIGHER EDU-
25 CATION SPECIFIED.—An eligible institution of higher

1 education specified in this paragraph is any of the
2 following:

3 “(A) An institution of higher education,
4 that, according to the data published by the
5 National Center for Science and Engineering
6 Statistics, is not, on average, among the top
7 100 institutions in Federal research and devel-
8 opment expenditures during the 3-year period
9 prior to the year of the award concerned.

10 “(B) A historically Black college or univer-
11 sity.

12 “(C) A minority-serving institution.

13 “(D) A Tribal College or University.

14 “(E) A consortium of any of the entities
15 specified in subparagraphs (A) through (D).

16 “(3) COLLABORATIONS.—A consortium receiv-
17 ing an award under this subsection may include any
18 of the following:

19 “(A) Mutually beneficial partnerships with
20 institutions of higher education, nonprofit orga-
21 nizations, Federal agencies, State, territorial,
22 local, and Tribal governments, and private sec-
23 tor entities.

24 “(B) Developing partnerships with any of
25 the following:

1 “(i) Artificial intelligence research in-
2 stitutes under section 5201.

3 “(ii) Recipients of other relevant
4 awards made by the Director of the Na-
5 tional Science Foundation.

6 “(4) USE OF FUNDS.—In carrying out the ac-
7 tivities under this subsection, an eligible institution
8 of higher education or nonprofit organization (or
9 consortium thereof) shall carry out one or more of
10 the following:

11 “(A) Development or expansion of research
12 programs in artificial intelligence and related
13 disciplines.

14 “(B) Faculty recruitment and professional
15 development in artificial intelligence and related
16 disciplines.

17 “(C) Bridge programs focused on pre-
18 paring post-baccalaureate students for graduate
19 programs in artificial intelligence and related
20 disciplines.

21 “(D) Provide or broker access to research
22 resources, including computing resources, net-
23 working, data facilities, and software engineer-
24 ing support for artificial intelligence research
25 and development.

1 “(E) Community building activities to fos-
2 ter mutually beneficial public-private collabora-
3 tion with Federal research agencies, industry,
4 Federal laboratories, academia, and nonprofit
5 organizations.

6 “(F) Development and hosting of intra- or
7 inter-institutional workshops to broaden work-
8 force participation in artificial intelligence re-
9 search and development.

10 “(G) Activities to integrate ethical and re-
11 sponsible practices and principles into education
12 programs in artificial intelligence and related
13 disciplines.

14 “(H) Other activities necessary to build re-
15 search capacity, education pathways, and work-
16 force development pathways in artificial intel-
17 ligence and related disciplines.

18 “(5) OUTREACH.—The Director of the National
19 Science Foundation shall—

20 “(A) conduct outreach to eligible institu-
21 tions of higher education specified in paragraph
22 (2) and nonprofit organizations to apply for
23 awards under this subsection; and

24 “(B) engage participants from all regions
25 of the United States, especially individuals from

1 underserved communities and groups histori-
2 cally underrepresented in science, technology,
3 engineering, and mathematics.

4 “(6) DUPLICATION.—The Director of the Na-
5 tional Science Foundation shall ensure awards made
6 under this section are complimentary to, and not du-
7 plicative of, awards made under existing programs.

8 “(7) ADDITIONAL CONSIDERATIONS.—In mak-
9 ing awards under this subsection, the Director of the
10 National Science Foundation may also consider the
11 following:

12 “(A) The extent to which the eligible insti-
13 tutions of higher education specified in para-
14 graph (2) and nonprofit organizations applying
15 for such awards support students from diverse
16 backgrounds, including first-generation under-
17 graduate students.

18 “(B) The geographic diversity of such in-
19 stitutions and organizations.

20 “(C) Relative resource constraints of such
21 institutions and organizations.

22 “(8) DEFINITIONS.—In this subsection:

23 “(A) HISTORICALLY BLACK COLLEGE OR
24 UNIVERSITY.—The term ‘historically Black col-
25 lege or university’ has the meaning given the

1 term ‘part B institution’ in section 322 of the
2 Higher Education Act of 1965 (20 U.S.C.
3 1061).

4 “(B) MINORITY-SERVING INSTITUTION.—

5 The term ‘minority-serving institution’ means a
6 Hispanic-serving institution (as defined in sec-
7 tion 502 of the Higher Education Act of 1965
8 (20 U.S.C. 1101a)); an Alaska Native-serving
9 institution or Native Hawaiian-serving institu-
10 tion (as defined in section 317 of such Act (20
11 U.S.C. 1059d)); or a predominantly Black insti-
12 tution, Asian American and Native American
13 Pacific Islander-serving institution, or Native
14 American-serving nontribal institution (as de-
15 fined in section 371 of such Act (20 U.S.C.
16 1067q)).

17 “(C) NONPROFIT ORGANIZATION.—The

18 term ‘nonprofit organization’ means an organi-
19 zation described in subsection (c)(3) of section
20 501 of the Internal Revenue Code of 1986 and
21 exempt from tax under subsection (a) of such
22 section.

23 “(D) TRIBAL COLLEGE OR UNIVERSITY.—

24 The term ‘Tribal College or University’ has the
25 meaning given such term in section 316 of the

1 Higher Education Act of 1965 (20 U.S.C.
2 1059c).”.

3 **Subtitle E—NSF AI Education**

4 **SEC. 641. SCHOLARSHIPS AND FELLOWSHIPS IN ARTIFI-**
5 **CIAL INTELLIGENCE.**

6 Paragraph (2) of section 5401(e) of the National Ar-
7 tificial Intelligence Initiative Act of 2020 (15 U.S.C.
8 9451(e)) is amended—

9 (1) in the heading, by striking “FACULTY”; and

10 (2) by adding at the end the following new sub-
11 paragraphs:

12 “(D) STUDENT SCHOLARSHIPS AND FEL-
13 LOWSHIPS IN ARTIFICIAL INTELLIGENCE.—

14 “(i) IN GENERAL.—The Director of
15 the National Science Foundation may sup-
16 port scholarships and fellowships for un-
17 dergraduate and graduate students by
18 making awards through institutions of
19 higher education, including community col-
20 leges, to students who are enrolled in pro-
21 grams of study leading to degrees or con-
22 centrations in or related to the design, re-
23 search, assessment, development, deploy-
24 ment, integration, or application of artifi-
25 cial intelligence.

1 “(ii) CONSIDERATIONS.—In carrying
2 out clause (i), the Director of the National
3 Science Foundation may prioritize making
4 awards to students who are enrolled in
5 programs of study leading to degrees or
6 concentrations in or related to any of the
7 following:

8 “(I) The teaching of artificial in-
9 telligence at elementary schools, sec-
10 ondary schools, career and technical
11 education schools, institutions of high-
12 er education, or through other higher
13 education and professional education
14 programs.

15 “(II) Artificial intelligence and
16 advanced manufacturing, including
17 the integration of artificial intelligence
18 into advanced manufacturing oper-
19 ations.

20 “(III) Artificial intelligence and
21 agriculture, including the integration
22 of artificial intelligence into agricul-
23 tural operations, prediction, and deci-
24 sion making.

1 “(iii) AWARDS.—Scholarships and fel-
2 lowships awarded under this subparagraph
3 may be in the form of awards that cover
4 the cost of tuition, education-related fees, a
5 stipend, and professional development
6 funds for a period of up to five years. Such
7 scholarships and fellowships shall be paid
8 directly to the institution of higher edu-
9 cation in which the student is enrolled.

10 “(iv) OUTREACH.—The Director of
11 the National Science Foundation shall con-
12 duct outreach and encourage applications
13 from rural-located institutions of higher
14 education, rural-serving institutions of
15 higher education (as such term is defined
16 in section 861 of the Higher Education
17 Act of 1965 (20 U.S.C. 1161q)), Tribal
18 Colleges and Universities (as such term is
19 defined in section 316 of such Act (20
20 U.S.C. 1059c)), and institutions located in
21 an Established Program to Stimulate Com-
22 petitive Research (EPSCoR) jurisdiction.

23 “(v) METHOD.—The Director of the
24 National Science Foundation may carry

1 out this subparagraph by making awards
2 through new or existing programs.

3 “(E) ARTIFICIAL INTELLIGENCE PROFES-
4 SIONAL DEVELOPMENT FELLOWSHIPS.—

5 “(i) IN GENERAL.—The Director of
6 the National Science Foundation may sup-
7 port activities to promote the exchange of
8 ideas and encourage collaborations between
9 institutions of higher education and indus-
10 try partners in the field of artificial intel-
11 ligence, including through fellowships for
12 students, teachers, faculty, and industry
13 professionals.

14 “(ii) SUPPLEMENTALS FOR STUDENTS
15 AND FACULTY.—The Director of the Na-
16 tional Science Foundation may award fel-
17 lowships for students and faculty to pursue
18 professional development programs in
19 STEM fields that are administered by or
20 affiliated with institutions of higher edu-
21 cation, including community colleges, in
22 order to enable recipients to attain skills,
23 training, or education in partnership with
24 industry members on the design, research,
25 assessment, development, deployment, inte-

1 gration, or application of artificial intel-
2 ligence.

3 “(iii) FELLOWSHIPS FOR INDUSTRY
4 PROFESSIONALS.—The Director of the Na-
5 tional Science Foundation may award fel-
6 lowships to industry professionals to enable
7 recipients to seek short-term appointments
8 to instruct and educate students on the de-
9 sign, research, assessment, development,
10 deployment, integration, or application of
11 artificial intelligence.

12 “(iv) FELLOWSHIPS FOR SCHOOL
13 PROFESSIONALS.—The Director of the Na-
14 tional Science Foundation may award fel-
15 lowships to teachers, school counselors,
16 and other school professionals for profes-
17 sional development programs in order to
18 enable recipients to attain skills, training,
19 or education in partnership with industry
20 members on the teaching, use of, or appli-
21 cation of artificial intelligence in K–12
22 education settings.

23 “(v) AWARDS.—Awards made under
24 this subparagraph may be in the form of
25 awards that cover the cost of tuition, edu-

1 cation-related fees, a stipend, and profes-
2 sional development funds for up to one
3 year. Such awards shall be paid directly to
4 the institution of higher education that ad-
5 ministers, or is affiliated with, the program
6 in which the fellowship recipient is partici-
7 pating.

8 “(F) NATIONAL SCIENCE FOUNDATION
9 OUTREACH CAMPAIGN.—

10 “(i) IN GENERAL.—The Director of
11 the National Science Foundation may
12 carry out a nationwide outreach campaign
13 to students at elementary schools, sec-
14 ondary schools, career and technical edu-
15 cation schools, institutions of higher edu-
16 cation, or through other higher education
17 and professional education programs to in-
18 crease awareness regarding National
19 Science Foundation-funded artificial intel-
20 ligence education opportunities.

21 “(ii) PRIORITY.—In carrying out the
22 campaign described in clause (i), the Di-
23 rector of the National Science Foundation
24 may prioritize outreach to groups histori-

1 cally underrepresented in STEM, including
2 in underserved and rural areas.

3 “(G) ELIGIBILITY.—To be eligible to re-
4 ceive a scholarship or fellowship under this
5 paragraph, an individual shall satisfy all of the
6 following:

7 “(i) Be a citizen, national, or lawful
8 permanent resident of the United States.

9 “(ii) Demonstrate a commitment to a
10 career in advancing the field of artificial
11 intelligence.

12 “(iii) Accept the terms of such schol-
13 arship or fellowship, as the case may be.

14 “(H) REPORT.—

15 “(i) IN GENERAL.—Not later than
16 seven years after the date of the enactment
17 of this subparagraph, the Director of the
18 National Science Foundation shall submit
19 to Congress, and make widely available to
20 the public, a report including any rec-
21 ommendations for legislative action that
22 could optimize the effectiveness of the
23 scholarships and fellowships under this
24 paragraph.

1 “(ii) REPORT REQUIREMENTS.—In
2 preparing the report under clause (i), the
3 Director of the National Science Founda-
4 tion may, as practicable—

5 “(I) include an assessment of the
6 effectiveness of such scholarships and
7 fellowships in expanding apprentice-
8 ships, internships, and other applied
9 or experiential learning opportunities
10 offered by employers in conjunction
11 with community colleges or other in-
12 stitutions of higher education;

13 “(II) assess the number of stu-
14 dents who received such scholarships
15 and fellowships;

16 “(III) assess the percentage of
17 such students who successfully com-
18 plete their education programs and in-
19 tend to enter the workforce;

20 “(IV) assess the percentage of
21 undergraduate, graduate, and post-
22 doctoral students who enter the work-
23 force in a field relating to such a
24 scholarship or fellowship;

“(V) assess the impact in the number of K–12 teachers, school counselors, and other school professionals who received such a scholarship or fellowship; and

“(VI) include an assessment of the effects such scholarships and fellowships have on related fields.”.

SEC. 642. COMMUNITY COLLEGE AND AREA CAREER AND TECHNICAL EDUCATIONAL SCHOOL CENTERS OF AI EXCELLENCE.

(a) IN GENERAL.—Subparagraph (B) of section 5401(e)(3) of the National Artificial Intelligence Initiative Act of 2020 (15 U.S.C. 9451(e)(3)) is amended to read as follows:

“(B) CENTERS OF AI EXCELLENCE.—

“(i) DEFINITIONS.—In this subparagraph:

“(I) AREA CAREER AND TECHNICAL EDUCATION SCHOOL.—The term ‘area career and technical education school’ has the meaning given such term in section 3 of the Carl D. Perkins Career and Technical Education Act of 2006 (20 U.S.C. 2302).

1 “(II) ELIGIBLE APPLICANT.—

2 The term ‘eligible applicant’ means a
3 community college, or area career and
4 technical education school, in partner-
5 ship with one or more of the fol-
6 lowing:

7 “(aa) A Federal, State,
8 local, territorial, or Tribal gov-
9 ernment entity.

10 “(bb) An institution of high-
11 er education.

12 “(cc) An entity in private in-
13 dustry.

14 “(dd) An economic develop-
15 ment organization or venture de-
16 velopment organization.

17 “(ee) A labor or workforce
18 training organization, which may
19 include State workforce develop-
20 ment boards and local workforce
21 development boards as estab-
22 lished under sections 101 and
23 107 of the Workforce Innovation
24 and Opportunity Act (29 U.S.C.
25 3111 and 3122).

1 “(ff) A nonprofit organiza-
2 tion.

3 “(III) NONPROFIT ORGANIZA-
4 TION.—The term ‘nonprofit organiza-
5 tion’ has the meaning given such term
6 in section 201 of title 35, United
7 States Code.

8 “(IV) VENTURE DEVELOPMENT
9 ORGANIZATION.—The term ‘venture
10 development organization’ has the
11 meaning given such term in section 27
12 of the Stevenson-Wydler Technology
13 Innovation Act of 1980 (15 U.S.C.
14 3722).

15 “(ii) ESTABLISHMENT OF CENTERS
16 OF AI EXCELLENCE.—The Director of the
17 National Science Foundation, in coordina-
18 tion with the Regional Technology and In-
19 novation Hub program of the Department
20 of Commerce, and leveraging the Regional
21 Innovation Engines, the Advanced Techno-
22 logical Education program, and other pro-
23 grams of the National Science Foundation,
24 shall establish up to eight regionally and
25 geographically diverse eligible applicants to

1 be designated as Community College and
2 Area Career and Technical Education Cen-
3 ters of AI Excellence (referred to in this
4 subparagraph as ‘Centers of AI Excel-
5 lence’). Such Centers of AI Excellence
6 shall enhance educational outcomes and
7 drive workforce development by integrating
8 artificial intelligence into teaching, learn-
9 ing, and community engagement.

10 “(iii) APPLICATION.—An eligible ap-
11 plicant seeking to be designated as a Cen-
12 ter of AI Excellence shall submit to the Di-
13 rector of the National Science Foundation
14 an application at such time, in such man-
15 ner, and containing such information as
16 the Director may require. Such application
17 shall include the following:

18 “(I) A description of the focus
19 area or areas for such proposed Cen-
20 ter of AI Excellence and how such
21 area or areas are aligned with re-
22 gional investments made by industry
23 and the Federal Government.

24 “(II) A description of the capac-
25 ity of such applicant to carry out the

1 purpose of such proposed Center of
2 AI Excellence.

3 “(III) A description of current
4 and anticipated future workforce de-
5 mands in occupations directly related
6 to such proposed Center of AI Excel-
7 lence.

8 “(IV) A description of how such
9 applicant will support the collection of
10 information and data for evaluating
11 such proposed Center of AI Excel-
12 lence.

13 “(V) Outreach plans for recruit-
14 ing and enrolling women and other
15 underrepresented populations.

16 “(VI) An evaluation plan that in-
17 cludes the use of outcome-oriented
18 measures to assess the impact and ef-
19 ficacy of such proposed Center for AI
20 Excellence.

21 “(iv) ACTIVITIES.—A Center of AI
22 Excellence shall develop and disseminate
23 information regarding best practices for
24 matters such as the following:

1 “(I) Artificial intelligence re-
2 search and education at community
3 colleges and area career and technical
4 education schools.

5 “(II) Methods to scale up suc-
6 cessful programs that perform re-
7 search or provide education on artifi-
8 cial intelligence at community colleges
9 and area career and technical edu-
10 cation schools.

11 “(III) Providing educators and
12 teachers with actionable strategies
13 and resources to effectively integrate
14 artificial intelligence into curriculums
15 in the classroom.

16 “(IV) Providing hands-on re-
17 search opportunities on artificial intel-
18 ligence and learning opportunities for
19 students that are enabled through ar-
20 tificial intelligence.

21 “(V) Identifying pathways for
22 students to jobs that are enabled by
23 artificial intelligence.

24 “(VI) Facilitating partnerships
25 with employers, employer consortia, or

1 other private sector organizations that
2 offer apprenticeships, internships, co-
3 operative education, or applied learn-
4 ing experiences in the field of artificial
5 intelligence.

6 “(v) PARTNERSHIPS.—The Director
7 of the National Science Foundation shall
8 encourage applicants to consider including
9 or partnering with a nonprofit organization
10 or an institution of higher education (or a
11 consortium thereof) that has extensive ex-
12 perience and expertise in artificial intel-
13 ligence.

14 “(vi) ACCOUNTABILITY AND DISSEMI-
15 NATION.—

16 “(I) EVALUATION REQUIRED.—

17 The Director of the National Science
18 Foundation shall evaluate the activi-
19 ties under clause (iv). Such evalua-
20 tion, to the extent practicable, shall
21 integrate the findings of research re-
22 sulting from such activity or activities
23 as a result of a designation under
24 clause (ii) with the findings of other

1 research on artificial intelligence edu-
2 cation.

3 “(II) REPORT ON EVALUA-
4 TION.—Not later than 180 days after
5 the completion of the evaluation under
6 subclause (I), the Director of the Na-
7 tional Science Foundation shall sub-
8 mit to Congress and make widely
9 available to the public a report that
10 includes the following:

11 “(aa) The results of such
12 evaluation.

13 “(bb) Any recommendations
14 for administrative and legislative
15 action that could optimize the ef-
16 fectiveness of the designations
17 under clause (ii).”.

18 **SEC. 643. AWARDS FOR RESEARCH ON ARTIFICIAL INTEL-**
19 **LIGENCE IN EDUCATION.**

20 (a) IN GENERAL.—Section 5401 of the National Ar-
21 tificial Intelligence Initiative Act of 2020 (15 U.S.C.
22 9451), as amended by section 631, is further amended—

23 (1) by redesignating subsection (h) as sub-
24 section (j); and

1 (2) by inserting after subsection (g) the fol-
2 lowing new subsections:

3 “(h) AWARDS FOR RESEARCH ON ARTIFICIAL INTEL-
4 LIGENCE IN EDUCATION.—

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

6 “(A) ELIGIBLE ENTITY.—The term ‘eligi-
7 ble entity’ means any of the following:

8 “(i) An institution of higher edu-
9 cation.

10 “(ii) A nonprofit organization.

11 “(iii) A consortium of one or more in-
12 stitutions of higher education or nonprofit
13 organizations and one or more private sec-
14 tor entities.

15 “(B) NONPROFIT ORGANIZATION.—The
16 term ‘nonprofit organization’ has the meaning
17 given such term in section 201 of title 35,
18 United States Code.

19 “(2) AWARDS.—

20 “(A) IN GENERAL.—The Director of the
21 National Science Foundation may make awards
22 on a competitive, merit-reviewed basis to eligible
23 entities, to enable such entities to promote re-
24 search regarding teaching models, tools, and
25 materials for artificial intelligence and its inte-

1 gration into the classroom, teaching, and learn-
2 ing for pre-kindergarten through grade 12 stu-
3 dents who are from low-income, rural, or Tribal
4 populations.

5 “(B) METHOD.—The Director of the Na-
6 tional Science Foundation may carry out sub-
7 paragraph (A) by making awards through new
8 or existing programs.

9 “(3) APPLICATION.—

10 “(A) IN GENERAL.—An eligible entity that
11 seeks an award under this subsection shall sub-
12 mit to the Director of the National Science
13 Foundation an application at such time, in such
14 manner, and containing such information as the
15 Director may require.

16 “(B) CONTENTS.—An application under
17 subparagraph (A) may include the following:

18 “(i) A description of the student de-
19 mographics on which the research sup-
20 ported under the award at issue would in-
21 tend to focus.

22 “(ii) A description of any regional
23 partnerships the eligible entity plans to
24 utilize with respect to such award.

1 “(iii) With respect to an application
2 that concerns the use or integration of ar-
3 tificial intelligence, a description of poten-
4 tial ethical concerns and implications of
5 teacher, faculty, and student interactions
6 with artificial intelligence.

7 “(iv) A description of how proposed
8 research on teaching models, tools, and
9 materials was developed in consultation
10 with other educators, academia, industry,
11 government entities, or civil society organi-
12 zations.

13 “(v) Such other information as the
14 Director may require.

15 “(4) USE OF AWARD FUNDS.—Awards de-
16 scribed in paragraph (2)(A) shall be used by the re-
17 cipient to—

18 “(A) emphasize preparing incoming K–12
19 teachers to integrate artificial intelligence into
20 their classrooms in innovative ways; and

21 “(B) support research to develop, pilot,
22 fully implement, or test areas, such as—

23 “(i) instructional materials and high-
24 quality learning opportunities for teaching
25 artificial intelligence;

1 “(ii) models for the preparation of
2 new teachers who will teach artificial intel-
3 ligence;

4 “(iii) scalable models of professional
5 development and ongoing support for
6 teachers; and

7 “(iv) tools and models for teaching
8 and learning aimed at supporting student
9 success and inclusion in artificial intel-
10 ligence across diverse populations, includ-
11 ing low-income, rural, and Tribal popu-
12 lations.

13 “(5) PARTNERSHIPS.—In making awards under
14 this subsection, the Director of the National Science
15 Foundation shall carry out the following:

16 “(A) Encourage applicants that, for the
17 purpose of the proposed activity or activities
18 funded through such award, include or partner
19 with a nonprofit organization or an institution
20 of higher education (or a consortium thereof)
21 that has extensive experience and expertise in
22 integrating artificial intelligence into K–12
23 classrooms.

24 “(B) Encourage applicants that, for the
25 purpose of such proposed activity or activities,

1 include or partner with a consortium of schools,
2 institutions of higher education, school districts,
3 or other State and local government entities.

4 “(C) Encourage applicants that, for the
5 purpose of such proposed activity or activities,
6 include commitments from school principals,
7 other school leaders, or administrators to make
8 a priority reforms and activities proposed by
9 the applicant.

10 “(i) RURAL AND UNDERSERVED COMMUNITIES AR-
11 TIFICIAL INTELLIGENCE COLLABORATIVE.—

12 “(1) IN GENERAL.—The Director of the Na-
13 tional Science Foundation may establish a pilot pro-
14 gram of regional cohorts in rural and traditionally
15 underserved areas that will provide peer support,
16 mentoring, and hands-on research experiences for
17 educators, principals, and other school leaders of
18 students in kindergarten through grade 12, in order
19 to build a network allowing educators, principals,
20 other school leaders to carry out the following:

21 “(A) Engage with one another on edu-
22 cational efforts related to teaching and using
23 artificial intelligence.

1 “(B) Interact with researchers, academia,
2 and local industry involved in artificial intel-
3 ligence.

4 “(2) METHOD.—The Director of the National
5 Science Foundation may carry out this subsection by
6 making awards through new or existing programs,
7 including the pilot program authorized under section
8 10511(a)(2)(B) of the Research and Development,
9 Competition, and Innovation Act (42 U.S.C.
10 19172(a)(2)(B)).”.

11 **SEC. 644. NATIONAL STEM TEACHER CORPS.**

12 Paragraph (6) of section 10311(c) of the Research
13 and Development, Competition, and Innovation Act (42
14 U.S.C. 18991(c)) is amended—

15 (1) in subparagraph (F), by striking “and”
16 after the semicolon;

17 (2) in subparagraph (G), by striking the period
18 at the end and inserting a semicolon; and

19 (3) by adding at the end the following new sub-
20 paragraphs:

21 “(H) incorporating artificial intelligence
22 skills development into the National STEM
23 Teacher Corps; and

24 “(I) considering whether to develop artifi-
25 cial intelligence best practices for high school

- 1 teachers, developed in consultation with other
- 2 educators and academia.”.

