

118TH CONGRESS
2D SESSION

H. R. 9402

To support National Science Foundation education and professional development relating to artificial intelligence, and for other purposes.

IN THE HOUSE OF REPRESENTATIVES

AUGUST 23, 2024

Mr. FONG (for himself and Ms. SALINAS) introduced the following bill; which was referred to the Committee on Science, Space, and Technology

A BILL

To support National Science Foundation education and professional development 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.**

4 This Act may be cited as the “NSF AI Education
5 Act of 2024”.

6 **SEC. 2. SCHOLARSHIPS AND FELLOWSHIPS IN ARTIFICIAL**
7 **INTELLIGENCE.**

8 Paragraph (2) of section 5401(e) of the National Ar-
9 tificial Intelligence Initiative Act of 2020 (15 U.S.C.
10 9451(e); enacted as part of title LIV of division E of the

1 William M. (Mac) Thornberry National Defense Author-
2 ization Act for Fiscal Year 2021 (Public Law 116–283))
3 is amended—

4 (1) in the heading, by striking “FACULTY”; and
5 (2) by adding at the end the following new sub-
6 paragraphs:

7 “(D) STUDENT SCHOLARSHIPS AND FEL-
8 LOWSHIPS IN ARTIFICIAL INTELLIGENCE.—

9 “(i) IN GENERAL.—The Director of
10 the National Science Foundation may sup-
11 port scholarships and fellowships for un-
12 dergraduate and graduate students by
13 making awards through institutions of
14 higher education, including community col-
15 leges, to students who are enrolled in pro-
16 grams of study leading to degrees or con-
17 centrations in or related to the design, re-
18 search, assessment, development, deploy-
19 ment, integration, or application of artifi-
20 cial intelligence.

21 “(ii) CONSIDERATIONS.—In carrying
22 out clause (i), the Director of the National
23 Science Foundation may prioritize making
24 awards to students who are enrolled in
25 programs of study leading to degrees or

1 concentrations in or related to any of the
2 following:

3 “(I) The teaching of artificial in-
4 telligence at elementary schools, sec-
5 ondary schools, career and technical
6 education schools, institutions of high-
7 er education, or through other higher
8 education and professional education
9 programs.

10 “(II) Artificial intelligence and
11 advanced manufacturing, including
12 the integration of artificial intelligence
13 into advanced manufacturing oper-
14 ations.

15 “(III) Artificial intelligence and
16 agriculture, including the integration
17 of artificial intelligence into agricul-
18 tural operations, prediction, and deci-
19 sion making.

20 “(iii) AWARDS.—Scholarships and fel-
21 lowships awarded under this subparagraph
22 may be in the form of awards that may
23 cover the cost of tuition, education-related
24 fees, a stipend, and professional develop-
25 ment funds for a period of up to five years.

1 Such scholarships and fellowships shall be
2 paid directly to the institution of higher
3 education in which the student is enrolled.

4 “(iv) OUTREACH.—The Director of
5 the National Science Foundation shall con-
6 duct outreach and encourage applications
7 from rural-located institutions of higher
8 education, rural-serving institutions of
9 higher education, Tribal Colleges or Uni-
10 versities, and institutions located in an Es-
11 tablished Program to Stimulate Competi-
12 tive Research (EPSCoR) jurisdiction.

13 “(v) METHOD.—The Director of the
14 National Science Foundation may carry
15 out this subparagraph by making awards
16 through new or existing programs.

17 “(E) ARTIFICIAL INTELLIGENCE PROFES-
18 SIONAL DEVELOPMENT FELLOWSHIPS.—

19 “(i) IN GENERAL.—The Director of
20 the National Science Foundation may sup-
21 port activities to promote the exchange of
22 ideas and encourage collaborations between
23 institutions of higher education and indus-
24 try partners in the field of artificial intel-
25 ligence, including through fellowships for

1 students, teachers, faculty, and industry
2 professionals.

3 “(ii) SUPPLEMENTALS FOR STUDENTS
4 AND FACULTY.—The Director of the Na-
5 tional Science Foundation may award fel-
6 lowships for students and faculty to pursue
7 professional development programs in
8 STEM fields that are administered by or
9 affiliated with institutions of higher edu-
10 cation, including community colleges, in
11 order to enable recipients to attain skills,
12 training, or education in partnership with
13 industry members on the design, research,
14 assessment, development, deployment, inte-
15 gration, or application of artificial intel-
16 ligence.

17 “(iii) FELLOWSHIPS FOR INDUSTRY
18 PROFESSIONALS.—The Director of the Na-
19 tional Science Foundation may award fel-
20 lowships to industry professionals to enable
21 recipients to seek short-term appointments
22 to instruct and educate students on the de-
23 sign, research, assessment, development,
24 deployment, integration, or application of
25 artificial intelligence.

1 “(iv) FELLOWSHIPS FOR SCHOOL
2 PROFESSIONALS.—The Director of the Na-
3 tional Science Foundation may award fel-
4 lowships to teachers, school counselors,
5 and other school professionals for profes-
6 sional development programs in order to
7 enable recipients to attain skills, training,
8 or education in partnership with industry
9 members on the teaching, use of, or appli-
10 cation of artificial intelligence in K–12 set-
11 tings.

12 “(v) AWARDS.—Awards made under
13 this subparagraph may be in the form of
14 an award that covers the cost of tuition,
15 education-related fees, a stipend, and pro-
16 fessional development funds for up to one
17 year. Such awards shall be paid directly to
18 the institution of higher education that ad-
19 ministers, or is affiliated with, the program
20 in which the fellowship recipient is partici-
21 pating.

22 “(F) NATIONAL SCIENCE FOUNDATION
23 OUTREACH CAMPAIGN.—

24 “(i) IN GENERAL.—The Director of
25 the National Science Foundation may

1 carry out a nationwide outreach campaign
2 to students at elementary schools, sec-
3 ondary schools, career and technical edu-
4 cation schools, institutions of higher edu-
5 cation, or through other higher education
6 and professional education programs to in-
7 crease awareness regarding National
8 Science Foundation-funded artificial intel-
9 ligence education opportunities.

10 “(ii) PRIORITY.—In carrying out the
11 campaign described in clause (i), the Di-
12 rector of the National Science Foundation
13 may prioritize outreach to groups histori-
14 cally underrepresented in STEM, including
15 in underserved and rural areas.

16 “(G) ELIGIBILITY.—To be eligible to re-
17 ceive a scholarship or fellowship under this
18 paragraph, an individual shall satisfy all of the
19 following:

20 “(i) Be a citizen, national, or lawful
21 permanent resident of the United States.

22 “(ii) Demonstrate a commitment to a
23 career in advancing the field of artificial
24 intelligence.

1 “(iii) Accept the terms of a fellow-
2 ships under this subparagraph.

3 “(H) REPORTS.—

4 “(i) IN GENERAL.—Not later than
5 seven years after the date of the enactment
6 of this subparagraph, the Director of the
7 National Science Foundation shall submit
8 to Congress, and make widely available to
9 the public, a report including any rec-
10 ommendations for legislative action that
11 could optimize the effectiveness of the
12 scholarships and fellowships under this
13 paragraph.

14 “(ii) REPORT REQUIREMENTS.—In
15 preparing the reports under clause (i), the
16 Director of the National Science Founda-
17 tion may, as practicable—

18 “(I) include an assessment of the
19 effectiveness of such scholarships and
20 fellowships in expanding apprentice-
21 ships, internships, and other applied
22 or experiential learning opportunities
23 offered by employers in conjunction
24 with community colleges or other in-
25 stitutions of higher education;

1 “(II) assess the number of stu-
2 dents who received such scholarships
3 and fellowship;

4 “(III) assess the percentage of
5 such students who successfully com-
6 plete their education programs and
7 who intend to enter the workforce;

8 “(IV) assess the percentage of
9 undergraduate, graduate, and post-
10 doctoral students who enter the work-
11 force in a field relating to such schol-
12 arship or fellowship;

13 “(V) assess the impact in the
14 number of K–12 teachers, school
15 counselors, and other school profes-
16 sionals who received such scholarships
17 or fellowships; and

18 “(VI) include an assessment of
19 the effects such scholarships and fel-
20 lowships have on related fields.”.

21 **SEC. 3. COMMUNITY COLLEGE AND AREA CAREER AND**
22 **TECHNICAL EDUCATIONAL SCHOOL CENTERS**
23 **OF ARTIFICIAL INTELLIGENCE EXCELLENCE.**

24 (a) IN GENERAL.—Subparagraph (B) of section
25 5401(e)(3) of the National Artificial Intelligence Initiative

1 Act of 2020 (15 U.S.C. 9451(e)(3); enacted as part of
2 title LIV of division E of the William M. (Mac) Thorn-
3 berry National Defense Authorization Act for Fiscal Year
4 2021 (Public Law 116–283)) is amended to read as fol-
5 lows:

6 “(B) CENTERS OF AI EXCELLENCE.—

7 “(i) DEFINITIONS.—In this subpara-
8 graph:

9 “(I) AREA CAREER AND TECH-
10 NICAL EDUCATION SCHOOL.—The
11 term ‘area career and technical edu-
12 cation school’ has the meaning given
13 such term in section 3 of the Carl D.
14 Perkins Career and Technical Edu-
15 cation Act of 2006 (20 U.S.C. 2302).

16 “(II) ELIGIBLE APPLICANT.—
17 The term ‘eligible applicant’ means a
18 community college, or area career and
19 technical education school, in partner-
20 ship with one or more of the fol-
21 lowing:

22 “(aa) A Federal, State,
23 local, territorial, or Tribal gov-
24 ernment entity.

1 “(bb) An institution of high-
2 er education.

3 “(cc) An entity in private in-
4 dustry.

5 “(dd) An economic develop-
6 ment organization or venture de-
7 velopment organization.

8 “(ee) A labor or workforce
9 training organization, which may
10 include State workforce develop-
11 ment boards and local workforce
12 development boards as estab-
13 lished under sections 101 and
14 107 of the Workforce Investment
15 and Opportunity Act (29 U.S.C.
16 3111 and 3122).

17 “(ff) A nonprofit organiza-
18 tion.

19 “(III) LABOR ORGANIZATION.—
20 The term ‘labor organization’ has the
21 meaning given such term in section
22 2(5) of the National Labor Relations
23 Act (29 U.S.C. 152(5)), except that
24 such term shall also include the fol-
25 lowing:

1 “(aa) Any organization com-
2 posed of labor organizations,
3 such as a labor union federation
4 or a State or municipal labor
5 body.

6 “(bb) Any organization that
7 would be included in the defini-
8 tion for such term in such section
9 2(5) but for the fact that the or-
10 ganization represents any of the
11 following:

12 “(AA) An individual
13 employed by the United
14 States, any wholly owned
15 Government corporation,
16 any Federal Reserve Bank,
17 or any State or political sub-
18 division thereof.

19 “(BB) An individual
20 employed by persons subject
21 to the Railway Labor Act
22 (45 U.S.C. 151 et seq.).

23 “(CC) An individual
24 employed as agricultural la-
25 borers.

1 “(IV) VENTURE DEVELOPMENT
2 ORGANIZATION.—The term ‘venture
3 development organization’ has the
4 meaning given such term in section
5 27(a) of the Stevenson-Wydler Tech-
6 nology Innovation Act of 1980 (15
7 U.S.C. 3722(a)).

8 “(ii) ESTABLISHMENT OF CENTERS
9 OF AI EXCELLENCE.—The Director of the
10 National Science Foundation, in coordina-
11 tion with the Regional Technology Hubs
12 program of the Department of Commerce,
13 and leveraging the Regional Innovation
14 Engines, the Advanced Technical Edu-
15 cation program, and other programs of the
16 National Science Foundation, subject to
17 the availability of appropriations, shall es-
18 tablish up to eight regionally and geo-
19 graphically diverse eligible applicants to be
20 designated as Community College and
21 Area Career and Technical Education Cen-
22 ters of AI Excellence (referred to in this
23 subparagraph as ‘Centers of AI Excel-
24 lence’). Such Centers of AI Excellence
25 shall enhance educational outcomes and

1 drive workforce development by integrating
2 artificial intelligence into teaching, learn-
3 ing, and community engagement.

4 “(iii) APPLICATION.—An eligible ap-
5 plicant seeking to be designated as a Cen-
6 ter of AI Excellence under this subpara-
7 graph shall submit to the Director of the
8 National Science Foundation an applica-
9 tion at such time, in such manner, and
10 containing such information as the Direc-
11 tor may require. Such application shall in-
12 clude the following:

13 “(I) A description of the focus
14 area or areas for such proposed Cen-
15 ter of AI Excellence and how such
16 area or areas are aligned with re-
17 gional investments made by industry
18 and the Federal Government.

19 “(II) A description of the capac-
20 ity of the applicant to carry out the
21 purpose of such proposed Center of
22 AI Excellence.

23 “(III) A description of dem-
24 onstrate current and anticipated fu-
25 ture workforce demands in occupa-

1 tions directly related to such proposed
2 Center of AI Excellence.

3 “(IV) A description of how the
4 eligible applicant will support the col-
5 lection of information and data for
6 purposes of evaluation of such pro-
7 posed Center of AI Excellence.

8 “(V) Outreach plans for recruit-
9 ing and enrolling women and other
10 underrepresented populations.

11 “(VI) An evaluation plan that in-
12 cludes the use of outcome-oriented
13 measures to assess the impact and ef-
14 ficacy of such proposed Center for AI
15 Excellence.

16 “(iv) ACTIVITIES.—A designated Cen-
17 ter of AI Excellence shall develop and dis-
18 seminate information regarding best prac-
19 tices for matters such as the following:

20 “(I) Artificial intelligence re-
21 search and education at community
22 colleges and area career and technical
23 education schools.

24 “(II) Methods to scale up suc-
25 cessful programs that perform re-

1 search or provide education on artifi-
2 cial intelligence at community colleges
3 and area career and technical edu-
4 cation schools.

5 “(III) Providing educators and
6 teachers with actionable strategies
7 and resources to effectively integrate
8 artificial intelligence into curriculums
9 in the classroom.

10 “(IV) Providing hands-on re-
11 search opportunities on artificial intel-
12 ligence and learning opportunities for
13 students that are enabled through ar-
14 tificial intelligence.

15 “(V) Identifying pathways for
16 students to jobs that are enabled by
17 artificial intelligence.

18 “(VI) Facilitating partnerships
19 with employers, employer consortia, or
20 other private sector organizations that
21 offer apprenticeships, internships, co-
22 operative education, or applied learn-
23 ing experiences in the field of artificial
24 intelligence.

1 “(v) PARTNERSHIPS.—The Director
2 of the National Science Foundation shall
3 encourage applicants to consider including
4 or partnering with a nonprofit organization
5 or an institution of higher education (or a
6 consortium thereof) that has extensive ex-
7 perience and expertise in artificial intel-
8 ligence.

9 “(vii) EVALUATIONS.—All applications
10 for designation under clause (ii) shall in-
11 clude an evaluation plan that includes the
12 use of outcome-oriented measures to assess
13 the impact and efficacy of the proposed
14 Center for AI Excellence.

15 “(viii) ACCOUNTABILITY AND DIS-
16 SEMINATION.—

17 “(I) EVALUATION REQUIRED.—

18 The Director of the National Science
19 Foundation shall evaluate the activi-
20 ties under clause (iv). Such evalua-
21 tion, to the extent practicable, shall
22 integrate the findings of research re-
23 sulting from such activity or activities
24 as a result of a designation under
25 clause (ii) with the findings of other

1 research on artificial intelligence edu-
2 cation.

3 “(II) REPORT ON EVALUA-
4 TIONS.—Not later than 180 days
5 after the completion of the evaluation
6 under subclause (I), the Director of
7 the National Science Foundation shall
8 submit 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 made under clause (ii).”.

18 **SEC. 4. 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. 9451;
22 enacted as part of title LIV of division E of the William
23 M. (Mac) Thornberry National Defense Authorization Act
24 for Fiscal Year 2021 (Public Law 116–283)) is amend-
25 ed—

1 (1) by redesignating subsection (g) as sub-
2 section (i); and

3 (2) by inserting after subsection (f) the fol-
4 lowing new subsections:

5 “(g) AWARDS FOR RESEARCH ON ARTIFICIAL INTEL-
6 LIGENCE IN EDUCATION.—

7 “(1) ELIGIBLE ENTITY DEFINED.—In this sub-
8 section, the term ‘eligible entity’ means any of the
9 following:

10 “(A) An institution of higher education.

11 “(B) A nonprofit organization.

12 “(C) A consortium of one or more institu-
13 tions of higher education or nonprofit organiza-
14 tions and one or more private sector entities.

15 “(2) AWARDS.—

16 “(A) IN GENERAL.—The Director of the
17 National Science Foundation may make
18 awards, on a competitive, merit-reviewed basis,
19 to eligible entities, to enable such eligible enti-
20 ties to promote research regarding teaching
21 models, tools, and materials for artificial intel-
22 ligence and its integration into the classroom,
23 teaching, and learning for pre-kindergarten
24 through grade 12 students who are from low-in-
25 come, rural, or Tribal populations.

1 “(B) METHOD.—The Director of the Na-
2 tional Science Foundation may carry out sub-
3 paragraph (A) by making awards through new
4 or existing programs.

5 “(3) APPLICATION.—

6 “(A) IN GENERAL.—An eligible entity that
7 desires to receive an award under this sub-
8 section shall submit to the Director of the Na-
9 tional Science Foundation an application at
10 such time, in such manner, and containing such
11 information as the Director may require.

12 “(B) CONTENTS.—An application under
13 subparagraph (A) may include the following:

14 “(i) A description of the student de-
15 mographics on which the research sup-
16 ported under the award intends to focus.

17 “(ii) A description of any regional
18 partnerships the eligible entity plans to
19 utilize to carry out the award.

20 “(iii) With respect to an application
21 that concerns the use or integration of ar-
22 tificial intelligence, a description of poten-
23 tial ethical concerns and implications of
24 teacher, faculty, and student interactions
25 with artificial intelligence.

1 “(iv) A description of how proposed
2 research on teaching models, tools, and
3 materials were developed in consultation
4 with other educators, academia, industry,
5 government entities, or civil society organi-
6 zations.

7 “(v) Such other information as the
8 Director may require.

9 “(4) USE OF AWARD FUNDS.—Awards de-
10 scribed in paragraph (2)(A) shall be used by the re-
11 cipient to—

12 “(A) emphasize preparing incoming K–12
13 teachers to integrate artificial intelligence into
14 their classrooms in innovative ways; and

15 “(B) support research to develop, pilot,
16 fully implement, or test areas, such as—

17 “(i) instructional materials and high-
18 quality learning opportunities for teaching
19 artificial intelligence;

20 “(ii) models for the preparation of
21 new teachers who will teach artificial intel-
22 ligence;

23 “(iii) scalable models of professional
24 development and ongoing support for
25 teachers; and

1 “(iv) tools and models for teaching
2 and learning aimed at supporting student
3 success and inclusion in artificial intel-
4 ligence across diverse populations, includ-
5 ing low-income, rural, and Tribal popu-
6 lations.

7 “(5) PARTNERSHIPS.—In making awards under
8 this subsection, the Director of the National Science
9 Foundation shall carry out the following:

10 “(A) Encourage applicants which, for the
11 purpose of the proposed activity or activities
12 funded through such award, include or partner
13 with a nonprofit organization or an institution
14 of higher education (or a consortium thereof)
15 that has extensive experience and expertise in
16 integrating artificial intelligence into K–12
17 classrooms.

18 “(B) Encourage applicants which, for the
19 purpose of such proposed activity or activities
20 funded through such award, include or partner
21 with a consortium of schools, institutions of
22 higher education, school districts, or other State
23 and local government entities.

24 “(C) Encourage applicants which, for the
25 purpose of such proposed activity or activities

1 funded through such award, include commit-
2 ments from school principals, other school lead-
3 ers, or administrators to make a priority re-
4 forms and activities proposed by the applicant.

5 “(h) RURAL AND UNDERSERVED COMMUNITIES AR-
6 TIFICIAL INTELLIGENCE COLLABORATIVE.—

7 “(1) IN GENERAL.—The Director of the Na-
8 tional Science Foundation may establish a pilot pro-
9 gram of regional cohorts in rural and traditionally
10 underserved areas that will provide peer support,
11 mentoring, and hands-on research experiences for
12 educators, principals, and other school leaders of
13 students in kindergarten through grade 12, in order
14 to build a network allowing educators, principals,
15 other school leaders to carry out the following:

16 “(A) Engage with one another on edu-
17 cational efforts related to teaching and using
18 artificial intelligence.

19 “(B) Interact with researchers, academia,
20 and local industry involved in artificial intel-
21 ligence.

22 “(2) METHOD.—The Director of the National
23 Science Foundation may carry out this subsection by
24 making awards through new or existing programs,
25 including the pilot program authorized under section

1 10511(a)(2)(B) of the Research and Development,
2 Competition, and Innovation Act (42 U.S.C. 19172;
3 enacted as part of title V of division B of Public
4 Law 117–167).”.

5 **SEC. 5. NATIONAL STEM TEACHERS CORPS.**

6 Paragraph (6) of section 10311(c) of the Research
7 and Development, Competition, and Innovation Act (42
8 U.S.C. 18991(e); enacted as part of title III of division
9 B of Public Law 116–117) is amended—

10 (1) in subparagraph (F), by striking “and”
11 after the semicolon;

12 (2) in subparagraph (G), by striking the period
13 at the end and inserting “; and”; and

14 (3) by adding at the end the following new sub-
15 paragraph:

16 “(H) incorporating artificial intelligence
17 skills development into the National STEM
18 Teacher Corps, including consideration of the
19 development of artificial intelligence best prac-
20 tices for high school teachers, developed in con-
21 sultation with other educators and academia.”.

○