I

118TH CONGRESS
2D SESSION

# H. R. 9402

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

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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

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# A BILL

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

*Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,*

**SECTION 1. SHORT TITLE.**

This Act may be cited as the ''NSF AI Education Act of 2024''.

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

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

William M. (Mac) Thornberry National Defense Authorization Act for Fiscal Year 2021 (Public Law 116–283)) is amended—

(1) in the heading, by striking ''FACULTY''; and

(2) by adding at the end the following new subparagraphs:

''(D) STUDENT SCHOLARSHIPS AND FELLOWSHIPS IN ARTIFICIAL INTELLIGENCE.—

''(i) IN GENERAL.—The Director of the National Science Foundation may support scholarships and fellowships for undergraduate and graduate students by making awards through institutions of higher education, including community colleges, to students who are enrolled in programs of study leading to degrees or concentrations in or related to the design, research, assessment, development, deployment, integration, or application of artificial intelligence.

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

concentrations in or related to any of the following:

"(I) The teaching of artificial intelligence at elementary schools, secondary schools, career and technical education schools, institutions of higher education, or through other higher education and professional education programs.

"(II) Artificial intelligence and advanced manufacturing, including the integration of artificial intelligence into advanced manufacturing operations.

"(III) Artificial intelligence and agriculture, including the integration of artificial intelligence into agricultural operations, prediction, and decision making.

"(iii) AWARDS.—Scholarships and fellowships awarded under this subparagraph may be in the form of awards that may cover the cost of tuition, education-related fees, a stipend, and professional development funds for a period of up to five years.

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

''(iv) OUTREACH.—The Director of the National Science Foundation shall conduct outreach and encourage applications from rural-located institutions of higher education, rural-serving institutions of higher education, Tribal Colleges or Universities, and institutions located in an Established Program to Stimulate Competitive Research (EPSCoR) jurisdiction.

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

''(E) ARTIFICIAL INTELLIGENCE PROFESSIONAL DEVELOPMENT FELLOWSHIPS.—

''(i) IN GENERAL.—The Director of the National Science Foundation may support activities to promote the exchange of ideas and encourage collaborations between institutions of higher education and industry partners in the field of artificial intelligence, including through fellowships for

students, teachers, faculty, and industry professionals.

''(ii) SUPPLEMENTALS FOR STUDENTS AND FACULTY.—The Director of the National Science Foundation may award fellowships for students and faculty to pursue professional development programs in STEM fields that are administered by or affiliated with institutions of higher education, including community colleges, in order to enable recipients to attain skills, training, or education in partnership with industry members on the design, research, assessment, development, deployment, integration, or application of artificial intelligence.

''(iii) FELLOWSHIPS FOR INDUSTRY PROFESSIONALS.—The Director of the National Science Foundation may award fellowships to industry professionals to enable recipients to seek short-term appointments to instruct and educate students on the design, research, assessment, development, deployment, integration, or application of artificial intelligence.

''(iv) FELLOWSHIPS FOR SCHOOL PROFESSIONALS.—The Director of the National Science Foundation may award fellowships to teachers, school counselors, and other school professionals for professional development programs in order to enable recipients to attain skills, training, or education in partnership with industry members on the teaching, use of, or application of artificial intelligence in K–12 settings.

''(v) AWARDS.—Awards made under this subparagraph may be in the form of an award that covers the cost of tuition, education-related fees, a stipend, and professional development funds for up to one year. Such awards shall be paid directly to the institution of higher education that administers, or is affiliated with, the program in which the fellowship recipient is participating.

''(F) NATIONAL SCIENCE FOUNDATION OUTREACH CAMPAIGN.—

''(i) IN GENERAL.—The Director of the National Science Foundation may

carry out a nationwide outreach campaign to students at elementary schools, secondary schools, career and technical education schools, institutions of higher education, or through other higher education and professional education programs to increase awareness regarding National Science Foundation-funded artificial intelligence education opportunities.

''(ii) PRIORITY.—In carrying out the campaign described in clause (i), the Director of the National Science Foundation may prioritize outreach to groups historically underrepresented in STEM, including in underserved and rural areas.

''(G) ELIGIBILITY.—To be eligible to receive a scholarship or fellowship under this paragraph, an individual shall satisfy all of the following:

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

''(ii) Demonstrate a commitment to a career in advancing the field of artificial intelligence.

''(iii) Accept the terms of a fellowships under this subparagraph.

''(H) REPORTS.—

''(i) IN GENERAL.—Not later than seven years after the date of the enactment of this subparagraph, the Director of the National Science Foundation shall submit to Congress, and make widely available to the public, a report including any recommendations for legislative action that could optimize the effectiveness of the scholarships and fellowships under this paragraph.

''(ii) REPORT REQUIREMENTS.—In preparing the reports under clause (i), the Director of the National Science Foundation may, as practicable—

''(I) include an assessment of the effectiveness of such scholarships and fellowships in expanding apprenticeships, internships, and other applied or experiential learning opportunities offered by employers in conjunction with community colleges or other institutions of higher education;

''(II) assess the number of students who received such scholarships and fellowship;

''(III) assess the percentage of such students who successfully complete their education programs and who intend to enter the workforce;

''(IV) assess the percentage of undergraduate, graduate, and postdoctoral students who enter the workforce in a field relating to such scholarship or fellowship;

''(V) assess the impact in the number of K–12 teachers, school counselors, and other school professionals who received such scholarships or fellowships; and

''(VI) include an assessment of the effects such scholarships and fellowships have on related fields.''.

**SEC. 3. COMMUNITY COLLEGE AND AREA CAREER AND TECHNICAL EDUCATIONAL SCHOOL CENTERS OF ARTIFICIAL INTELLIGENCE 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); enacted as part of title LIV of division E of the William M. (Mac) Thornberry National Defense Authorization Act for Fiscal Year 2021 (Public Law 116–283)) 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).

"(II) ELIGIBLE APPLICANT.—The term 'eligible applicant' means a community college, or area career and technical education school, in partnership with one or more of the following:

"(aa) A Federal, State, local, territorial, or Tribal government entity.

"(bb) An institution of higher education.

"(cc) An entity in private industry.

"(dd) An economic development organization or venture development organization.

"(ee) A labor or workforce training organization, which may include State workforce development boards and local workforce development boards as established under sections 101 and 107 of the Workforce Investment and Opportunity Act (29 U.S.C. 3111 and 3122).

"(ff) A nonprofit organization.

"(III) LABOR ORGANIZATION.—The term 'labor organization' has the meaning given such term in section 2(5) of the National Labor Relations Act (29 U.S.C. 152(5)), except that such term shall also include the following:

"(aa) Any organization composed of labor organizations, such as a labor union federation or a State or municipal labor body.

"(bb) Any organization that would be included in the definition for such term in such section 2(5) but for the fact that the organization represents any of the following:

"(AA) An individual employed by the United States, any wholly owned Government corporation, any Federal Reserve Bank, or any State or political subdivision thereof.

"(BB) An individual employed by persons subject to the Railway Labor Act (45 U.S.C. 151 et seq.).

"(CC) An individual employed as agricultural laborers.

"(IV) VENTURE DEVELOPMENT ORGANIZATION.—The term 'venture development organization' has the meaning given such term in section 27(a) of the Stevenson-Wydler Technology Innovation Act of 1980 (15 U.S.C. 3722(a)).

"(ii) ESTABLISHMENT OF CENTERS OF AI EXCELLENCE.—The Director of the National Science Foundation, in coordination with the Regional Technology Hubs program of the Department of Commerce, and leveraging the Regional Innovation Engines, the Advanced Technical Education program, and other programs of the National Science Foundation, subject to the availability of appropriations, shall establish up to eight regionally and geographically diverse eligible applicants to be designated as Community College and Area Career and Technical Education Centers of AI Excellence (referred to in this subparagraph as 'Centers of AI Excellence'). Such Centers of AI Excellence shall enhance educational outcomes and

drive workforce development by integrating artificial intelligence into teaching, learning, and community engagement.

''(iii) APPLICATION.—An eligible applicant seeking to be designated as a Center of AI Excellence under this subparagraph shall submit to the Director of the National Science Foundation an application at such time, in such manner, and containing such information as the Director may require. Such application shall include the following:

''(I) A description of the focus area or areas for such proposed Center of AI Excellence and how such area or areas are aligned with regional investments made by industry and the Federal Government.

''(II) A description of the capacity of the applicant to carry out the purpose of such proposed Center of AI Excellence.

''(III) A description of demonstrate current and anticipated future workforce demands in occupa-

tions directly related to such proposed Center of AI Excellence.

''(IV) A description of how the eligible applicant will support the collection of information and data for purposes of evaluation of such proposed Center of AI Excellence.

''(V) Outreach plans for recruiting and enrolling women and other underrepresented populations.

''(VI) An evaluation plan that includes the use of outcome-oriented measures to assess the impact and efficacy of such proposed Center for AI Excellence.

''(iv) ACTIVITIES.—A designated Center of AI Excellence shall develop and disseminate information regarding best practices for matters such as the following:

''(I) Artificial intelligence research and education at community colleges and area career and technical education schools.

''(II) Methods to scale up successful programs that perform re-

search or provide education on artificial intelligence at community colleges and area career and technical education schools.

''(III) Providing educators and teachers with actionable strategies and resources to effectively integrate artificial intelligence into curriculums in the classroom.

''(IV) Providing hands-on research opportunities on artificial intelligence and learning opportunities for students that are enabled through artificial intelligence.

''(V) Identifying pathways for students to jobs that are enabled by artificial intelligence.

''(VI) Facilitating partnerships with employers, employer consortia, or other private sector organizations that offer apprenticeships, internships, cooperative education, or applied learning experiences in the field of artificial intelligence.

''(v) PARTNERSHIPS.—The Director of the National Science Foundation shall encourage applicants to consider including or partnering with a nonprofit organization or an institution of higher education (or a consortium thereof) that has extensive experience and expertise in artificial intelligence.

''(vii) EVALUATIONS.—All applications for designation under clause (ii) shall include an evaluation plan that includes the use of outcome-oriented measures to assess the impact and efficacy of the proposed Center for AI Excellence.

''(viii) ACCOUNTABILITY AND DISSEMINATION.—

''(I) EVALUATION REQUIRED.—The Director of the National Science Foundation shall evaluate the activities under clause (iv). Such evaluation, to the extent practicable, shall integrate the findings of research resulting from such activity or activities as a result of a designation under clause (ii) with the findings of other

research on artificial intelligence education.

"(II) REPORT ON EVALUATIONS.—Not later than 180 days after the completion of the evaluation under subclause (I), the Director of the National Science Foundation shall submit to Congress and make widely available to the public a report that includes the following:

"(aa) The results of such evaluation.

"(bb) Any recommendations for administrative and legislative action that could optimize the effectiveness of the designations made under clause (ii).".

**SEC. 4. AWARDS FOR RESEARCH ON ARTIFICIAL INTELLIGENCE IN EDUCATION.**

(a) IN GENERAL.—Section 5401 of the National Artificial Intelligence Initiative Act of 2020 (15 U.S.C. 9451; enacted as part of title LIV of division E of the William M. (Mac) Thornberry National Defense Authorization Act for Fiscal Year 2021 (Public Law 116–283)) is amended—

(1) by redesignating subsection (g) as subsection (i); and

(2) by inserting after subsection (f) the following new subsections:

''(g) AWARDS FOR RESEARCH ON ARTIFICIAL INTELLIGENCE IN EDUCATION.—

''(1) ELIGIBLE ENTITY DEFINED.—In this subsection, the term 'eligible entity' means any of the following:

''(A) An institution of higher education.

''(B) A nonprofit organization.

''(C) A consortium of one or more institutions of higher education or nonprofit organizations and one or more private sector entities.

''(2) AWARDS.—

''(A) IN GENERAL.—The Director of the National Science Foundation may make awards, on a competitive, merit-reviewed basis, to eligible entities, to enable such eligible entities to promote research regarding teaching models, tools, and materials for artificial intelligence and its integration into the classroom, teaching, and learning for pre-kindergarten through grade 12 students who are from low-income, rural, or Tribal populations.

''(B) METHOD.—The Director of the National Science Foundation may carry out subparagraph (A) by making awards through new or existing programs.

''(3) APPLICATION.—

''(A) IN GENERAL.—An eligible entity that desires to receive an award under this subsection shall submit to the Director of the National Science Foundation an application at such time, in such manner, and containing such information as the Director may require.

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

''(i) A description of the student demographics on which the research supported under the award intends to focus.

''(ii) A description of any regional partnerships the eligible entity plans to utilize to carry out the award.

''(iii) With respect to an application that concerns the use or integration of artificial intelligence, a description of potential ethical concerns and implications of teacher, faculty, and student interactions with artificial intelligence.

''(iv) A description of how proposed research on teaching models, tools, and materials were developed in consultation with other educators, academia, industry, government entities, or civil society organizations.

''(v) Such other information as the Director may require.

''(4) USE OF AWARD FUNDS.—Awards described in paragraph (2)(A) shall be used by the recipient to—

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

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

''(i) instructional materials and high-quality learning opportunities for teaching artificial intelligence;

''(ii) models for the preparation of new teachers who will teach artificial intelligence;

''(iii) scalable models of professional development and ongoing support for teachers; and

"(iv) tools and models for teaching and learning aimed at supporting student success and inclusion in artificial intelligence across diverse populations, including low-income, rural, and Tribal populations.

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

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

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

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

funded through such award, include commitments from school principals, other school leaders, or administrators to make a priority reforms and activities proposed by the applicant.

''(h) RURAL AND UNDERSERVED COMMUNITIES ARTIFICIAL INTELLIGENCE COLLABORATIVE.—

''(1) IN GENERAL.—The Director of the National Science Foundation may establish a pilot program of regional cohorts in rural and traditionally underserved areas that will provide peer support, mentoring, and hands-on research experiences for educators, principals, and other school leaders of students in kindergarten through grade 12, in order to build a network allowing educators, principals, other school leaders to carry out the following:

''(A) Engage with one another on educational efforts related to teaching and using artificial intelligence.

''(B) Interact with researchers, academia, and local industry involved in artificial intelligence.

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

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

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

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

(1) in subparagraph (F), by striking ''and'' after the semicolon;

(2) in subparagraph (G), by striking the period at the end and inserting ''; and''; and

(3) by adding at the end the following new subparagraph:

''(H) incorporating artificial intelligence skills development into the National STEM Teacher Corps, including consideration of the development of artificial intelligence best practices for high school teachers, developed in consultation with other educators and academia.''.

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