NATIONAL SCIENCE FOUNDATION
2415 EISENHOWER AVENUE
ALEXANDRIA, VIRGINIA 22314

NSF 23-099

Dear Colleague Letter: Request for Information on the Capacity of Institutions of Higher Education to Produce Graduates with Degrees, Certifications, and Relevant Skills Related to Artificial Intelligence

May 8, 2023

Dear Colleagues:

The National Science Foundation's (NSF) Directorate for STEM Education (EDU) is seeking input from institutions of higher education (IHEs) and other interested parties to help with an assessment of the capacity of IHEs related to Artificial Intelligence (AI). This Dear Colleague Letter (DCL) is not intended to solicit proposals, but rather to invite input from a variety of sources. **The deadline for submissions is June 21, 2023**.

BACKGROUND

AI is transforming the ways in which citizens navigate their daily lives, researchers make discoveries in the lab, and manufacturers build products. As new AI-driven discoveries and capabilities emerge, they have the potential to drive practical solutions that address critical global challenges such as food production, climate change, poverty, and cancer. However, to seize these opportunities and leverage AI to serve the public good, an increased number of qualified and diverse AI professionals is required.

The National Science Foundation is interested in learning about the capacity of IHEs to produce graduates with AI competencies to meet the current and future needs of the Federal workforce. Scholarship-for-Service (SFS) programs, like the CyberCorps® SFS program (See sfs.opm.gov and NSF 23-574), aim to increase the number of new entrants into the government workforce in priority areas. These programs provide scholarships to students and prepare them for impactful careers in the cybersecurity mission of the government, with the graduates serving government organizations for a length of time equal to the duration of the scholarship. As required by the CHIPS and Science Act of 2022, NSF is currently evaluating the need and feasibility of establishing a scholarship-for-service program to recruit and train

the next generation of AI professionals to meet the needs of Federal, State, local, and Tribal governments.

OBJECTIVE

The primary objective of this DCL is to seek information that can help with an assessment of the capacity of institutions of higher education to produce graduates with degrees, certifications, and relevant skills related to AI.

In addition, this DCL aims to collect information about existing resources for AI education, such as model curricula, concept inventories, or AI education and workforce development initiatives.

WHAT NSF IS LOOKING FOR?

Responses must provide the following information:

1. Respondent's Name [Point of Contact] (up to 100 characters)
2. E-mail (up to 50 characters)
3. Respondent's Affiliation (up to 50 characters)
4. Respondent's Position and Title (if applicable)
5. Name of IHE Described
6. Current AI programs, if applicable, (i.e., descriptions or URLs of major, minor, concentration, certificate, etc.) at the IHE (up to 5000 characters, and/or upload files or URLs)
7. Current AI-related courses, if applicable, (i.e., descriptions or URLs of AI-related courses), including courses with AI theme or AI content, the IHE is offering (up to 5000 characters, and/or upload files)
8. Expertise of faculty teaching AI-related courses (i.e., faculty with AI research portfolios, or faculty from general list) (up to 2000 characters)
9. AI topical focus areas that the IHE faculty are prepared to contribute expertise for the purpose of development of AI curriculum development, if applicable (up to 1000 characters)
10. AI topical research and development areas that the IHE faculty are working on, if applicable (up to 1000 characters)
11. What factors are critical for increasing AI education and workforce development capacity at your institution? What are the current barriers? (up to 2000 characters)
12. What factors are critical for increasing the number of graduates with AI skills, knowledge, and competencies? What are the current barriers? (up to 2000 characters)
13. Do you have any other comments? (up to 2000 characters)

After receiving the DCL input, NSF may hold interactive sessions such as online town halls to

seek further refinement of areas identified as being of particular importance.

This DCL welcomes input from a diverse range of experts, including those from academia, industry, government, and non-profit sectors. Submissions from Historically Black Colleges and Universities (HBCUs) and Minority Serving Institutions (MSIs) are particularly encouraged.

HOW TO RESPOND TO THIS DCL?

Respond to the survey at https://www.surveymonkey.com/r/nsf_airfi addressing the above questions, no later than June 21, 2023. Submissions may be from individuals or groups. More than two submissions from any individual are discouraged.

WHAT WILL NSF DO WITH THIS INFORMATION?

This information will be used by NSF to prepare a public AI Scholarship-for-Service Initiative Report to be submitted to the Committee on Commerce, Science, and Transportation of the Senate, the Committee on Science, Space, and Technology of the House of Representatives, the Committee on Homeland Security and Governmental Affairs of the Senate, and the Committee on Oversight and Reform of the House of Representatives. Submissions should not include any confidential or proprietary information.

Sincerely,

James L. Moore III, Assistant Director
Directorate for STEM Education (EDU)