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Submitter Information

Organization: Cyber Innovation Center

General Comment

See attached file(s)

Attachments

CIC Response to NSF-2025-OGC-0001

RESPONSE TO:

**National Science Foundation 2025 Artificial Intelligence (AI)
Research and Development (R&D) Strategic Plan Request
for Information (RFI)**

FROM

Cyber Innovation Center

Administrative Information

Company Name: Cyber Innovation Center

Docket ID No.: NSF-2025-OGC-0001

Executive Summary

President Donald J. Trump’s January 2025 Executive Order 14179: *Removing Barriers to American Leadership in Artificial Intelligence* and his April 2025 Executive Order 14277: *Advancing Artificial Intelligence Education for American Youth* outline a clear national imperative: equip the next generation of Americans with the skills and knowledge to lead in an AI-powered future that promotes a flourishing economy and national competitiveness in cyber education, provides for enhanced national security, and asserts a future of American dominance in AI. Additionally, the 2023 *National Artificial Intelligence R&D Strategic Plan* identified a need to “better understand the national AI R&D workforce needs” and to improve education and AI fluency to effectively compete on the world stage.

To support the rewrite of the 2023 Strategic Plan, we recommend integrating foundational K-12 AI education as a formal federal R&D priority, recognizing that sustained global leadership in AI requires early, nationwide access to technical education that is currently not represented by private-sector investment. Effectively answering this demand calls for:

- early exposure to AI in K-12 education;
- comprehensive training for educators;
- expanded credential-based career pathways; and
- and robust public-private collaboration to ensure the United States remains at the forefront of global innovation.

CYBER.ORG—the workforce initiative of the Cyber Innovation Center—represents a turnkey solution to this need and is uniquely positioned to scale this work nationwide. With a national reach, a long track record of success, and deep partnerships across government, industry, and education, CYBER.ORG stands ready to operationalize the strategic goals of the updated National AI R&D Strategic Plan.

As the nation’s leading K-12 cybersecurity and emerging technology education initiative, CYBER.ORG is first and foremost a workforce development program. Its mission is to ensure that every student in the United States has access to foundational knowledge and career pathways that lead directly into high-wage, high-demand fields—including artificial intelligence, cybersecurity, and other emerging technologies critical to U.S. competitiveness and critical infrastructure. Unlike traditional education programs, CYBER.ORG is intentionally designed to align K-12 curricula with national workforce frameworks, industry-recognized certifications, and real-world job competencies. By embedding AI concepts into early education and supporting dual-enrollment and credentialing partnerships across higher education, CYBER.ORG accelerates the development of a skilled and future-ready workforce—starting in America’s classrooms.

With a presence in all 50 states, CYBER.ORG has provided curricula and resources to over 42,000 educators, professionally trained over 36,000 educators, and impacted more than 5.6 million students through its leading-edge curricula and professional development programs. By focusing on career exploration, industry-recognized certifications, and hands-on experiences, CYBER.ORG is not only enhancing cyber literacy but also directly contributing to workforce readiness, today. CYBER.ORG is uniquely positioned to meet the challenges facing the legacy US educational system as it attempts to meet the evolving demands of AI education.

Recommendation: Foundational AI Education as a Federal R&D Priority

To secure America's position as the unrivaled global leader in artificial intelligence, the updated *National AI R&D Strategic Plan* should explicitly include foundational K-12 AI education as a federal R&D priority. This shift recognizes that long-term AI leadership depends not only on research breakthroughs and industry adoption, but also on building a national pool of AI-literate, cyber-capable talent—beginning in elementary and secondary education.

The revised plan should include:

- federal investment in research, development, and deployment of K-12 AI curriculum and educator training aligned with national innovation and security needs;
- studies on evolving workforce demands to ensure proper alignment of K-12 curriculum and future industry needs;
- recognition of K-12 AI education infrastructure—including content platforms, teacher training systems, and curriculum development—as part of the national AI R&D ecosystem;
- emphasis on wide-spread access, ensuring AI fluency in suburban, urban, rural, and tribal communities; and
- interagency collaboration between NSF, CISA, ED, and OSTP to create a unified AI workforce development agenda that begins in K-12 education.

These updates will allow the federal government to fulfill its unique role in supporting longitudinal research and workforce development.

CYBER.ORG's Proven Model and National Infrastructure

Founded in 2010 by the Cyber Innovation Center, CYBER.ORG began as a local education and workforce development initiative and has become the nation's leading provider of cybersecurity and emerging technology education for K-12 students. In partnership with the Department of Homeland Security's Cybersecurity and Infrastructure Security Agency (CISA) through the Cybersecurity Education Training Assistance Program (CETAP), CYBER.ORG provides no-cost curriculum, training, and tools to educators in every U.S. state and territory. CYBER.ORG continually updates its curriculum and training to reflect the latest advancements in cybersecurity

and AI. This evolution includes initiatives to support AI higher education staff training and tools for retraining the workforce—including leveraging experience collaborating across a wide spectrum of U.S. Government agencies to investigate options to strengthen the federal AI workforce.

What also makes CYBER.ORG unique is its educator-first model: curriculum is created by certified K-12 teachers for K-12 teachers, ensuring age-appropriate design, classroom usability, and rapid adoption. Courses span elementary through high school and are available with flexible modules that allow for full-year integration or single-lesson implementation. Through platforms like the CYBER.ORG cyber range and partnerships with organizations such as Palo Alto Networks, EduTech, and Parallax, students gain hands-on experience with tools and simulations that mirror real-world applications of AI and cybersecurity. The model not only introduces foundational AI and emerging tech concepts as early as grade 3, but it also prepares high school students for industry-recognized certifications such as CompTIA IT Technology+, Security+, and Network+ to create clear pathways into high-wage, high-demand careers.

With access to CYBER.ORG, students gain insights into various cybersecurity roles, required qualifications, and potential career paths. Career awareness, exploration, and pursuit are top priorities for CYBER.ORG.

Meeting the Executive Order Vision for AI—Now

CYBER.ORG introduces AI concepts throughout its K-12 curriculum, from teaching elementary students about ethical decision-making and pattern recognition to giving high school students hands-on exposure to machine learning, data classification, and neural networks. Educators are supported through an expansive professional development model—delivered both virtually and in person—that includes AI-specific modules and training in emerging technologies. With a current capacity to deliver more than 1,250 professional development workshops over the next five years, CYBER.ORG is prepared to scale to reach tens of thousands more educators—accelerating national AI fluency. In partnership with over 40 colleges and universities, CYBER.ORG supports dual-enrollment pathways and credential alignment with the NICE Workforce Framework, allowing students to begin their AI workforce journey in high school.

Critically, CYBER.ORG’s infrastructure already exists. The organization has a national educator network, robust digital delivery platforms, curriculum aligned to federal frameworks, and established public-private partnerships with industry, nonprofits, and educational systems. With a presence in rural, urban, tribal, and military-connected communities, CYBER.ORG is equipped to ensure access to AI education across all regions of the country. Leveraging this infrastructure means that federal investment in AI workforce development through CYBER.ORG can achieve immediate scale and efficiency—avoiding the costs, delays, and duplication that often accompany new program development, and allowing dollars to go further, faster.

A Ready Partner for the Future of AI Education

As the United States accelerates its leadership in AI, the demand for a digitally fluent, cyber-literate workforce has never been more urgent. The future of AI workforce development hinges on early, equitable access to AI education, integrated with cybersecurity literacy to ensure responsible innovation and national security. CYBER.ORG is uniquely positioned to meet this challenge—and to serve as a primary implementer of the updated *National AI R&D Strategic Plan*.

Building on its proven national infrastructure and educator-first model, CYBER.ORG is expanding its AI education initiatives to prepare students not only to use AI but to understand, develop, and secure it. By embedding AI concepts across K-12 curricula and pairing them with foundational cybersecurity knowledge, CYBER.ORG is cultivating a generation of digital citizens who are both technically skilled and ethically grounded.

In alignment with President Donald J. Trump’s January 2025 Executive Order Removing Barriers to American Leadership in Artificial Intelligence and the April 2025 Executive Order Advancing Artificial Intelligence Education for American Youth, CYBER.ORG is prepared to scale its efforts in partnership with the National Science Foundation. This includes:

- developing and refining AI-integrated curricula that reflect the latest advancements in machine learning, data science, and ethical AI;
- delivering AI-specific professional development to thousands of educators nationwide to ensure classroom readiness and instructional confidence;
- expanding dual-enrollment and credentialing pathways aligned with the NICE Workforce Framework to accelerate student entry into AI-related careers; and
- hosting national AI education challenges and competitions, such as the Presidential AI Challenge, to inspire innovation and engagement among students.

Through these initiatives, CYBER.ORG will help fulfill the national strategic priorities outlined in the Executive Orders and the revised *National AI R&D Strategic Plan*—ensuring that American students are not only consumers of AI but creators and protectors of it. With its established reach, trusted partnerships, agile curriculum development capabilities, and measurable outcomes, CYBER.ORG stands ready to lead the next phase of AI workforce development.

Federal investment in CYBER.ORG will yield immediate impact, equipping the next generation of Americans with the skills needed to lead in AI-driven fields.

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