

United States Senate

WASHINGTON, DC 20510

May 13, 2021

Dr. Sethuraman Panchanathan
Director
National Science Foundation
2415 Eisenhower Ave
Alexandria, VA 22314

Dear Director Panchanathan:

We were pleased to see the National Science Foundation (NSF) establish the National Artificial Intelligence (AI) Research Institutes program last year to invest in long-term research into AI. As founding co-chairs of the Senate Artificial Intelligence Caucus, we believe it vital for the United States to maintain leadership in AI research and innovation, and we agree that NSF's National AI Research Institutes constitute a significant part of that imperative.

As a complement to NSF's Research Institutes, our Artificial Intelligence Initiative Act became law as a core part of the National AI Initiative, which was enacted in last year's National Defense Authorization Act (P.L.116-283). The National AI Initiative creates the federal research and development architecture needed to maintain U.S. leadership in AI, and places emphasis on AI contextualized by American values. The Joint Explanatory Statement of the National Defense Authorization Act also includes clear congressional intent about the importance of prioritizing trustworthy AI, declaring that "the United States government should use this Initiative to enable the benefits of trustworthy artificial intelligence while preventing the creation and use of artificial intelligence systems that behave in ways that cause harm."

AI leadership by the United States is only possible if AI research, innovation, and use is rooted in American values. Central to these values are notions of ethics and safety. If our country is to reap the benefits of AI at scale, we must ensure that citizens and users—human people—have the trust and confidence in AI systems to actually deploy them. In short, our AI systems must do what we want them to do.

As you work to stand up additional AI Institutes, we ask that you prioritize research on safety and ethics. Broadly, AI safety refers to technical efforts to improve AI systems in order to reduce their dangers, and AI ethics refers to quantitative analysis of AI systems to address matters ranging from fairness to potential discrimination. While we understand that NSF incorporates concepts of ethics and safety across all of the thematic areas of its AI research, establishing two new themes dedicated to ethics and safety would help ensure that innovations in AI ethics and safety were pursued for their own ends rather than being merely best practices for different use cases. Ideally, we hope adding safety and ethics to NSF's AI research themes leads to the creation of AI Research Institutes focused on these topics.

As the leaders of the Senate AI Caucus, we are aware of the challenges and opportunities presented by AI. Our goal is to help ensure that conversations, and policy-making, around AI are honest, balanced, substantive, and dedicated to the goal of improving the well-being of our constituents. Creating new themes for ethics and safety will help mitigate the harms posed by high-risk AI systems, reduce—and hopefully even eliminate—the potential AI has for discrimination, ensure AI systems are robust enough to prevent adversarial attacks, and safeguard individual’s privacy.

We thank you for your commitment to ethics and safety alongside U.S. leadership in AI, and look forward to working with you to continue to find ways to continue to invest in that commitment.

Sincerely,

/s/

ROB PORTMAN
U.S. Senator

/s/

MARTIN HEINRICH
U.S. Senator