News Release 19-021

NSF leads federal partners in accelerating the development of transformational, AI-powered innovation

New funding opportunity anticipates $200 million in long-term investments in AI research and education over the next 6 years

NSF's AI Research Institutes program will support longer-term research than typical grants.

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The National Science Foundation today announced the creation of a new program that will significantly advance research in AI and accelerate the development of transformational, AI-powered innovation by allowing researchers to focus on larger-scale, longer-term research.

The National Artificial Intelligence Research Institutes program anticipates approximately $120 million in grants next year to fund planning grants and up to six research institutes in order to advance AI research and create national nexus points for universities, federal agencies, industries and nonprofits.

"Advances in AI are progressing rapidly and demonstrating the potential to transform our lives," said NSF Director France Córdova. "This landmark investment will further AI research and workforce development, allowing us to accelerate the development of transformational technologies and catalyze markets of the future."

"The National Science Foundation is at the cutting edge when it comes to this Administration's efforts to prioritize AI research and development. These institutes will advance our national strategy for U.S. leadership in AI, leverage important multisector R&D partnerships and support groundbreaking AI innovation for the benefit of the American people," said Michael Kratsios, Chief Technology Officer of the United States.

The program, led by NSF in partnership with the National Institute of Food and Agriculture, U.S. Department of Homeland Security's Science & Technology Directorate, U.S. Department of Transportation's Federal Highway Administration and U.S. Department of Veterans Affairs, has both planning and institute tracks. The planning track will support planning grants for up to two years and $500,000 to enable teams to develop collaborative plans and capacity for full institute operations. The institute track will support cooperative agreements of $16 million to $20 million for four to five years (up to $4 million per year) for the creation of AI Research Institutes in an initial set of high-priority areas:

- Trustworthy AI
- Foundations of Machine Learning
- AI-Driven Innovation in Agriculture and the Food System
- AI-Augmented Learning
- AI for Accelerating Molecular Synthesis and Manufacturing
- AI for Discovery in Physics

The AI Research Institutes program will support the advancement of multidisciplinary, multi-stakeholder research on larger-scale, longer-time-horizon challenges in AI research than are supported in typical research grants.

"These institutes will accelerate the transition of AI innovations into many economic sectors while also nurturing and growing the next generation of AI researchers and practitioners," said NSF Acting Assistant Director for Computer and Information Science and Engineering Erwin Gianchandani. "This long-term, substantive and highly visible investment in AI research and workforce development will realize the potential of AI and enable the U.S. to maintain global leadership."

The AI Research Institutes program demonstrates NSF's continued leadership in AI, building upon decades of support for transformative AI innovations, workforce development, and advanced and scalable computing resources enabling AI.

NSF's ability to bring together a vast range of scientific disciplines -- including computer and information science and engineering, cognitive science and psychology, economics and game theory, engineering and control theory, ethics, linguistics, mathematics, philosophy, and more -- uniquely positions NSF to lead the nation in addressing key research challenges.

Earlier this year, NSF joined other federal agency partners in announcing the release of the 2019 Update to the National Artificial Intelligence (AI) Research and Development (R&D) Strategic Plan <https://www.nitrd.gov/pubs/National-AI-RD-Strategy-2019.pdf> . In addition, Advances in AI <https://nsf.gov/cise/ai.jsp> are core to many of the "10 Big Ideas for Future NSF Investment <https://www.nsf.gov/news/special_reports/big_ideas/> s," key among these being Harnessing the Data Revolution <https://www.nsf.gov/cise/harnessingdata/index.jsp> and the Future of Work at the Human-Technology Frontier <https://www.nsf.gov/eng/futureofwork.jsp> .

Grant proposals for the National AI Research Institutes program are due to NSF no later than Jan. 28, 2020, for Institute proposals and Jan. 30, 2020, for planning grant proposals.

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