

Senate Rules Committee Hearing on Artificial Intelligence
Wednesday, January 24, 2024

For 177 years, the Smithsonian has been devoted to the increase and diffusion of knowledge. To achieve our mission, we have always embraced the creative use of technology. In the 1850s, we issued weather monitoring equipment to volunteers nationwide, collecting meteorological data via telegraph. A couple of years ago, we helped use computation from the Event Horizon Telescope's several thousand images to create the first image of a black hole at the center of the Milky Way. In short, we have always looked to the future. Artificial intelligence is no different.

Throughout the Institution, scientific applications of machine learning are common. Scientists at the Smithsonian Astrophysical Observatory, or SAO, use it to identify exoplanets. Smithsonian Tropical Research Institute scientists use it to measure the evolutionary history of pollen through fossils. Researchers at the National Zoo and Smithsonian Conservation Biology Institute use it for field research in conservation.

But there are so many more widespread applications of AI that hold great promise, whether it can make us more efficient and effective as an institution, improve the visitor experience, or augment the creativity of our curators and exhibition specialists. Many applications are currently being explored, from improving our websites' search engine functionality with AI-generated keywords to transcribing audio files.

Our Data Science Lab, created to address a massive increase in digital data, is developing a new AI model that can discover and correct instances in our collections where women's contributions were mistakenly attributed to men.

SAO has also launched AstroAI, a center that brings AI experts and scientists together to tackle the most exciting and challenging problems in astrophysics. AstroAI has more than 50 projects underway or being planned that apply various AI techniques.

Our Head of Digital Transformation, Becky Kobberod, is the Smithsonian's first leader devoted to developing a pan-institutional digital strategy. She will chair a formal AI Community of Practice, co-chaired by Ellen Stofan, our Under Secretary for Science and Research, and Deron Burba, our Chief Information Officer. With their leadership, we are determining the best way forward to effectively and responsibly use AI to enhance our work. They will help us build a framework of good governance to ensure the safe and responsible implementation of AI.

In a world filled with untrustworthy information, people rely on our reputation as a trustworthy reservoir of knowledge. Currently, concerns about bias, ethics, safety, and accuracy in available AI products make it necessary for us to proceed with caution. But as a trusted resource with vast expertise and experience, this is a terrific opportunity. We and other cultural institutions can collaborate with technology leaders to help improve AI tools, not only for our own use, but for everyone's.

Not only can we implement best practices for using AI at the Smithsonian and use our own resources to help create better versions of it; we can examine the many dimensions of AI from a scholarly perspective. The Smithsonian convenes conversations about some of the most consequential issues of our time. We can do the same for artificial intelligence, bringing experts together to examine the ethical, social, and economic implications of this technology.

Our strategic plan lays out some bold goals for the Smithsonian's future: to be more digital in the way we reach the American people, nimbler and more effective in our operations, elevate our scientific endeavors, expand our educational efforts, and be a more trusted source than ever. AI touches all of them.

The nation's 250th anniversary in 2026 will be a pivotal moment for us, not only as our strategic priorities begin to come to fruition, but as a time to experiment with innovative AI tools. It will allow us to see how AI can support our mission. It will enable collaboration with tech leaders and other government and cultural organizations to make AI more reliable and trustworthy. It will be a moment to educate about the benefits and risks of AI. And, most importantly, it will signal the further embrace of digitization to make our resources more available.

Ultimately, AI is a tool. Used properly, it will allow the Smithsonian to expand our reach and impact in science, art, history, and culture like never before. Like any new technology, it comes with risks and the potential for unintended consequences. But by leaning on internal and external experts, I am confident we can methodically and thoughtfully apply AI for all who benefit from the gifts the Smithsonian has to offer.

###