

AI Technology to Increase US Government Transparency

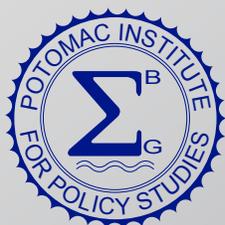
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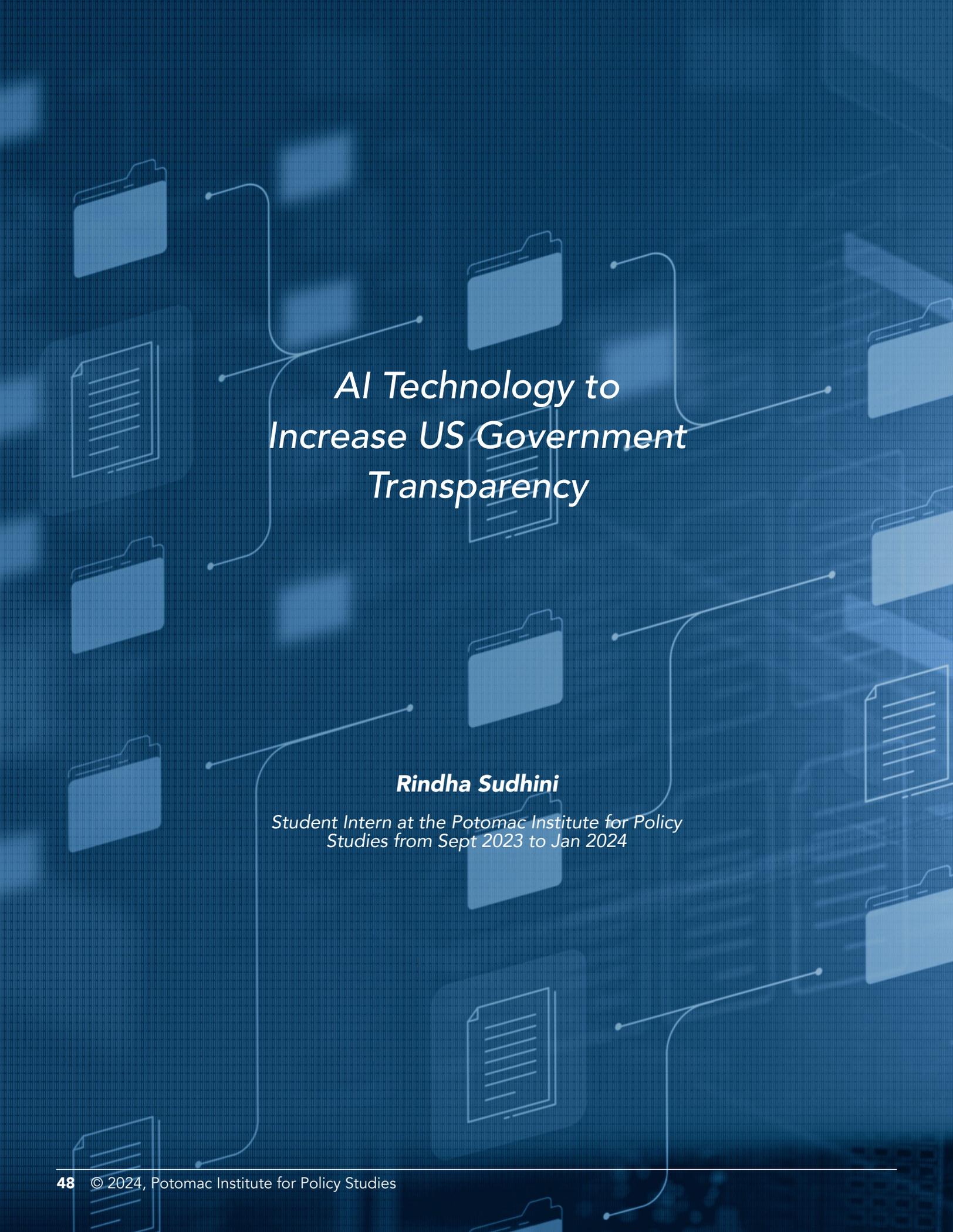
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AI Technology to Increase US Government Transparency

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INTRODUCTION

Historically, the federal government has been committed to promoting transparency through information access laws.¹ One such law is the Freedom of Information Act (FOIA),² which allows citizens to request access to records from any federal agency. Even though these requests are meant to be a primary means of providing information to the public, the general citizenry is highly unlikely to attempt to use the FOIA.³ FOIA requests are a notoriously slow process, as most state and federal agencies do not employ digitization or automation techniques in their responses.⁴ Material marked “For Official Use Only” is also not subject to FOIA release. Manually entering requests, logging them through a spreadsheet, and requiring individual judgements are three factors that create an inefficient method of promoting a more accessible government.

Surveys by the Pew Research Center show that many Americans believe that the federal government can and should share more information with the public.⁵ This perceived lack of publicly available information shows that current measures to increase transparency are not working. It also alludes to a growing sense of distrust, as citizens continue to feel distance between themselves and the government. A fundamental psychological construct is that humans tend not to trust what they do not understand.⁶ The extent to which citizens are limited in accessing information about the government, therefore, fosters declining understanding of government proceedings and trust in government.

One possible solution is to employ artificial intelligence (AI) to deal with FOIA requests by facilitating speed and reliability in access and response, and, more broadly, engendering trust in governmental transparency. AI technology can accommodate a considerable volume and range of digital information and can increase the efficiency of government processes. Processes optimized for efficiency and such accessibility promote transparency.

IMPEDIMENTS TO AI-BASED TRANSPARENCY

Using AI technologies to filter and make government data accessible requires increasing digital record-keeping and establishing uniform federal standards of data stewardship. At the same time, users should not employ AI techniques as black-box systems that exclude human-in-the-loop access and that could erode public trust.

Insufficient Digital Record-Keeping

Increased automation in government digitization efforts necessitates increasing digital record-keeping. Many current government processes that deal with official documents and decisions do not use digital forms of the collected data. Reportedly, “only 2 percent of government forms are digitized, 45 percent of websites have not been designed to work on mobile devices, and 60 percent of websites are not fully usable by those who use assistive technologies.”⁷ The government is not leveraging digitization to the extent required to enable AI-based transparency. AI systems require increased access to digital data for more accurate and reliable outcomes.⁸

Inconsistent Federal Data Stewardship Standards

To enable AI systems to access federal digital records, data needs to be organized and structured to facilitate easy access and integration of information. Current standards for federal data stewardship leave much data largely unstructured and disorganized.⁹ Historically, standards were not developed with the intent of using AI systems, but instead were based upon the use of paper archives or, at best, analyses using spreadsheet software. Examples of unstructured data are qualitative statements such as survey responses, social media posts, and voice memos. These represent an untapped information resource with which to enhance government-citizen relations.¹⁰ Structuring data to enable automated ingestion and analysis requires enhanced data stewardship.

Data also need to be securely and equitably organized. Government agencies regularly collect private and sensitive information, requiring robust storage protection measures, such as anonymization, encryption, and other trustworthy access control methods.¹¹ Equity calls for awareness that data collected by the government could have unintentional biases. Data stewardship requires dataset adjustments to correct errors, inconsistencies, and bias to minimize discriminatory outcomes of AI systems. When data are secure and equitable, the resulting outputs will be perceived as more trustworthy.¹²

Trustworthiness of AI

Currently, AI suffers from a “black-box problem”—the dilemma that most AI systems cannot provide an explanation of the reasons for its outputs.¹³ The implications of the black-box problem are significant, particularly when



considering using AI to increase governmental transparency. If the method employed to enhance transparency is inherently opaque and cannot be understood, it may exacerbate the erosion of public trust.

Further, generative AI uses large language models to produce misinformation and “deep fakes.”^{14,15} Unfamiliarity with the power of this technology and its potential risks can also contribute to a lack of public trust.¹⁶ Consumers of AI technology are not typically equipped to discern whether video or audio is original, edited, or generated.

As a result, if AI systems are used to make government actions more transparent, they must be developed and used in ways that anticipate and mitigate public mistrust.

PROPOSED AGENCY RESPONSIBILITIES

To overcome impediments and achieve greater AI-based transparency, the government will have to increase digital record-keeping, establish mandatory standards for federal data stewardship, and mitigate the impact of the “black-box problem.” These issues are difficult to address because no single agency has the expertise and responsibility across all stages of data collection, analysis, and review. In this light, we offer the following proposal to assign specific responsibilities to appropriate agencies.

Digital Data Record-Keeping

While the US government encourages agencies to be more diligent in digital record-keeping (e.g., via the “digital.gov” website in the General Services Administration [GSA]), the focus is not on digitization for AI-type analytics. Legislation, such as Section 508 of the Rehabilitation Act,¹⁷ requires Federal departments and agencies to consider accessibility by those with disabilities. More comprehensive mandatory standards for digital data accessibility and stewardship, with follow-up reporting on compliance (for example, by the GSA), will be needed to increase the availability of digital records for AI-based analytic techniques.

Mandatory Data Stewardship Standards

Currently, federal agencies independently manage their respective data stewardship practices. Lack of guidance and oversight have contributed to vast amounts of unstructured data, which AI systems cannot leverage. The Cybersecurity and Infrastructure Security Agency (CISA) is well-suited to resolve these data stewardship concerns. As an operational component of the Department of Homeland Security (DHS),

CISA is responsible for fostering a secure government technological infrastructure, and already possesses frameworks for collaborating with individual agencies in the cybersecurity space.¹⁸

In 2019, the Office of Management and Budget (OMB) published Memorandum M-19-18, “Federal Data Strategy—A Framework for Consistency” (the FDS),¹⁹ which provides prospective principles and guidelines for agencies to manage and use federal data by 2030. DHS should support CISA with the authority to elaborate the FDS frameworks to incorporate AI technologies. Authorities could be assigned to CISA through legislation, thereby allowing them to establish required standards for organizing unstructured and insecure data.

Congress could also require federal agencies to conduct internal audits to assess the extent to which data stewardship practices comply with CISA standards. CISA would view these audits and engage their oversight authority to draft roll-up reports to update Congress on agencies’ compliance.

Such audits should include internal risk assessments to identify major sources of unstructured and insecure data. CISA could collaborate with agencies to develop specific protocols for structuring and securing new forms of data as they are collected. This approach would allow flexibility in tailoring data stewardship practices to specific data types collected by each agency.

Ensuring compliance with data stewardship standards enhances transparency and public trust by signaling governmental commitment to the responsible use and protection of personal data. CISA should make these standards publicly available, along with their plans for working with individual agencies, to inform citizens how data will be used and strengthen their trust.

Creating a Government AI Training Program

Currently, government AI technology is managed (and understood) by a subset of employees specifically hired for their AI expertise.²⁰ An understanding of data governance and AI technology needs to be consistently distributed across agencies more broadly. The public should not be expected to trust the use of AI systems when many government officials lack a basic understanding of the technologies. To meet this goal, all levels of the government workforce—including leadership—need mandatory training programs that support data and AI literacy.

The General Services Administration (GSA) is an independent government agency established to create an “effective and efficient government for the American people.”²¹ The GSA runs and maintains a technology training interface for all federal employees and, therefore, would be appropriate to oversee AI training programs. “Digital.gov/events” is a GSA training microsite with webinars and events on technology training.

This resource could be expanded to include extensive data governance and AI training programs. Topics should include a basic understanding of standard AI technology (e.g., Natural Language Processing (NLP), computer vision, and generative AI). Trainings should be tailored to: 1) educate employees about the types of AI systems currently employed in the federal government, and 2) provide specialized familiarity with how AI pilot and test cases are employed and operate in their respective agencies. Additionally, current AI regulation and safety practices for AI risk mitigation should be addressed.

Researching Alternative Solutions to the Black-box Problem

Ongoing research in “explainable AI” is proposed to remove the black box problem that contributes, at least in part, to a lack of trust in AI technology.²² As an alternative, AI technology could be configured as a system to cull data rather than make important decisions. Such systems would recognize data that should be identified and parsed for human analysis, thereby ensuring that humans remain in the loop to maintain public trust and ethical standards.²³

The National Institute of Standards and Technology (NIST) has an established network of AI industry partners that can identify technical requirements needed to cultivate safe, secure, and trustworthy AI systems.²⁴ This work qualifies NIST as an appropriate agency to 1) identify technical standards for AI recognition systems that ensure that trustworthy information is provided to human analysts, and 2) research alternative solutions that are developed and implemented to address and reduce the black-box problem.

CONCLUSION

Federal agencies such as the CISA, GSA, and NIST provide ideal environments for overcoming impediments to AI-based government transparency. Employing small groups of specific experts trained to propose standards, create training programs, and research solutions to the black-box

problem greatly increases possibilities for using AI to afford enhanced transparency in government affairs. If successful, such efforts could bolster government-public relations and position the federal government at the forefront of AI integration. In an era of increasing AI prominence, the government must participate in the procedural, policy, and organizational groundwork program developments to regulate the field by setting a responsible precedent and assessing, addressing, and reducing the perceived lack of governmental transparency.

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