GAO Highlights

ARTIFICIAL INTELLIGENCE

GAO's Work to Leverage Technology and Ensure Responsible Use

Why GAO Did This Study

AI, in general, refers to computer systems that can solve problems and perform tasks that have traditionally required human intelligence. Many federal agencies are using or planning to use AI, through applications such as facial recognition, automated email responses, and enhanced user experience on websites. At the same time, AI capabilities continue to expand in areas such as medical diagnostics, image generation, and emulating human writing styles.

This testimony describes how GAO (1) plans to use AI internally to enhance effectiveness and efficiency across its mission and operations and (2) supports Congress through oversight of federal use of AI and foresight on its wider implementation.

GAO performed the work on which this testimony is based in accordance with all applicable sections of GAO's Quality Assurance Framework.

What GAO Found

GAO is exploring internal use of artificial intelligence (AI) to make its work for Congress and taxpayers more efficient, in-depth, and effective. For example, GAO recently began deployment of a large language model to explore generative AI capabilities similar to those found in industry, supplemented with GAO-specific information and security. Among other capabilities, this prototype will also support other use cases to help efficiently synthesize past reports, assist with editorial review, and scan congressional documents for mandated work for GAO. By developing these tools, GAO is also gaining insight into the benefits and risks of AI, which will help GAO evaluate other agencies' use and better provide technical assistance to Congress. See the table for details on eight AI use cases GAO is currently exploring.

List of Artificial Intelligence Use Cases GAO Is Exploring as of January 2024

Use case	Potential benefits
Organizes large volumes of text, such as public comments from Regulations.gov	Groups contents by similar themes Prioritizes reviews based on relevant hierarchical topics
Summarizes draft GAO legislative mandates	Increases efficiency and reduces manual processes Highlights potentially fragmented and duplicative mandates
Assists with copyediting according to GAO's style guide	Automates select copyediting tasks Enables staff to focus on narrative structure and clarity
Provides automated responses to chat questions on published GAO work	Summarizes published GAO contents to enhance knowledge management and increase efficiency Enhances specificity and accuracy of results
Summarizes qualitative responses from annual GAO Employee Experience Survey	Identifies trends, patterns, and sentiments quickly Improves survey interpretation with less manual intervention Assists with root-cause analyses
Monitors information about congressional committee calendars, press releases, and web contents	Matches congressional interests with relevant GAO work Enhances timeliness of outreach and technical assistance
Enhances GAO auditing through use of extended reality glasses	Improves data collection and collaboration across locations Reduces costs and risks Enables new data capturing and analysis opportunities
Triages IT help desk requests and answers internal GAO policy questions	Provides 24/7 self-service assistance to GAO employees Allows support staff to focus on more complex requests

Source: GAO. | GAO-24-107237

Note: For the full list of use cases, updated periodically, see www.gao.gov/science-technology/artificial-intelligence-use-cases.

United States Government Accountability Office

AI also remains a top priority for many congressional committees and offices. GAO therefore has a robust body of work to meet Congress's need for information on AI's promise and risks. Since 2018, GAO has issued nearly 50 products on AI. It currently has 20 ongoing projects on AI with many more planned, including two technology assessments and one performance audit on generative AI. For example, in a landmark December 2023 report, GAO reviewed the implementation of AI at major federal agencies and made 35 recommendations to 19 agencies to fully implement federal AI requirements. In addition, in 2021, GAO published *Artificial Intelligence: An Accountability Framework for Federal Agencies and Other Entities*, identifying 31 key practices to help ensure accountability and responsible use of AI. GAO's AI use cases are built upon this framework. The following is a selection of GAO AI-related products:

Cybersecurity and Privacy

Facial Recognition Services: Federal Law Enforcement Agencies Should Take Actions to Implement Training, and Policies for Civil Liberties. GAO-23-105607. September 5, 2023.

Facial Recognition: CBP and TSA are Taking Steps to Implement Programs, but CBP Should Address Privacy and System Performance Issues. GAO-20-568. September 2, 2020.

Facial Recognition Technology: Privacy and Accuracy Issues Related to Commercial Uses. GAO-20-522. July 13, 2020.

AI Opportunities and Challenges

Artificial Intelligence in Natural Hazard Modeling: Severe Storms, Hurricanes, Floods, and Wildfires. GAO-24-106213. December 14, 2023.

Generative AI (Science & Tech Spotlight). GAO-23-106782. June 13, 2023.

Digital Twins: Virtual Models of People and Objects. (Science & Tech Spotlight). GAO-23-106453. February 14, 2023.

Federal Research and Management

Artificial Intelligence: Agencies Have Begun Implementation but Need to Complete Key Requirements. GAO-24-105980. December 12, 2023.

Artificial Intelligence: DOD Needs Department-Wide Guidance to Inform Acquisitions. GAO-23-105850. June 29, 2023.

Artificial Intelligence: DOD Should Improve Strategies, Inventory Process, and Collaboration Guidance. GAO-22-105834. March 30, 2022.

Federal Workforce

Artificial Intelligence: Actions Needed to Improve DOD's Workforce Management GAO-24-105645. December 14, 2023.

FAA Workforce: Better Assessing Employees' Skill Gaps Could Help FAA Prepare for Changes in Technology. GAO-21-310. May 13, 2021.

Automated Technologies: DOT Should Take Steps to Ensure Its Workforce Has Skills Needed to Oversee Safety. GAO-21-197. December 18, 2020.

Defense and Law Enforcement

Information Environment: Opportunities and Threats to DOD's National Security Mission. GAO-22-104714. September 21, 2022.

Artificial Intelligence: Status of Developing and Acquiring Capabilities for Weapon Systems. GAO-22-104765. February 17, 2022.

Forensic Technology: Algorithms Strengthen Forensic Analysis, but Several Factors Can Affect Outcomes. GAO-21-435SP. July 06, 2021.