GAO@100

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Artificial Intelligence: An Accountability Framework for Federal Agencies and Other Entities

What GAO Found

To help managers ensure accountability and responsible use of artificial intelligence (AI) in government programs and processes, GAO developed an AI accountability framework. This framework is organized around four complementary principles, which address governance, data, performance, and monitoring. For each principle, the framework describes key practices for federal agencies and other entities that are considering, selecting, and implementing AI systems. Each practice includes a set of questions for entities, auditors, and third-party assessors to consider, as well as procedures for auditors and third-party assessors.

Why GAO Developed This Framework

AI is a transformative technology with applications in medicine, agriculture, manufacturing, transportation, defense, and many other areas. It also holds substantial promise for improving government operations. Federal guidance has focused on ensuring AI is responsible, equitable, traceable, reliable, and governable. Third-party assessments and audits are important to achieving these goals. However, AI systems pose unique challenges to such oversight because their inputs and operations are not always visible.

GAO's objective was to identify key practices to help ensure accountability and responsible AI use by federal agencies and other entities involved in the design, development, deployment, and continuous monitoring of AI systems. To develop this framework, GAO convened a Comptroller General Forum with AI experts from across the federal government, industry, and nonprofit sectors. It also conducted an extensive literature review and obtained independent validation of key practices from program officials and subject matter experts. In addition, GAO interviewed AI subject matter experts representing industry, state audit associations, nonprofit entities, and other organizations, as well as officials from federal agencies and Offices of Inspector General.

Artificial Intelligence (AI) Accountability Framework

Data
Ensure quality, reliability, and representativeness of data sources and processing.

Data Used to Develop an AI Model
Entities should document sources and origins of data, ensure the reliability of data, and assess data attributes, variables, and augmentation/enhancement for appropriateness.

Data Used to Operate an AI System
Entities should assess the interconnectivities and dependencies of data streams that operationalize an AI system, identify potential biases, and assess data security and privacy.

Monitoring
Ensure reliability and relevance over time.

Continuous Monitoring of Performance
Entities should develop plans for continuous or routine monitoring of the AI system and document results and corrective actions taken to ensure the system produces desired results.

Assessing Sustainment and Expanded Use
Entities should assess the utility of the AI system to ensure its relevance and identify conditions under which the AI system may or may not be scaled or expanded beyond its current use.

Governance
Promote accountability by establishing processes to manage, operate, and oversee implementation.

Governance at the Organizational Level
Entities should define clear goals, roles, and responsibilities, demonstrate values and principles to foster trust, develop a competent workforce, engage stakeholders with diverse perspectives to mitigate risks, and implement an AI-specific risk management plan.

Governance at the System Level
Entities should establish technical specifications to ensure the AI system meets its intended purpose and complies with relevant laws, regulations, standards, and guidance. Entities should promote transparency by enabling external stakeholders to access information on the AI system.

Performance
Produce results that are consistent with program objectives.

Performance at the Component Level
Entities should catalog model and non-model components that make up the AI system, define metrics, and assess performance and outputs of each component.

Performance at the System Level
Entities should define metrics and assess performance of the AI system. In addition, entities should document methods for assessment, performance metrics, and outcomes; identify potential biases; and define and develop procedures for human supervision of the AI system.

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