



ASA Response to the OSTP Request for Information on the Development of an Artificial Intelligence Action Plan

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Prepared with the input and guidance of the ASA [Scientific and Public Affairs Advisory Committee](#) and the [Committee on Data Science and Artificial Intelligence](#).

The [American Statistical Association](#), a non-partisan scientific organization, appreciates the opportunity to comment on the [request for information](#) (RFI) from the Office of Science and Technology Policy (OSTP) and the Networking and Information Technology Research and Development (NITRD) National Coordination Office (NCO) regarding the development of an artificial intelligence (AI) Action Plan. This RFI refers to implementing the guidance in the Executive Order on [“Removing Barriers to American Leadership in Artificial Intelligence”](#) published on January 23, 2025.

The purpose of the Executive Order is to set out guidelines for developing “AI systems that are free from ideological bias or engineered social agendas” while not overly burdensome on private enterprise. The policies proposed in these comments follow these guidelines with the aim of enhancing the country’s global AI dominance while promoting human flourishing and economic competitiveness along with protecting national security. In particular, these comments address the following topics listed in the RFI: model development; application and use (either in the private sector or by government); explainability and assurance of AI model outputs; data privacy and security throughout the lifecycle of the AI system; technical and safety standards; education and workforce; and research and development. The RFI invites input on additional topics, which we believe should include the role of academia and ethics.

AI model development is inherently dependent on issues such as data quality, predictive accuracy, and the ability to ensure reliable outcomes. Statistical science provides the tools necessary to evaluate and optimize AI systems in ways that are both efficient and minimally burdensome. The ASA describes the role of statistics and statisticians in AI further in its [Statement on The Role of Statistics in Data Science and Artificial Intelligence, 8/4/23](#) and its [2024 Statement on Ethical AI Principles for Statistical Practitioners](#) (EAIPSP).

We suggest five policy actions which we discuss in the remainder of these comments:

1. Establish voluntary best-practice guidelines based on statistical quality assurance methods;
2. Standardize statistical benchmarks for AI model performance;
3. Incentivize AI system developers to document and share data integrity and model validation procedures;
4. Establish partnerships and collaborations across government, business, and academia; and
5. Promote statistical literacy among AI system developers and practitioners.

1. Establish voluntary best-practice guidelines based on statistical quality assurance methods

A major concern for AI development is managing risk without slowing the pace of innovation. Statistics provides an effective means of achieving this balance by offering methodologies for testing and validating AI systems. Model overfitting, for example, which occurs when AI models perform well on training data but poorly in real-world applications, can be prevented using well-established statistical techniques such as cross-validation and bias-variance tradeoff assessments. Statistical uncertainty quantification ensures that AI models provide not only predictions but also an estimate of confidence in those predictions, allowing end-users to make better-informed decisions. Furthermore, companies which incorporate these principles into their development processes will gain a competitive edge, as consumers and businesses will naturally gravitate toward AI tools that produce fair, transparent, and accountable results. Rather than relying solely on external oversight, statistical best practices enable AI to be self-improving while allowing room for necessary safeguards to ensure responsible deployment.

2. Standardize statistical benchmarks for AI model performance

A targeted initiative to develop standardized statistical benchmarks for AI performance assessment would provide a reliable framework for evaluating AI models by application. By defining statistical metrics, for fairness (one of the principles in the EAIPSP), accuracy, and uncertainty quantification, policymakers can create a foundation for AI evaluation that balances innovation with responsible deployment. This approach ensures that AI models meet high-performance standards without imposing rigid constraints that may stifle progress.

3. Incentivize AI system developers to document and share data integrity and model validation procedures

Another important step is incentivizing AI developers to document and share data integrity and model validation procedures, including evidence of maintaining the privacy and confidentiality of individuals. Accountability and transparency are two principles of ethical AI practice described in the EAIPSP. By fostering transparency in AI model development, organizations can build trust in their systems while allowing external stakeholders to assess performance and fairness objectively. Encouraging companies to disclose key statistical validation metrics in AI reporting would create a more competitive and trustworthy AI marketplace.

4. Establish partnerships and collaborations across government, business, and academia

Establishing public-private partnerships and other types of collaborations among AI developers, statisticians, and policymakers can accelerate advancements in AI model development and evaluation, including explainability, fairness, and risk assessment. These collaborations would ensure that statistical expertise is applied effectively to AI systems, creating a foundation for more robust AI applications. Supporting research initiatives that bring together statisticians and AI practitioners across government, business, and academia would also drive methodological innovations that improve AI performance and accountability.

Supporting the continued collaboration between the [National Artificial Intelligence Research Resource \(NAIRR\) Pilot](#) and the [National Secure Data Service Demonstration](#) is a good example of a policy action that can be integrated into the new action plan. These two efforts have their roots in legislation passed during the previous Trump Administration: NAIRR is a promising initiative to harness government and other data for AI methodological and substantive research, with a statutory focus on leveraging publicly available government data. NSDS is a statutorily authorized program that complements the Federal statistical agencies in harnessing government data that is restricted by law or regulation for privacy and other reasons for research and other statistical purposes. The NSDS builds on decades of robust statistical system data governance with strong ethical, methodological and legal frameworks. There are several collaborative efforts between NAIRR and NSDS already underway, including a technical project to make a safe version of restricted data available for AI research. Additional joint methodological and data governance projects would advance safe and appropriate access to government data for cutting-edge AI research.

5. Promote statistical literacy among AI system developers and practitioners

A final action item is the promotion of statistical literacy among AI developers and practitioners. Ensuring that those designing and implementing AI systems have a fundamental understanding of statistical principles will improve model reliability and

prevent common pitfalls such as overfitting, biased decision-making, and unreliable predictions. Investing in statistical training programs and integrating statistical coursework into AI-related education would significantly enhance the quality of AI systems being deployed and will support implementation of the other policy actions proposed in these comments.

To conclude, AI is a transformative technology with the potential to revolutionize industries, drive economic growth, and strengthen national security. Ensuring successful implementation requires a commitment to sound statistical practice. The role of statistics in AI is *not* to create obstacles, but to provide tools that produce AI models which are robust, reliable, adaptable, and can be efficiently governed. If policymakers incentivize the private sector to integrate statistical best practices it will ensure that AI continues to evolve in ways that benefit both industry and society along with maintaining US dominance in the field.

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