

<https://www.nist.gov/topics/artificial-intelligence/ai-standards>  
 Comments due to NIST by July 19th

“OGP ME” refers to the GSA OGP Office of Information Integrity and Access (ME) <mefrontoffice@gsa.gov>

COMMENT #	NAME OF COMMENTER	TYPE i.e., Editorial Minor Major	LINE # PAGE etc.	RATIONALE for CHANGE	PROPOSED CHANGE (specific replacement text, figure, etc. is required)
1	Ryan Day	Major	General	The term “fairness” is only mentioned once in this document. Should the standards address fairness in a more robust way? This may be a separate subject from trustworthiness, and worth being addressed as a standalone component.	
2	Philip Ashlock	Major	General	In advancing the government’s understanding and engagement with AI technologies and use cases it’s important to recognize that successful AI applications often have more fundamental dependencies that deserve attention before AI methods are incorporated. To ensure consensus in assessing these situations, we may need to have a more established and standardized AI Maturity Model to understand the readiness and applicability of AI to given situations. An AI/ML practitioner in the industry has written about this as the The AI Hierarchy of Needs in	

				the following blog post - <a href="https://hackernoon.com/the-ai-hierarchy-of-needs-18f111fcc007">https://hackernoon.com/the-ai-hierarchy-of-needs-18f111fcc007</a>	
3	Philip Ashlock		General	With so much current activity and discussion around AI in government right now it can often be difficult to determine if one is talking about the role of government in managing the use of AI in the private sector or how AI should be deployed within government. My understanding of the EO is that it is primarily focused on how government can support and manage AI in the private sector, but it may be worth being more explicit about how government should establish standards for use in the private sector versus use in the public sector. For example, government often establishes stricter policies around things like cybersecurity and privacy for technologies used in government than those in the private sector and issues like algorithmic bias can lead to legally discriminatory practices when applied within government.	
4	Jasmeen Bowmaster		General	Algorithmic transparency is vital in order to move forward. Strong emphasis is needed on what this term actually means and defining the supporting processes.	

5	Ryan Day	na	56	(Positive feedback) The use of the term “trustworthiness” is a useful way to summarize the critical AI-related attributes such as explainability.	
6	Philip Ashlock	Major	277	Section 2 “US Government AI Standards Priorities” doesn’t do enough to articulate specific horizontal or vertical areas for prioritization and instead only describes high level principles and characteristics for standards activities. Section 2C does provide some sense of a process for determining these needs, but this inventorying of needs and use cases for AI standardization should be more systematic and coordinated.	Perhaps this process could be overseen by NIST or the NSTC ML/AI Subcommittee with the other tasks described in Section 3.
7	Philip Ashlock	Major	277	The government should consider what types of systemic standards the government has a unique role in establishing to create more robust and resilient platforms and marketplaces that allow many AI solutions to thrive together. Platforms like the internet that use open standards to connect many different private sector services with a seamless interconnected user experience are the kinds of things the government should consider playing a leading role in helping to shape (“Leading” as described on line 384). One possible example of this could be to help support interconnection protocols and HCI standards between more generalized AI systems and more specialized domain-	

				<p>specific AI systems or to help support infrastructure and frameworks around transfer learning. The following blog post demonstrates an idea like this where something could serve as a meta chatbot or “chatbot router” that would facilitate natural language processing based human computer interactions between a general purpose smart agent and an interoperable marketplace of domain specific hyper specialized smart agents - <a href="https://medium.com/@pelumi/chatbots-igniting-division-of-labour-in-ai-1430fcc85c8d">https://medium.com/@pelumi/chatbots-igniting-division-of-labour-in-ai-1430fcc85c8d</a></p>	
8	Gwynne Kostin		152-159	<p>What is the process to keep abreast of the state of AI-relevant standardization? How will Appendix II be maintained?</p>	<p>Perhaps get agreement to have the organizations maintain their lists. NIST could create a mailing list and send reminders quarterly.</p>
9	Gwynne Kostin	Major	259	<p>There should be a stronger emphasis on two way engagement between public, other standards organizations and the government, as well as a plan to establish an ongoing feedback loop.</p>	
10	Gwynne Kostin		273-276	<p>This is an important caveat--especially in government when the “safest” approach is to default to the most stringent approach.</p>	<p>Maybe to emphasize that the “standards and standards related tools SHOULD aim to provide guidance for....”</p>

11	Jasmeen Bowmaster		210	<p>Tools for accountability and auditing</p> <p>Define consistent process for federal agencies to audit outputs to ensure validity of the results before they are allowed to be published (similar to <a href="#">CIO Internal Clearance Process for GSA Data Assets</a>)</p> <p>Emphasize the need for an objective, stand-alone audit process of results (and source data + algorithm) published to validate algorithms used</p>	
12	Jasmeen Bowmaster		213		<p>HELP WANTED: Data Standards and Data Sets</p> <p>Included should be a process for reporting on discrepancies found within datasets and associated metrics</p>
13	Ryan Day	Minor	292	<p>The term "Multi-channel" is somewhat unclear in meaning. The text box it references (323 and following) uses multi-channel in the title but does not use that term in the body of the text, so it is unclear how that term is being used. Is each channel meant to be a technical method of contributing comments, or is each channel a standards body?</p>	

14	Ryan Day	Minor	349	<p>Clearly stated provenance and intended use or design (“intent of design”)</p> <p>This section is describing characteristics of a standard, not attributes of an AI system. However, the definition in this bullet says “allow users to decide whether an AI system ... is appropriate for other applications”.</p>	<p>Two options to correct this would be:</p> <ul style="list-style-type: none"> <li>• Move this item to another section of the document that is discussing attributes of AI systems.</li> <li>• Update the definition to discuss if a standard is appropriate to be used (or is relevant) in a context.</li> </ul>
15	Jasmeen Bowmaster		363	<p><i>Harmonized and using clear language to define AI-related terms and concepts and to promote interoperability</i></p> <p>Provide clear definitions and guidance to commonly used AI/ML terms to facilitate uniformity across the board in vocabulary and nomenclature</p>	
16	Ryan Day	Minor	392	<p>Row 392: Practical Steps for Agency Engagement</p> <p>These seem to be high level steps that any agency might take. However, the Presidential Directive for AI assigns different roles for each agency (e.g. if they are an “implementing agency”). This should clarify how agencies can determine the level of engagement with standards that is required.</p>	

17	Joshua Fuehrer		468-470		<p>Under “Grow a cadre of Federal staff with the relevant skills and training, available to effectively engage in AI standards development in support of U.S. government interests. Suggested lead: NIST, OPM”</p> <p>Recommend changing the wording to something more meaningful, as “grow” is ambiguous:</p> <ul style="list-style-type: none"> <li>Invest \$100,000,000 to recruit and retrain Federal staff with the relevant skills required to influence or lead AI standards development in support of U.S. government interest.</li> </ul> <p>Maybe strikethrough OPM/NIST and make it an agency specific responsibility?</p> <ul style="list-style-type: none"> <li>Each federal agency has a unique mission and will have focus areas for investment in AI, thereby, an understanding of the experience/skills “the agency” needs for standard development/AI implementation. For example, the <a href="#">Automated Vehicles 3.0</a> presented by DoT (Row 708-709) has very unique mission requirements for “growing” or training/hiring the right people with the right skills.</li> </ul>
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18	Gwynne Kostin		468-470	<p>Develop incentives for participation/remove barriers (real or perceived)</p> <p>Track and publish opportunities for participation. Create incentives for agencies to be included in the commercial/NGO standards process.</p>	
19	Joshua Fuehrer		603		<p>Standards under development by IEEE</p> <p>Please add the following:  P7014 - Standard for Ethical considerations in Emulated Empathy in Autonomous and Intelligent Systems (after row 622)</p>
20	Joshua Fuehrer		691	<p>The Object Management Group (OMG) cross-sector AI-related specifications under development include:</p> <p>There are other related standards for robotics that have a touchpoint to AI that are already developed. Do we want to include standards or specifications (In this case Robotics) that can be also used or considered when implementing AI? I took the approach as the DoT example (Row 708-709) in which they included a largely vertical list of standards/specifications.</p>	<p>The following are possible candidates:</p> <ul style="list-style-type: none"> <li>● Finite State Machine Component for RTC - FSM4RTC</li> <li>● Hardware Abstraction Layer for Robotic Technology - HAL4RT</li> <li>● Robotic Localization Service - RLS 1.1</li> <li>● Robotic Interaction Service - RoIS 1.2</li> <li>● Robotic Technology Component - RTC 1.1</li> </ul>



21	Joshua Fuehrer		691		<p>Recommend adding the following after Row 691:</p> <p>The Charter of the Artificial Intelligence Platform Special Interest Group (AI PSIG) is an OMG body working towards identifying and recommending new specifications in the area of AI.</p> <p>The scope of the Special Interest Group includes but not limited to Ubiquitous Computing, Machine Learning, Emergent Intelligence, Contextual Agents, Holonic Systems, Morphing and AI State Environments, Digital Twins, Mirror Worlds, and VR, Emergent IoT AI Architectures, Blockchain and AI.</p>
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