



Date: July 19, 2019

To: NIST

Re: IBM comments on NIST draft Plan for Federal Engagement in AI Standards

We greatly appreciated the opportunity to provide input to National Institute of Standards and Technology (NIST) in response to the NIST Request for Information (RFI) on Artificial Intelligence (AI) Standards released on May 1, 2019.

NIST's thoughtful integration of IBM's input, along with the input from a diverse group of stakeholders, into the first draft of "U. S. Leadership in AI: A Plan for Federal Engagement in Developing Technical Standards and Related Tools" is to be commended.

We are pleased to see the inclusion of many ideas that IBM has long championed for ensuring the development of trustworthy AI built on the foundation of fairness, explainability, robustness, transparency, ethics and responsibility, and privacy. We are also pleased to see NIST specifically call out the importance of increasing national efforts related to evaluations, data sets and metrics for AI as a way to drive U. S. industry leadership in AI technology.

IBM offers additional comments using the provided template that elaborates on our prior input and recommends specific actions for NIST, which includes convening stakeholders to create an overall AI accountability framework as well as working to ensure that AI standards efforts are practical, outcome based and built on foundations like NIST Privacy Framework.

We also offer additional comments aimed at ensuring NIST's efforts on documenting use cases for AI will sufficiently capture the key dimensions of trustworthy AI, including fairness, explainability, robustness and transparency, and that efforts on establishing standard formats for data and metadata capture the baseline of currently available data and data formats used by Federal government and industry.

Once again, we appreciate the opportunity to comment. IBM values the significant steps that NIST is taking on AI standards and tools. We look forward to continued engagement on making the U. S. Plan for Federal Engagement in AI Standards a reality. For any questions, please contact John R. Smith at jsmith@us.ibm.com.

Sincerely,

A handwritten signature in black ink, appearing to read "Dario Gil".

Dario Gil

Director of IBM Research

July 1, 2019

Comment Template for Draft Plan for Federal Engagement in Developing Technical Standards and Related Tools for AI Technologies

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	John R. Smith	Major	Line # 471 p. 17	Recommend that specific action be taken by NIST to create a conceptual foundation for trustworthy AI	Add text: “Convene stakeholders to create an overall AI accountability framework that provides a shared conceptual foundation and guidance around important aspects of trustworthy AI – including fairness, explainability, robustness, and transparency — and fosters development of trust-related evaluations, data sets, and metrics. <i>Suggested lead: NIST</i> ”
2	John R. Smith	Major	Line # 475, p. 17	Need to ensure that AI standards efforts are directed towards practical needs	Add text: “Ensure the development of technical AI standards that are practical and outcome-based, meeting specific needs and industry for conformance and interoperability, while allowing continued innovation and industry competition in AI.”
3	John R. Smith	Major	Line # 179, Table 2, Footnote 13 (Privacy)	While some aspects of privacy are being addressed by IEEE (as referenced), further efforts related to privacy should continue to build on the <i>NIST Privacy Framework</i> .	Add text: “Any additional standards or tools touching on <i>privacy</i> and useful for the development of AI should supplement the <i>NIST Privacy Framework</i> and not be independent efforts.”
4	John R. Smith	Major	Line # 500, p. 17	Establishing a baseline of available data and data formats related to AI will be of tremendous value for US industry	Add text: “Identify and make publicly available a catalog of existing data and data formats used by Federal government and industry across sectors.”
5	John R. Smith	Major	Line # 192, p. 9	The current draft plan omitted the key dimensions of trustworthy AI in use case documentation	Add text: “Documentation of use cases should address important dimensions of trustworthy AI, including fairness, explainability, robustness and transparency.”