From: David Draper
Sent: Thursday, September 29, 2022 4:35:42 PM (UTC-05:00) Eastern Time (US & Canada)
To: aiframework <aiframework@nist.gov>
Subject: Feedback AI NIST Framework

Draft 2 of the NIST AI Risk Management Framework is very thorough and solidly grounded in best practices for risk management. This includes risk management in terms of social context of AI systems risks.

While appropriate for many use cases, I am concerned that the emphasis placed on social issues (and context) in the Framework may minimize the importance practitioners in the engineering and hard sciences place on managing the risks AI systems pose. This may include use in contexts such as manufacturing, mining, chemicals, agriculture, and other industrial systems and processes in which "black box" algorithms are replacing first principles engineering and scientific practices.

AI systems risk management includes choice of algorithm. Engineers don't have to abandon first principles when choosing an AI algorithm. For many use cases the additional investment in models which are grounded in first principles, but still drawing on big data produced by industrial processes, will be worth the effort. This should be called out, and might be appropriately emphasized as part of Map 2.3: Scientific integrity and TEVV considerations.

Overreliance on "black box" algorithms reduces the value of domain specific expertise for managing risk that the disciplines of engineering and the sciences provide.

Best Regards,

David Draper
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