Comments for Request for Information on NIST's AI Risk Management Framework

AI Quality Management (AIQM) Research Project,

Digital Architecture Research Center,

Department of Information Technology and Human Factors,

National Institute of Advanced Industrial Science and Technology

(Correspondence to: Yutaka OIWA, Dr., y.oiwa at aist.go.jp)

National Institute of Advanced Industrial Science and Technology (AIST) is one of the largest public research organizations in Japan, focuses on the creation and practical realization of technologies beneficial to industry and society and on "bridging" the gap between innovative technological seeds and commercialization. We have been working jointly with industrial partners to develop a quality management framework for machine-learning-based products since 2018.

We believe that our activity and outcome are closely related to, and valuable for, the following your specific requests posted in the Federal Register:
(quoted from https://www.federalregister.gov/documents/2021/07/29/2021-16176/artificial-intelligence-risk-management-framework)

> 5. Standards, frameworks, models, methodologies, tools, guidelines and best practices, and principles to identify, assess, prioritize, mitigate, or communicate AI risk and whether any currently meet the minimum attributes described above;
>
> 7. AI risk management standards, frameworks, models, methodologies, tools, guidelines and best practices, principles, and practices which NIST should consider to ensure that the AI RMF aligns with and supports other efforts;

We have made our "Machine learning quality management guideline" available publicly in both Japanese and English [https://www.digiarc.aist.go.jp/en/publication/aiqm/]. Our guidelines pick three properties, safety, performance, and fairness, as current main targets for quality management goals and provide several technical focus points such as accuracy and robustness for quality management actions. Our contents offer partial answers to your specific interest items 2, 3, 4, and 10.

Related to item 12, we are interested in governance-level issues and working closely

with another project lead by our Ministry of Economy, Trade and Industry, presented in https://www.meti.go.jp/shingikai/mono_info_service/ai_shakai_jisso/pdf/20210709_9.pdf (in English).

We think frameworks for AI quality management are essential to enhance the trustworthiness of human society and encourage innovation and industry of AI systems. We look forward to the opportunity to share the knowledge in our AIQM guidelines and work with NIST to develop the Framework.

Best Regards,

Yutaka OIWA
Project Leader, AIQM project
National Institute of Advanced Industrial Science and Technology