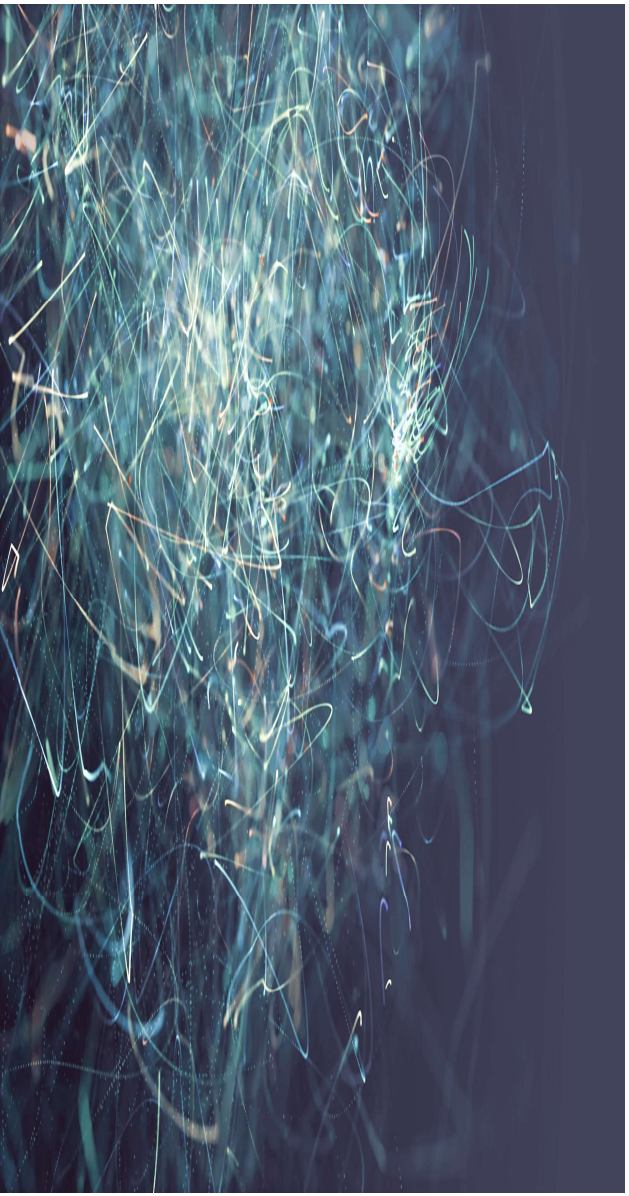

A Practical Guide for Implementing an AI Risk Management Program

An Introduction to a Series of Articles on AI Risk Management

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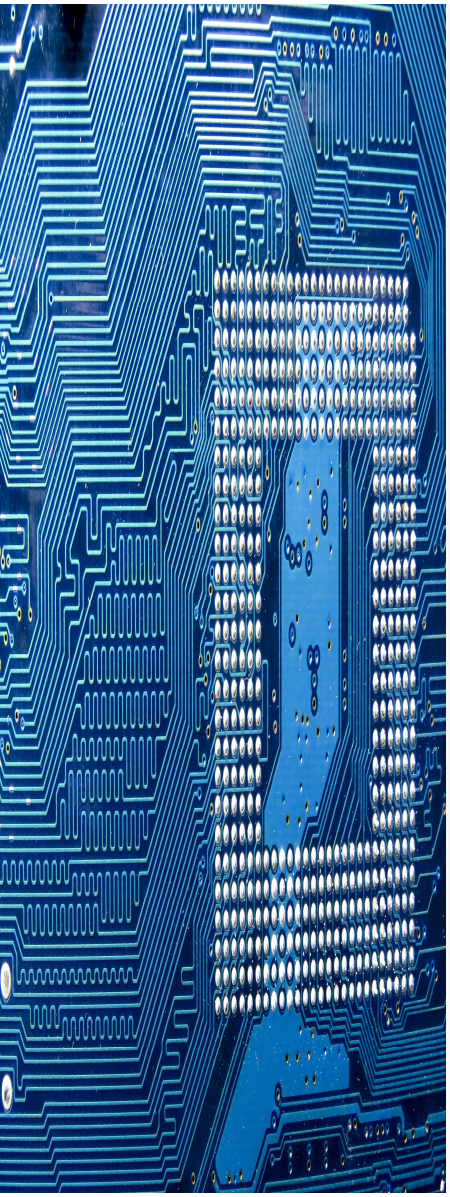
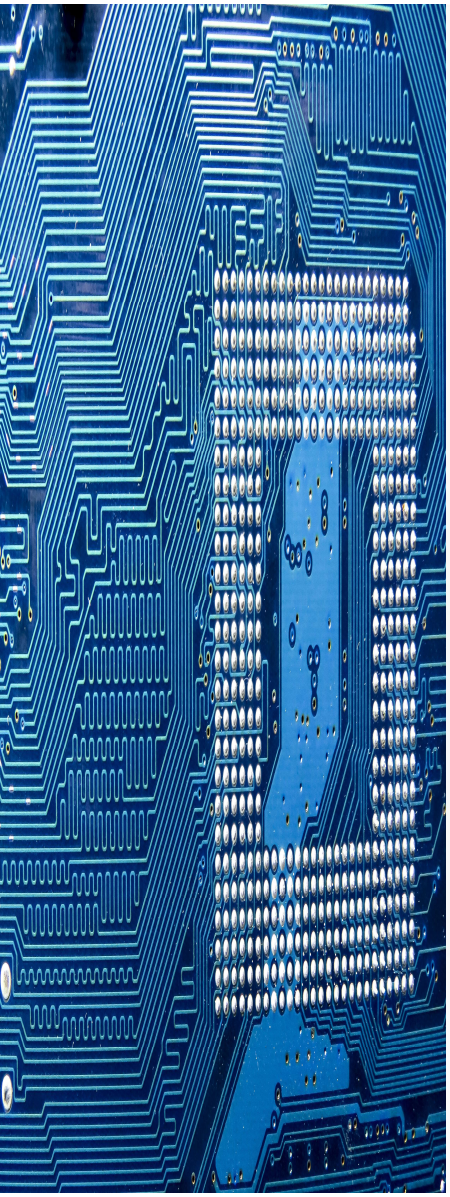


Introduction

Organizations should embrace and encourage the use of AI. Without the automated decision support and generative capabilities offered by AI, organizations will fail to compete with their peers and startups who will maximize the use of these tools. An organization's exposure to AI will come from multiple sources including internal development, custom solutions developed by external parties, vendor provided systems, and reliance on third party service providers who make use of AI in their systems. When properly and safely implemented these tools improve products and services, create better customer experiences, and reduce costs. However, leveraging AI in systems can come with substantial risks.

This article is an introduction for a series of articles providing practical guidance for an organization to implement a risk management program for the use of an AI algorithm, model, or component ('AI component') within a product, service, process, or system ('system').

While risk management is the focus of this series of articles, risk management should be viewed as a mechanism to encourage and facilitate the implementation of AI using guidelines to ensure an organization has the necessary controls, documentation, and metrics to provide transparency to stakeholders about the risks and risk management of AI.



Why Implement AI Risk Management?

Systems containing AI components can expose an organization to many risks. The level of review and on-going monitoring of a system should be based on the level of potential risk from deployment and continued use. When assessing the potential risk of a system containing AI components, organizational impacts to consider include:

Reputational Damage

A poorly managed AI implementation can negatively impact an organization's reputation.

Regulatory Compliance Failure

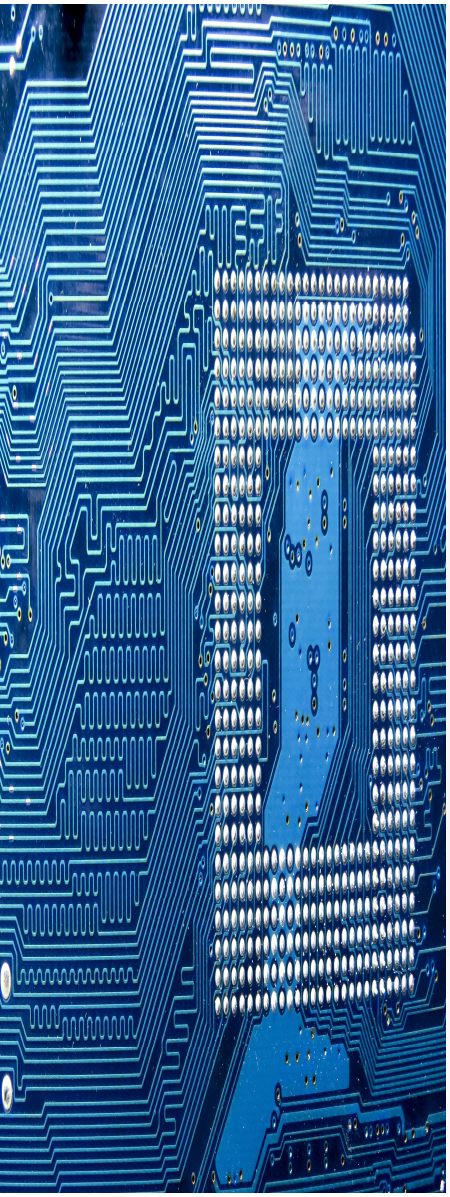
Regulations addressing AI risks have been introduced and more are expected.

Lost Sales and Profit Margins

Bad decisions caused by poorly implemented AI can affect financial results.

Private Legal Actions

An organization might face legal action if an AI implementation infringes on individuals' rights.

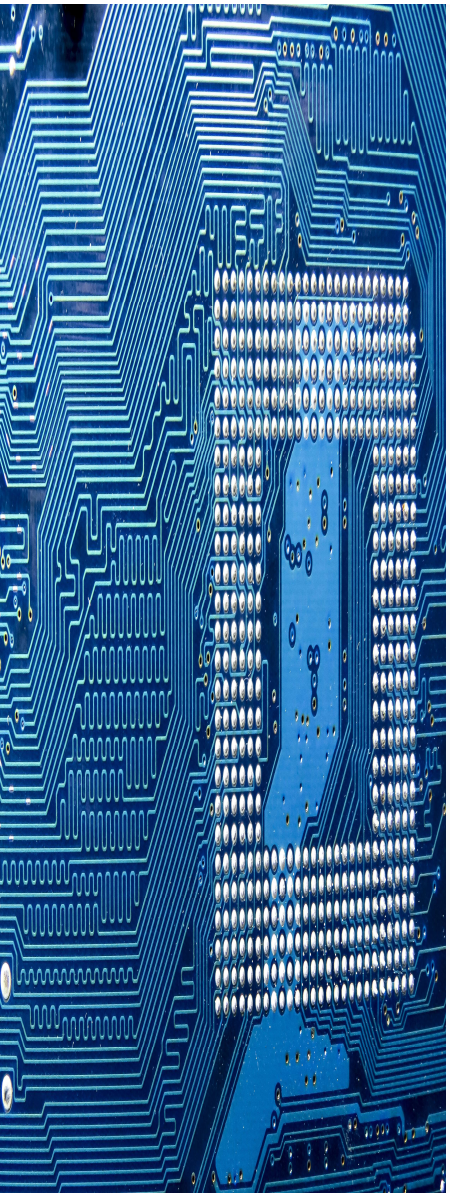


Challenges When Implementing an AI Risk Management Program

To assist with the risk management of leveraging AI, organizations including the National Institute of Standards and Technology ('NIST') and the Organization for Economic Co-operation and Development ('OECD') have developed frameworks to support 'Responsible AI', the implementation of policies and controls to manage the risks and improve safety when embedding AI components into a system. These frameworks provide robust guidance on implementing AI risk management but are not meant to be prescriptive. Implementation of an AI risk management program based on these frameworks requires additional guidance.

Regulations to address the risks of AI have already been introduced, and the pace of new regulation will likely accelerate. Like data security and privacy regulations, the requirements are robust and complex. Implementation of controls to achieve regulatory compliance can be challenging.

The classification of a component as AI creates another challenge. Stakeholders will disagree on which components should be classified as AI. The European Union's Artificial Intelligence Act[1] defines AI as, 'software that is developed with … [machine learning approaches, logic- and knowledge-based approaches, and statistical approaches] and can, for a given set of human-defined objectives, generate outputs such as content, predictions, recommendations, or decisions influencing the environments they interact with.' While the regulatory definition provides general guidance, an organization managing the risks of deploying AI, including complying with regulations, requires a sufficiently inclusive but relatively simple method to determine which components, and therefore which systems, are within scope of its AI risk management program.



A Series of Articles to Support Implementation of an AI Risk Management Program

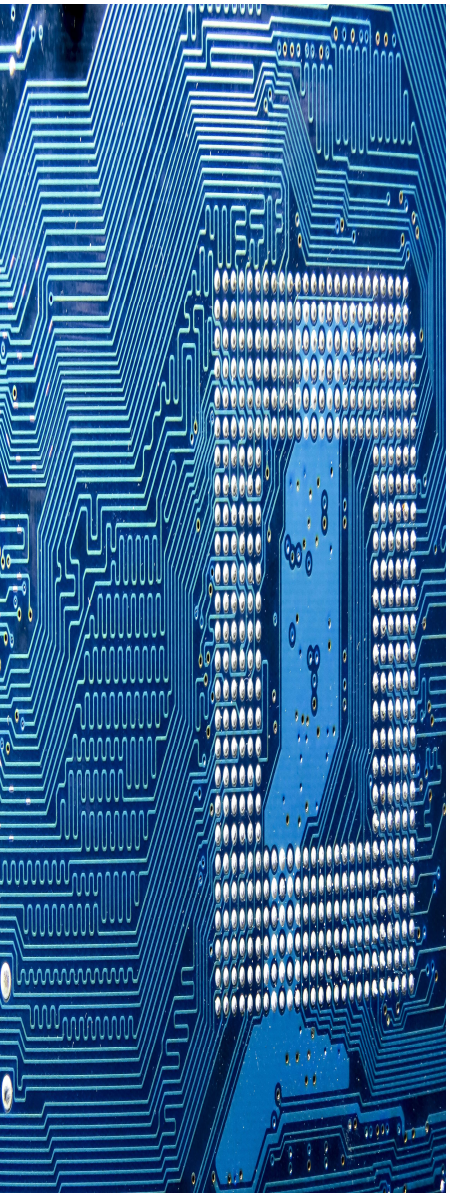
The articles in this series will provide practical guidance for an organization to implement a risk management program across the entire lifecycle of a system that includes one or more AI components.

The NIST AI Risk Management Framework identifies these stages of an AI system's lifecycle:

- Plan and Design
- Collect and Process Data
- Build and Use Model
- Verify and Validate
- Deploy and Use
- Operate and Monitor

The series of articles will follow the lifecycle for the NIST Framework but will add a 'Decide' stage to provide guidance on the initial decision to deploy and AI component.

Where a specific technical methodology is available to support the implementation of the AI risk management program for a specific stage in the AI lifecycle, a separate document on the methodology will be provided and referenced from the article for that lifecycle stage.



Limitation of Scope

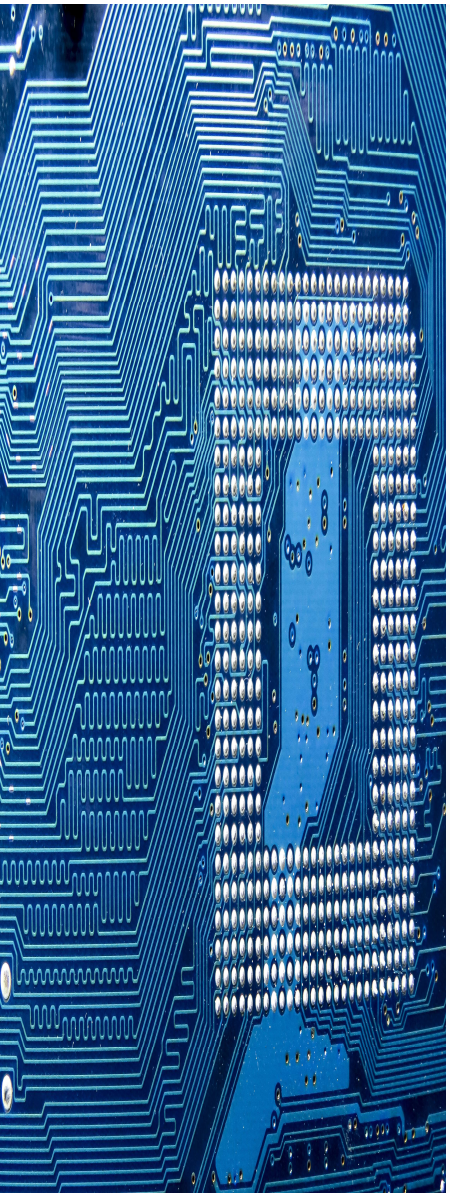
The series will discuss where the AI risk management program should ensure alignment with an organization's data governance, security, and privacy programs. While data governance, security, and privacy are vital parts of managing the risk of systems that include an AI component, this series will not provide detailed guidance on these functions. Other sources should be consulted for details of implementing these data and risk management functions.

Notes

The series is not and should not be used as legal advice or recommendations.

The articles provide practical guidance on developing an AI risk management program but should not be viewed as a comprehensive guide to AI risk and risk management and should be supplemented with other sources.

Articles might be updated from time to time to reflect updates to AI components, regulations, and risk management frameworks. See the version number and date on the initial page of this document.



References

1 European Commission, Proposal for a Regulation of the European Parliament and of the Council Laying Down Harmonised Rules on Artificial Intelligence and Amending Certain Union Legislative Acts, April 21, 2021, https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52021PC0206

2 National Institute of Standard and Technology, United States Department of Commerce, Artificial Intelligence Risk Management Framework (AI RMF 1.), January, 2023, https://doi.org/10.6028/NIST.AI.100-1

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