

Data governance for AI governance

Introduction

Data governance is critical for the effective management of data throughout the AI lifecycle, spanning from training to deployment. It entails establishing clear policies, procedures, and standards to ensure data remains accessible, usable, secure, and reliable. The integration of data governance with AI governance is vital to fostering ethical, transparent decision-making. Key components of Data Governance include Data Quality, Data Security, Data Lineage, Data Compliance, and Data Ethics (atlan, 2025).

In our data-driven world, organizations are increasingly focused on collecting extensive data to drive improved outcomes. However, inadequate data governance can lead to significant issues, including bias, inaccuracies, and data duplication. For instance, bias may occur when training data lacks diversity, while "noise" refers to irrelevant or misleading information that can skew results. When data quality is compromised, AI governance cannot yield reliable or trustworthy outcomes (Arora, 2025)

To address these data governance challenges and enhance data quality, organizations should implement best practices such as conducting regular data audits, utilizing automated data management tools, and promoting a culture of data stewardship. By doing so, they can strengthen their data governance framework and achieve more effective and ethical outcomes in their AI initiatives.

Problem Statement:

A report from MIT says 95% of generative AI pilots deliver zero return on investment. One of the main issues is the lack of data governance, which makes it difficult to leverage AI to its full potential (Catmull, 2025). Without proper governance, organizations encounter significant challenges, including regulatory violations, compliance issues, privacy breaches, model drift, and loss of stakeholder trust in AI-driven decisions. Data stewardship responsibilities are spread across teams without clear accountability, creating governance gaps between AI development and compliance teams.

Weak data governance results in inaccurate and unreliable AI model lineage. These issues undermine overall model performance and hinder compliance with key data protection standards, such as HIPAA (Health Insurance Portability and Accountability Act) and GDPR (General Data Protection Regulation (Arora, 2025).

Existing Solution:

Several existing frameworks and standards outline the relationship between data governance and AI governance to ensure the development of ethical, compliant AI systems. Frameworks such as COBIT 2019, the DAMA-DMBOK, and the CIIA model provide a structured approach to data quality, data lineage, and accountability. Additionally, global regulations like GDPR and the EU AI Act promote integration and adherence to principles throughout the AI lifecycle. But most of them handle data governance and AI governance less cohesively. So, it affects the decision-making process and the final truth, and it also impacts the data privacy, ethics, and regulatory compliance (Janssen, Brousa, Estevez, Barbosad, & Janowski, 2020).

My research area:

My research focuses on “Data governance enables AI governance”. My research question is

- “How does effective data governance contribute to ethical and regulatory compliance in AI governance?”.

This research will integrate both data governance and AI governance, and it will provide data protection, data security, and data compliance. My research will focus on establishing centralized governance with cross-functional representation and standardizing AI governance processes.

This research will also provide practical recommendations for organizations and policymakers on applying the mixed governance framework in real-world settings. By linking these two governance domains, the study aims to reduce policy fragmentation, align regulations such as GDPR and the EU AI Act, and promote the development of trustworthy and responsible AI ecosystems.

References:

- Arora, S. S. (2025). How Data Governance Improves AI Success? *medium*. Retrieved from https://medium.com/@community_md101/how-data-governance-improves-ai-success-65cc4feb3fbc
- atlan. (2025). *Data Governance for AI: Framework & Best Practices 2025*. Retrieved from www.atlan.com: <https://atlan.com/know/data-governance/for-ai/>
- Catmull, J. (2025). *MIT Says 95% Of Enterprise AI Fails — Here’s What The 5% Are Doing Right*. Retrieved from www.forbes.com: <https://www.forbes.com/sites/jaimecatmull/2025/08/22/mit-says-95-of-enterprise-ai-failsheres-what-the-5-are-doing-right/>
- Janssen, M., Brousa, P., Estevez, E., Barbosad, L. S., & Janowski, T. (2020). Data governance: Organizing data for trustworthy Artificial Intelligence. *Government Information Quarterly*, 37(3). doi:<https://doi.org/10.1016/j.giq.2020.101493>