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Artificial intelligence — Data quality for analytics and machine learning (ML) —

Part 5:
Data quality governance framework

FDIS stage

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Foreword

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This document was prepared by Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee SC 42, *Artificial intelligence*.

A list of all parts in the ISO/IEC 5259 series can be found on the ISO and IEC websites.

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Introduction

To address data quality properly without wasting critical resources, the organization's governing body can set the strategic direction for the use of analytics and machine learning (ML) and can oversee the quality of the needed data.

The data quality governance framework for analytics and ML assists the governing body in establishing a data quality governance within its organization with adequate controls across different layers of the organization throughout the data life cycle (DLC).

The framework can be used by both the governing body and management to interact and ensure the establishment of an effective data quality governance for analytics and ML at all levels in the organization.

The framework can be applicable regardless of an organization's size and type; and used in conjunction with other parts of the ISO/IEC 5259 series.

Artificial intelligence — Data quality for analytics and machine learning (ML) —

Part 5:
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1 Scope

This document provides a data quality governance framework for analytics and machine learning (ML) to enable governing bodies of organizations to direct and oversee the implementation and operation of data quality measures, management, and related processes with adequate controls throughout the data life cycle (DLC) model according to ISO/IEC 5259-1.

This document can be applied to any analytics and ML. This document does not define specific management requirements or process requirements according to ISO/IEC 5259-3and3 and ISO/IEC 5259-4 respectively.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO/IEC 5259-1:—,:2024, *Artificial intelligence — Data quality for analytics and machine learning (ML) — Part 1: Overview, terminology, and examples*

ISO/IEC 22989:2022, *Information technology — Artificial intelligence — ConceptsArtificial intelligence concepts and terminology*

ISO/IEC 38505-1:2017, *Information technology — Governance of IT — Governance of data — Part 1: Application of ISO/IEC 38500 to the governance of data*

ISO/IEC 38507:2022, *Information technology — Governance of IT — Governance implications of the use of artificial intelligence by organizations*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO/IEC 5259-1, ISO/IEC 22989, ISO/IEC 38505-1 and ISO/IEC 38507, and the following apply.

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at https://www.electropedia.org/

3.23.13.1
data creator
role within an organization responsible for generating, collecting and curating data from data sources

~~3.3~~3.2 ~~3.2~~
data owner
organization that is in the position to obtain, create, and have significant control over the content, access and distribution of data

Note 1 to entry: A data owner does not necessarily have a legal status with respect to data.

[SOURCE: ISO/TR 14872:2019~~(en),~~ 3.4 ~~—~~ modified, Note 1 to entry replaced]

~~3.4~~3.3 ~~3.3~~
data steward
role within an organization responsible for ensuring that data-related work is performed according to policies and practices as established through data governance

[SOURCE: ISO/IEC TS 38505-3:2021~~(en),~~ 3.9]

~~3.5~~3.4 ~~3.4~~
direct
communicate desired purposes and outcomes

Note 1 to entry: Within the context of governance of IT, directing involves setting objectives, strategies, and policies to be adopted by the members of the organization, to ensure that the use of IT meets organization's business objectives.

Note 2 to entry: Objectives, strategies, and policies can be set by management if they have the relevant authority delegated to them by the governing body.

[SOURCE: ISO/IEC 38500~~:—~~,:2024, 3.1]

~~3.6~~3.5 ~~3.5~~
executive manager
person who has authority delegated from the governing body for implementation of strategies and policies to fulfil the purpose of the organization

Note 1 to entry: Executive managers can include roles which report to the governing body or the head of the organization or have overall accountability for major reporting function, for example Chief Executive Officers (CEOs), Heads of Government Organizations, Chief Financial Officers (CFOs), Chief Operating Officers (COOs), Chief Information Officers (CIOs), and similar roles.

Note 2 to entry: In management standards, executive managers can be referred to as top management.

~~3.7~~3.6 ~~3.6~~
governance
human-based system comprising directing, overseeing and accountability

[SOURCE: ISO/IEC 38500:2024, 3.3]

~~3.8~~3.7 ~~3.7~~
governing body
person or group of people who have ultimate accountability for the whole organization

Note 1 to entry: Every organizational entity has one governing body, whether or not it is explicitly established. When the organization is not an organizational entity, the term governing group is applicable where "governing body" is used throughout this document.