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THE IMPORTANCE OF TRUSTED DATA IN THE *USAGE OF BUSINESS-DRIVEN ARTIFICIAL INTELLIGENCE*

Preserve data governance by improving cloud data quality

As demand for artificial intelligence (AI) and machine learning (ML) increases, so too does the need to determine the quality and integrity of the enterprise data these models call upon. Deloitte helps clients address this need by combining our deep industry experience in data management with advanced tools such as Informatica's Intelligent Data Management Cloud™ (IDMC) platform. The IDMC platform gives organizations more peace of mind by using AI and ML tools to automate intricate data quality management governance tasks. It also helps unlock new data insights previously inaccessible via legacy data management methods.

The rigors of traditional data quality management

Data quality management is a continuous and iterative process. It requires an enterprise to both understand the contents of its data and make that data relevant in the context of business data improvement. The negative impacts of poor data quality are significant, with an industry study revealing that in the US alone, businesses lose $3.1 trillion yearly due to poor data quality.

Traditionally, organizations might use manual tools to manage the quality of their data by defining data quality thresholds that aligned to their business objectives, then implementing associated business rules for comparison, correction, and standardization. But maintaining data quality isn't easy. Persistent challenges include:

Accuracy: When individuals and teams manage a highly intensive process, there's a chance for human error

Time: Intensive, manual processes create incessant feedback loops, which sap time and energy with multiple reviews and oversight

Churn: The additional time and energy required to maintain standards leads to more churn in business objectives and baselines for business rules

Only when these challenges are resolved, enterprises will benefit from "trusted data."

The benefits of AI-enabled data quality management

Thanks to advances in AI, ML, and Generative AI (GenAI), organizations now have an opportunity to use these tools to help uphold and preserve complex data governance and quality management tasks, which can benefit an organization through:

Improved data quality by minimizing error-prone methods

Savings on data quality management costs when automating and reallocating resources

Reduce total cost of ownership (TCO) or reallocate personnel to focus on more complex tasks

Working collaboratively to instill data governance policies

Before some organizations can leverage the long-term benefits of AI-enabled cloud data governance, they should consider working with service providers that have experience establishing AI-enabled capabilities. These collaborations can help organizations efficiently review current data quality management policies and implement new data quality guidelines for greater interoperability and adherence.

Deloitte's deep experience in these areas can help organizations establish or reestablish their data governance policies, incorporating cutting-edge AI and ML models to unlock new possibilities and insights.

This proficiency, coupled with the dynamic capabilities of Informatica's IDMC platform, forms an efficient support structure that assists organizations to not only better govern but also enhance the quality of their data. This fosters improved data integrity and contributes to the organization's external value to its customers and clients.

Putting AI to the task for data quality management

What does enhanced data quality management look like when run through the Deloitte-led, AI-enabled capabilities in Informatica's IDMC platform? Consider the potential improvements that teams could see across the data quality management spectrum in the following scenarios:

Data standardization: AI-enabled tools can help easily identify common synonyms and abbreviations, standardizing values such as 'USA' as a country, also written as "US", "The USA", "United States", "America," or "The United States of America." In more complex scenarios, an organization could utilize these features to standardize human names or addresses, improve accuracy of data attributes for industry labeling, or use population files from Informatica to build a library of common names and terms that can be leveraged to further standardize data, such as matching 'John' in English with 'Johann' in German or 'Jean' in French.

Data anomaly identification: A well-trained AI model can distinguish between a new valid data value or wrong data from an incoming data feed by understanding common human errors and mistakes, such as misspellings, language barriers, or inputting errors. By identifying patterns in large volumes of unstructured data, an AI model can more easily distinguish and pinpoint anomalies when analyzed in comparison to expected patterns.

Missing data speculation: A more tailored deep-learning model can also help predict and suggest content for missing data by analyzing similar data structures from historical data values, such as customer or product data structures with a level of customization on top.

Data quality operations: AI/ML can help in continuous data quality monitoring by lifting data quality thresholds as data quality increases over time. Also, as data volume grows and more data is ingested, an AI model can auto-scale data quality operations without having to change existing business processes.

Data augmentation: AI, ML, and natural language processing (NLP) can also be used for data quality rule creation and to extend profiling, cleansing, linking, identifying, and semantically reconciling master data in different data sources. This leads to more AI-driven data quality checks that augment and enrich the data governance process.

When data quality is critical, AI is the advantage

With these capabilities in mind, Deloitte is well positioned to help provide guidance for organizations exploring new ways to enhance their Informatica IDMC investment by implementing the GenAI-enabled tools found within the IDMC, such as CLAIRE® GPT, which aims to assist organizations to unlock new insights from structured and unstructured data and literally "talk" to their data using natural language to improve data quality through:

Insights from data profiling results

Within CLAIRE, the Insights feature provides an automated approach to uncovering data quality issues, presenting insights and generating recommendations for review and approval. This includes the ability to autonomously conduct profiles to facilitate the detection of data quality issues. And upon approval of recommendations made by the user, available data quality and data profiling services can automatically generate data quality rules and implement them into the user's profile for issue detection.

Informatica's CLAIRE, the AI Copilot, excels in identifying and generating data quality rules using advanced ML and NLP techniques. It translates plain text rule requirements into precise technical representations and autonomously generates new rules from metadata like glossary term names. CLAIRE seamlessly integrates these rules within the Cloud Data Governance framework. Additionally, it intelligently associates data quality rules with cloud profiles based on matching column and source object names, significantly reducing manual effort and preserving consistent data quality standards.

Cloud data quality in action

Deloitte-led, GenAI-enabled data quality enhancements are already helping companies address challenges and scale for the future. Here's a recent example of our work put into practice:

Challenge: When a client needed to create a data quality rule for different data sets, including important customer information for credit card and social security numbers, the process was traditionally manual. This method was time-consuming, involving the identification of where this information resided within their data lake. Subsequently, the client would then associate applicable data quality rules to the identified data. With this manual process, the client had to worry about associating different data quality rules to the same data sets, which resulted in inconsistent data quality rules for the same concepts. This potentially conflicted with its data governance policies and undermined both the value of the work and the time spent performing it.

Solution: AI-enabled tools helped drive effective data governance by documenting new policies and actively enforcing them. This facilitated information security professionals to meet compliance requirements for data privacy regulations such as GDPR, Sarbanes-Oxley Act (SOX), and more.

Get started today

Working with Deloitte to integrate AI and ML into an organization's Informatica-based cloud data quality processes and operational workflows is a smart first step toward unlocking new insights with speed and scale to transform productivity and empower more innovative analyses.

Ready to get started?
Reach out to discuss how Deloitte can help your organization improve the quality of its cloud data.

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