

# Predictions 2024: Data And Analytics

AI Is Ready For The Spotlight, But Data And Analytics Determine If It Shines

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## Summary

In 2024, data and analytics will confront new challenges and opportunities as they're faced with supporting the boom of AI technologies. Outputs from AI technologies will only be good as the data that goes into them, so business and technology leaders must embrace best practices for data and analytics to maximize the value from their artificial intelligence. In this report, we outline five predictions for data and analytics in 2024. These predictions will cover topics such as data platforms, quality, and skills training and will help business and technology leaders know what to expect in the year ahead.

# Data And Analytics Teams Set The Stage For The AI Show

If generative AI (genAI) is the star actor in “Business Technology: The Musical, 2024,” data and analytics leaders are the stage managers. According to Forrester’s July 2023 Artificial Intelligence Pulse Survey, 89% of AI decision-makers say their organizations are expanding, experimenting, or exploring the use of genAI, but before the star technology can deliver value for its audience of stakeholders and customers, data and analytics leaders must enable the people, processes, and platforms to set the stage for success. Forward-thinking data and analytics teams know that outputs from AI technologies will only be as good as the data that goes into them, and they will embrace data platforms and data quality practices to support LLMs and unstructured data as well as data skills training to put their staff in the best position to deliver value with new AI technologies. The work that data and analytics teams do behind the scenes will determine whether new AI technologies flop or shine in the spotlight when they hit center stage. We predict that:

- **CAIOs will surface on one out of eight executive leadership teams.** As organizations chase the productivity promise of AI, expect to see new titles like chief artificial intelligence officer (CAIO) surfacing on your LinkedIn and other social media feeds. Twelve percent of AI decision-makers whose organization has a well-defined AI strategy indicate a CAIO has primary responsibility for the overall enterprise AI strategy at their organization, while only 2% attribute this responsibility to a chief data officer (CDO). This doesn’t mean that CDOs are on the verge of extinction. Data is still a vital and often unleveraged resource within organizations due to challenges around quality, governance, and access. Ensure your AI and data leaders are in lockstep to spin data straw into insights gold.
- **Vector database adoption will increase by 200% to support genAI initiatives.** With increasing investments in genAI, organizations will look at vector databases to support similarity searches of text, images, and documents. Traditional databases primarily rely on exact matches, whereas with vector databases, you can find similar or relevant data based on context, a key need for generative output. Vector databases have a built-in search capability that quickly delivers optimized and relevant results, especially with complex data sets such as image, audio, and video. With vector representation in databases, LLMs can process large data sets quickly, delivering the performance and scale needed to run complex analyses. In the next 12 months, the adoption of vector databases in production deployments will reach 18%, with another 45% experimenting. Identify use cases

where similarity comparisons can drive value and start vectorizing those data sources.

- **Sixty percent of employees will get prompt engineering training.** The right prompt into a genAI tool is the difference between getting relevant and quick answers and getting “coherent nonsense.” But only 33% of US and UK data and analytics employees agreed their organizations currently provide training on how best to communicate via prompts with chatbots, independent physical robots, or intelligent agents. With AI at the center of future productivity for all employees, teams will need to continue to invest in data/AI literacy programs to close the skills gap in how to engineer successful prompts. Don’t leave this important training to learning and development — IT needs to develop bring-your-own-AI (BYOAI) guidelines and enterprise training programs for employees to help them best leverage generative AI consistently and safely.
- **Improving data quality will enhance AI/ML models’ accuracy by 20%.** Using data of low or dubious quality is the ultimate garbage in/garbage out example. Accuracy, a critical metric for gauging model performance, relies heavily on the quality of training data. Models cannot produce the right outputs without high-quality data. Improving data quality allows machine learning models to accurately identify underlying patterns, thereby improving prediction accuracy. When organizations prioritize data quality through rigorous metrics, assessments, continuous monitoring, and improvement, they not only enhance model reliability but also reduce the risk of biased or erroneous conclusions. This improvement in model accuracy translates into cost savings, improved business outcomes, and a competitive advantage. Establish accountability for data quality within your data engineering and analytics teams along with clear measures of improvement.
- **Unstructured data managed by enterprises will double in 2024.** Although it’s a truism that 80% of the world’s data is unstructured, global data and analytics decision-makers say only 27% of their organizations’ managed data is unstructured. GenAI will double that as companies roll out more conversational experiences for customers and employees. Enterprises will scramble to store, analyze, and make sense of this deluge of unstructured data. This trend will show up in the data pipeline space, where 80% of new data pipelines built in 2024 will be for ingesting, processing, and storing unstructured data. Be prepared to scale — enterprises will need to double down on data infrastructure. With the explosion of unstructured and semi-structured data, organizations must leverage all-in-one unified data platforms such as lakehouse, translytical, and data fabric to manage costs, support multistructured data analytics, and enable broader use cases and workloads.



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