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The Future of BI & Analytics

Adopting Generative AI for Analytics: Early Trends, Lessons and Best Practices

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Publication: March, 2024

Management Summary

Research sponsored by:

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Executive Summary

Generative AI (GenAI) enables business intelligence and analytics (BIA) teams to prepare and analyze data using natural language, thereby boosting productivity and tackling more sophisticated use cases. Both methods go beyond natural language processing to convert human commands to SQL queries, describe findings and perform myriad other tasks while conversing with users. BIA teams are taking advantage of GenAI features within their BIA tools or general-purpose language models.

So, what can we learn from adoption trends so far? This report draws conclusions and provides actionable recommendations based on the survey responses from 238 data leaders and practitioners about their use of GenAI for BIA. We explore adoption status, benefits, risks and use cases, as well as the best practices of leading practitioners.

The market is in the early stages of adoption, although GenAI experimentation and implementation is higher among experienced AI/ML users. More than one third of respondents say GenAI will improve their use of BIA to a moderate degree over the next 12-18 months. Overall, they rank faster time to insight, improved productivity and deeper analytics as the top benefits – and early adopters find the risks of this new technology to be manageable. Those risks include data privacy, skills gaps, compliance, data quality and bias.

A variety of roles use GenAI, starting with experts such as data analysts and data scientists, then ranging outward to include various IT and business stakeholders. More than half of companies use GenAI for analytics functions such as predictive analytics and forecasting, followed by data analysis and mining, report and dashboard creation, thus enabling self-service. Many GenAI leaders view GenAI as a way to enrich their analytics outputs, and many laggards view it as a way to improve productivity.

Key Takeaways

Adoption Status and Outlook

Leaders outpace laggards
in adopting both GenAI
and AI/ML overall

- Most leaders and practitioners remain in the early stages of adoption: nearly one third (29 percent) of respondents are discussing it, 9 percent are evaluating it and 22 percent are experimenting. Just 9 percent are implementing GenAI; 6 percent have GenAI in partial operational use and 3 percent in full operational use. As one would expect, leaders outpace laggards by a wide margin in adopting both GenAI and AI/ML overall.

More advanced AI/ML users
adopt GenAI for BIA
in much higher numbers

- The more advanced users of AI/ML — i.e., those already implementing or operating — adopt GenAI for BIA in much higher numbers than less advanced AI/ML users. This trend underscores the role of an established data science program in supporting GenAI adoption.

More than one third of respondents
say GenAI will improve their use of BIA
in the next 12-18 months

- More than one third of respondents say GenAI will improve their use of BIA to a moderate degree over the next 12-18 months. Outside of this band, the pessimists outnumber the optimists somewhat. However, respondents express more optimism about the benefits of GenAI in general than GenAI for BIA in particular.

Data engineers and business users are optimistic
while heads of business units are more
pessimistic or ambivalent

- Data engineers and business users express the most optimism about GenAI for BIA, given its productivity and self-service benefits. In contrast, heads of business units are ambivalent or even pessimistic given concerns about data governance. Data scientists, developers, consultants and power users also are ambivalent or even pessimistic. They need less productivity assistance than others given their technical skills — and might also have governance concerns.

Benefits and Risks

- Faster time to insight, reduced workload, enhanced user interaction, simplified BIA and expanded self-service rank as the top benefits of GenAI for BIA. These and other popular responses illustrate a desire to become more data-driven, democratize data consumption and handle more diverse data sets. Leaders believe the immediate value of GenAI for BIA is getting more valuable insights, faster, out of traditional tabular data sets — rather than adding new data sources.

Top benefits of GenAI

- Faster time to insight
- Reduced workload
- Enhanced user interaction
- Simplified BIA
- Expanded self-service

- Respondents, in particular GenAI leaders and early adopters of AI/ML, believe GenAI for BIA poses manageable risks. Almost half (45 percent) say the risk is moderate and 34 percent say low or very low. These findings underscore the maturity of most leaders when it comes to governing more traditional AI/ML projects — and their ability to extend governance programs to address GenAI. Companies that have moved past the evaluation stage also find the risk to be lower than others.

GenAI poses manageable risks

45% say the risk is moderate

34% say the risk is low or very low

- Data privacy and security, skills gaps and training needs, and compliance and regulatory challenges rank as the top risks of GenAI. These responses indicate that analytics teams, familiar with longstanding challenges of data governance, understand well the risks of employing GenAI for BIA.

Top risks of GenAI

- Data privacy and security
- Skill gaps and training needs
- Compliance and regulatory challenges

Rollout Details

Roles using GenAI

Data experts, IT / business stakeholders, data & business analysts, data scientists, developers, marketing & sales personnel, …

- A broad spectrum of roles use GenAI, starting with data experts and then ranging outward to various IT and business stakeholders. Nearly two thirds of respondents say data and business analysts will use GenAI to a significant degree in their organization, followed by data scientists, developers, marketing and sales personnel and so on. The responses illustrate the breadth of GenAI applications as well as its ability to democratize analytics.

Primary Uses of GenAI

Analytics functions, data analysis, mining and report, dashboard creation

- More than half of companies use GenAI for analytics functions such as predictive analytics and forecasting, followed by data analysis and mining, report and dashboard creation. These findings reflect a primary focus on sophisticated tasks—e.g., predictive analytics and data mining — and a strong secondary focus on helping both data and business experts perform more basic analytical tasks such as report creation.

Leaders want to generate insights

but laggards prefer to create data visualizations

- Higher portions of leaders than laggards want to generate insights about one or more data sets and generate insights about a dashboard or report. A greater portion of laggards, meanwhile, want GenAI to create data visualizations. These differences show that many leaders view GenAI as a way to enrich their analytics outputs, while laggards view it as a way to improve productivity.

Satisfaction with GenAI features

is mostly neutral,
but happy users outnumber the rest

- Most respondents are neutral when asked about their satisfaction with the GenAI features of their BIA software. Outside this band, happy users outnumber the rest. These numbers reflect the early stage of adoption and the wide range of GenAI deployment preferences outside BIA software. GenAI leaders, further along the adoption curve, express higher satisfaction than laggards. Leaders have more run-time with GenAI features within BIA software and their AI/ML expertise helps them get value from them.

Recommendations

- **Take a pragmatic approach.** While GenAI has powerful capabilities, its value depends on careful application to the right data sets and use cases within your organization. Learn from the leaders that use GenAI to enrich their analytical outputs in addition to boosting productivity. We also recommend that companies educate themselves about the risks of GenAI, then prioritize lower risk use cases for initial deployment to gather experience "on the ground". Early as well as late adopters must also extend their data governance programs to mitigate the risks of GenAI, for example, by strengthening controls for data quality, privacy and handling of intellectual property.

- **Strengthen your data culture.** As with other new technologies, GenAI for BIA depends on a strong data culture, including team communication, data literacy and executive oversight. Take steps to improve in each of these areas. For example, data scientists can communicate their data requirements to data engineers to improve data and output accuracy; business managers can get training on GenAI risks and governance techniques; and chief data officers can align GenAI objectives with the corporate strategy.

- **Keep it simple.** GenAI involves many complex tasks, with variable and risky outcomes. Keep things simple wherever possible, for example, by using GenAI features within BIA software or pre-trained large language models rather than customizing your own model. Start with small, simple projects that extend what experts already do well. Have your data analysts experiment with GenAI features and validate the results before pursuing a broader rollout.

- **Delve into unstructured data sets.** Companies have long struggled to extract meaningful insights from all the text — within emails, service records, PDF files and so on — that sloshes around their organizations. As you tackle new projects and expand your use of GenAI, look for ways to glean insights from these unstructured and semi-structured data objects. This can unlock new analytical value and enable new use cases, for example, by enriching 360-degree customer views or developing sophisticated measures of customer satisfaction.The data vault has committed users that value its ability to speed data delivery and grow with the business. Study how best-in-class adopters selected the data vault, trained their teams on the 2.0 solution, and automated its processes with commercial tools.

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