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Decision Intelligence and Generative AI

The potential for creative expression and business innovation

Contents

Summary

Generative AI and Decision Intelligence are two distinct approaches to data analysis and decision-making. Choosing one or the other — or some combination of both — depends on the organization's needs and goals. Generative AI is designed to create new content by training a large existing dataset while using learned patterns to generate results. Decision Intelligence is a way to enable better decisions for enterprises using AI.

Business leaders can use generative AI to automate certain tasks and Decision Intelligence to guide the overall decision-making process. This next generation combo has the potential to overcome several challenges related to adoption of Decision Intelligence tools.

Overall, the combination of generative AI and DI has the potential to be a powerful tool for solving complex problems in a variety of industries, from finance to healthcare to entertainment to retail.

With generative AI acting as a force multiplier for Decision Intelligence tools, the journey from data to decisions will only get easier. This eBook discusses how companies can put generative AI to work with Decision Intelligence.

The emergence of ChatGPT

2023 is turning out to be the year of change and new opportunities for Artificial Intelligence (AI). Unless you've been living under a rock for the past few months, you must have heard of ChatGPT. ChatGPT is a state-of-the-art language model developed by OpenAI. It is capable of generating human-like responses to natural language questions. Bard and ERNIE 3.0 — AI solutions from Google and Baidu, respectively — provide similar capabilities. Such technologies are also finding their way into business use cases, helping to reduce response time in customer service and automated support interactions.

All these tools fall under Generative Artificial Intelligence (GAI). GAI refers to algorithms that can be used to create new content, including audio, code, images, text, simulations, and videos.[1] While it has technically been around for several years, it recently gained popularity due to advances in the underlying technology that have made its models easier to train and deploy at scale.

Unlike traditional AI designed to recognize patterns and make predictions based on existing data, GAI is designed to go beyond what already exists and create something new. This is achieved through training the AI on a large dataset of existing content, then using the learned patterns to generate new content that is similar in style or theme.

[1] https://www.mckinsey.com/featured-insights/mckinsey-explainers/what-is-generative-ai

By using generative AI, artists, designers, and musicians can publish new creations that push the boundaries of what is possible.

Additionally, businesses can use it to develop new products, services, and experiences that stand out from the competition. Generative AI can be used to solve complex problems in various fields, such as drug discovery, climate modelling, and engineering. With the continued advancement of Generative AI technology, we will likely see even more innovative uses for this technology in the years to come.

Can GAI models completely replace human-driven tasks?

Despite the perception created by Chat GPT, AI cannot simply spit out optimal results that can easily replace human ingenuity. AI can automate some tasks but falls short with many skills that people excel at, like critical thinking, creativity, or strategic decision-making. ChatGPT can be used as a source of creative inspiration, to give ideas and serve as a starting point for work, but it will never replace the added value that a human being can bring.

The GPT in ChatGPT stands for Generative Pretrained Transformer. This means these text-based machine learning models rely on self-supervised learning. This type of training consists of feeding a model a huge amount of text which uses deep learning algorithms to generate human-like conversations in natural language. This makes it significantly different from many other chatbot tools which are programmed to answer pre-set questions with templatized responses based on certain rules designed by programmers.

What does Generative AI technology mean for organizations?

Tools like ChatGPT can create enormous opportunities for companies strategically leveraging the technology. Chat-based AI can augment how humans work by automating repetitive tasks while providing more engaging user interactions.[2] Recently, ChatGPT even helped a company recover unpaid invoices from its client by writing a serious legal notice.[3]

While generative AI applications like ChatGPT are becoming popular in education and consumer applications, business managers must consider the associated risks, among them:

[2] https://www.forbes.com/sites/bernardmarr/2022/12/28/what-does-chatgpt-really-mean-for-businesses

[3] https://www.indiatimes.com/trending/jugaad/ceo-uses-chatgpt-to-recover-overdue-fees-from-client-594230.html

1. While ChatGPT can do a great job at essential operations management and process analysis questions, it makes mistakes in relatively simple math calculations.

2. ChatGPT is a tool that can assist with specific tasks in data science, such as generating or verifying code for data cleaning and pre-processing. Still, it cannot completely replace the role of a data scientist.

3. Where data analytics is concerned, ChatGPT is limited in its understanding of any context beyond what is provided inquestion as text.

4. Moreover, Chat GPT is not entirely secure in its current form. Its accuracy and reliability will always be under scrutiny.

With the growing use of this technology, the question on everyone's mind is whether it will replace decision-making tools or put data analysts out of work. With Decision Intelligence (DI) technology emerging as a way to enable better decisions for enterprises, how do GAI tools compare?

Comparing Decision Intelligence and Generative AI Models

GAI and DI are two different fields of artificial intelligence that solve specific business problems.

Generative AI is focused on creating new content or output similar to or indistinguishable from human- generated content. It uses machine learning algorithms and neural networks to learn patterns and features from large datasets and then generates new content by sampling these learned features. Generative AI has a wide range of applications, from creative projects to content creation and data synthesis.

On the other hand, DI is a field of AI focused on making decisions in complex and uncertain business environments, often involving multiple disparate data sources. DI uses machine learning algorithms and statistical models to analyze data, identify patterns, and make decisions that optimize a particular objective or outcome—frequently with major implications for the business.

Focus

Generative AI tools focus on creating new content based on learning from massive data created by humans, whereas Decision Intelligence tools focus on enabling business decisions in complex environments.

Form Factor

Generative AI (in its current ChatGPT form) only provides textual answers to queries, whereas Decision Intelligence tools provide creative visualizations to complex analytical questions.

Feedback

GAI tools cannot touch their own code or do anything autonomously. As such, they cannot currently 'improve' themselves. On the other hand, Decision Intelligence tools have autonomous feedback powered by deep learning technology that helps them to improve their decision-making capabilities.

Fidelity

While both use AI and ML as their base technology, Generative AI lacks explainability and interpretability because there isn't a way to reference the data source or type of analysis applied. Decision Intelligence tools have in-built explainability that provides reliability and trustworthiness to the outputs.

Can GAI and DI be used together?

When used together, Generative AI and DI can help businesses and organizations make better decisions by providing them with more accurate and relevant data. For example, generative AI can generate new data or content that can be fed into a DI system. The DI system can then analyze the data and make decisions based on the insights it uncovers.

Overall, the combination of Generative AI and DI has the potential to be a powerful tool for solving complex problems in virtually any industry. However, it's important to note that both fields of AI come with their own challenges and limitations. Careful consideration should be given to their uses since each has its own ethical and practical implications.

How can we use GAI to enhance DI?

Generative AI can be used to enhance Decision Intelligence systems in several ways, including:

Augment data analysis

GAI can be used to generate new data points that can be used to improve the accuracy and reliability of DI models. This can be particularly useful when real data is scarce or difficult to obtain. It can also be used to simulate different scenarios and generate large amounts of data that can be used to train DI models to make more informed decisions.

Improve contextual learning

For any Decision Intelligence tool to be effective, it needs to understand user and business context to give meaningful responses. GAI models can also be used to understand user questions better. It can provide more accurate results back to the users of Decision Intelligence tools. The complex AI model responses or recommendations generated by these tools can also be simplified using GAI technologies to understand and interpret the reasoning behind them.

Enhance interactivity

GAI can generate more human-like natural language responses created by Natural Language Processing models that can be used in DI systems, making it easier for users to interact with the system and get the information they need. They can also automatically generate reports and charts based on the user's data, providing a fast and efficient way to communicate insights and results.

In short, the GAI and DI power duo has the potential to overcome several challenges related to adoption of Decision Intelligence tools by improving their interactivity and intuitiveness, leading to better, faster decisions.

Conclusion

Generative AI and Decision Intelligence are two distinct approaches to data analysis and decision-making, and they each have their own strengths and weaknesses.

In practice, the choice between using generative AI, Decision Intelligence, or some combination will depend on the specific needs and goals of the organization. Companies looking to put generative AI to work can use it out of the box or fine-tune it to perform a particular task. In some cases, combining both approaches may be the most effective solution. For example, leaders can use Generative AI to automate certain tasks and Decision Intelligence to guide the overall decision-making process. Ultimately, the choice between these two approaches will depend on the specific requirements and constraints of the problem at hand.

Critical thinking is vital with the rise of Generative AI. For the time being, these tools can be considered as the harbingers of enhanced productivity, increased efficiency, and creative inspiration.
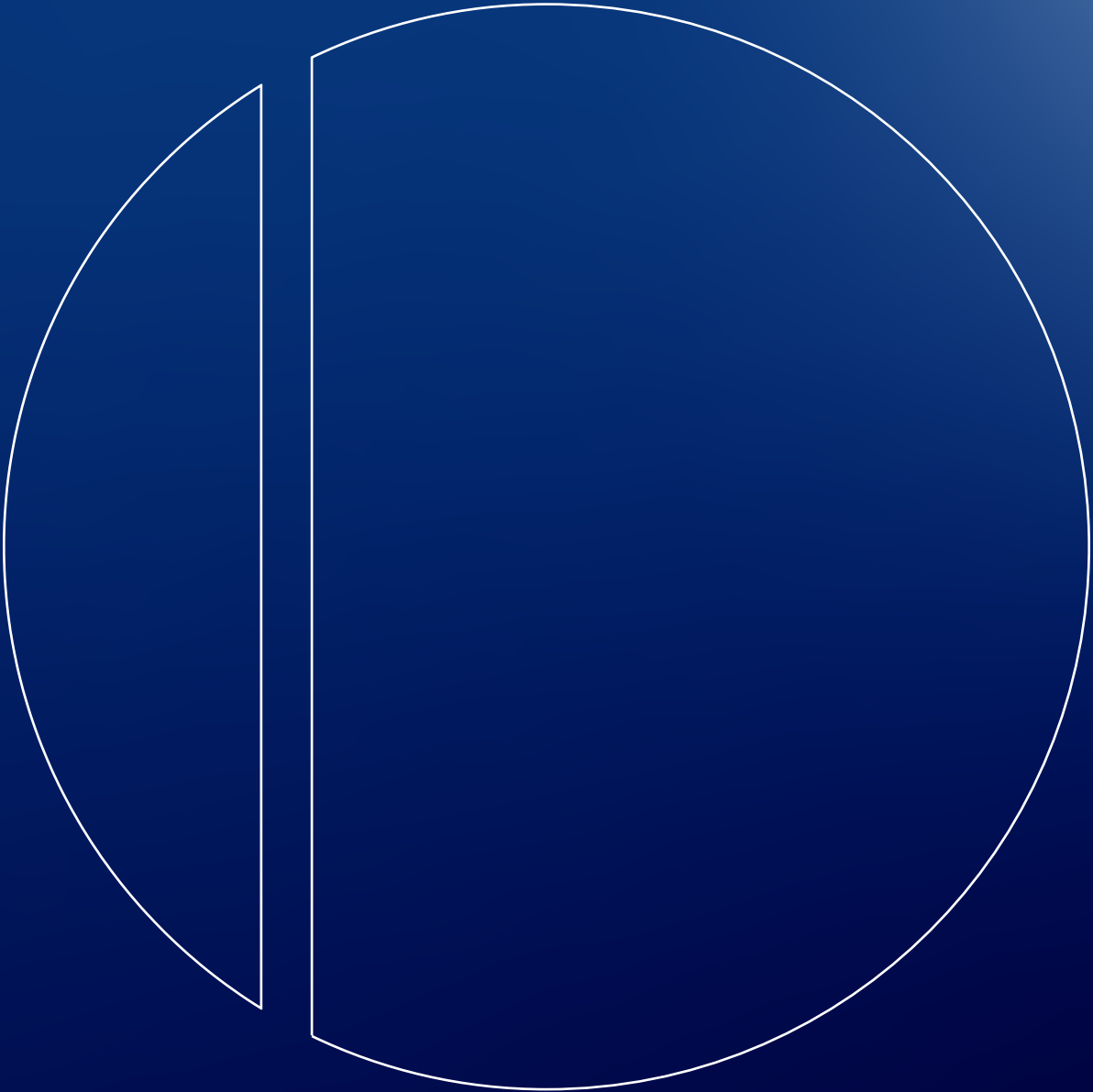
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The Fosfor Decision Cloud is a connected fabric that unifies and amplifies the value promised by the modern data ecosystem, which is made up of infrastructure, data, and application clouds. Fosfor enables organizations to effectively curate data, generate impactful insights, and formulate effective decisions to deliver the long-sought promise of data and AI: optimal business outcomes. Fosfor is part of LTIMindtree, a global technology consulting and digital solutions company. For more information, visit **www.fosfor.com.**

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