Business Intelligence

Augmented Analytics
Supercharge Your Business with AI

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Many businesses still rely on traditional data analysis methods such as spreadsheet reporting and legacy database visualization, but these approaches come with challenges. The time-consuming data preparation and merging process is prone to human error. Creating a single source of truth from disparate data sources both new and old is burdensome, if not near impossible. Additionally, issues with versioning and security make these methods less reliable. It's no wonder, then, that many companies make the switch to business intelligence tools for their data analytics. Modern BI tools take charge of all these processes; connecting to data sources, preparing and merging data, simplifying data visualization and ultimately discovering actionable insights that help businesses make the most influential decisions.

As the way we do business changes and evolves at breakneck speed, the business intelligence industry is also going through a technological shift. The volume of data that BI tools handle nowadays is increasing exponentially as data sources continue to diversify; it's only fitting that BI vendors are shifting gears to address these new demands and needs. At SelectHub, our research analyst team works to identify these needs and help software buyers build their own requirements templates. One BI requirement that consistently pops up as a must-have in recent times is augmented analytics, which is rapidly becoming the next generation of business intelligence and data analysis.

Augmented analytics isn't just a buzzword — it's a huge trend that lets BI software users harness the power of technologies like machine learning, automation and artificial intelligence to complete data analysis. By implementing augmented analytics, companies are able to process data faster and return deeper, more valuable insights. Features such as natural language generation and natural language processing empower users of all technical skill levels with data-driven insights through self-service BI, increasing data accessibility and data literacy. Meanwhile, data scientists, analysts and IT team members can focus on more specialized projects instead of repetitive reporting tasks. If you want a BI solution that's fully equipped for the future, augmented analytics is a must.

In this report, we'll clarify exactly what augmented analytics is, outline the trends you should watch and explain why your business should consider deploying it today.

What is Augmented Analytics?

Discussions about augmented analytics generally refer to three key components: machine learning, natural-language generation and automated insights. These technologies together power up BI tools to make analytics easier and more accessible, as well as remove bias.
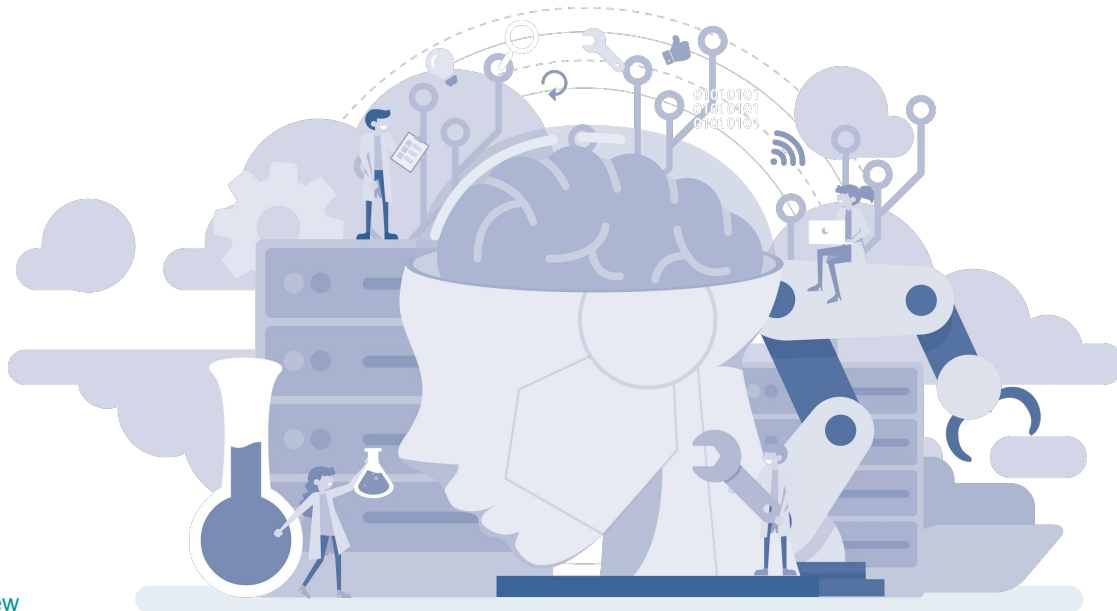
Machine Learning

Machine learning refers to a kind of artificial intelligence that learns from and adapts to data. According to MIT's Technology Review, "machine-learning algorithms use statistics to find patterns in massive amounts of data."* After discovering patterns and trends, machine learning algorithms then apply them to make predictions and recommendations that help users make better decisions. As the name implies, machine learning helps computers learn how to solve problems and draw conclusions on their own, without requiring explicit programming. It has many applications, including in business, finances, health and more.

Natural Language Generation

Programming languages can be complex, finicky and difficult or impossible for the average business user to learn; this used to make data analytics accessible to only those with the persistence, bravery and aptitude to learn how to code. That's no longer the case today, with more and more BI solutions adding natural language generation (NLG) and natural language processing (NLP) functionalities.

Automated Insights

Business intelligence turns data into insights, which users take and then transform into decisions. Solutions with augmented analytics are able to automate the time-consuming and labor-intensive processes involved in analyzing data. Automation of routine tasks like data preparation, coding, data modeling and visualization allows humans to focus instead on utilizing those findings to formulate and implement impactful business strategies.

*[TechReview](#)

Augmented Analytics Trends

SIGNIFICANT GROWTH AHEAD

DATA FOR ALL

HUMANS AND AI, NOT OR

COMPANIES LOOK TO THE CLOUD

BETTER INSIGHTS, BETTER DECISIONS

THE PROACTIVE ADVANTAGE

Source: Allied Market Research

Key Takeaways

Significant Growth Ahead

The increasing complexity of modern business intelligence has led to the huge demand for the augmented analytics market, with an estimated CAGR anywhere from 28.4% to 31.2% by 2025 according to market research analysts.

Data Democratization

Augmented analytics makes data accessible to users of all skills, increases user adoption and data literacy throughout your entire organization.

Humans "And" AI, not "Or"

Augmented analytics boosts and complements existing data preparation, management and analytical processes. Its purpose is to aid and assist humans, not replace them.

Companies Looking to the Cloud

More and more businesses are seeking to adopt cloud-based solutions, due to factors such as scalability, agility, flexibility and robust functionality.

Better Insights Mean Better Decisions

Through machine learning and automation, augmented analytics return deeper and faster insights that improve productivity and enable more effective data-driven decision-making.

A Proactive Advantage

Predictive and prescriptive recommendations, as well as automated, personalized insights, are examples of ways that augmented analytics helps businesses stay ahead of the crowd by utilizing artificial intelligence.

Augmented Analytics: Growing Fast

Augmented analytics is seeing significant growth due to steadily increasing demand and it's no wonder — there are applications for AI and machine learning in almost every industry. The global augmented analytics market could be worth anywhere from $29.586 billion to $35.35 billion in 2025 with an approximate CAGR of 28.4% to 32.3%. according to studies from Adroit Market Research, Allied Market Research and Mordor Intelligence*.

The growing volume of data and its increasing complexity are driving a demand for augmented analytics technologies to help businesses make sense of all the information that they generate. For businesses looking to stay ahead of the curve, investing in augmented analytics would help to future-proof their solutions.

Data for All

Once upon a time, data analytics was strictly the field of IT professionals and data scientists. Nowadays, most BI tools empower users of all technical skill levels to perform data analysis and explore their insights, but this accessibility can also be an obstacle. Without the proper training and skills, it can be difficult for users to fully maximize the value of an enterprise BI tool and achieve the kind of data literacy that drives productivity, defeating the purpose of implementing self-service BI.

Augmented analytics may have an answer to this problem. By leveraging natural language processing and natural language generation, artificial intelligence can take data analyses and convert them into words that users with no data science knowledge can understand. Similarly, some solutions with augmented analytics can understand queries presented in natural language, instead of a coding language like SQL, automatically generating and delivering

Global Augmented Analytics Market Approximate Value, 2020-2025
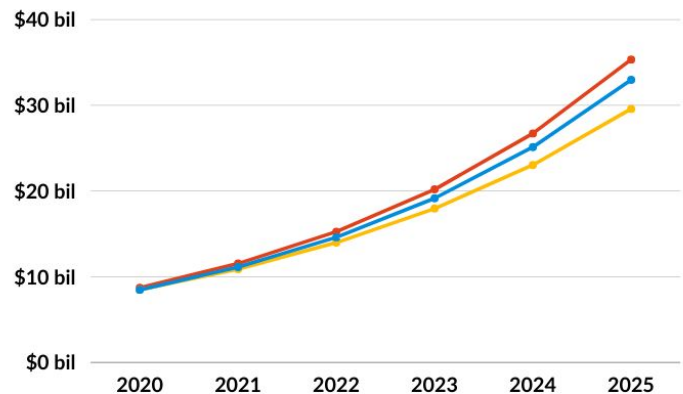
Estimated CAGR
- 32.3%
- 31.2%
- 28.4%

Sources: Adroit Market Research, Mordor Intelligence, Allied Market Research

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visualizations and insights upon request. With all the ease of asking a colleague a question, users can converse with computers in a human-like way to get the information they need.

Well-implemented AI-powered applications lower the barrier to user adoption for non-technical users. It helps users become more comfortable and familiar with data analysis, leading them to derive insights and dig deeper on their own. Augmented analytics features turn data analytics into an interactive, two-sided conversation with data where users can ask questions and get answers to their day-to-day and strategic challenges.

*<u>Adroit Market Research</u>
<u>Allied Market Research</u>
<u>Mordor Intelligence</u>
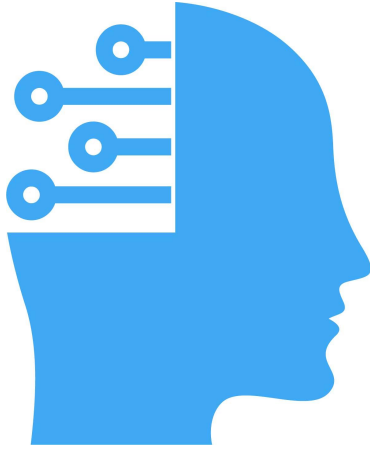
AI: Here to Help

A unique benefit that augmented analytics can bring to your company is that it's powered by machines. Devoid of human bias or error, artificial intelligence can deliver truly objective results. Machine learning algorithms also improve over time, providing more relevant and accurate suggestions in the long-term, building user trust in data. But some users may still be wary of AI specifically because it's not human.

Reality doesn't resemble a sci-fi film; artificial intelligence doesn't mean that our computers are going to rise up and take over the world. The key to augmented analytics is in the name itself: it is intended to augment and improve existing data analytics solutions and processes. Implementing augmented analytics involves finding the ways in which it can enhance and add value to the processes your business already has in place.

While it has the potential to save money and increase productivity for businesses of all sizes, augmented analytics can't and won't replace the talented employees of your company. Your employees can rest assured that their jobs aren't going anywhere — augmented analytics only improves the partnership between machines and humans so that humans can do their jobs easier, faster and better. Machine intelligence is no replacement for critical thinking and ultimately, decision-making will always remain in the hands of you and your employees.

Better Insights Mean Better Decisions

Business intelligence is all about the insights that power data-driven decision-making. BI tools centralize and analyze data of all types, structured and unstructured, allowing for more comprehensive analysis and more detailed results. AI-powered BI tools can deliver more specific, informative insights at a faster pace. Through machine learning, they are smart enough to connect the dots between disparate data points and find the root causes that influence metrics. The automation of mechanical tasks involved in data preparation and data visualization accelerates time to insights and helps BI users focus on what really matters: making decisions that benefit their bottom line and business overall.

Augmented analytics excels in providing decision-makers with actionable data that they can use to plot a course for success. An AI-assisted platform can discover results that users may not have been looking for, helping them identify opportunities to make an impact. And the best part? Because augmented analytics make insights accessible to workers at all levels of a company, everyone can see these opportunities to make decisions that create a positive impact, not just management.
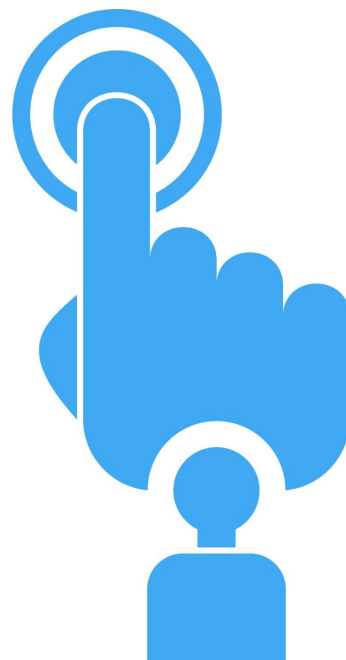
Cloud-Based Solutions

Vendors often provide both on-premises and cloud deployment models for their business intelligence solutions, but researchers project that the cloud segment will see significant growth. On-premise deployment solutions are by no means becoming obsolete; larger organizations and enterprises often prefer these because they can establish high levels of data security or manage high demands on server capacity. However, the cloud segment of augmented analytics will see a 31.4% CAGR through 2025 according to Allied Market Research*.

Cloud-based solutions are attractive to many organizations for many reasons. With lower capital investment and maintenance costs, cloud deployment promises a more affordable, on-demand option with flexible scalability for growing businesses. Utilizing a cloud-based infrastructure gives your IT department one less piece of hardware to manage, update and replace, if necessary. Add to that reliable backup options and easier accessibility from the web and it becomes clear why cloud-based deployments are gaining steam. While not without their cons, including dependence on an Internet connection, cloud-based solutions are here to stay and here to grow in the coming years.

See the Future

The early bird catches the worm, they say. In business intelligence, that means spotting problems before they arise and making decisions that serve to improve business both in the present and future. Augmented analytics makes it easier for decision-makers to do so by giving them insight into what's to come and ways in which they can influence outcomes.

While traditional, historical reporting explains "what happened," data analysis looks at key drivers and factors to address "why did it happen?" With statistical modeling and machine learning techniques like neural networks and multiple regression analysis, we can now get a glimpse into "what might happen" and "what should we do about it?" Augmented analytics highlights trends and uses them to forecast and predict results, shifting business decisions from reactive to proactive in nature.

*<u>Allied Market Research</u>

AUGMENTED ANALYTICS
How It Benefits Your Business

1	**SAVE TIME AND MONEY**
2	**MAXIMIZE VALUE OF DATA**
3	**DELIVER THE BEST INSIGHTS**
4	**BE PROACTIVE**
5	**PERSONALIZE ANALYTICS**

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Save Time and Money Through Automation

As IT talent becomes more and more valuable and scarce, it becomes increasingly important for businesses to ensure that their team members spend their time working on what matters most. However, with so many integral items on a data team's to-do list and only so many employees, it can be difficult to take care of everything that needs addressing. Machine learning can become your team's newest member; it can deal with rote tasks such as data discovery, reporting or auditing, freeing up human team members to focus on more strategic opportunities. Automation of smaller tasks streamlines workflows and allows everyone to make the most of their time, increasing productivity and maximizing efficiency.

Maximize Value of Data

Just as important as an accelerated time-to-insight is the quality of the insights received, and artificial intelligence can maximize the value of your data so that you always receive the best information. The more valuable your insights are, the better the decisions you can make.

Augmented analytics improves the quality of data even before the analysis stage; augmented data preparation, powered by machine learning, can enrich your datasets and enhance data with other information, making your existing data worth even more. It draws relevant information from other sources and then uses that information to make even more connections, returning better insights that empower data-informed decision-making.

With traditional analytics and ad-hoc reporting, you first need an idea or hypothesis to investigate; in contrast, augmented analytics help you uncover things you might never have known otherwise. The truth is that with BI tools, even those with interactive drill-down and filter features – no matter how deep you dig into your reports and datasets – if you're not looking for something in particular, you might not find it. Augmented analytics helps circumvent this by surfacing those unexpected results for you. Machine learning algorithms do the heavy lifting for you, combining myriad data sources, drawing correlations, finding outliers and surfacing relationships to make ground-breaking discoveries.

Deliver the Most Effective Insights

OK, your BI tool has crunched the numbers and shown you the key drivers; now, how do you convey that information to others? Have you ever caught yourself staring at a blank page, paralyzed and wondering how or where to even begin your project? Data visualizations are an effective way to communicate insights visually, but creating and customizing them can be time-consuming and difficult. Having access to data doesn't mean that you know how to use and manipulate it to tell the story that you want in the way you'd like to do so.

Augmented analytics shortcuts and eliminates this so-called "blank-canvas syndrome." Machine learning algorithms can analyze the data you choose and then offer you a recommendation for the best data visualization for your data. You won't ever have to wonder again whether a pie chart, line chart or row chart is better. AI makes data visualization as simple as choosing the graphic you like best, dragging it to your canvas and tweaking the final product.

With many modern BI tools, this means interactive, always-connected and updated visualizations that you can annotate, export and share.

Creating and customizing visualizations is one thing, but what about understanding them? This is where natural language generation can come in handy. NLG can take a selected data set or visualization and automatically turn it into descriptive text, creating a narrative that outlines exactly what's going on in your data in layman's terms.

With augmented analytics, long gone are the days of struggling to find a way to communicate your insights; AI and NLG ensure that you'll always be able to deliver the best insights that power the best decisions.

Be Proactive with Predictive and Prescriptive Analytics

They say that hindsight is 20/20, but foresight is also 20/20. With predictive analytics, users can foresee when something might go wrong and what factors influence potential outcomes. While no substitute for risk management, predictive analytics can certainly help businesses mitigate risks and see potential issues on the horizon before they arrive. Prescriptive analytics takes predictive analytics one step further, by not only detailing what situations you can expect but also providing advice on how to handle them. Aided by recommendations from artificial intelligence, users can take the necessary steps to prevent negative consequences before they even happen. When used effectively, these kinds of analytics, powered by machine learning, help organizations make even more informed and effective decisions based on data, rather than instinct. They can depict the "what-if" and worst-case scenarios to help decision-makers understand the likelihood of certain risks and plan accordingly. While no one, human or machine, can see the future clearly, augmented analytics gives organizations a huge advantage in identifying needs, saving money and expecting the unexpected.

View Personalized Analytics Just for You

If we can learn anything from tech giants such as Google and Facebook, it's that personalization is everything. AI-driven targeted ads are becoming more prevalent, and that's simply because personalization is effective. The same is true for your insights; seeing the information that's most relevant to you, your role and your day-to-day will make you a more efficient and productive worker.

Especially important to this is the adoption of mobile apps, as the world shifts to a workforce always on the move. Some mobile apps with geospatial and geofencing features can automatically show insights based on the user's location. With AI, you can open a mobile app and immediately see a feed designed just for you with the most important KPIs and visualizations front and center. You can tell the app to save certain visualizations and show them to you every morning. Through NLG, you can build live queries through text or speech to your phone in plain, natural language, like you would ask a friend. You can receive notifications on data changes or data sets so that you always stay up-to-date with the latest information. All of these personalized functionalities that make it easier for users to do their jobs effectively are made possible through augmented analytics.
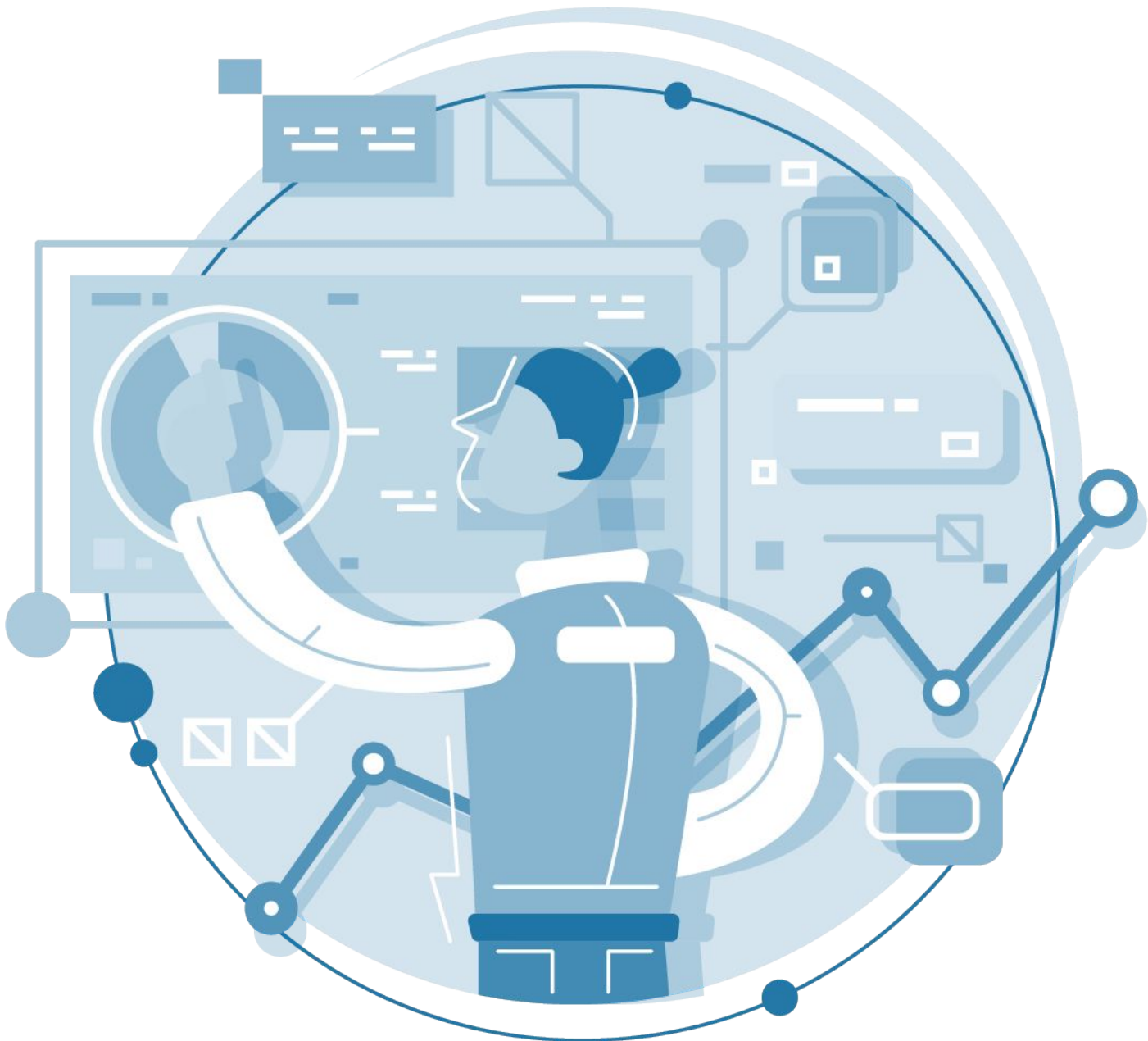
What's Next?

Augmented analytics helps businesses do more with their data with less effort. Goodbye spreadsheets; Hello, smart data discovery. Augmented analytics grants the power to make data-informed decisions to everyone within an organization, creating a more data literate business. Instead of needing to manipulate their data with complex queries, users can get the information they need by asking their computers or phones conversationally. Time-consuming processes like data preparation can be delegated to machine learning algorithms, which automatically enrich, source and improve data to deliver the best insights possible. Users with the AI advantage can stay informed of potential outcomes because of predictive analytics and machine learning, while prescriptive analytics offers them suggestions as to how to deal with those possible futures.

The value that augmented analytics offers to your business is instant and lasting; augmented analytics can uncover hidden opportunities, deliver insights faster and help users all throughout an organization make better, more accurate data-informed decisions, empowered by more comprehensive analysis across all data sources. By leveraging the capabilities of machine learning, natural language interfaces and automation, augmented analytics lends a helping, AI hand to human users in all industries who look towards the future.
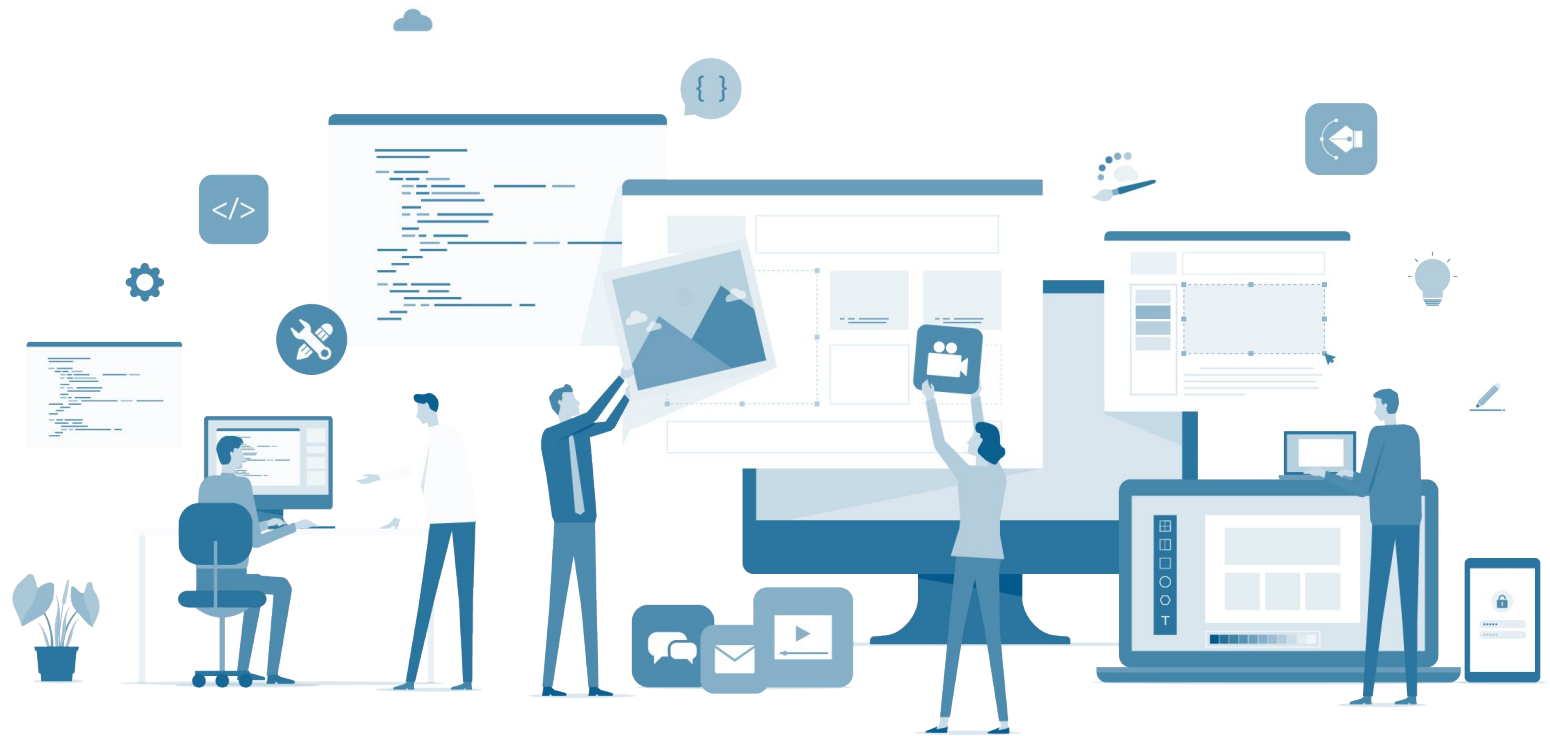
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