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Why the Future of Data Analytics is Prescriptive Analytics?

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Analytics is probably the most important tool a company has today to gain customer insights. This is why the Big Data space is set to reach over $273 Billion by 2023 and companies like Microsoft, Amazon and Google among so many others are so heavily invested in not only collecting data, but enabling data for the enterprise.

As AI and machine learning continue to develop, the way we use analytics also continues to grow and change. While in the past, businesses focused on harvesting descriptive data about their customers and products, more and more, they're about pulling both predictive and prescriptive learnings from the information they gather. So—what is the difference between descriptive, predictive analytics and prescriptive analytics? And do you need the latter in your company?

If you're new to the data analytics field, let's do a quick overview:

- **Descriptive analytics:** data that provides information about what has happened in your company. Think about a monthly sales report, web hit numbers, marketing campaign rates, etc. They give you insights on how a project performed. This is the most basic form of analytics. (Think "analysis" vs. "analytics.")
- **Predictive analytics:** data that provides information about what will happen in your company. Pulling on more complex machine learning and AI processes and algorithms, predictive analytics help you determine what will happen—how well a product will sell, who is likely to buy it, which marketing to use for the greatest impact.
- **Prescriptive analytics:** data that provides information on not just what will happen in your company, but how it could happen better if you did x, y, or z. Beyond providing information, prescriptive analytics goes even one step further to recommend actions you should take to optimize a process, campaign, or service to the highest degree.

To best honest, there is still a lot of confusion between what constitutes predictive and prescriptive analytics, and you may see them used interchangeably in some circles. Regardless, descriptive, predictive, and prescriptive analytics all play important roles in our organizations today. We don't always need complex algorithms running on our data. Sometimes we just want to know where our financials stand or how much traffic our social media pages are getting. However, in those instances where we do want to improve efficiencies and optimize performance, prescriptive analytics are playing an increasingly important role.

Prescriptive Analytics Makes Marketing Easier

Let's take a for instance. In the past, marketing teams would draft campaigns and use descriptive analytics to target who they felt would be most open to receiving it. Customers in the 20-30 range might get a "younger" message than those in the 45-60 age range. They

might be pitched different products or services. This would generally lead to better overall performance of the campaign. And honestly: many companies still market this way. But this type of marketing still isn't optimally efficient. There are still many assumptions going into it, and even the results—a high or low purchase rate—won't necessarily provide insights on why the campaign did or didn't perform well.

When we move into predictive analytics, things get a bit clearer. AI and machine learning can tell us more specifically which groups of customers to target, and which products or discounts to offer to maximize impact. They can even tell you what time of day and what medium to use to reach them. But the results of those campaigns are still descriptive. They won't tell you what you should be doing to improve your results even further.

Enter, prescriptive analytics. Prescriptive analytics takes three main forms—guided marketing, guided selling and guided pricing. It uses AI and machine learning to guide buyers with less human interaction—prescribing the right buyer, at the right time, with the right content—telling sales people which product to offer using what words—informing you what price to use at what time in which situation. This information allows you to maximize not just sales but price and profit overall.

Indeed, the benefits of predictive and prescriptive analytics go far beyond sales conversions. They bleed down into time savings, efficiencies, human capital, transaction costs. Predictive analytic, when automated, can allow you to make real-time decisions—something gasoline and chemical companies do, for instance, changing prices throughout the day to maximize profit. Achieving the benefits of data and more specifically prescriptive analytics comes down to having the technology, systems and processes to maximize available data. In one of my recent pieces here on Forbes I spoke a lot about the importance of having the right infrastructure and software to power your data. Those thoughts remain true here if you want to move up the food chain to leverage the power of prescriptive analytics. This is because prescriptive analytics are about trusting that the AI will do the work to maximize sales on your behalf, based on the calculations it's performing in the background (which is driven by your systems of record, tools and infrastructure). It also requires relinquishing control. But the data it creates from these exchanges is also incredibly insightful, proving that often AI can optimize sales and marketing like humans never could.

To know which type of analytics your company should be investing in, you need to start with the big question: what do you want to accomplish? As I noted above, prescriptive analytics are powerful, but they won't be necessary for every company, or every campaign you push out to customers. They also will require a lot of tweaking. No algorithm was crafted perfectly the first time. It takes time, effort, and focus to make prescriptive analytics work effectively. But if you are in a competitive marketplace—managing anything from products to people—prescriptive analytics could mean a huge boost to profit, productivity, and the bottom line. And honestly: it's still early in the prescriptive analytics game. I'm guessing we're only seeing the tip of the iceberg in terms of what prescriptive analytics can accomplish. (And for small and medium-sized businesses out there, don't worry: My guess is Prescriptive Analytics as a Service isn't far behind.)