

DATA SCIENTISTS: DO YOU NEED THEM?

At TiVo, giant repositories of customer data don't just sit there; TiVo takes that information to advertisers and customers, thanks to a team of eight data scientists working under the company's chief research officer, Jonathan Steuer. Through analysis, the data science team uses its reams of data to tease out customers' viewing habits—invaluable and newfound insights on the company's customer base that drive TiVo's advertising strategy. "It helps us understand what television shows are the best environments for an advertiser to be in," Steuer explains. "The goal of data scientists is not to create more data, but to turn it into useful answers and insights. This is not business executives making charts in Excel, and this is not your grandfather's business intelligence."

Welcome to the new world of data science. Data scientists aren't people with slide rules and celluloid visors, crunching numbers in an isolated back room. Increasingly, they are an integral part of an organization's fabric and day-to-day strategy and mission, whether they are part of the marketing team, have their own research department or are employed by a third party.

Data scientists have become indispensable, particularly for consumer-facing companies, because they empirically investigate how to make the customer experience better—insights that companies can often glean most efficiently and effectively from mining the data. And companies can often conduct and update data analytics practically in real time, unlike old-fashioned marketing techniques such as focus groups and surveys. In the case of TiVo, data scientists monitor consumption habits. The TiVo research team pays close attention to specific data points: Are people who have Netflix or

Hulu subscriptions watching in different ways? How does the ability to watch programs streaming to your home DVR change that media diet? This all leads to a better, more personalized and refined customer experience, one that creates algorithms to suggest relevant content, remembering previous searches and favorite shows.

Still, the pairing of the terms "data" and "scientist" is a recent—and sometimes confusing—concept. "If you ask four different people about the definition of a data scientist, you get five different answers," says Lee Paries, vice president of sales for Teradata's Big Data Solutions. But the definition that stands out for Paries is "someone with an analytic background who works on solving business problems."

However one defines data scientists, their stock is rising. As Antoine Blondeau, CEO of Sentient Technologies, a company working on artificial intelligence, puts it, "Decision makers are increasingly data scientists in many ways. We are seeing that it has never been more important to understand data."

And here's why. "Data and the right analytics can help you find new markets and categories," explains Manan Goel, Teradata's senior director of Big Data Product Marketing. Data scientists also work a lot on retention. Many are focusing on customer churn, a big financial drain for any company. "Data scientists are looking at data across multiple channels to understand why customers are leaving and going to other brands. Data provides a unique opportunity to outsmart your competition," observes Goel.

Despite the breadth of definitions for data scientists, the skill set that defines them is unique—or at least, the labeling of such experts as data scientists is. There are

only a couple hundred people on LinkedIn with the title, notes Goel. “It’s not only very hard to find these folks but hard to make sure they are working on the right problems,” he says.

SO WHAT SHOULD COMPANIES LOOK FOR IN THEIR DATA SCIENTISTS?

- **The ability to identify the right kind of data.**

With so much data out there, knowing where to start looking for the answer is a critical skill. “The data might be client, third party or something else,” says Oscar Padilla, vice president of strategy at Luminar, the first big data analytics provider focused specifically on U.S. Latino consumers.

- **A mix of skill sets.** Not everyone is going to be an expert coder or a purely analytic thinker, but having the right combination of people who can work with the raw data, and people who can synthesize top-line findings crisply and clearly, translating the data into graphs and charts, is critical, says Steuer. You might not find these qualities in the same person, so the key is to achieve the right balance on your team.

- **A storyteller.** A data scientist doesn’t necessarily have to be some techie in the back room who emerges with mysterious numbers that others must interpret. “Rather, data scientists should be able to say, here is the problem and here is how we solved it,” explains Paries.

HANDLING YOUR DATA SCIENTISTS

Do companies need their own staff of data scientists?

Not necessarily, says Lee Paries of Teradata. “A lot of regular business analysts understand analytics and data, but the challenge is in the execution and programming, and if it doesn’t have the skill set [in its own ranks], a company might want to bring in an outside consultant.”

How do companies get the most out of their data scientists?

- **Start with the problem you want to solve, not the data,** advises Luminar’s Oscar Padilla. “If you start with the data, then you are not trying to address what the client issue might be, and you can get pigeonholed in the wrong direction.”
- **Ensure that your data scientists are spending their time on high-value projects that will move the business forward.** “A lot of data scientists are spending time on low-value activities, such as data acquisitions and data manipulation,” observes Teradata’s Manan Goel. Instead, he says, you should ensure that their projects are aligned with your company’s current goals and strategy. In other words, data scientists’ focus on customer retention, understanding churn or figuring out the right tweaks to a new product should follow corporate strategy.
- **Make the research compelling.** It shouldn’t be about dumping reports or focusing on low-level analytics, says TiVo’s Jonathan Steuer. Data scientists should be working on topics that are not only relevant but interesting to the rest of the organization and potentially the public. For instance, TiVo conducts “top moments” research—discovering moments in a particular show that people rewind and watch over and over again. This research generates a newsworthy nugget of data that can generate press coverage.
- **Assess and bridge skill sets.** Look at what capabilities you need to build in-house and what you can outsource, advises Goel. Many companies simply do not have the technology or capabilities to do all the data processing and manipulation in-house. Take an inventory of your company’s own data environment and consider contracting out to fill the gaps.
- **Don’t get siloed.** At TiVo, Steuer regularly gets input from other parts of the company, such as the PR team, to ensure that his team isn’t in its own data bubble and remains aligned with corporate strategy. When appropriate, seek opinions from people outside the research team about how to leverage current findings and what direction to take in future analysis.

CONCLUSION

Companies and organizations need data scientists more than ever before. Data analytics make use of the massive amounts of information that companies now purposely or even unwittingly gather, and separate the signal from the noise. The companies who rely on data scientists to zero in on specific business questions, and then use that data to solve them, will be the winners. They gain a better grasp of everything: the reasons for customer defections, new demographics for their products and more potent analysis for current and potential advertisers.

As Teradata's Paries points out, the future of the profession is not isolated from the core functions of the organization; it's in the thick of the action, looking into questions that impact the bottom line. Then the ability to weave those insights and data points into a compelling—and actionable—narrative comes into play. Of course, not all data scientists can be this hybrid of number cruncher and storyteller, but that is the gold standard. As Blondeau of Sentient Technologies puts it, “Data is critical to a company's success”—and data scientists are increasingly the conduits to that success.

To learn more from Forbes and Teradata thought leaders, please go to [LINKTK](#).

Forbes

INSIGHTS

ABOUT FORBES INSIGHTS

Forbes Insights is the strategic research and thought leadership practice of Forbes Media, publisher of *Forbes* magazine and Forbes.com, whose combined media properties reach nearly 75 million business decision makers worldwide on a monthly basis. Taking advantage of a proprietary database of senior-level executives in the Forbes community, Forbes Insights conducts research on a host of topics of interest to C-level executives, senior marketing professionals, small business owners and those who aspire to positions of leadership, as well as providing deep insights into issues and trends surrounding wealth creation and wealth management.

Bruce Rogers

CHIEF INSIGHTS OFFICER

Kasia Moreno

EDITORIAL DIRECTOR

Brian McLeod

COMMERCIAL DIRECTOR

Ross Gagnon

RESEARCH DIRECTOR

Matthew Muszala

MANAGER

William Thompson

MANAGER

Lawrence Bowden

MANAGER, EMEA

Erika Maguire

PROJECT MANAGER

Hannah Seligson

REPORT AUTHOR

Charles Brucaliere

DESIGNER

