



# Data Scientists: Business' Next Top Talent

*How to find, hire and retain big data professionals who propel your business*

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Finding and securing skilled professionals who can translate and apply big data to smart business decisions has become the holy grail for talent recruitment. Companies large and small are scouring the talent pool horizon, searching for businesspeople who can help them unlock the secrets of our information explosion. Simultaneously, universities around the world are launching analytics-related programs, angling to graduate capable data scientists—people who can discern, decipher, connect, and converse about big data.

## From Expensive Storage to Innovative Revenue

Big data analytics is not a new technological phenomenon. Rather, it's the latest step in our technological evolution; from the internet and instant messaging to social media and mobility. Each development has demonstrably changed IT and commerce, and data analytics is today's catalyst.

Data used to be something simply managed and secured, often at considerable expense to the data holders. Like old phone books, data piled up on the corporate curbside (or warehouse) and IT managers crafted temporal policies about where to archive it, in what medium, and at what temperature. Companies often retained recruiters like me to find skilled data warehouse managers—IT professionals who could cut costs and protect data behind secure firewalls.

But that's all changed. Big data now means revenue and competitive advantage. Companies no longer want to store it as a cost center. They want to mine it as a revenue generator.

That requires talent, and the world is searching everywhere for skilled data scientists. Whether they're newly-minted grads or experienced data veterans, these sought-after professionals piece together data from disparate sources and apply business principles to help companies make better decisions and increase revenue.

## Demand for Data Scientists Exceeds Supply

Companies of all sizes are recognizing the potential of big data and are feverishly seeking talent that can help them harness it. A recent [study](#) by Wanted Analytics, a provider of workplace data analytics, found that the need for data talent is rapidly escalating.

- Demand for IT project managers and computer systems analysts with big data experience climbed almost 125 percent and 90 percent, respectively in 2014.
- The hiring scale for big data candidates is 76 (on a scale of 1-100), making big data one of most challenging professions in which to hire.



- Together, Cisco and Oracle had almost 6,000 big data positions available in Q4 2014. Extrapolate that need, and McKinsey predicts that within the next three years, the U.S. will face a shortage of 140,000 to 190,000 people with analytics capabilities and 1.5 million managers who know how to translate data into business decisions.

Your company will most likely be among those searching for the missing million plus professionals. Where will you find them? How will you recruit them? And once you've hired them, what do you need to know to keep them?

## Understand Who You Seek

Big data's not just for the big boys. What was once seen as the bastion of the Fortune 50, data analytics is leveling the playing field for companies of all sizes. The data is there. If you can access and make sense of it, you can utilize it to drive business strategy.

What traits should you look for in data scientists? The basics are essential. Big data is no task for someone intimidated by mathematics, statistics, or market research and analysis. Credible candidates must know where to look for it, how to integrate it from often disparate sources, and how to glean insight from it by creating mathematical models than can assess consumer behaviors.

But expert math skills tell only part of the story. My client companies want data scientists who can also work in a highly collaborative environment. Unlike software or app development where people often create products or services in a highly independent fashion, big data requires reaching across traditional organizational silos. To do this effectively, companies seek candidates with solid interpersonal skills and who can cogently present data in a business context. Delving into the data chaos with a clear understanding of your company's strategic objectives will deliver far more effective results than simply mining information for the sake of uncovering interesting factoids. Finally, businesses want innovators who have demonstrated an ability to create and succeed throughout the course of their professional careers.

A [Wall Street Journal](#) article by Elizabeth Dwoskin captured the data scientist challenges extremely well. In it, she quotes Jonathan Goldman, who was in charge of LinkedIn's data science team that developed the "People You May Know" button and is now heading up the data science group at Intuit. "People call them unicorns," Goldman said because they possess a distinctive and competitive skill set.

Far from commonplace, these distinctions are often fascinating. Dwoskin profiles an intriguing trio of data scientists in her piece. All hold Ph.D.'s and come from academia.

- One is an astrophysics researcher who conducted research on the giant particle accelerator and now analyzes business ratings for Yelp.
- Another applied biostatistics to breast cancer research and is now analyzing fashion terminology for Etsy, a global retail community.
- A third data scientist used a degree in cognitive psychology to analyze how people change their political beliefs. This person now works for Square Inc., a credit card processing firm, to determine which retailers are more likely to have customers who want their money back.

These seemingly juxtaposing profiles are not unique. In my own recruiting, I have placed many people with similarly diverse backgrounds. Recently, I helped a Fortune 50 financial services company hire 10 new data scientists into their firm. Of those, one possesses a Ph.D. from Stanford and was using data-intensive computing to



assess brain networks. Another had been an AP math teacher with a passion for statistics who went on to obtain a master's degree in data science specialization from Johns Hopkins University.

Where do you find professionals like these who possess the traits that my clients—and thousands of others—deem important? I cast a wide net, keep my eyes and ears open, and suggest that you do the same. People with these skills are highly sought after in today's marketplace. Most already have very good jobs. They're aware of their value in the market and know future opportunities are a matter of when, not if. They are empowered to be selective about the offers they consider and pursue.

In my multi-channeled approach, I scout data scientists at technology and business analytics conferences. I join and participate in a wide variety of user groups and message boards that cover big data. I am a heavy LinkedIn user, always looking for people who share the skill sets necessary to succeed in analytics. And knowing that Millennials and their younger counterparts are ripe for careers in technology and big data, I work closely with students and placement professionals in colleges and universities who offer analytics-related programs.

Even while new analytics programs are launching at campuses across the country, the actual supply of graduates remains small. According to Dwoskin, the National Science Foundation reported in 2012 that approximately 2,500 people received doctorates in statistics, biostatistics, particle physics, and computer scientists (the most common areas of study for data scientists. By comparison, that national total is 2,000 fewer than the number of engineers who graduated last year from Georgia Tech alone.

## Nine Keys to Finding & Hiring Analytical Talent

What do I recommend to my clients who want to attract big data talent? Some of it is old school; simply doing the basics well. But I also recommend that they radically adjust their perspectives from even five years ago. It's a candidate's market in general, even more so when searching for big data skill sets. These are my top tips for recruiting and hiring big data talent.

- **Bring structure to the unstructured.** People often think of data in highly organized terms. But big data's not found in a financial spreadsheet. It's spread across a universe of information and requires people with curious and questioning minds to link disparate information into a coherent plan for business advancement.
- **Go back to school.** Chances are high that your next big data hire may have little to no business experience. But if they have the ability to conduct complex research and experiment with different hypotheses and concepts, they have the intellectual foundation necessary to succeed. University environments are the most logical places to look.
- **Move quickly.** Agree to meet interested candidates anytime; anywhere and make job offers within days; not weeks. There's so much demand for top talent that taking weeks or months to interview, review, and assess candidates will almost guarantee failure. Get the deal done before your competitor does.
- **Be strong out of the gate and prepare to counter.** Once you find the right candidate, be prepared to pay—not only to hire them, but to retain them as well. Remember, data scientists are in high demand and according to Wanted Analytics, the median salary for people with big data resumes is \$103,000. My own experience puts the number even higher. Make a strong initial offer to both capture a candidate's attention and deter competitors. For data scientists already in your employ, always be ready to assess and counter.
- **Be flexible.** The workplace world is evolving and Millennials in particular want flexibility in how and where they work. Allow telecommuting, workplace flexibility, and managerial discretion.



- **Deliver the right tools.** Invest in the tools that data scientists require to succeed, such as Hadoop, Dbase, Hive, and other in-demand analytics tools. Gain their input in selecting technology partners and tools—they're the ones being asked to deliver on them.
- **Encourage connections.** While meeting with and presenting to senior management is an important element of the job, data scientists seek the company of their peers. Conferences, workshops, webinars, and seminars all provide the cultural interaction that keeps them engaged and innovative.
- **Challenge the mind.** The more interesting your challenges, the more intriguing the opportunity. Candidates and new hires need to hear your most pressing business needs. But once you articulate your objectives, give them wide latitude and let their natural curiosity help you realize your goals together.
- **See through your customers' eyes.** While money is important, the ability to connect with clients or consumers is an even more powerful motivation. Enable your data scientists to see the world through your audiences' eyes and reap the benefits of this empowering perspective.

Recruiting and hiring big data talent is an important challenge in today's data-driven marketplace. Many companies are searching for it but are often unsure about precisely what they need. "I've never done this before," is an admission that I frequently hear from clients. These obstacles are surmountable, if you're prepared to make a meaningful investment in your company's future. Whether you work with a recruiter or manage it in-house, these recommendations will help you achieve your objectives.

Like many of its technological predecessors, big data is not a passing trend. It's a deeply ingrained and continually innovative information resource that allows companies to bring structure and business sense to disparate data points. Companies of all sizes recognize the potential...and the scramble is on for talent that can help make big data a meaningful element of business strategy.

Invest the time to understand how big data can become an important element of your business operations and the competitive challenges inherent in finding data scientists. Remember, a solid plan and decisive actions to obtain – and retain – that talent will equip you to compete and excel in the world of big data.