The Battle for Data Talent

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References to "AI" and "machine learning" may have surpassed "big data" as the trendiest buzzwords in the technology industry over the past few years. But whatever hashtag is trending the highest on Twitter, all of those developments depend on data science—and on the highly trained practitioners of this craft.

Large entities across sectors have been using data science to improve returns with clear, tangible results. Southwest Airlines reduced the time its planes stand on the tarmac, saving $100 million per year. UPS optimized its fleet, saving 39 million gallons of fuel. The IRS improved its ability to detect fraud and improper payments, saving taxpayers $2 billion.

To gain a deeper understanding of new trends in data science, we invited Eric Haller, executive vice president and global head of Experian DataLabs, to speak at William Blair's 2018 CONNECTIVITY conference. Experian DataLabs was launched in 2011 to focus on breakthrough experimentation to harness the vast amounts of data generated by Experian's users.

Focus Shifts From Infrastructure to Tools

Rapid improvements in technology infrastructure that support increased computational intensity have enabled the remarkable growth of machine learning in recent years. Five years ago there were more questions around infrastructure, but over the past two years Haller said those sorts of issues don't often come up. For instance, it's a working assumption that companies are in the cloud if they are involved in data analytics.

Today, the questions usually focus on the tools that a company is using to manipulate data and extract insights, Haller explained.

The tools we have to interrogate the data, create insights, and leverage data are expanding. And while many of the mathematical approaches now used by leading data scientists have existed for decades, today's computational abilities allow us to leverage those techniques in a way we couldn't in the past.

In addition to the increased volume of ideas, the nature of these ideas has changed as well. Following the financial crisis, companies were more interested in solutions related to risk mitigation, but the focus has since shifted toward finding innovative ways to use data analytics to drive growth, says Haller.

Competition for Talent Gets Fierce

What's even more important than the quantity and quality of data? Finding people who know how to use it.

LinkedIn ranks "data scientist" as one of the most-promising careers, and Glassdoor has ranked it as the No. 1 job in America for the past three years.

Competition is fierce, and firms have to pay well for data science talent. Haller said Experian DataLabs extends job offers to half of the individuals who pass the initial screening for an interview, and those individuals often have many other job offers.

Finding the right people is so crucial to Experian DataLabs that, despite the competition, the lab puts applicants through a rigorous process to determine whether an applicant has the precise mixture of aptitudes needed to solve the challenges the research presents. Haller said the data manipulation problems they give applicants involve moving around large pieces of data and writing algorithms to index, sort, match, and extract the data.

In terms of attracting and retaining data scientists, however, talent begets talent.

Ability to Work With "Dirty" Data

Cleaning the data to make it actionable is one of the biggest challenges a company may encounter. Undergraduate and master's programs are almost clinical in their approach because they work with clean data sets; as a result, some companies may seek data scientists with doctorates, who are more accustomed to working with "dirty" data.

Turning Data Talent Into Sustainable Value

At William Blair, we are constantly evaluating a company's prospects for generating sustainable value through forms of differentiation that build moats around the business and capture market share over the long term.

For any company that relies on data analytics to drive value, we believe that the company's ability to attract and

retain talented data scientists will be a powerful source of differentiation.

The demand for doctorate-level data scientists far exceeds universities' ability to train them, and this supply-demand imbalance shows no signs of abating. As a result, our bottom-up analysis of data-driven companies across industries will include a rigorous assessment of that company's recruitment and retention of data scientists.

To access more insights about how William Blair is reaching beyond traditional investment analysis to think about the white space between asset classes, sectors, geographic regions, and investment teams, we invite you to explore other posts about sessions at our 2018 CONNECTIVITY conference.

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