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Barclays' guide to AI and big data jobs in hedge funds ⁽¹⁾

by Dan Butcher (<https://news.efinancialcareers.com/us-en/en/author/dbutcher/>) 16 June 2017



Machine learning and artificial intelligence are the new hot thing. As J.P. Morgan pointed out in a huge report earlier this month (<https://news.efinancialcareers.com/uk-en/285249/machine-learning-and-big-data-j-p-morgan/>), machine learning is set to penetrate financial markets in a serious way. And machine learning requires data – the two things go hand in hand.

Now Barclays has supplemented huge J.P. Morgan's machine learning report with a smaller one of its own – on machine learning in hedge funds. The bank surveyed 65 hedge fund managers collectively managing \$650bn in assets under management and found that they're already allocating around 10% of their headcount and 3%-5% of their revenues to machine learning and data initiatives, and this looks set to grow.

If you want to work in machine learning and data analysis in a hedge fund context, this is what Barclays' report suggests you need to know.

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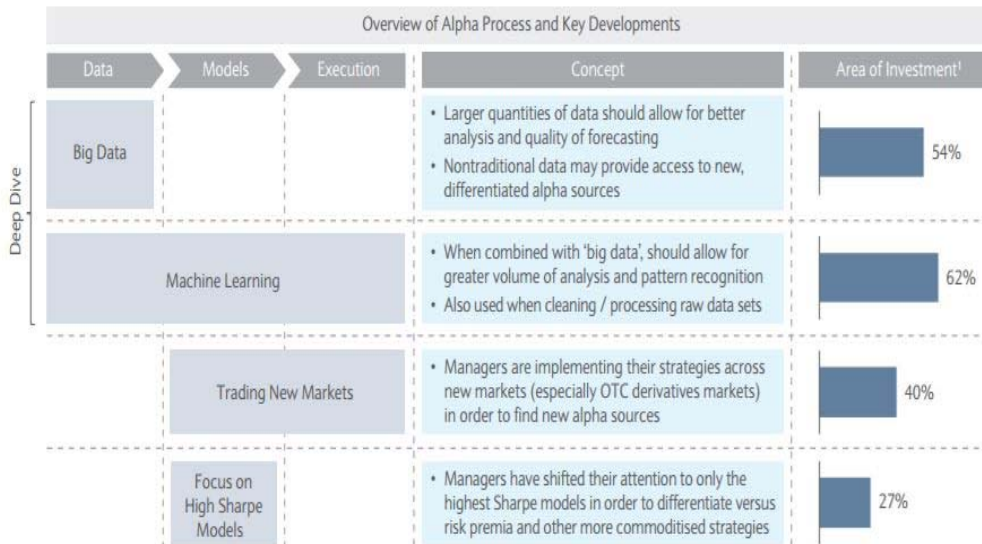
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1. You'll need to choose your hedge fund carefully

As the chart below shows, not all hedge funds have a machine learning and big data strategy. 62% are investing in machine learning and 54% are investing in big data – but there's still a large minority doing nothing at all.

FIGURE 15: Current Investment Areas by Systematic Managers



Source: Strategic Consulting survey results and analysis

1. Percentage of managers within sample that are active or investing in these areas

2. It's all about finding and cleaning the data

Data analysis is the place to be. Systematic hedge fund managers are very focused on exploiting newer and larger data sets in pursuit of sources of alpha. When it comes to sourcing and processing data, hedge fund managers have to decide whether to buy the data from a vendor, which can be exorbitant, or to source it themselves. If they opt for the latter, they need people to clean and process the data so they can apply it to their investment strategies. As the chart below shows, hedge funds' preferred kind of data comes from traditional security prices and trade volumes. However, 54% are already using data from non-traditional sources like web-scraping, satellites and social media.

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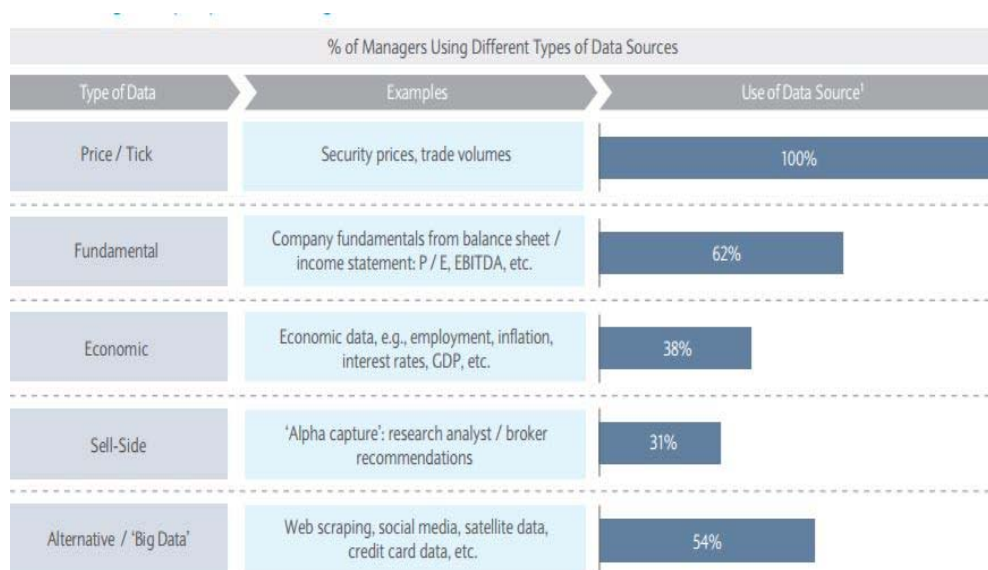


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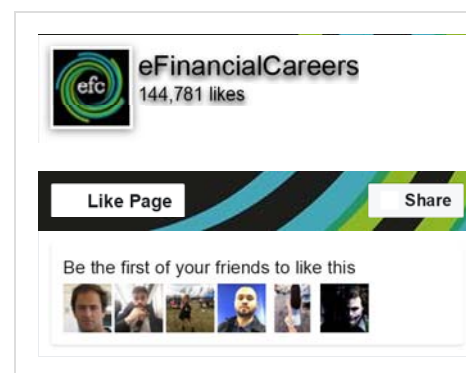
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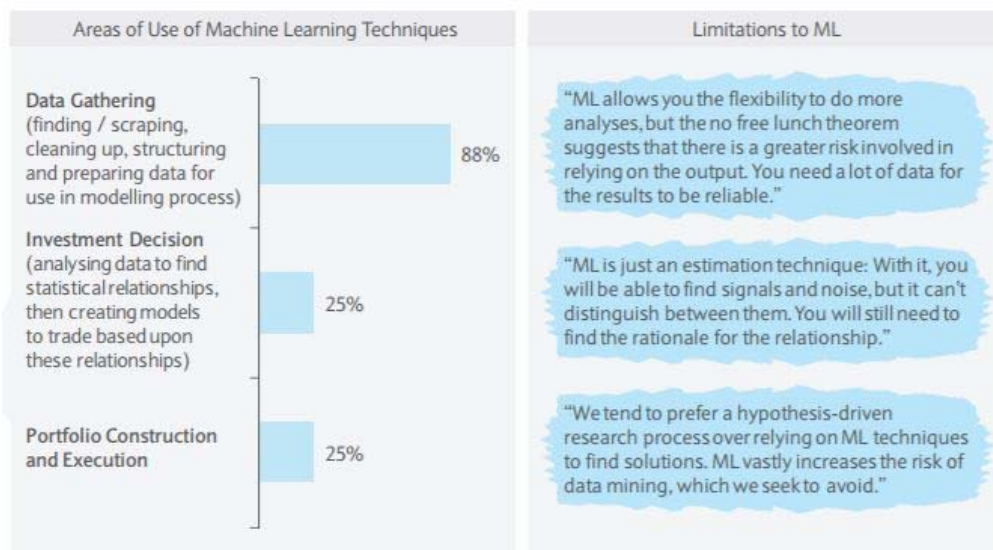
1. Strategic Consulting survey results and analysis – refers to percentage of interviewed managers incorporating each data source in their research process



3. If you work in machine learning for a hedge fund, you'll probably be cleaning data – not developing trading strategies

If you get a machine learning job with a hedge fund, you might think you'll be developing self-teaching trading algorithms. Think again.

As the chart below shows, most machine learning jobs in hedge funds are based around data gathering and cleaning. Hardly any (yet) have anything to do with actual portfolio management. Bad luck.



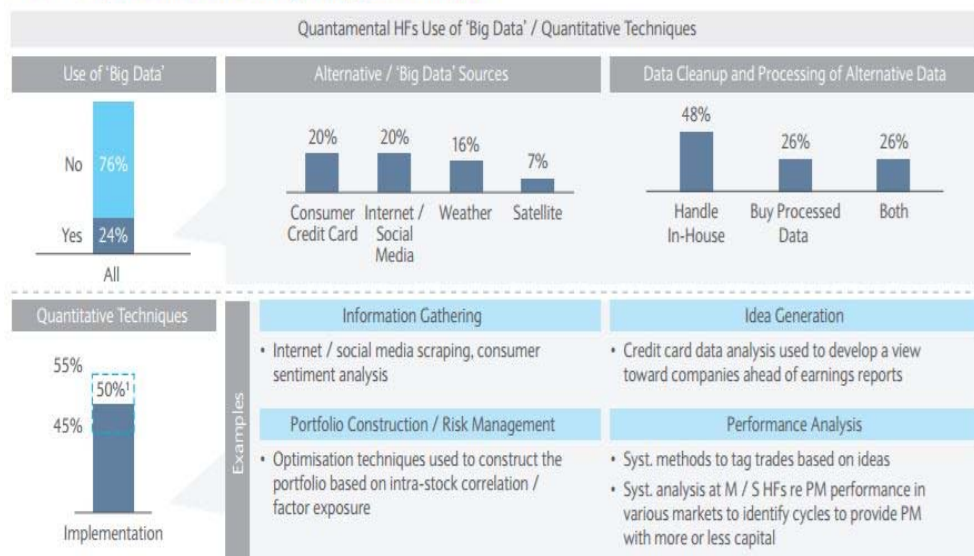
Human beings won't be displaced entirely. – There's a move towards "quantamental" hedge funds, and these need data specialists

What if you work in hedge funds and are not a machine learning type? Don't despair. Barclays says there's also a move towards "quantamental" hedge funds. These are funds in which, "– discretionary managers using quantitative techniques in various stages of their investment process in an attempt to

incorporate 'the best of both worlds.'

Barclays surveyed 45 discretionary portfolio managers and found they're using quantitative methods as per the chart below. As the chart shows, there are also opportunities for data specialists in these funds: 76% of them *aren't* using big data yet, but nearly three quarters of those which do have some capacity for handling it in-house.

FIGURE 23: Quantamental – Use of 'Big Data', Quant Techniques



Source: Strategic Consulting analysis

1. Range of 45% – 55% covers responses across all four categories (info gathering, idea gen, port construction / risk mgt, performance analysis)

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Photo courtesy of Barclays

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