The Growth of Data Science in Financial Services Apprenticeships

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Data Science in general

In 2021, some of the core technologies that organisations use to produce vast volumes of data are now reaching venerable status. For example, it marks the 15-year anniversary of the availability of cloud computing at scale and 16 years of mainstream Python adoption. These technologies might be obscure to those outside of technology practice, but they act together as some of the key pillars that have allowed companies to produce and manage huge volumes of data about their clients, their suppliers, their organisations and their products over the last decade and more.

However, these companies all have the same challenge – just because you have a lot of something in front of you, doesn't mean you can consume it. It turns out that the tools to query, interpret and make sense of this sea of data are much newer and are just reaching maturity – whether off the shelf tools like Microsoft Power BI or more advanced developer functionality like TensorFlow, both of which, like many of the now flagship tools in the data interpretation space, have only reached mainstream adoption in the last few years. This has created an opportunity and a problem – business expectations for what can be achieved by data interpretation have increased and yet the relative youth of the tools used to undertake this interpretation at scale means that the skills to use them are not yet fully embedded in the workforce.

Making it relevant to Financial Services

There is no doubt that Financial Services as an industry has brought into Data Science as a discipline. Finance, with its acute focus on making predictions about the short, medium and long term has long invested in data and technology, but we see many of our clients going through transitions that mean these tools are moving from an enabler – how do they make their legacy processes and approaches work better to a foundational part of the service offered – they identify as data companies. Even in parts of the industry where the service remains centred on people, leaders have one eye on the future – we were recently asked by a large wealth manager based in Asia to help embed learnings in their advisory population on how to differentiate their services from data driven technology ones.

And where the service is foundational, clients are betting big. For example, Goldman Sachs has announced just prior to this article that it is opening its biggest office in the UK outside London, creating hundreds of technology jobs in Birmingham. In recent years, Birmingham also became the home of 1,000 people from Deutsche Bank, mainly in back office and technology roles. Goldman will hire software engineers, data analysts and data scientists to work on new ways of delivering financial services at the Birmingham base, which will open by the end of the year.

The role of data science in early careers

Data science is a fantastic path for those beginning their finance careers. The barriers to entry are hard enough to mean it will unlikely to become oversaturated compared to the demand for at least five years or more, but it is accessible in principle to all (most tools used are free of charge in some form allowing you to learn with minimal outlay). An example of a career that did not exist ten years ago, it is rapidly becoming a profession like accountancy or consultancy; with defined career pathways, many employers across different industries, and cross-applicability of skills that mean high career mobility. Constant and continual changes in technologies, approaches and business demands make this an innovative and progressive space to be working on.

It also has a fantastic attribute that it allows exposure to many aspects of an organisation. A new Data Analyst could enter a financial services employer and within twelve months be working on opportunities from any part of the organisation – client, product, marketing, finance, HR – and including specific strategic initiatives. For example, in the highly topical area of ESG investing, tracking the impact of sustainable investment decisions is a critical topic to many organisations, both commercially and ethically. This is exactly the kind of task that a Data Scientist can take on and leverage their skills to make a transformative impact, early on.

The UK skills gap and apprenticeships

In the UK, some of the skills required to deliver on the data science paradigm are not yet fully apparent or widespread – a widely understood example of this will be the ongoing need to understand the ethical use of data. So, compliance departments of the future may well be staffed by 'data ethicists' who monitor the organisations' data scientists to ensure appropriate behaviour, particularly as legal frameworks struggle to keep up with the pace of change.

But even when it comes to the immediately required skills, recent research has shown that the UK has a chronic shortage of data talent, which is costing organisations more than £2 billion a year. The government's **National Data Strategy** outlines its ambition to establish the UK as a world-leading data economy and highlights the need for firms to develop the core skills required to analyse data sets and bridge the data science skills gap.

Apprenticeships are a key tool in helping to overcome this skill gap by developing these data management capabilities at the beginning of someone's career. There are two apprenticeships standards available in this area – the Level 3 Data Technician and the Level 4 Data Analyst standard – that both help provide entrants into the profession with a strong grounding in practical, skills-based data science. The standards are well designed, and like all Apprenticeship Standards, have been designed by industry to be relevant to the real-world requirements of organisations.

How Fitch Learning can help

Fitch Learning has designed programmes to support both Apprenticeship standards (Levels 3 and 4) in the Data Science space, targeted specifically at the Financial Services industry. These programs have been built from the ground up to be relevant to the industry we specialise in, and they combine practical case study-based approaches with a strong technical foundation of skills, plus certification upon completion from an accredited practitioner. You can find out more about our apprenticeship standards **here**.