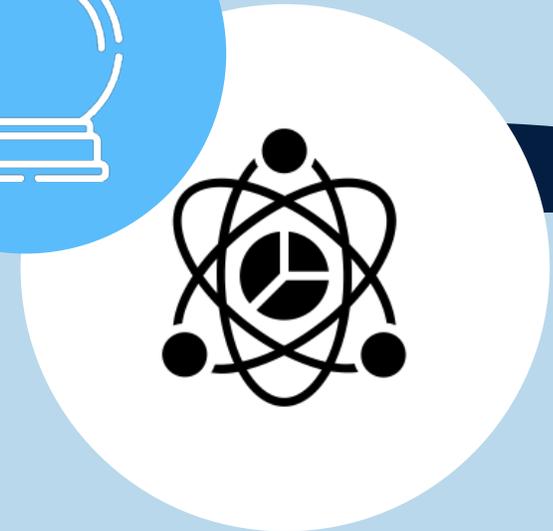Acolyte Presents

DATA SCIENTISTS: DEMAND & AVAILABILITY OF TALENT IN THE UK

Talent Insight Hub – Intelligence White Paper 2020
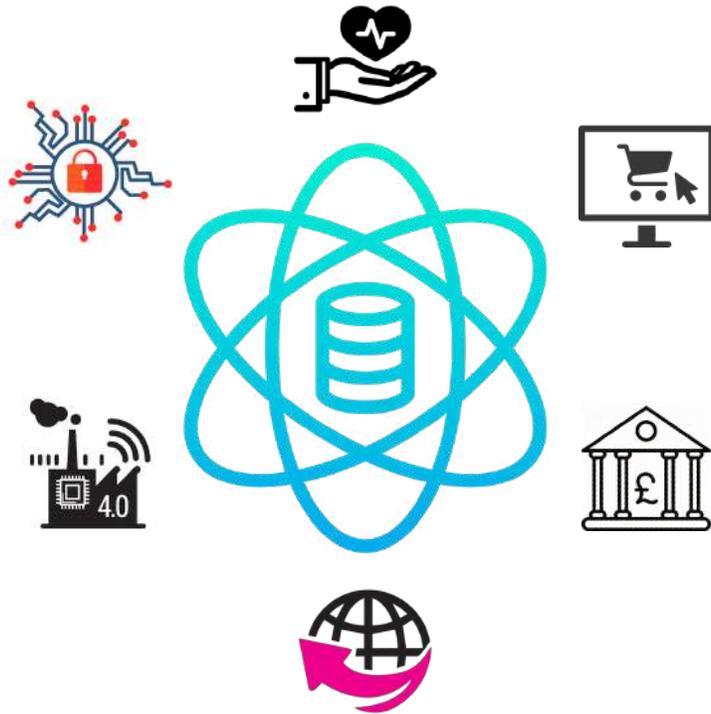
1.0
The Data Scientist Talent

Acolyte: Data Scientist Talent Analysis

Background

Data scientists are specialist professionals who use a specialist set of skills to transform large volumes of data into usable, analytical insights to allow organisations to make faster, more informed decisions

The online environment is creating high volumes of data that can be harnessed to inform businesses on fundamentals such as demand trends, pricing policies and customer behaviours. Even organisations that have traditionally been less reliant on empirical market data are now recognising the importance of gathering these insights to drive strategic and commercial decision making

The Covid-19 pandemic is contributing to this trend as ecommerce and online marketplaces become increasingly important. Operating digitally means that effective use of data is more important than ever in effectively engaging with consumers and remaining competitive

The result is that demand for Data Science talent in the UK has grown by over 1200% in the last 5 years

The high demand for this talent has outpaced the supply of Data Scientists in the UK. This growing talent deficit is threatening the growth of industries and the economy nationally. In this extremely competitive talent market, employers are forced to rethink their hiring strategies in order to attract Data Scientists and to standout as an employer of choice

It is now more important than ever to understand the behavioral characteristics of Data Scientists and employers are increasingly investing time and resources to analyse the key motivators of this talent population. There is increasing recognition of the importance of the candidate journey through the hiring process and a growing awareness of the impact of an employer's brand and reputation within the talent communities that are being targeted

There is much to be learned from benchmarking recruitment performance against competitors and the employer's EVP is taking increasing prominence in discussions around hiring strategies

2.0
Why is there a demand for Data Scientists?

Acolyte: Data Scientist Talent Analysis

Demand Drivers for Data Scientists

Businesses are generating significant amounts of data today and at a rapid pace. Forbes indicate that over 90% of the data present globally today took only the last two years to be produced[1]

The International Data Corporation (IDC) predicts that 79.4 zettabytes [ZB] *(1 ZB is equal to watching the entire Netflix catalogue 3 million times)* of data will be generated per year by 2025 [2]

Mckinsey's research stated that Ecommerce, Digital Platforms, IoT devices, wireless sensors, wearables, etc. will be the dominant sectors that contribute to the volume of data doubling every 3 years[3]

The quantity of data produced rapidly has propelled the growth in demand for Data Scientists; a specialist workforce impacting businesses significantly by using data to drive critical business decisions

Even during Covid, the need for business to stay connected with customers digitally has increased the production of digital information globally driving demand for this talent

Mckinsey in its research revealed that Ecommerce, Digital Platforms, IoT devices, wireless sensors, wearables etc. will contribute to the volume of data doubling every 3 years

[1] https://www.forbes.com/sites/bernardmarr/2018/05/21/how-much-data-do-we-create-every-day-the-mind-blowing-stats-everyone-should-read/#25d66f2360ba

[2] https://www.idc.com/getdoc.jsp?containerId=prUS45213219

[3] https://www.mckinsey.com/business-functions/mckinsey-analytics/our-insights/the-age-of-analytics-competing-in-a-data-driven-world

3.0
What is the demand for Data Scientists in the UK?

Acolyte: Data Scientist Talent Analysis

Fig 1: 2020 Forecast based on Data from the Royal Society

# of Job Adverts

2020 Demand forecast based on The Royal Society analysis
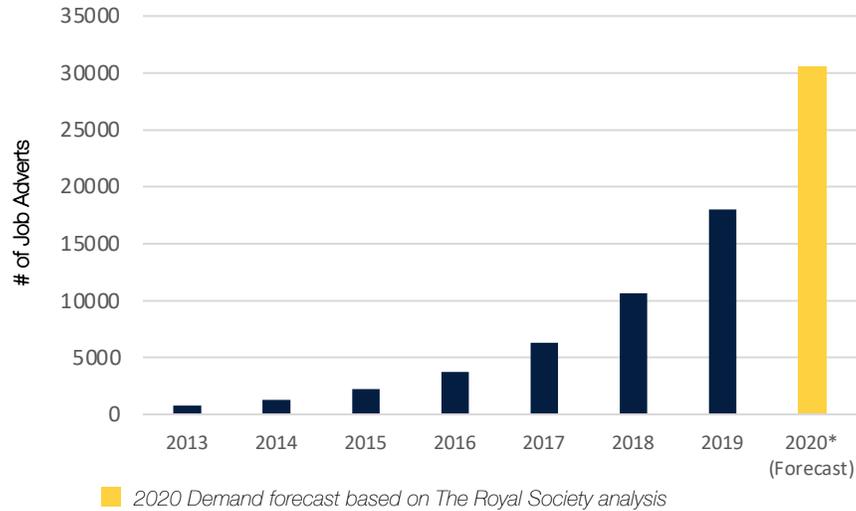
Fig 2: 2020 Estimate based on Independent Acolyte Research

# of Job Adverts

2020 Demand estimate based on Acolyte analysis of Job Adverts
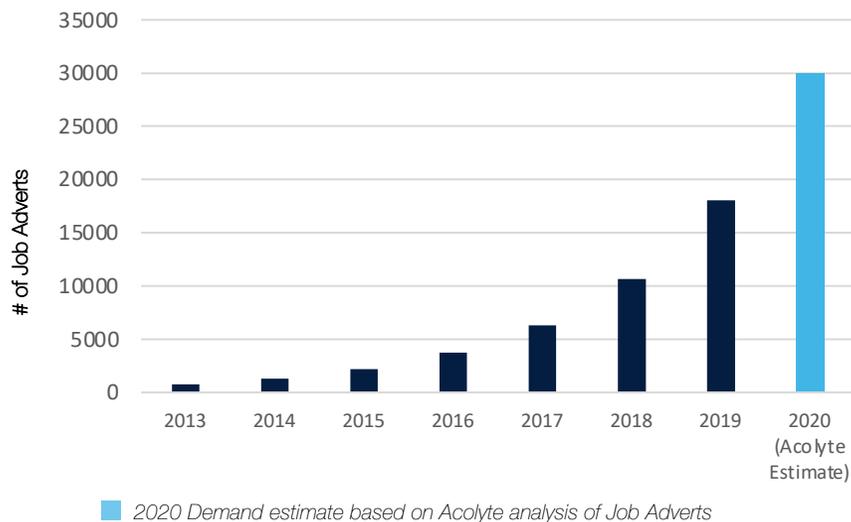
Quantifying the Demand

In a report published by The Royal Society, Data Scientist job adverts were analysed and the demand for Data Scientists in the 5-year period between 2013 and 2018 was found to have grown at a rate of 1287% in the UK[1]

Based on the report, Acolyte estimated the demand for Data Scientists to reach 30,509* by 2020 at a Compound Annual Growth Rate of 69.2% as shown in *Fig 1*

Fig 2 shows an independent Acolyte analysis of the UK labour market in the last 12 months that estimated the number of Job Adverts in 2020 for Data Scientists to be c.30,000

Both sets of analysis (Fig 1 and Fig 2) demonstrate that demand for Data Scientists in the UK continues to grow exponentially. This rapid growth mirrors the growing importance of data-based solutions and decision making in the wider economy
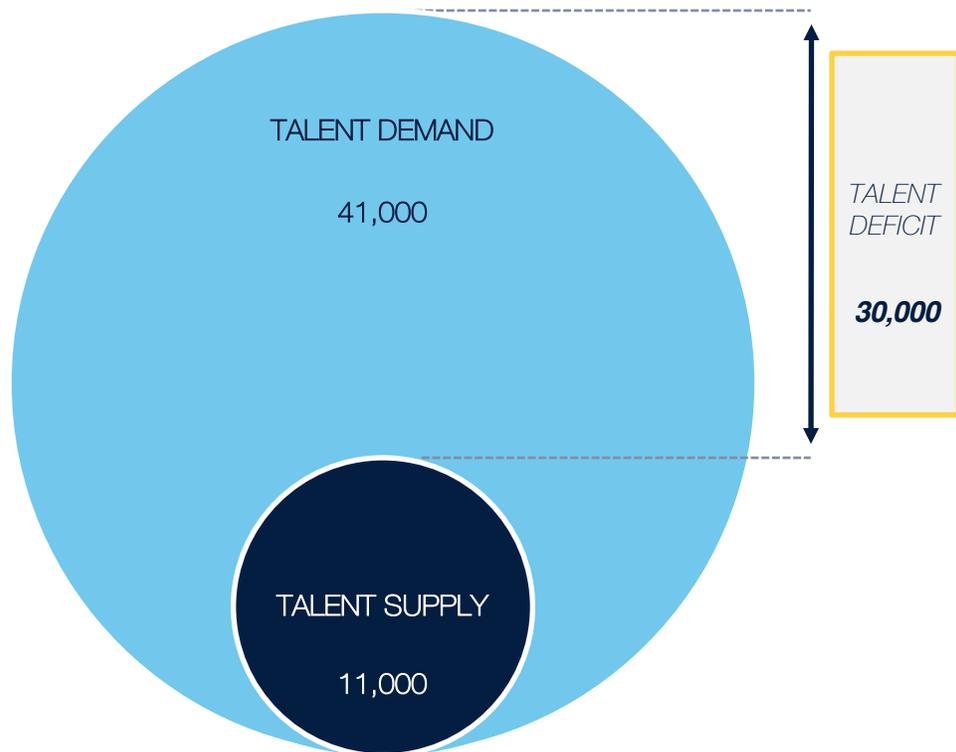
The Covid pandemic has positively impacted the demand for Data Scientists. As economies transition to a more on-line environment, companies are generating higher quantities of digital data. This is leading to a growing reliance on the insights available from this information to drive customer engagement and growth strategies. The appetite for Data Science skills has never been stronger.

Demand for Data Scientists in the 5-year period between 2013 and 2018 was found to have grown at a rate of 1287% in the UK

[1] https://royalsociety.org/-/media/policy/projects/dynamics-of-data-science/dynamics-of-data-science-skills-report.pdf?la=en-GB&hash=212DAE7D599B0A48687B372C90DC3FEA

4.0
How big is the supply-demand gap?

Acolyte: Data Scientist Talent Analysis

The Supply Demand Gap

In order to understand the impact of increasing demand for Data Scientists in context, it is important to assess the extent of talent supply

In the September 2020 analysis of the UK talent market, Acolyte identified over 11,000[1] Data Scientists currently employed at organisations across the UK

When this is added to the 30,000 open vacancies identified in section 3 of this report, total demand for Data Scientists in the UK stands at c.41,000

There is not enough Data Science talent who have the necessary combination of scientific, computational and analytical skills to support the exponential growth of demand in the industry

Closing this talent gap is challenging. it involves governments, industries and educational institutions working in tandem to supply more qualified and skilled Data Science candidates into the talent market

The extent of Talent Supply shortage affects the behaviour of candidates and employers in different ways. Understanding their behaviour will help candidates and employers position themselves better to attract each other on opportunities

There is not enough talent who have the necessary combination of scientific, computational and analytical skills to satisfy the exponential growth of demand in the industry

TALENT DEMAND

41,000

TALENT DEFICIT

30,000

TALENT SUPPLY

11,000

[1]https://www.acolytegroup.co.uk/blog/candidate-market-snapshot-data-scientists

5.0
How has demand affected candidate behaviour?

Acolyte: Data Scientist Talent Analysis

Data Science Drivers

Data Science is a talent-led market. This means that as the demand for Data Scientists increases, the candidates have choice over which employer they elect to work for. As a result, it is particularly important for employers seeking to attract the best talent to understand what drives Data Scientists to be attracted to an opportunity

One way of unlocking the core drivers of the Data Science community is to review the *5 key areas* that every candidate instinctively uses to assess potential opportunities. This is a proven mechanism for successfully interpreting the motivators of talent working in this sector.

COMPANY & CULTURE

Data Scientists appreciate working in organisations that create a supportive culture which encourages them to innovate, ask sound questions and be witness to how their work directly influences the organisation's overall purpose and journey

Team culture plays a crucial role in attracting and retaining data scientists. An intelligent, highly motivated and productive data savvy team will bring out the best in a Data Scientist

CAREER & DEVELOPMENT

Data Scientists are attracted to organisations that are committed to their professional development and that provide ample opportunities to stay up to date with the latest tools and data science skills that help them progress as professionals in their field

Data scientists appreciate the freedom to bring data concerns directly to leadership

RESPONSIBILITIES & EXPERIENCE

Data Analysts enjoy complex business problems and want to be challenged by organisations who constantly are pushing the boundaries of data analytics

They like to be given the space, time and trust to function creatively while they solve challenging data problems that contribute directly to the company's success

OFFICE & ENVIRONMENT

The working life of a Data Scientist is stressful, and they appreciate organisations that provide powerful infrastructure and latest technology tools that help reduce their mundane parts of their work

A work-from-anywhere approach with a flexible working schedule will be well suited for a Data Scientist as it demonstrates that an employee's value is based on the quality of their work and not the location

REWARD & RECOGNITION

Data Science can be a lucrative career option as the demand for skilled talent drives high pay. It is important for employers to pay enough that salary is no longer an issue

Long work hours is not uncommon in the industry and Data Scientists are increasingly feeling the pressure of an unbalanced work/life scenario. Providing support to solve this issue for them will be the starting point to building an effective team of Data Scientists

6.0

Benchmarking against competitors who successfully attract Data Scientists

EVP

Benchmarking against Competitors

Over the last 5 years, Data Scientists have become one of the most sought-after talent groups in the UK. High demand for this role has prompted employers to reconsider their overall recruitment strategy and their Employer Value Proposition (EVP) to attract these in-demand candidates

Some employers have been highly successful in hiring Data Scientists more than others. We can analyse behaviours of triumphant employers using the same *5 key areas* that candidates use to assess an opportunity

COMPANY & CULTURE

AstraZeneca hire significant numbers of Data Science talent in the UK. Their entrepreneurial culture promoting disruption and innovation is a unique selling point to attract Data Scientists. AZ is well known for its work ecosystem that allows ideas to be considered, discussed and implemented so that employees can witness the impact of their work on the company's journey

CAREER & DEVELOPMENT

The ONS (Office for National Statistics), UK's largest independent producer of national statistics employs a significant number of Data Scientists to manage large amounts of data. They are recognized as a Silver Accredited Investors in People being renowned for developing their people through all stages of their career, training courses, opportunities to gain professional qualifications and accreditations

RESPONSIBILITIES & EXPERIENCE

Fast growing internet-based companies like Deliveroo have a strong focus on Data Science to make informed decisions. Deliveroo attracts quality Data Scientists to work for them as they have Data Science as a core function in running the business. Data Scientists in Deliveroo are trusted to solve complex problems for their customers, riders and restaurants creating significant impact for the company and its partners

OFFICE & ENVIRONMENT

Amazon's state of the art office spaces include numerous facilities including retail stores, cafes, alfresco dining spaces and gyms among a long list of others providing employees a favourable environment to be highly productive. The relaxed and more informal office spaces has the brightest Data Scientists applying their minds to solve complex business problems in supply chain and technology

REWARD & RECOGNITION

Facebook provides a wide range of employee benefits in addition to competitive remuneration. A holistic employee care plan with a range of benefits covering health, family, finance, community and generous time away makes Facebook an extremely attractive employer for Data Science talent

Please contact Chris Murphy for further information.

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acolyte