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DATA ANALYTICS

Permanent Salary Report 2019

FOREWORD

When I first started as a Headhunter 15 years ago, the term “data science” barely existed. Today, it is not uncommon for even small businesses with between 50-250 people to have a Chief Data Officer, especially in the case of data-driven platforms and FinTech startups. This has created extremely high demand for data science skill sets – demand that employers are struggling to fill.

In the UK, Brexit has been one of the major concerns for the flow of data analytics talent. However, from our data we can determine that the number of vacant positions is on the rise, which also indicates an ongoing mismatch of qualified talent within the market. If the overseas talent pool were to reduce or be cut off, high-growth tech would suffer.

Over the coming decade, as the application of data becomes ever-more vital, we believe there will be increased demand for data-related skills.

As a counterpoint, just like many professions, automation in data analytics will create efficiencies that do not currently exist.

What impact will this have on the talent market? The adoption of cloud technology, and demand for automation engineering and machine learning, are crucial elements that companies must address through their tech stacks and talent acquisition efforts.

Lloyd Wahed

Lloyd Wahed
CEO

EXECUTIVE **SUMMARY**

Data scientists, engineers and analytics professionals are in high demand. They enable organisations to extract valuable insights from data and apply them for substantial actionable solutions. As data analysis methodology grows in power, and the volume of data collected increases exponentially, the number and variety of roles in data science are also increasing significantly.

Our report reveals average data science salaries across the UK, as well as salary expectations for different data professionals. Overall, more than half of UK data jobs are located in London. Not surprisingly, big cities such as Birmingham, Manchester, Oxford and Cambridge are where most of the other jobs are located. Outside of the big cities, companies – especially well-funded startups – are willing to pay above market price to attract talent. The number of job openings, however, is limited.

Most positions outside London are contracting jobs, where companies hire talent for a set period to solve a specific problem.

Data engineers have the highest average salary across all levels, followed closely by data scientists. Some Chief Data Officer and Lead Data Engineer roles offer salaries of up to £200,000. Data analyst positions, typically considered to be the entry level for careers in data and analytics, pay much less on average than data scientist and data engineer jobs. London tops the list of high-paying locations, with a majority of £50,000+ and £100,000+ jobs based in the capital.

Our report also examines in-demand skills across data science. In terms of required skills, Python, R and SQL are the three most popular programming languages for jobs in data.

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TABLE OF CONTENTS

REPORT OVERVIEW

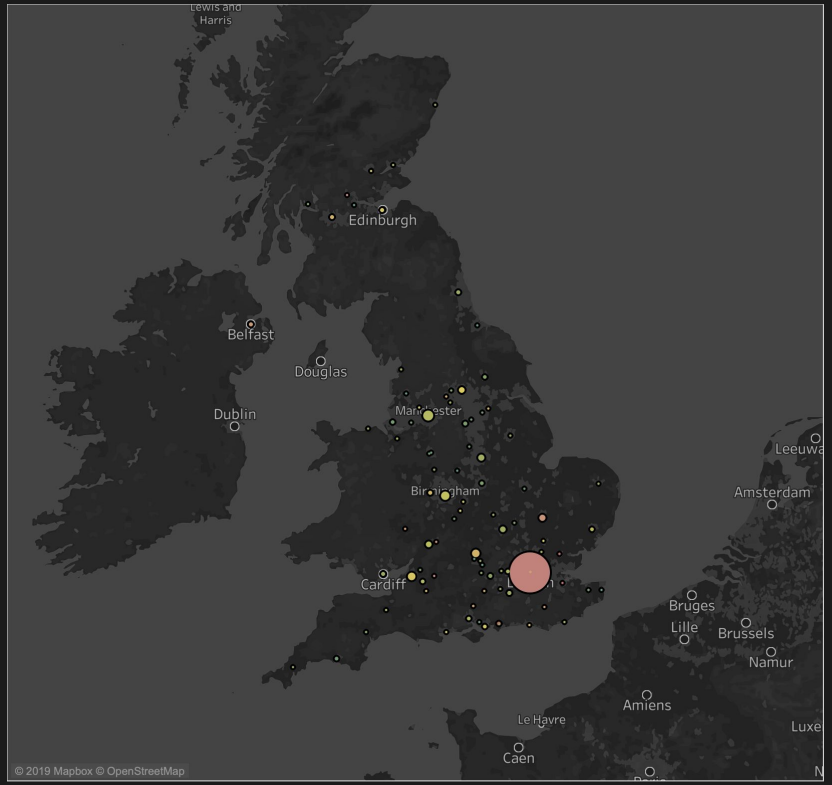
The data analytics market is now focused more on data engineering roles, as there is still a shortage of candidates with knowledge of statistical and engineering skills. To create and maintain a data pipeline is becoming increasingly important, and companies are willing to reward handsomely for the right data engineer. This explains the highest salary among all seniority of data engineer candidates. Data Scientists and data analysts (generally regarded as an entry for data roles) are also in high demand, with salaries not far behind.

Research Methodology

We extracted thousands of job listings from the leading job board, and from many of our job collections, we collect and categorise the data into different subsets of data professions. We then divide the obtained data into many subgroups based on salary, locations, years of experience and skills required.

Job / Category	Junior	Middle	Senior
Data Analyst	£37,188		£52,201
Data Engineer	£41,053	£67,658	£84,302
Data Scientist	£39,028	£64,631	£79,685

Data & Analytics Average Salary for UK Cities



Map based on Longitude (generated) and Latitude (generated). Colour shows average of Annual Salary. Size shows % of Total Count of Annual Salary. Details are shown for City.

JOB DEMAND

Three-fifths (57.5%) of the job offers for all three roles - Data Analyst, Data Scientist and Data Engineer - are for London-based offices. Moreover, London is also characterised as having one of the highest average salaries for these roles, reaching over £66,000 per annum.

Permanent data jobs are commonly located in big cities, with other cities such as Manchester, Birmingham, Oxford, Bristol and Cambridge accounting for between 1.6% and 3.3% of all positions. The rest of the jobs are spread across the country, generally in the north of England.

Interact with our map here

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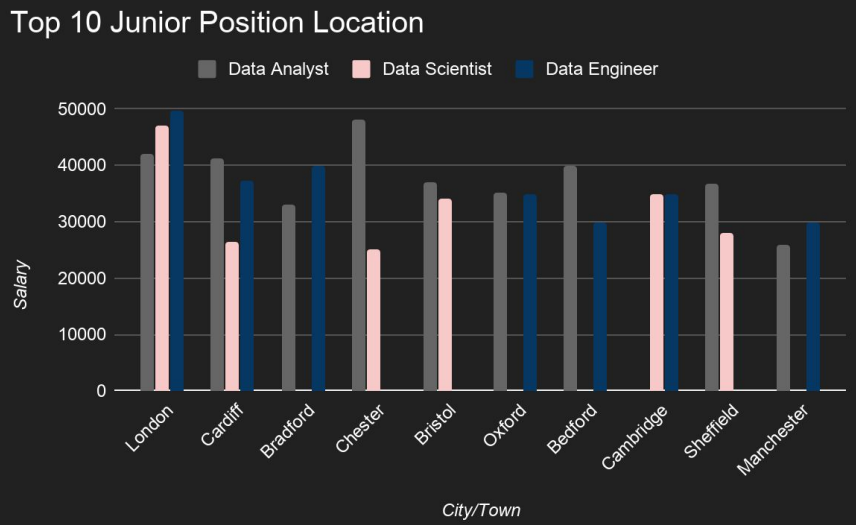
SALARIES ACROSS THE UK

Analysis of salary levels for different locations across the United Kingdom



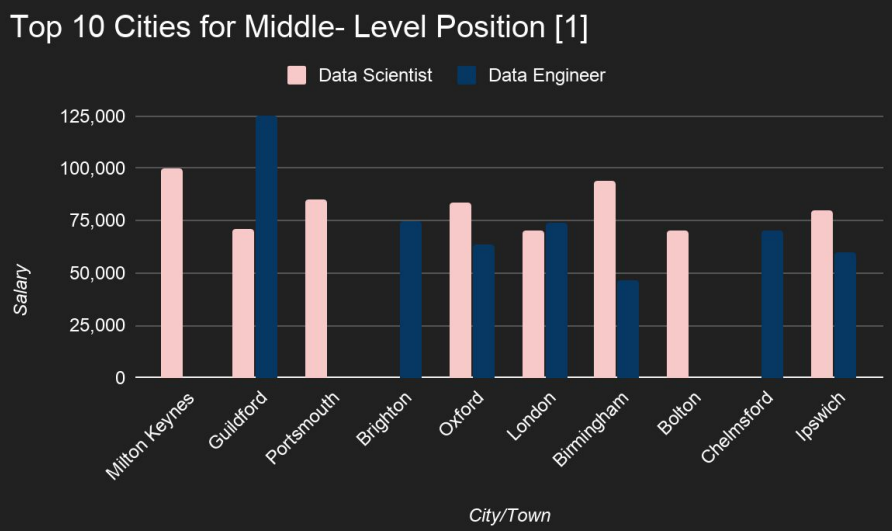
LOCATION
JUNIOR LEVEL

London, not surprisingly, has the highest average salary for junior positions, ranging from £42,071 for data analysts to £49,585 for data engineers.

Cities like Cardiff, Bristol, Oxford, Cambridge and Manchester are an attractive prospect for candidates seeking entry-level data roles.

Other cities such as Bradford (where average salaries range from £33,000 for data analysts to £40,000 for data engineers) and Chester, albeit with a high average salary, only represent a small number of jobs posted (less than 1% each). As such, roles in these locations are highly dependent on job openings for regional companies.

LOCATION
MIDDLE LEVEL

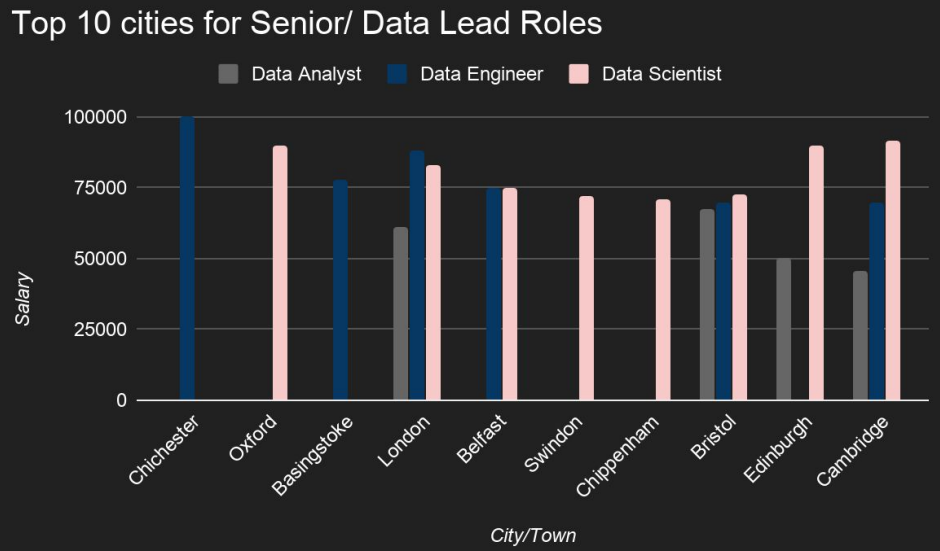


Not surprisingly, big cities such as London, Birmingham and Oxford appear in the top 10. In London, mid-level data scientists can expect to earn an average of £70,108, climbing to £74,254 for data engineers.

Oxford and Birmingham have higher average salaries than London for data scientists, at £83,333 and £93,750 respectively.

Other notable cities are Guildford (Surrey) and Brighton, where there are many big companies that have relocated to smaller towns. These companies are willing to pay a premium to attract top-tier candidates out of big cities.

[1] Data Analysts are not included because it is considered to be the entry level for the other two job titles



LOCATION
SENIOR LEVEL

Senior manager and data tech leads are in high demand to manage and guide their relatively young teams of data scientists. A senior data professional will have at least five years of experience, although most have 7-8 years of experience.

High-profile cities such as London, Oxford, Cambridge and Bristol all appear in the list. However, it is always a good idea to look out for potential roles around your area. Many companies are willing to pay competitive salaries to attract talents out of big cities, such as in Chichester and Basingstoke.

Recruitment firms usually fill many of these top regional roles (senior or team lead), so maintaining good relationships with some of your local recruitment agencies is essential to attain your next senior role.

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57.5%

Of total data jobs are based in London

£66,000
per annum

Average salary for London data professionals

LONDON MARKET SCENE

London is among the highest-paid cities for data roles. A majority of jobs (73.3%) offering a salary of £50,000+ are based in the capital - vastly more than Manchester, which boasts the second-highest proportion of £50,000+ jobs (2.3%).

Three-fifths (61%) of data engineer jobs two-thirds (70%) of data scientist jobs are based in London. Jobs for data analysts, which require less technical know-how, are more widely spread around the UK - although two-fifths (42%) of positions are still located in London.

Data engineers enjoy the highest average annual salary (£77,632), followed closely by data scientists (£73,705). Unsurprisingly given the entry-level nature of the role, data analysts have the lowest average salary (£44,317).

	Data Analyst	Data Engineer	Data Scientist
Average Annual Salary	£44,317	£77,632	£73,705
% per job title	42%	70%	61%

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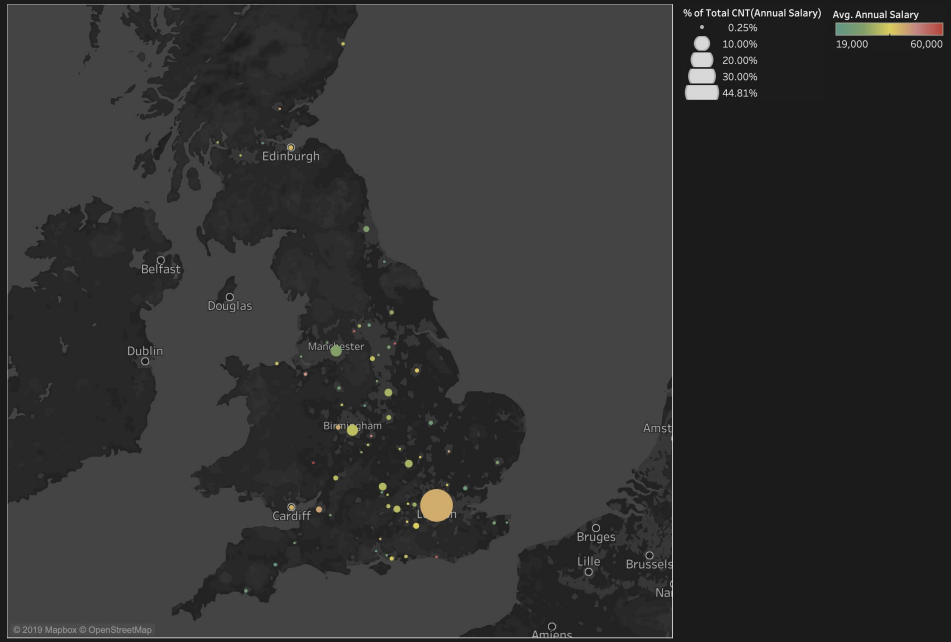
DATA CAREER VIEWPOINT

Working as a data analyst, data scientist or data engineer, what will the career progression look like?

Data Analyst Average Salary by UK Cities



Map based on Longitude (generated) and Latitude (generated). Colour shows average of Annual Salary. Size shows % of Total Count of Annual Salary. Details are shown for City. The data is filtered on Category, which keeps Data Analyst.

DATA ANALYST LOCATION

Four in every ten UK data and analytics jobs are in London, where the average salary of £44,317 is one of the highest in the country.

Birmingham (5.57% of total data analyst jobs) comes in second place with an average salary of £35,494, followed closely by Manchester (5.32%), where the average wage stands at £29,652.

Other notable cities and towns are Milton Keynes (2.78% - average salary £33,818), Oxford (2.53% - average salary £35,119), and Nottingham (2.28% - average salary £33,858).

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DATA ANALYST PROGRESSION

£37,188
per annum

Average salary for a **junior/ mid-level** data analyst

£52,201
per annum

Average salary for **senior** data analyst

£15,012
per annum

Average difference between junior and senior-level data analyst salaries

£100,000
per annum

Maximum salary for a global data analytics lead

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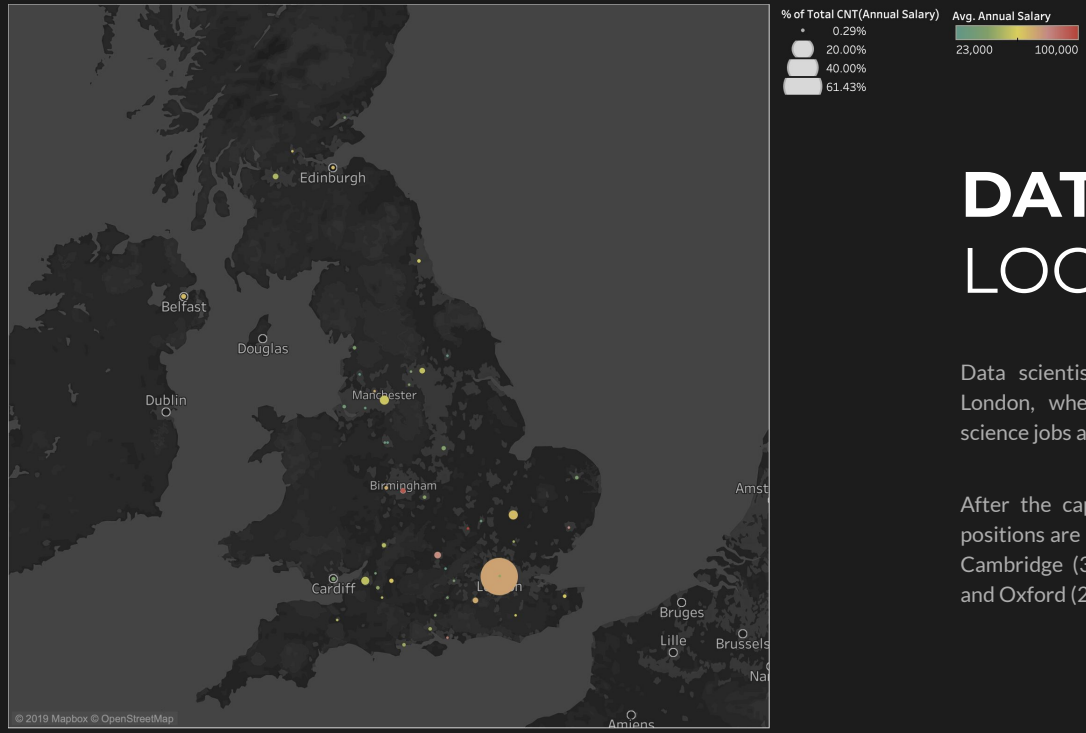
Data Analyst Average Salary by UK Cities



Map based on Longitude (generated) and Latitude (generated). Colour shows average of Annual Salary. Size shows % of Total Count of Annual Salary. Details are shown for City. The data is filtered on Category, which keeps Data Scientist.

DATA SCIENTIST LOCATION

Data scientists enjoy an average salary of £73,705 in London, where nearly two-thirds (61.43%) of all data science jobs are based..

After the capital, the cities with the most data science positions are Manchester (3.71% - average salary £58,562), Cambridge (3.43% - £67,149), Bristol (2.86% - £55,500), and Oxford (2.00% - £79,286).

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DATA SCIENTIST
PROGRESSION

£39,028
per annum

Average starting salary for data scientist

£79,685
per annum

Average **senior salary** for data scientists

£40,657
per annum

Average difference between junior and senior-level salaries

£200,000
per annum

Maximum salary for a chief data officer

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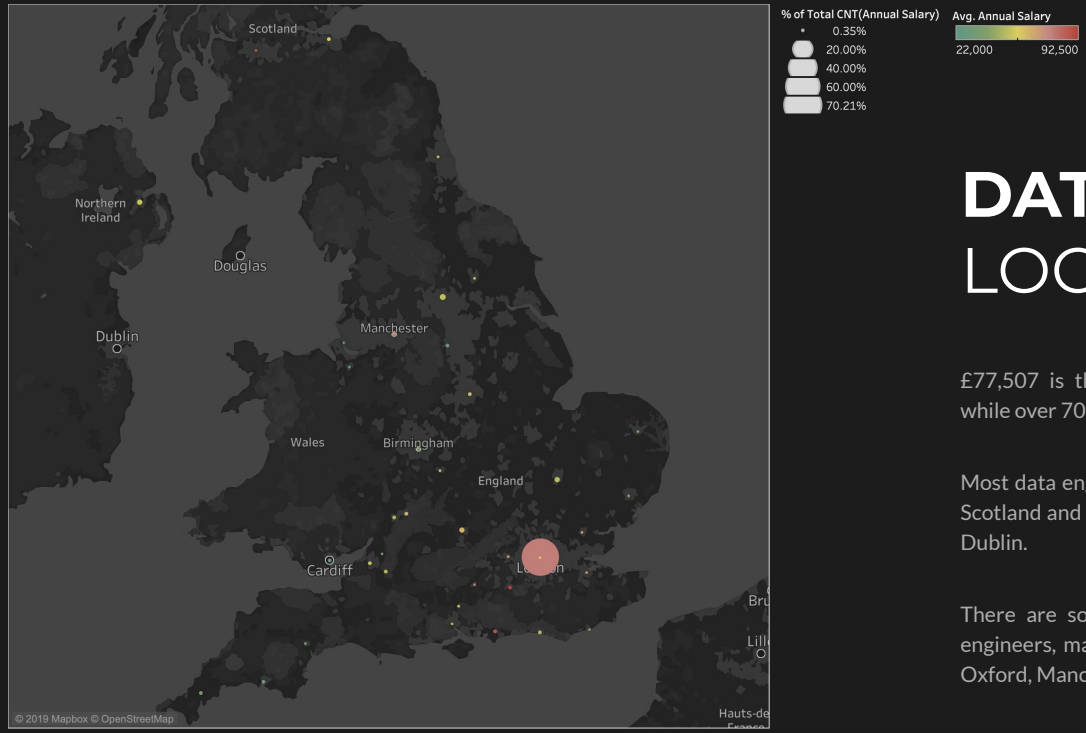
Data Engineer Average Salary by UK Cities



DATA ENGINEER LOCATION

£77,507 is the average data engineer salary in London, while over 70% of all job positions are London-based.

Most data engineering jobs are in England, but some are in Scotland and Northern Ireland - primarily in Edinburgh and Dublin.

There are some full-time roles around the UK for data engineers, mainly in high-profile cities such as Cambridge, Oxford, Manchester and Leeds.

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DATA ENGINEER PROGRESSION

£41,053
per annum

Average starting salary for data engineers

£84,302
per annum

Average senior salary for data engineers

£43,250
per annum

Difference between entry and senior-level data engineer salaries

£200,000
per annum

Maximum salary for a lead data engineer

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SALARY LEVEL

Where are the £50,000+ and £100,000+ jobs located?

JOBS **£50,000+**

London is the area where most of the jobs with £50,000+ salaries are located (75.1%). Manchester, with the second-highest proportion of £50,000+ jobs, lags well behind in second place (2.39%), followed by Oxford (2.05%), Cambridge (2.05%), Bristol (1.37%) , Leeds (1.37%), and Birmingham (1.19%).

Among these top 10 locations, Surrey is willing to pay the highest salary, with an average of £80,714, followed by Birmingham with £80,000. London is in third place, with an average salary of £76,622.

Locations	Average Annual Salary	Percentage
London	£76,622	75.09%
Manchester	£67,143	2.39%
Oxford	£74,583	2.05%
Cambridge	£72,083	2.05%
Bristol	£71,265	1.37%
Leeds	£63,750	1.37%
Surrey	£80,714	1.19%
Birmingham	£80,000	1.19%
Belfast	£67,500	1.02%
Gloucester	£55,000	0.85%

DATA ANALYST
£50,000+

London is where the vast majority of £50,000+ data analyst jobs are located (74%).

Six locations each boast a 2.47% share of data analyst jobs with salaries of more than £50,000, while a further three cities have a 1.23% share.

Locations	Percentage
London	74.07%
Birmingham	2.47%
East Sussex	2.47%
Edinburgh	2.47%
Gloucester	2.47%
Manchester	2.47%
Oxford	2.47%
Brighton	1.23%
Bristol	1.23%
Cardiff	1.23%

City	Percentage
London	72.30%
Manchester	3.24%
Cambridge	3.24%
Oxford	2.16%
Leeds	1.80%
Bristol	1.80%
Surrey	1.44%
Birmingham	1.44%
Chippenham	1.08%
Belfast	1.08%

DATA SCIENTIST
£50,000+

Again, most of the £50,000+ data scientist roles are based in London (72.3%).

However, there is a slightly wider geographical spread than with £50,000+ data analyst and data engineer roles, with leading big cities such as Manchester and Cambridge each having 3.24% of total positions.

Other cities such as Oxford (2.16%), Leeds (1.8%) and Bristol (1.8%) also appear in the top 10.

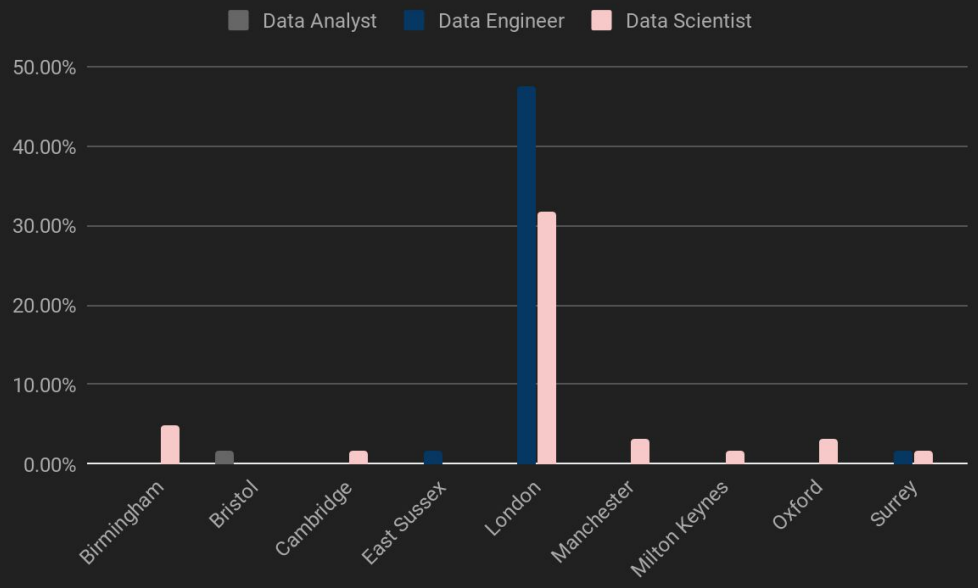
DATA ENGINEER
£50,000+

With the average starting salary for junior data engineers standing at £41,000 per annum, most data engineer jobs are in London.

Outside of London, most £50,000+ jobs are located in high-profile cities like Oxford (1.76%), Belfast (1.32%) and Cambridge (1.32%).

High-paying roles can also be found in cities such as Brighton and Bristol, where employers typically prefer contractors to full-time positions.

Locations	Percentage
London	78.85%
Oxford	1.76%
Belfast	1.32%
Cambridge	1.32%
Leeds	1.32%
Manchester	1.32%
Brighton	0.88%
Bristol	0.88%
Cheltenham	0.88%
East Sussex	0.88%



£100,000+ **LOCATION**

London, not surprisingly, is where most of the top jobs can be found.

94% of data engineering jobs with a salary of £100,000+ are in London, representing nearly half of total jobs with a £100,000+ salary. Meanwhile, 67% of £100,000+ data scientist jobs are based in London. There are also some £100,000+ jobs in other big cities, such as Birmingham, Manchester, Oxford and Cambridge.

For data analysts, there is only one job with a listed salary of more than £100,000, which is in Bristol (for a global head of analytics). This is an outlier, as senior data analyst positions only offer an average annual salary of £52,000. Data analyst, after all, is considered to be an entry role for data science or data engineering.

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COMMON AND HIGHEST-PAID **SKILL SET**

What languages are sought after by data employers?

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Skill	Percentage
Excel	73%
SQL	32%
Python	20%
Tableau	17%
R	13%
SAS	11%
VBA	9%
Scala	4%
PowerBI	4%
C++	4%

DATA ANALYST
TOP 10 SKILLS

Data analyst is the entry-level role for careers in data analytics, so the requirement is comparatively simple.

Most data analysts are only required to be efficient in Excel. Some roles also prefer candidates to know SQL to extract and input into the company's SQL server. Even though some exposures to Python, R, and SAS are preferable, many firms don't require it, and they can train you at the job.

Some visualisation knowledge - such as Tableau or Power BI - can also be valuable, and potential employers are likely to favour candidates with such skills.

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DATA ANALYST HIGHEST EARNING SKILLS

The highest-paid skill is Kafka, even though it is only mentioned in 0.25% of all data analyst job postings.

AWS Cloud (Amazon Web Service) is a skill that can lead to a very high salary of £47,857. SAS or C++, even though not commonly required in data analyst roles, can be paid relatively well, at £47,757 and £45,329, respectively.

Solid knowledge of programming language Python, relational database language SQL, as well as some data visualisation skills in PowerBI and Tableau, are also beneficial for well-paid data analyst roles.

Language	Percentage	Average
Kafka	0.25%	£55,000
AWS	1.77%	£47,857
SAS	10.89%	£47,757
C++	3.54%	£45,329
PowerBI	3.80%	£45,173
Azure	1.77%	£44,503
Python	20.25%	£43,627
Tableau	17.47%	£43,203
C#	1.52%	£43,000
SQL	49.11%	£41,605

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DATA SCIENTIST
TOP 10 SKILLS

Python is becoming a must-know skill for data scientists, with more than 82% of job posts requiring or preferring candidates to have Python. R (37%) is also a popular choice for data science, with its extensive statistical and data visualisation libraries. Java and Scala are two other popular programming languages for data scientists, as they can be faster than Python or R when dealing with large datasets, or when being used with Hadoop or Spark.

For data warehouse / big data technologies, Spark - with its real-time data processing - and Hadoop, for working with large or multiple datasets, are highly desirable skills.

With an increase in the adoption of cloud computing services, data scientists are gradually expected to know about AWS (16%), Azure (9%) or Google Cloud (2%).

Skills	Percentage
Python	82%
SQL	46%
Excel	38%
R	37%
Spark	18%
AWS	16%
Scala	14%
Java	13%
Hadoop	12%
NoSQL	11%

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DATA SCIENTIST HIGHEST EARNING SKILLS

Language	Percentage	Average
Google Cloud	2.29%	£85,625
Kafka	4.00%	£77,142
Hadoop	12.29%	£75,856
HIVE	5.14%	£75,550
Azure	9.14%	£74,966
AWS	15.43%	£74,111
Spark	19.14%	£73,938
Scala	13.14%	£73,893
Java	12.86%	£72,933
Tensorflow	8.86%	£72,554

Even though Google Cloud, as a cloud platform, is not as popular as AWS or Azure, it is the highest paying skill for data scientists, with an average salary of £85,625.

Kafka, Hadoop, HIVE, and Spark - all popular data warehouse platforms for data engineers - are rarely required for data scientist positions. However, when the job requires these skills, it is generally well-paid.

Java and Scala, typically used in conjunction with big data frameworks and software, are also among the top 10 highest-earning skills.

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DATA ENGINEER
TOP 10 SKILLS

Python, Scala and Java are the three most popular languages. Python is unsurprisingly the most popular for data engineers, as it is a common way to build ETL frameworks using Airflow, or to interact with different APIs. Scala and Java are also common requirements to use with data warehouse tools such as Spark or Hadoop.

Apache Hadoop is a must-learn for any data engineer, with many popular real-time data processing frameworks built into it, including Spark and Kafka. Of the two, Spark is the most popular.

Cloud-based techs are another common requirement for data engineers, with AWS being the most popular. Microsoft Azure and Google Cloud are being slowly adopted, but are still lagging behind AWS.

Skill	Percentage
Python	61%
Spark	43%
Scala	42%
AWS	42%
SQL	34%
Java	33%
Hadoop	33%
Excel	32%
Kafka	25%
Azure	24%

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DATA ENGINEER HIGHEST EARNING SKILLS

Language	Percentage	Average
Tensorflow	2.49%	£88,571
Hadoop	34.52%	£80,222
PIG	8.54%	£80,208
Spark	44.13%	£79,745
Kafka	26.33%	£79,595
MapReduce	4.63%	£79,231
NoSQL	19.93%	£79,018
Java	34.16%	£78,844
HIVE	16.01%	£78,790
Scala	43.06%	£77,392

Even though only 2.49% of job postings required applicants to know Tensorflow, it is the highest paying skill for data engineers with an average salary of £88,571.

Hadoop is the second-highest-paying skill, with an average salary of £80,222. Other popular data warehousing skills for data engineers, such as Spark, PIG, Kafka and Java, also make the top 10.

An honourable mention goes to Scala, one of the most popular languages, required in 43.06% of data engineering job postings. It ranks in 11th position on the high-earning list with an average salary of £77,392.

CONCLUSION

Demand for people with data-related skill sets is already high. How high? According to The Royal Society, the UK's national academy of sciences, it grew by 231% from 2013-18. Over the same period, demand for *all* types of skills rose by a fraction of that amount (just 36%).

But what is driving this demand? The growth of FinTech has been a major contributor. To acquire and retain customers, brands like Funding Circle, Starling Bank and Tide have recognised the importance of harnessing data insights to deliver personalized experiences at scale.

Significantly, while these skills have always been highly sought-after, until relatively recently only large, established enterprises and digital natives have been prepared to make the required investment.

Now, companies are increasingly aware that they simply cannot compete without a data offering of their own.

This, of course, is fantastic news for candidates with the right skills. Skills like scripting languages, big data, SQL databases and machine learning. These candidates can command high salaries, even for entry-level roles. As demand continues to dramatically outstrip supply in the talent market, we fully expect salaries to climb further.

Whether you are a data analyst, scientist or engineer looking for a new challenge, or a client desperate to access data skill sets, Mana Search is ideally positioned to help. Our mission is to unlock growth for disruptive FinTechs by connecting them with expert talent. Get in touch with the Mana team to learn what we can do for you.

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ABOUT US

Mana Search's mission is to unlock growth for disruptive FinTechs by connecting them with expert talent. We are based in London, specialising in placing senior and C-suite analytics candidates to VC / PE-backed startups and analytics consulting arms of international firms.

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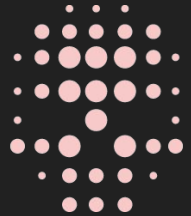

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