

DATA ANALYST

Details of standard

Occupation summary

This occupation is found in any employer in any sector that uses data to make business decisions. Data analysts may work in various departments within a single employer, (for example finance, sales, HR, manufacturing, or marketing), and in any employment sector, public or private, including retail, distribution, defence, banking, logistics, media, local government etc.

The broad purpose of the occupation is to ascertain how data can be used in order to answer questions and solve problems. Data analysis is a process of requirement-gathering, inspecting, cleansing, transforming and modelling data with the goal of discovering useful information, informing conclusions and supporting decision-making. Data analysis has multiple facets and approaches, encompassing diverse techniques under a variety of names. In today's world, data analysis plays a crucial role in making decisions more evidence-based and helping organisations operate more effectively.

For example: a data analyst may investigate social media trends and their impact on the organisation. In retail, a data analyst may break down sales figures to make recommendations on product placement and development. In HR a data analyst may investigate staff retention rates, in order to decide on recruitment strategy. In a hospital, a data analyst may investigate wait times for different departments, in order to provide a better service to its patients.

In their daily work, an employee in this occupation interacts with internal or external clients. Internally, the data analyst may work with many people within their organisation, at different levels. Externally a data analyst may provide data analysis services to other organisations on behalf of their employer. Data analysts would normally be office based and work normal business hours.

An employee in this occupation will be responsible for the creation and delivery of their own work, to meet business objectives. The data analyst will be responsible for working within the data architecture of the company and ensuring that the data is handled in a compliant, safe and appropriately secure manner, understanding and adhering to company data policy and legislation. Data analysis is a fast-moving and changing environment, and data analysts need to continue to stay abreast of, and engaged with, changes and trends in the wider industry; including data languages, tools and software, and lessons learnt elsewhere.

Typical job titles include:

Data analyst

Departmental data analyst

Energy data analyst

Junior analyst

Marketing data analyst

Problem analyst

Occupation duties

DUTY

Duty 1 Identify data sources to meet the organisation's requirement, using evidence-based decision making to establish a rationale for inclusion and exclusion of various data sets and models

Duty 2 Liaise with the client and colleagues from other areas of the organisation to establish reporting needs and deliver insightful and accurate information

Duty 3 Collect, compile and, if needed, cleanse data, such as sales figures, Digital Twins etc. solving any problems that arise, to or from a range of internal and external systems

Duty 4 Produce performance dashboards and reports in the Visualisation and Model Building Phase

Duty 5 Support the organisation by maintaining and developing reports for analysis to aid with decisions, and adhering to organisational policy/legislation

Duty 6 Produce a range of standard and non standard statistical and data analysis reports in the Model Building phase

Duty 7 Identify, analyse, and interpret trends or patterns in data sets

KSBS

K1 K2 K3 K4 K5 K6 K8 K9 K10 K12 K15

S1 S2 S7 S8 S9 S15

B2 B3 B4 B5 B7

K1 K2 K3 K4 K5 K6 K9 K10 K11 K12 K15

S1 S2 S4 S5 S7 S12

B1 B3 B4 B5 B6 B7

K1 K2 K3 K4 K5 K6 K8 K10 K11 K12 K13 K15

S1 S2 S3 S4 S6 S7 S8 S9 S10 S13

B1 B2 B3 B4 B5 B6 B7

K1 K2 K3 K4 K5 K6 K7 K8 K9 K10 K11 K12 K13 K15

S1 S2 S3 S4 S5 S7 S8 S9 S10 S11 S12 S13 S14 S15

B2 B3 B4

K1 K2 K3 K7 K8 K10 K11 K12

S1 S2 S3 S5 S8 S9 S14

B1 B2 B3

K2 K3 K4 K5 K6 K7 K8 K9 K10 K11 K12 K13 K14

S1 S2 S3 S4 S5 S8 S9 S10 S11 S13 S14

B2 B3 B6 B7

K1 K2 K3 K4 K5 K8 K10 K11 K12 K13 K14 K15

S1 S2 S3 S4 S5 S6 S10 S11 S13 S14

B2 B3 B4 B5 B7

Duty 8 Draw conclusions and recommend an appropriate response, offer guidance or interpretation to aid understanding of the data	K1 K2 K7 K8 K11 K14 S1 S2 S3 S4 S5 S7 S10 S11 S12 S13 S14 B2 B3 B4 B5 B7
Duty 9 Summarise and present the results of data analysis to a range of stakeholders, making recommendations	K2 K3 K4 K5 K7 K9 K10 K12 K13 K15 S1 S2 S4 S5 S7 S9 S12 S14 S15 B1 B3 B4 B7
Duty 10 Provide regular reports and analysis to different management or leadership teams, ensuring data is used and represented ethically in line with relevant legislation (e.g. GDPR which incorporates Privacy by Design).	K1 K2 K3 K4 K5 K6 K7 K9 K10 K11 K12 K15 S1 S2 S4 S5 S7 S10 S12 S14 S15 B3 B4 B5
Duty 11 Ensure data is appropriately stored and archived, in line with relevant legislation e.g. GDPR	K1 K2 K3 K6 K8 K11 K12 S1 S2 S3 S9 B1 B3 B4
Duty 12 Practice continuous self learning to keep up to date with technological developments to enhance relevant skills and take responsibility for own professional development	K7 K8 K10 K11 K13 K14 K15 S1 S3 S4 S6 S7 S12 B1 B2 B3 B4 B5 B6 B7

KSBs

Knowledge

K1: current relevant legislation and its application to the safe use of data

K2: organisational data and information security standards, policies and procedures relevant to data management activities

K3: principles of the data life cycle and the steps involved in carrying out routine data analysis tasks

K4: principles of data, including open and public data, administrative data, and research data

K5: the differences between structured and unstructured data

K6: the fundamentals of data structures, database system design, implementation and maintenance

K7: principles of user experience and domain context for data analytics

K8: quality risks inherent in data and how to mitigate or resolve these

K9: principal approaches to defining customer requirements for data analysis

K10: approaches to combining data from different sources

K11: approaches to organisational tools and methods for data analysis

K12: organisational data architecture

K13: principles of statistics for analysing datasets

K14: the principles of descriptive, predictive and prescriptive analytics

K15: the ethical aspects associated with the use and collation of data

Skills

S1: Use data systems securely to meet requirements and in line with organisational procedures and legislation including principles of Privacy by Design

S2: implement the stages of the data analysis lifecycle

S3: apply principles of data classification within data analysis activity

S4: analyse data sets taking account of different data structures and database designs

S5: assess the impact on user experience and domain context on data analysis activity

S6: identify and escalate quality risks in data analysis with suggested mitigation or resolutions as appropriate

S7: undertake customer requirements analysis and implement findings in data analytics planning and outputs

S8: identify data sources and the risks and challenges to combination within data analysis activity

S9: apply organizational architecture requirements to data analysis activities

S10: apply statistical methodologies to data analysis tasks

S11: apply predictive analytics in the collation and use of data

S12: collaborate and communicate with a range of internal and external stakeholders using appropriate styles and behaviours to suit the audience

S13: use a range of analytical techniques such as data mining, time series forecasting and modelling techniques to identify and predict trends and patterns in data

S14: collate and interpret qualitative and quantitative data and convert into infographics, reports, tables, dashboards and graphs

S15: select and apply the most appropriate data tools to achieve the optimum outcome

Behaviours

B1: maintain a productive, professional and secure working environment

B2: show initiative, being resourceful when faced with a problem and taking responsibility for solving problems within their own remit

B3: work independently and collaboratively

B4: logical and analytical

B5: identify issues quickly, investigating and solving complex problems and applying appropriate solutions. Ensures the true root cause of any problem is found and a solution is identified which prevents recurrence.

B6: resilient - viewing obstacles as challenges and learning from failure.

B7: adaptable to changing contexts within the scope of a project, direction of the organisation or Data Analyst role.

Qualifications

English and Maths

Apprentices without level 2 English and maths will need to achieve this level prior to taking the End-Point Assessment. For those with an education, health and care plan or a legacy statement, the apprenticeship's English and maths minimum requirement is Entry Level 3. A British Sign Language (BSL) qualification is an alternative to the English qualification for those whose primary language is BSL.

Additional details

Occupational Level:

4

Duration (months):

24

Review

This apprenticeship standard will be reviewed after three years

Version log

VERSION	CHANGE DETAIL	EARLIEST START DATE	LATEST START DATE	LATEST END DATE
1.1	Standard, funding band and end-point assessment plan revised.	01/06/2021	Not set	Not set
1.0	Retired	23/03/2016	31/05/2021	Not set

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Yes

No

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