



Institute for Apprenticeships & Technical Education

This submission

Unique occupational standard reference number:
ST0118

Trailblazer Group Reference Number:
TBG0437

Does this standard have core and options?
No

Is this proposal a resubmission?
No

Would your proposed apprenticeship standard
replace an existing framework?
No

Target date:
31/08/2020

Title of Occupation:
Data Analyst

Name of Trailblazer Group:
Data Analyst L4

Rationale for target date:
Part of Digital Route Review

Occupational profile

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 used for this occupation...

Data Analyst; Departmental Data Analyst (e.g. HR, Marketing etc.); Problem Analyst; Junior Analyst; Marketing Data Analyst;

Duties

Duty	KSBs
<p>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</p>	<p>K1 K2 K3 K4 K5 K6 K8 K9 K10 K12 K15</p> <p>S1 S2 S7 S8 S9 S15</p> <p>B2 B3 B4 B5 B7</p>
<p>Duty 2 Liaise with the client and/or colleagues from other areas of the organisation to establish reporting needs and deliver accurate information.</p>	<p>K1 K2 K3 K4 K5 K6 K9 K10 K11 K12 K15</p> <p>S1 S2 S4 S5 S7 S12</p> <p>B1 B3 B4 B5 B6 B7</p>
<p>Duty 3 Collect, compile and, if needed, cleanse data, such as sales figures, Digital Twins etc. solving any problems that arise, to/from a range of internal and external systems,.</p>	<p>K1 K2 K3 K4 K5 K6 K8 K10 K11 K12 K13 K15</p> <p>S1 S2 S3 S4 S6 S7 S8 S9 S10 S13</p> <p>B1 B2 B3 B4 B5 B6 B7</p>
<p>Duty 4 Produce performance dashboards and reports in the Visualisation and Model Building Phase</p>	<p>K1 K2 K3 K4 K5 K6 K7 K8 K9 K10 K11 K12 K13 K15</p> <p>S1 S2 S3 S4 S5 S7 S8 S9 S10 S11 S12 S13 S14 S15</p> <p>B2 B3 B4</p>

<p>Duty 5 Support the business by maintaining and developing reports for analysis to aid with decisions, and adhering to organisational policy/legislation</p>	<p>K1 K2 K3 K7 K8 K10 K11 K12 S1 S2 S3 S5 S8 S9 S14 B1 B2 B3</p>
<p>Duty 6 Produce a range of standard and nonstandard statistical and data analysis reports in the Model Building phase</p>	<p>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</p>
<p>Duty 7 Identify, analyse, and interpret trends or patterns in data sets</p>	<p>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</p>
<p>Duty 8 Draw conclusions/Recommend appropriate response/Offer Guidance/Interpretation</p>	<p>K1 K2 K7 K8 K11 K14 S1 S2 S3 S4 S5 S7 S10 S11 S12 S13 S14 B2 B3 B4 B5 B7</p>
<p>Duty 9 Summarise and present the results of data analysis to a range of stakeholders, making recommendations</p>	<p>K2 K3 K4 K5 K7 K9 K10 K12 K13 K15 S1 S2 S4 S5 S7 S9 S12 S14 S15 B1 B3 B4 B7</p>

<p>Duty 10 Provide regular reports & analysis to different management/leadership teams, ensuring data is used and represented ethically in line with relevant legislation (e.g. GDPR, which incorporates Privacy by Design).</p>	<p>K1 K2 K3 K4 K5 K6 K7 K9 K10 K11 K12 K15</p> <p>S1 S2 S4 S5 S7 S10 S12 S14 S15</p> <p>B3 B4 B5</p>
<p>Duty 11 Ensure data is appropriately stored and archived, in line with relevant legislation e.g. GDPR</p>	<p>K1 K2 K3 K6 K8 K11 K12</p> <p>S1 S2 S3 S9</p> <p>B1 B3 B4</p>
<p>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</p>	<p>K7 K8 K10 K11 K13 K14 K15</p> <p>S1 S3 S4 S6 S7 S12</p> <p>B1 B2 B3 B4 B5 B6 B7</p>

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/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 of 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 the data analysis activity

S6 identify and escalate quality risks in data analysis with suggested mitigation/resolutions as appropriate.

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

S8 identify data sources and the risks, 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 best outcome

Behaviour

B1: maintain productive, professional and secure working environment

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

B3: works independently and collaboratively

B4: logical and analytical

B5: identifies issues quickly, enjoys investigating and solving complex problems and applies appropriate solutions. Has a strong desire to push to ensure the true root cause of any problem is found and a solution is identified which prevents recurrence.

B6: demonstrates resilience by viewing obstacles as challenges and learning from failure.

B7: demonstrates an ability to adapt to changing contexts within the scope of a project, direction of the organisation or Data Analyst role.

Additional information

Proposed Route:

Digital

Typical duration of apprenticeship (months):

24

Proposed occupational Level:

4

Please select the end-point assessment method/s likely to be used to assess competence against the KSBs as a whole:

Project based

Discussion based

Qualifications & professional recognition

English and Maths qualifications

Level 3 and above apprenticeships

Level 3 and above apprenticeships 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.

Other mandatory qualifications

Does the apprenticeship include any mandated qualifications in addition to the above-mentioned English and maths qualifications?

No

Entry requirements

Are there any statutory/regulatory or other typical entry requirements?

No

Professional recognition

Does this standard align to any professional recognition?

No

Please specify any professional recognition which you have considered but concluded is not applicable to the occupation.

No professional recognition exists for this occupation.