apprentify

Developing Future Talent

Data Analyst

Level 4

Welcome to the Level 4 Data Analyst Programme

This apprenticeship will cover:

- Data Analysis
- Database Design
- Forecasting Data
- Python

Contents

Data Analysis Level 4 Training

Unit 1 - Learning about the Business Domain

Delivery days - 1

Learners will discover the importance of the Business domain context, the principles of user experience and how to use organisational tools like Trello, OneNote, Gantt charts, the Situation, Task, Action and Result (STAR) technique, infographics and version control. They will learn about the principles of what makes a good report and the stages of writing it.

Unit 2 - Requirements and Data Architecture

Delivery days - 1

Learners will explore the stages of the Data Analytics life cycle and the data life cycle as well as the differences between them. They will recognise the factors of good quality data, learn about requirement types and how to gather them. Finally, they will be able to identify the functions of data architecture so that they can identify their own data architecture used in the workplace.

Unit 3 - Collecting and Manipulating Data (Part 1)

Delivery days - 3

In this unit, spread over two months, learners will begin their journey into data analysis. They will follow the Extract, Transform and Load (ETL) process, starting with collecting, integrating, validating and verifying data from multiple sources and in various formats.

Unit 3 - Collecting and Manipulating Data (Part 2)

Delivery days - 3

In the second month of this unit, learners will continue to explore different data structures, learn how to filter, clean, transform and manipulate data, and develop techniques for dealing with missing data. The learning will be hands-on and applied in numerous projects using quantitative and qualitative data.

Unit 4 – Initial Data Analysis and Data Visualisation (Part 1)

Delivery days - 2

Learners will be introduced to relational databases, including NoSQL. They will gain understanding of how databases work and learn about database types, relational models, Relational Database Management Systems (RDBMSs) and NoSQL characteristics. They will design databases then use SQL Server Management Studio to implement and interrogate databases using SQL language.

Unit 4 – Initial Data Analysis and Data Visualisation (Part 2)

Delivery days - 2

In the second month of this unit, learners will learn about data visualisation using Power BI for desktop. They will learn how to integrate and transform data and to generate interactive dashboards for different audiences.

Unit 5 - Statistical Analysis and Predictive Analytics (Part 1)

Delivery days - 3

This unit is spread over two months. During the first month of Unit 5, learners will explore statistical analysis methods. They will identify different types of analysis, apply statistics and hypothesis testing to various scenarios, and learn to predict trends and patterns using Machine Learning Algorithms (MLAs) like clustering and text mining.

Unit 5 - Statistical Analysis and Predictive Analytics (Part 2)

Delivery days - 3

In the second month of this unit, learners will continue with MLAs. They will identify and predict trends using the linear and logistic regression algorithms. They will apply these algorithms in numerous projects using R language. Finally, they will use data sets and job-related scenarios to apply their new skills in the work environment.

Unit 6 - Time Series Analysis and Sharing the Results (Part 1)

Delivery days - 2

Learners will continue with MLAs – time series analysis and forecasting. They will understand past trends and develop a forecast the future. They will learn about the other aspects necessary when dealing with time series: stationary data, seasonality and autocorrelation.

Unit 6 - Time Series Analysis and Sharing the Results (Part 2)

Delivery days - 2

In the second month of this unit, learners will learn about another useful MLA – classification. They will learn how to share it with internal or external clients. They will be presenting methods for summarising and presenting results like dashboards, tailored reports and recommendations.

Unit 7 – Data Analysis with Python

Delivery days - 4

Learners will apply everything they have learned about manipulating and analysing data using another language – Python. They will learn about data types and data structures, data pre-processing with NumPy, data cleaning and pre-processing with Pandas, and how to apply MLAs and data visualisation in Python.

EPA Readiness – Portfolio

Delivery days - n/a

Learners will have approximately four months to prepare for Gateway. They will consolidate the portfolio that they have built up during the course.

- Work Based Project
- Presentation
- Questioning
- Professional Discussion

EPA

Learner Journey

Month 1
Learning about the Business Domain

Month 2
Requirements and Data Architecture

Month 3
Collecting and Manipulating Data

Month 4
Collecting and Manipulating Data

Month 5
Initial Data Analysis and Data Visualisation

Month 6
Initial Data Analysis and Data Visualisation

Month 7
Statistical Analysis and Predictive Analytics

Month 8
Statistical Analysis and Predictive Analytics

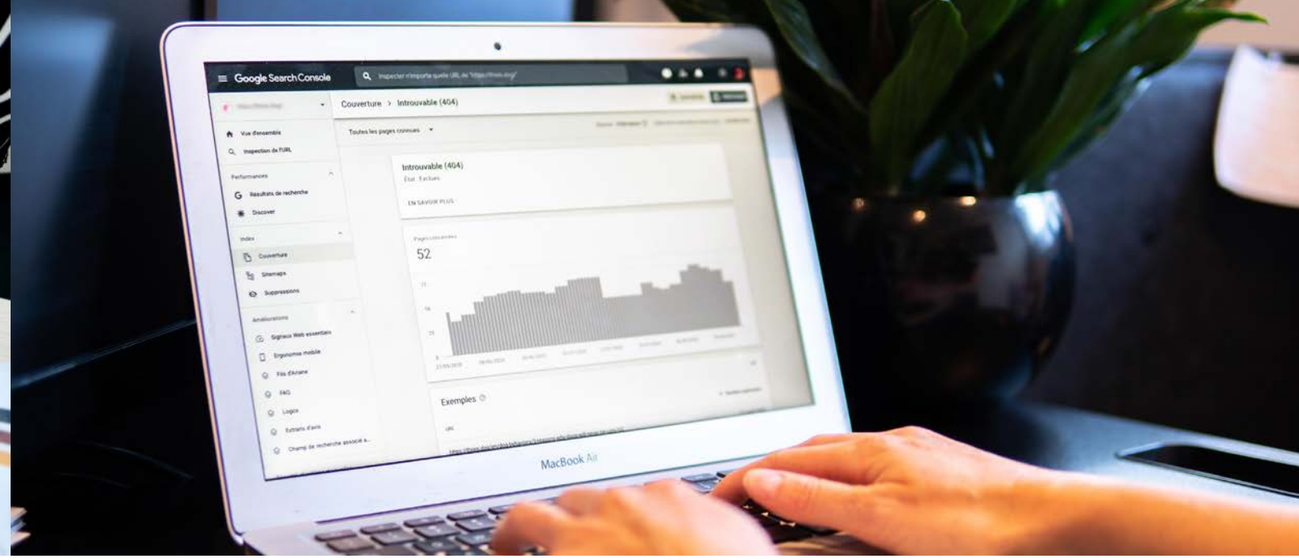
Month 9
Time Series Analysis and Sharing the Results

Month 10
Time Series Analysis and Sharing the Results

Month 11
Data Analysis with Python

Month 12-15
Preparing for Gateway

EPA



Your apprenticeship programme

Qualification

On successful completion of the programme, you will be awarded a Level 4 Data Analyst Apprenticeship, which will allow you to join the British Computer Society (BCS) as an Associate member.

Off-the-job training

As an apprentice, you study while you work, a minimum of 6 hours per week of your time at work will be dedicated to your apprenticeship. You will learn through a mix of classroom days, personalised coaching sessions, e-learning and activities to practise what you are learning.

Employers collaborate with the training provider and you to ensure that you are on target with your off-the-job learning hours. Everything you do can be tracked on the Bud digital platform. Working with your Development Coach and line manager, you can balance your off-the-job training hours with your day-to-day responsibilities.

Is it off-the-job training?

Off-the-job training can take place very flexibly throughout the apprenticeship. This can be scheduled for every day, a day a week, in longer blocks (e.g. one week in every five) or in other creative ways. The stipulations are:

- The minimum off-the-job training hours have been met
- Has the individual begun their apprenticeship programme?
- Is the activity directly related to the apprenticeship standard or framework?
- Is the activity teaching new knowledge, skills and behaviours?
- Is the learning taking place within the apprentice's normal contracted working hours?

If all of these apply, it counts as off-the-job training.

Virtual Classrooms

Learners will attend classroom sessions online using Class, our virtual-classroom software. To access the session, they will need:

- A desktop/laptop computer
- To download the Class meeting software application

Apprentify Class

Once you have installed the software, please use the Class Guides if you are having any issues.

Class Guides

Assessment

On Programme

Your progress will be continually assessed using our online apprenticeship management system, Bud. Throughout your apprenticeship you will upload evidence to show that you have completed the activities that contribute towards the achievement of your apprenticeship.

Apprenticeship Standard

End-point Assessment (EPA)

Once you have gone through the gateway, you will start the EPA. This assessment will showcase the entirety of the knowledge, skills and behaviours you have developed during the programme.

EPA Explainer Video

Expectations during your apprenticeship

The modern apprenticeship revolves around the tripartite relationship between apprentice, employer and Apprentify. All parties are responsible for ensuring that the apprenticeship programme is a success.

The expectations listed are necessary for all parties to ensure that the apprentice completes their apprenticeship.

Apprentice

- Preparation and planning for coaching/ classroom sessions
- Attending all virtual classrooms and coaching sessions
- Completion of tasks in the agreed timeframe
- Planning your 20% off-the-job training and completing your Bud activities
- Taking responsibility for your own development
- Communicate support needs to your line manager and Development Coach
- Update your Self-Study Log with the extra training you complete

Line Manager

- Facilitate time for the apprentice for their learning in working hours
- Monthly one-to-one reviews with learners to discuss progress, provide feedback and guide development
- Provide opportunities for learners to participate in relevant workplace tasks related to their apprenticeship standard
- Keep in regular contact with the apprentice and Development Coach
- Provide learning opportunities
- Support with 20% off-the-job training

Development Coach

- Providing teaching and coaching sessions
- Monitoring progress using Bud and gaining feedback from line managers
- Coaching apprentices with both apprenticeship- and workplace-related skills
- Feedback to drive enhanced performance and improved knowledge
- Online support through regular meetings
- Marking and assessment of Bud work
- Preparation for EPA

Path to Mastery

The Path to Mastery gives you the chance to gain additional skills in specialist areas. The optional learning is designed to enhance expertise in specialist areas and let you thrive in your role. As an apprentice, you will only be enrolled on the Path to Mastery if both your employer and Apprentify agree that you are in a position to take on extra learning. You can choose one of the following:

Customer Analytics in Python

You will explore the fundamentals of marketing combined with data-science principles.

Google Looker

You will practise working with data, building queries and visualisations, sorting, applying filters, aggregators, calculations, data explorer and extract data, building reports and sharing the results.

Credit Risk Modelling

You will be shown the complete credit risk modelling picture, apply pre-processing of data, calculate different measures and build typical models for the domain.

Career Progression

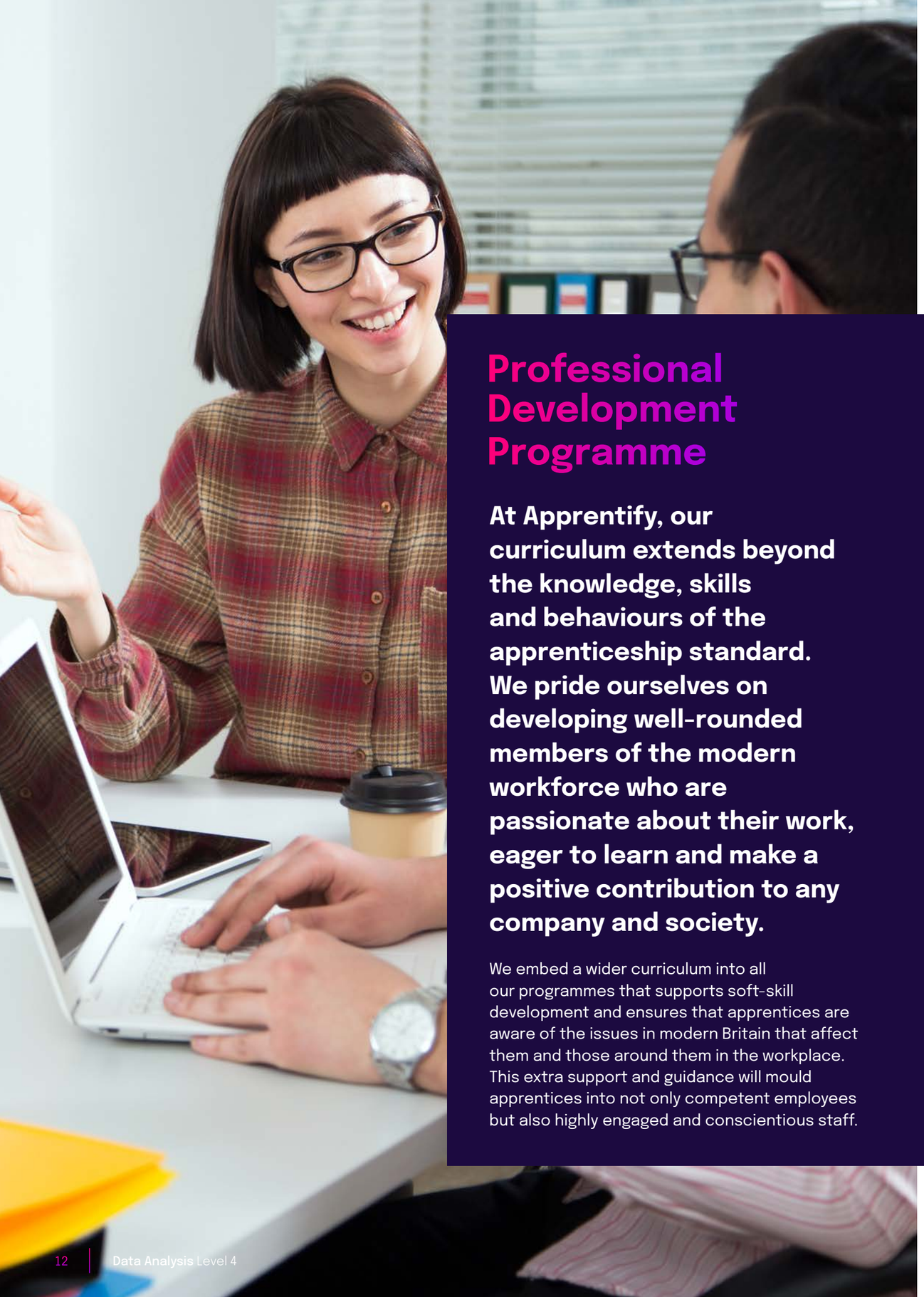
You are here

Data Scientist
£46,953

Data Manager
£58,154

Data Engineer
£60,351

Data Architect
£65,312+



Professional Development Programme

At Apprentify, our curriculum extends beyond the knowledge, skills and behaviours of the apprenticeship standard. We pride ourselves on developing well-rounded members of the modern workforce who are passionate about their work, eager to learn and make a positive contribution to any company and society.

We embed a wider curriculum into all our programmes that supports soft-skill development and ensures that apprentices are aware of the issues in modern Britain that affect them and those around them in the workplace. This extra support and guidance will mould apprentices into not only competent employees but also highly engaged and conscientious staff.

British Values

All schools, colleges and training providers have a duty to actively promote the fundamental British values of a functioning modern democracy. What are British values, and what are examples of the understanding and knowledge apprentices are expected to learn in the workplace?

Rule of Law

Rules promote a happy, safe and secure living and working environment. Examples are:

- Legislation
- Agreed procedures, policies and ways of working
- Codes of conduct
- How the law protects you and others

Individual Liberty

Protection of your rights and the rights of others you work with. Examples are:

- Values and principles
- Individuality, consent, choice and rights
- Dignity and respect
- Equality and human rights
- Personal and professional development

Democracy

Everyone should be aware of their rights and responsibilities that help to build a culture of freedom and equality. Examples are:

- Team meetings
- Joint decision-making
- Receiving and giving feedback
- The right to protest and petition
- Leadership and accountability

Respect and Tolerance

Respecting the ideas, beliefs and values of others while not imposing our own on others, including:

- Tackling discrimination
- Tackling bullying
- Embracing diversity
- The importance of religion, traditions, preferences and cultural heritage
- Recognise stereotyping, prejudice and labelling

Safeguarding and Additional Learning Needs (ALN)

Safeguarding and Prevent

Apprentify has a statutory requirement to ensure that all our apprentices are safe from harm and can learn in a secure environment. This is a responsibility of everyone involved in the apprenticeship programme, including employers and apprentices.

Safeguarding does not simply refer to physical harm. It can also be far less obvious and harder to recognise - abuse, neglect and wellbeing concerns are all examples of safeguarding concerns that you should be aware of and know how to respond to, both on behalf of yourself and on behalf of others.

The Prevent duty is part of the UK Government's Counter-Terrorism Strategy (CONTEST) and is designed to stop people from becoming terrorists or supporting terrorism. It is a requirement of numerous public-facing bodies, including apprenticeship training providers, to develop knowledge of the signs of radicalisation and to ensure that learners understand how to report their concerns.

What does this look like in my apprenticeship?

Your Development Coach will support you and your employer in building awareness and applying safeguarding and Prevent in the workplace and in modern Britain. This will involve:

- Discussions during progress reviews
- Activities in virtual classrooms
- E-learning courses
- Real-life scenarios in coaching sessions
- External courses for Action Counters Terrorism (ACT) Awareness

Our Safeguarding Officers

To find out who our designated Safeguarding Officers are, click on the link below.

Safeguarding

What do I do if I have any concerns?

If you have any concerns, you can confidentially contact the Apprentify safeguarding team

Cognassist

During the application process for apprenticeships, learners will complete a Neurodiversity Assessment, which will identify any neurodiversity needs. If the software identifies such a need, the learner will work with a dedicated Cognassist Tutor throughout the apprenticeship.

At the start of each month, learners will be provided with four strategies to support their learning and develop their understanding. Learners must aim to complete all four strategies every month. Once learners have completed the strategies, apprentices hold a monthly session with their Cognassist Tutor.

These are completed remotely with a Tutor, who will discuss each strategy and document feedback around the skills and actions, as well as the impact of, each module on Cognassist. While this is not mandatory, and you can opt out if you wish, this will support you with any identified learning needs throughout your apprenticeship.

Cognassist is a tool that assesses the neurodiversity of learners and provides strategies and activities for them to enhance their learning. Cognassist assesses capacity in the following domains:

- Verbal Memory
- Non-Verbal Memory
- Literacy
- Numeracy
- Visual Information
- Processing Speed
- Executive Function
- Verbal Reasoning
- Non-Verbal Reasoning

Notes

apprentify

Get connected

0333 996 0165
info@apprentify.com