# QA Data Apprenticeships Portfolio Style Guide

For Levels 3, 4 and 5

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# Contents

# 1.     Portfolio guidance

As an apprentice on a data apprenticeship, it is important that your portfolio reflects your professional competency by communicating your work as an industry-standard professional report, the kind your organisation would be comfortable handing to a client. This guide has been assembled to help you create the portfolio to the expected standard and will link you to helpful resources that can be used from the features of Microsoft Word.  This will help you to easily produce your professional document. It will also give you tips on communicating your work in a way that is suitable for apprenticeship end point assessment. The main body of your final portfolio is recommended to be created using standard word processing software and be in a Microsoft Word or PDF format.  Up to four other files of various formats can supplement your main portfolio if needed.  Speak to your DLC if you would like to add additional files to your portfolio.

## 1.1.     General approach to the portfolio

Your portfolio should contain real-world examples of how you have applied your learning in the workplace. As such, online learning, academic exercises, work done at live events, things you have done in your spare time as enrichment, or a hobby cannot appear in your portfolio. All portfolio pieces, and the projects within them, must have direct application to the business needs of the employing organisation. This means that there should not be activities which are contrived for the sake of meeting assessment criteria which the business does not benefit from. Speak to your line manager and your DLC to ensure that the work assigned to you in your daily job role is aligned to the needs of each unit of the apprenticeship according to the schedule of due dates on Bud. Your DLC will have a list of topics covered in each unit to help you and your manager plan appropriately.

It is important to remember that for your portfolio, your end-point assessor is a technical specialist in data analysis, and it is not necessary to explain fundamental data concepts such as data cleansing, data extraction, or data modelling. Focus your attention on how you apply your knowledge to what you are doing. However, the assessor may or may not come from the same industry as your organisation. Therefore, you should not assume familiarity with acronyms which may be specific to your industry or your organisation. You should always expand an acronym the first time you use it to ensure the assessor understands what you mean. For apprentices who work in industries with a lot of technical jargon such as finance, legal, or science, it may be helpful to supply a glossary of terms as part of your portfolio.

### 1.1.1.     Narration style

The portfolio writing style may be different from what you are accustomed to. The portfolio should always be written in the first-person narration style, using past tense. This means that statements should be in the form of "I did", "I extracted", "I analysed", etc. The evidence in the portfolio cannot be speculative, that is to say "what I could do" at some future time. You should avoid speaking in broad terms about how things are done at your organisation, "we do this", "we do that". The end-point assessor must be able to understand the work you have done yourself and how that is different from other work performed by your team. Do not use the "royal 'We'" when referring to yourself or the assessor will assume you are referring to your team or organisation. Remember, the end-point assessor is assessing you as an individual, not your team or your organisation.

## 1.1.2. STAR Methodology

To make your portfolio pieces understandable to someone who does not know you or your organisation, we strongly encourage the use of the STAR methodology.

**S** – Situation

**T** – Task

**A** – Action

**R** – Result

You will need to "set the scene" for your assessor by explaining the details of the situation which surround your project, so that you can establish the context you are working in. Then, you should explain the task you were set in a way that clearly defines what you were meant to accomplish. Next, explain the actions you took to complete the task. Lastly, detail the result of your efforts, including how your work benefitted or impacted the business and any feedback you received from your management or stakeholders.

Sometimes, especially in earlier modules, the project you select for the portfolio piece may be a work that is still in progress, and you do not have the full results to share yet. Your DLC will accept your portfolio piece on Bud once the associated knowledge, skills, and behaviours (KSBs) have been satisfactorily demonstrated, but may comment that the piece would be stronger with a better conclusion. It is important to remember that the portfolio is always a living document until the day it is sent to the end-point organisation. You are permitted to return to previously accepted portfolio pieces to add further information and detail as well as results which might not have been available at the time you submitted the work.

The STAR method is a guide for how to write the flow of your portfolio pieces and should not expressly be used as headings or subheadings, as they make the piece look formulaic and artificial. Use appropriate headings which describe the steps and flow of the work in a meaningful way reflective of the context.

## 1.1.3. Evidence of competency

To evidence your competency, you will need to provide detailed examples of the knowledge, skills, and behaviours of the standard. When evidencing your competency, you should provide a step-by-step list of the actions you undertook as a part of the project in your portfolio piece. In more technical pieces, you should use a level of detail that would allow someone with access to the same data as you to recreate the result of your analysis. Again, remember that your audience is a technical specialist, so it is not required to explain program features or where to find certain functions within the software, but it should be detailed enough to show the steps undertaken. You should also explain any choices or business decisions you made in producing your result.

Examples: Why did you select a particular tool? Why did you remove these data points as outliers? What are the limitations of your model? What assumptions did you make?

If security allows, you should use visual evidence to back up the claims of your work. The assessor will have a deeper understanding of your work if they can see what you did. They will have greater confidence you have actually undertaken the steps you described if they can see the evidence to support it. If you work in a high security environment where visual evidence is restricted, then be sure and include strong explanations of your work with specific detail of how it was achieved instead.

Screenshots should be appropriately compliant with GDPR and Data Protection. As an apprentice, you have three main options for compliance:

**Redact** – Use markup tools or software like Microsoft Paint to obscure sensitive information within a screenshot. Redaction is appropriate when it is not necessary to see individual items in a list or column, email addresses, names of people providing internal or external feedback, etc.

**Anonymise** – Change personally identifiable information such as names into numbers or fictious names to ensure that any data shown cannot be linked to an individual. (Consider random number generation, random words, fictional character names, etc) Other data that is suitable for anonymisation includes addresses, phone numbers, customer IDs, account numbers, etc. Anonymisation is appropriate for situations where it would be useful to see the contents of a populated list for understanding how operations like joins were carried out.

**Normalise** – For numerical data in analyses such as a time-series forecast or descriptive charts showing change over time, a dataset can be divided by the first number in the series to make the initial value equal to 1. All subsequent values will then be displayed as a ratio of increases or decreases from the initial value. This allows the apprentices to show trends and analysis without revealing the values themselves. This method would be particularly well-suited to financial data.

Screenshots and other kinds of visuals should always be captioned to explain to the reader what they are seeing and how this relates to the content of your portfolio. Consider using screenshots at any point where you have made statements about an action taken with a software tool such as a data cleansing step, linking tables together, building a data model using annotated code, completed dashboards, or settings you may have selected within a software tool (such as Power BI or Tableau).

Screenshots of things other people have produced are usually not necessary as your portfolio should be made up of your work not that of others.  If you feel someone else's work is needed for context, then please note that it is not your work, properly credit it with standard referencing, and explain why it has been included.

Think of your portfolio as if it was a court case where you're trying to be convicted of being a data technician, data analyst, or data engineer. The primary skeleton of your report is the words you use to narrate the actions, thought processes, and decisions you have made. This is augmented by screenshots and other visuals, workplace documents produced, witness statements, annotated photographs, or short video clips (conditions apply to some of these types of evidence, ask your DLC if you intend to use anything other than screenshots and workplace documents to support your portfolio).

### 1.1.4.    Mapping knowledge, skills, and behaviours

The knowledge, skills, and behaviours (KSBs) associated with the portfolio for assessment method 2 (AM2) for your program can be found within the Institute for Apprenticeships and Technical Education assessment plan for your standard.

- For the **Level 3 Data Technician standard**, Click here.
- For the **Level 4 Data Analyst standard**, Click here.
- For the **Level 5 Data Engineer standard**, Click here.

The KSBs for each portfolio piece have been mapped within the program design and the list of KSBs can be found in the workplace activity task instructions on QA Learning Platform. It is best practice for an apprentice to list the KSBs addressed in a portfolio piece at the end of

their portfolio with a short description of how they have been demonstrated. You will be required to map your portfolio to the assessment criteria listed in the tables for your assessment before entering gateway for end-point assessment.

## 1.2. Portfolio formatting

### 1.2.1. Font choice and page layout

Your portfolio should be a professional cohesive document which maintains a consistent style throughout. Speak to your line manager to see if your organisation has document templates for preferred logos, colours, fonts, font sizing, and spacing.

If your organisation does not have a style template, be sure to select a standard font such as Helvetica, Open Sans, or Arial. Research suggests that sans serif fonts improve readability for those with accessibility needs. Font size should be between 11 and 14-point. Page background should be set to default white or a subtle shading which does not interfere with the reader's ability to see the text. Text colour should be black or a dark shade of colour matching your company branding. Use single spacing between words and lines.

Portfolios should be formatted with pages in portrait orientation. Any exceptionally wide screenshots should be either cut into smaller segments, or a smaller thumbnail should be used with a link to an appendix page where the full image is displayed on a landscape-oriented page. You can link together different parts of your portfolio, such as appendices, by using internal hyperlinks or cross-referencing.

Page margins should be between 1.5 to 2.54 cm (Microsoft Word default). Page margins should be respected at all times, including for screenshots.

### 1.2.2. Justification, image placement, and page breaks

Portfolio text should be aligned left. Do not use justify as this can create awkward spacing.

Screenshots and images should be easy to see and aligned centrally on the page without word wrap, contrary to what one might see in a periodical publication or a website page.

Tables and bullet-point lists should appear on a single page, do not split these with page breaks.

Try to keep paragraphs together without page breaks where possible, these can be distracting to the reader. It is better to leave some blank space at the bottom of one page and start the paragraph on the next page. Ensure that any headings used are directly above the text and not at the bottom of the previous page.

### 1.2.3. Headings and subheadings

Your portfolio should have headings and subheadings appropriate to the work being presented. **Do not** use questions in the task instructions from the QA Learning Platform as section or subsection headings. Doing this makes your portfolio appear to be answering a set of academic questions instead of presenting your work as authentic workplace evidence within the STAR format. This risks the end-point assessor disregarding that piece of evidence which could result in areas of insufficiency when evaluated for a grade at EPA.

Units can be presented in the portfolio as chapters. You may use the unit title from the learning content, but do not make reference to academic terms such as "apply", "activity", "assignment", "A2.3", etc. Placing these in your work will give the end-point assessor reason to doubt the application of the work presented.

### 1.2.4. Portfolio contents

Your portfolio should contain the following:
- A single cover page with your name, company name, and name of your apprenticeship standard. A company logo would look professional here.
- A single table of contents that covers all of the sections in the portfolio.
- A single table of figures based on your image captions.
- Page numbers placed in the page footer.
- A classification label (Internal, External, etc.) in the footer.
- All portfolio workplace reports with suitable headings, with transitionary text between to make the sections have a natural flow without abrupt endings.
- Supporting evidence such as presentations, workplace documents, dashboard files, etc. embedded into the document.
  - NOTE: Embedded files only work if your portfolio is in Word format. Exporting your Word document to PDF will remove the embedded evidence. There are ways to embed into PDF, but you may require access to specialist software.
  - You must make it clear to the assessor that you want them to click on the embedded file to open it.
  - Embed files in the sections of the portfolio that they belong to, **do not** separate them from the relevant text.
- Appendices for any supporting evidence that interrupts the flow of your activity narrative.

### 1.2.5. Things that should not appear in your portfolio

It is important that certain things are not included in your portfolio because they can cause your end-point assessor to doubt the authenticity of your work or raise concerns about your compliance with GDPR and Data Protection.

Do not include any of the following:
- Names of people who are not yourself or your line manager.
  - When referring to colleagues on your team or within your organisation, use job titles and/or initials only.
- References to QA activity names and numbers.
  - Examples: "A2.3", "Apply", or "Workplace" in your section headings or within the text, unless it is within the context of tasks set by your organisation.
- QA branded documents.
  - If using QA templates such as feedback forms, remove the QA branding and replace it with your own, or remove the branding altogether.
- Links to external resources or company websites.
  - The assessor will not follow external links to other sources. If you believe the content is relevant, it should be included in your portfolio as a summary in your own words.
- Negative comments.
  - Do not criticise others or their work in your portfolio, this is viewed as unprofessional.
- Excessive details about you or others
  - Your assessor wants to know about your professional career and competency, not personal details, events, or relationships. Mention what is necessary for context, but do not bring the assessor's attention away from your professional contributions and competency evidence.

## 1.3.    Useful resources

These external resources can help you with your portfolio writing and skill building.

### 1.3.1.    Portfolio writing:

- Grammarly is an excellent spelling and grammar check website that is more comprehensive than the built-in features on Microsoft Word. There are free plugins available for web browsers and Windows.
- Cite This For Me is a useful website if you wish to reference external sources of information. The UK uses Harvard referencing as standard (ISO 690:2021) but ask your organisation if they have a different preferred referencing style. You should always credit ideas, information, and images that you have taken from external sources. Click here to see when it is appropriate to use a reference.
- BBC Bitesize has resources to help with different writing techniques including writing tone, persuasive and narrative styles, sentence structure, etc.
- The Oxford Guide to Effective Writing and Speaking is available in paperback or on Kindle for less than £10.

### 1.3.2.    Skill building:

- The Data Visualisation Catalogue is a good resource for helping you choose the best visualisations for the data you are communicating.
- Kaggle, the NHS, and the UK Government have open datasets which you can use to build your analysis skills.
- Swirl can help you learn to use R programming for data science applications.
- Codewars is a website that can give you practice challenges for multiple programming languages for all experience levels.
- Math is Fun has easy and intuitive explanations for a variety of mathematical concepts, including simple and advanced statistics for all levels.
- Data Science and Big Data Analytics is a freely available book for modelling techniques with examples and instructions.
- Simplilearn has a free course in using PowerQuery for Excel, along with other free training resources for both Excel and Power BI.
- Scribbr has a beginner's guide to statistical analysis which can be useful to all levels.

We hope you have found this guide useful for creating your data apprenticeship portfolio. There are many nuances with apprenticeships because every apprentice produces unique individualised work and is in a different situation and context, even if you work with another apprentice in your own team. If you have any doubts about how your portfolio should be constructed, what it should contain, or what the evidence should look like, speak with your DLC. Your DLC will be happy to help you contextualise these guidelines and tailor the contents of your portfolio pieces to fit the requirements of both your apprenticeship standard and your unique work situation. Never be afraid to ask for our input, a DLC's job is to help you build the best portfolio you can.

Good luck with your apprenticeship journey!