

**Data Technician**

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| Course Date: |
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# Day 1: Task 1

Please research the different versions of Tableau, compare and contrast them below and explain the limited functionality on ‘Tableau Public’.

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| Different Tableau versions | **Tableau Desktop –**  This is a powerful data visualisation tool that allows users to connect to various data sources create interactive visualisations and build dashboards. It's ideal for individual analysts and offers robust features for data exploration and presentation.  In terms of collaboration **Tableau Desktop** has limited collaboration as it is mainly used for creating dashboards and reports. You can share work by publishing to T**ableau Server, Tableau Cloud** or exporting to PDF/excel  It connects to a wide range of data sources: databases such as (SQL, Oracle, etc) Cloud services and flat files (excel, csv).  It requires a creator licence which is one per user and it is subscription based renewed annually.  **Tableau Server –**  Designed for organisations, tableau server enables sharing of visualisations and dashboards created in tableau desktop across the enterprise. It provides centralised data governance, security features, and collaboration capabilities allowing teams to work with data seamlessly.  Tableau Server has strong collaboration features, it's enables sharing, scheduling and managing dashboards for team access. It includes role-based permissions and collaboration across the organisation.  It has the same data connectivity options as Tableau Desktop, and it also supports live data connections and scheduled extracts.  In terms of licencing, it requires a server licence core based or user based. The licencing is typically handled for organisations and not individuals.  **Tableau Prep** –  This tool is designed for data preparation allowing users to clean combine and reshape data for analysis. It simplifies the process of preparing data ensuring that it is in the right format for visualisation and tableau desktop or other tableau products.  Tableau Prep has limited collaboration it is primarily used for preparing and cleaning data. Workflows can be shared by publishing to Tableau Server or Tableau Cloud.  Tableau Prep is included with the Creator Licence which is the same as tableau desktop. It cannot be purchased separately.  **Tableau Cloud** –  Formally known as tableau online, tableau cloud is a fully hosted analytics platform. It offers the same sharing and collaboration features as tableau server but without the need for on premises hardware making it a scalable solution for organisations looking to minimise infrastructure management. So, it is less complex than Tableau server.  It is accessible from anywhere with Internet connectivity. It provides sharing commenting and role-based permissions for collaborative use.  Tableau cloud is licenced per user for whether they are a creator explorer or a viewer. It is a subscription-based pricing model.  **Tableau Public** –  A free version of tableau desktop, tableau public allows users to create and share visualisations publicly. It's a great tool for learning tableau and sharing insights with a broad audience though it lacks some of the advanced features and data privacy options of the paid versions. For example, public data storage only limited data sources no offline save option, restricted features, no collaboration tools and no support for large scale dashboards.  Tableau Public is limited to public sharing only the dashboards are published publicly and cannot have restricted access.  It promotes fewer data sources compared to other tableau products and primarily connects to flat files and public datasets.  A Summary Table:    The limited functionality of Tableau Public affects real-world applications.  The lack of data privacy in Tableau Public, requiring all dashboards to be shared on a public server, makes it unsuitable for industries like finance, healthcare, or government that handle sensitive data. Its limited connectivity to flat files and public datasets also restricts its use in professional settings needing live database connections or complex sources. Additionally, the absence of collaboration tools, version control, and role-based permissions limits its effectiveness for teams and large organisations. |

# Day 1: Task 2

Using the *EMSI\_JobChange\_UK* dataset, create your own dashboard, I want to see a bar chart showing percentage change and a UK based map showing the key city locations impacted.

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| Paste your print screen here | To Summarise  Water collection and treatment and mining support/service were the top 2 highest job changes this is due to automation and smart technologies streamlining the process and there is no longer much of a need for humans to be doing these jobs.  London had the highest percentage Job change by a lot. This could be due to the diverse job market there. Or the cost-of-living pressures. |

# Day 2: Task 1

Using the Spotify data set, conduct an analysis to find trends and key information that could be used by an organisation for future projects.

There is no set scope for the analysis, simply to find trends and document them below:

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| Paste your print screens here |  |

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| What did you find? | Pop music was the most popular genre of music.  Reggaeton was the most danceable genre of music.  I created a graph of distribution of track length versus popularity which had a positive correlation, so I found out that the longer the track the more popular it is.  I showed the top 10 most popular tracks Con Calma by Daddy Yankee was the most popular  I created a distribution graph showing danceability by popularity of the different genres of music and found out that the more popular a genre was the higher the danceability |

# Day 2: Task 2

Using the Health, conduct an analysis to find trends and key information that could be used by an organisation for future support.

There is no set scope for the analysis, simply to find trends and document them below.

* Data can be lifesaving and is being used more within the NHS, reflect on how this data could support decision making for the NHS.

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| Paste your print screens here |  |
| What did you find and any reflections on how the NHS could use this? | Insights  The first graph shows the average life expectancy for men and women in each continent. I found that Africa has the lowest life expectancy for both men and women.  The second graph visualises the population of the top 10 countries with China having the highest population.  The next graph shows the rates of liver and lung cancer by continent, and it shows that lung cancer in Asia has the highest rate. And overall, the lung cancer and liver cancer rates in Asia are higher than all other continents.  The next illustration shows the distribution of stomach cancer by country using size to indicate which country has the most stomach cancer patients. I found out that China has the highest overall rate. And a few other Asian countries also have high rates of stomach cancer.  The next graph shows the total cancer rates for each country, and we can clearly see that China has the highest rate of all cancers combined.  The next graph shows the health index by continent. I combined BMI cholesterol and blood pressure levels and shows them by continent Africa’s levels are the highest.  Recommendations  The NHS could adopt evidence-based policies or preventative strategies learned from this analysis. Increased screening uptake can lead to earlier diagnoses and better treatment outcomes for cancers in China and anywhere else that it is high to get the rates down. Findings could lead to innovative treatments, personalised medicine, and improved healthcare outcomes.  Africa’s health index levels are the highest.; To prevent this we could:  Hold programmes that could include nutrition education exercise promotion access to healthcare for monitoring and managing these conditions.  They could raise awareness and encourage early health checks. Offer free or subsidised health check-ups, including BMI assessments, blood pressure monitoring, and cholesterol tests. |

# Day 3: Task 1

Please complete Lab 1 ‘Get Data in Power Bi Desktop’. Once complete, paste a print screen below and in the collaboration board.

“Teaching is the best way to learn, so please listen out for support requests from the class and we’ll work through the challenges together”

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| Paste your completed lab here |  |

# Day 3: Task 2

Please complete Lab 2 ‘Load Transformed Data in Power BI Desktop’. Once complete, paste a print screen below and in the collaboration board.

“Teaching is the best way to learn, so please listen out for support requests from the class and we’ll work through the challenges together”

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| Paste your completed lab here |  |

# Day 4: Task 1

Please complete Lab 7 ‘Design a Report in Power BI Desktop’. Once complete, paste a print screen below and in the collaboration board.

“Teaching is the best way to learn, so please listen out for support requests from the class and we’ll work through the challenges together”

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| Paste your completed lab here |  |

# Day 4: Task 2

Please complete Lab 10 ‘Create a Power BI Dashboard’. Once complete, paste a print screen below and in the collaboration board.

“Teaching is the best way to learn, so please listen out for support requests from the class and we’ll work through the challenges together”

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| Paste your completed lab here |  |

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| **Course Notes** |

It is recommended to take notes from the course, use the space below to do so, or use the revision guide shared with the class.

We have included a range of additional links to further resources and information that you may find useful, these can be found within your revision guide.

**END OF WORKBOOK**

**Please check through your work thoroughly before submitting and update the table of contents if required.**

**Please send your completed work booklet to your trainer.**

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| **Information** |