

**Data Technician**

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| Name: |
| 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 has different versions of its software .**   1. Tableau Public 2. Tableau Desktop 3. Tableau Server 4. Tableau Online 5. Tableau Prep   **Tableau Public**: A free version of Tableau Desktop that allows users to create and share visualizations publicly.  **Tableau Desktop**: This is the primary tool for creating visualizations and dashboards. It's available in both a free version (Tableau Public) and a paid version (Tableau Desktop Professional)1.  **Tableau Server**: This version allows you to share your dashboards and collaborate with others in your organization. It's designed for larger enterprises that need to manage and distribute analytics at scale2.  **Tableau Online**: A cloud-based version of Tableau that enables users to publish and share dashboards without the need for infrastructure management.  **Tableau Prep**: A data preparation tool that helps users clean and organize their data before analysis.  **Tableau Mobile**: An app that allows users to access and interact with their dashboards on mobile devices.   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | | **Feature** | **Tableau Public** | **Tableau Desktop** | **Tableau Server** | **Tableau Online** | **Tableau Prep** | | --- | --- | --- | --- | --- | --- | | **Cost** | Free | Paid (Subscription) | Paid (Subscription) | Paid (Subscription) | Paid (Subscription) | | **Data Privacy** | Public (no privacy) | Private | Private | Private | Private | | **Offline Mode** | No | Yes | No | No | Yes | | **Advanced Analytics** | No | Yes | Yes | Yes | Yes | | **Enterprise Integrations** | No | Yes | Yes | Yes | Yes | | **Data Source Connection** | Limited | Extensive | Extensive | Extensive | Limited | |     **Limited Functionality of Tableau Public:**   1. **Public Sharing Only**: Unlike Tableau Desktop and Tableau Server/Online, only allows you to share your visualizations openly on the internet, meaning anyone can see them. You can’t keep your work private. This is a big limitation if you’re working with sensitive or confidential data, as it can’t be kept hidden or secure. 2. **No Data Source Connectivity**: Tableau Public does not support connecting to many enterprise-level data sources (e.g., SQL databases, Tableau Server). You can only use data from files like Excel or CSV, which limits its use for larger or more complex data that needs to be updated regularly. 3. **No Advanced Features**: Tableau Public doesn't have some of the more powerful tools available in other versions, like controlling who sees what data (row-level security), advanced data cleaning, or complex data analysis. This makes it less suitable for handling complicated data tasks or highly customized reports. 4. **Limited Storage**: Tableau Public only gives you 10GB of storage for your data. This means you have to be careful about how much data you upload, as you can’t store unlimited amounts.   **Conclusion:** Tableau Public is best suited for individuals who want to create and share visualizations publicly, with a focus on learning or sharing publicly available data. For organizations or individuals working with sensitive, private data or needing advanced functionality, Tableau Desktop, Tableau Server, or Tableau Online would be more appropriate. |

# Day 1: Task 2

**Comparison Summary:**

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 |  |

# 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 | **Popularity with Track Id and Artist Name:**  ck Id with popularity  Most Popularity by Artist:    TrackID with Liveness and Loudness by Rank: |

|  |  |
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| What did you find? | * Drake has most popularity * Pop music has more popularity and then rap, rock and hip-hop * Track Name ‘Home’ has most popularity and there are some track name without any popularity * Intro Track name has more instrumentalness (less vocal content) * Janelle Monae tracks has more danceability followed by Frank Ocean and then acapella has least danceability |

# Day 2: Task 2

Using the Health [data set](https://justit831-my.sharepoint.com/:u:/g/personal/danpe_justit_co_uk/EZQ21qEcLdVHhvngLvlD4TsBmzGvgh98xkHGxM1XVNCKUg?e=E7UfGi), 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? | * BP patients are more compared to BMI and Cholesterol and has similar count in every country and followed by Cholesterol and BMI. * In BP, Asia is the highest population growth and the country is UAE and Africa continent is more in number of records. * Life Expectancy increased from year 1990 to 2008. * Cancer rates are increasing each year for both Men and Women and Lung Cancer patients are more compare to Liver and Stomach.   By looking at a patient's health records by blood pressure , BMI and cholesterol levels are influenced by a combination of country, gender, and continent can help guide public health strategies and personalized care plans across various regions.  Early diagnosis leads to earlier interventions, which can save lives. especially in complex cases like cancer detection.  Early identification of health trends allows the NHS to allocate resources more efficiently, preventing overcrowding in hospitals and reduce waiting times. |

# 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 | DimProduct table:      13.    14.    15.    16.    17.    Get Data from Csv  1.    2,3,4    5,6    7.    Apply changes to power BI desktop: can see the all the tables on the right hand side in Data pane    In Model view the tables are showing like below: |

# 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 | 2.    3.    4.    5.    6.      7.    8.    9.    10.    11.    12.    13.    14.    15.      16.    #  17.      **Configure the SalespersonRegion query**          Configure the Product query:              Configure the Reseller query            Configure the Region query                        Configure the ColorFormats query |
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# Day 4: Task 1

Please complete Lab 6 ‘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 9 ‘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 | 1. Scatter Chart       When the animation stops, select one of the bubbles to reveal its tracking over time. | |
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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:

Today we have learnt about Tableau and Power BI data visualization tools.

**Tableau:** Tableau is known for its advanced visualizations and interactive dashboards, making it ideal for complex data analysis. It can handle large data sets and have different visuals like Bar charts, Column charts, Line charts, Heat maps, Scatter plots and Box and whisker plots etc.,

Tableau has a feature called **‘Show Me’**, which suggests the best visualization type based on the selected data fields. And it has ‘Calculated Field’ to create formulas using different functions like SUM,AVG, Percentage etc.,

On the other hand **Power BI** is often used data visualisations and it has integrated with Microsoft tools like using Excel, SQL Server, or Azure and easily collaborates with Microsoft Teams and SharePoint.

Power BI and Power BI has more visuals nearly 36 types of visualizations. Power BI uses **Power Query** for data cleaning and transformation.

Power BI has DAX (Data Analysis Expressions) to perform calculations and measures.

Power BI has built-in capabilities to publish dashboards and reports to the **Power BI Service**, which provides sharing and collaboration across the teams.

Power BI incorporates AI tools such as **Azure Machine Learning** integration.

Power BI offers **Q&A** functionality where users can type questions in natural query language (NLQ).

Both tools have Drag-and-Drop Interface for creating visualizations, data connectivity including Excel, databases , cloud services.

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| **Additional Information** |

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.**