

**Data Technician**

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| Course Date: 21/04/2025 |
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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 | Public | Online | Server | Prep | | Desktop application  Paid  Private/Local machine  Professional version | Free desktop  Free version  Public only, no private option  Personal use | Cloud based version  Internet connection required  Private and secure  Hosted by Tableau | Both in-house and Cloud based  Enterprise licence  Secured  Hosted by organization | Data preparation  Tool and cleaning  Private and secure  Local Machine  Or server  User friendly | |

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 |  |

# 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? | The dashboard indicates that the genre 'POP' is the most popular in terms of acoustic-ness, dance-ability, energy, and tempo. Furthermore, POP music demonstrates a positive correlation with these factors, although overall acoustic-ness shows a negative correlation. This suggests that the 'POP' genre has a significant positive impact on key musical attributes.  Additionally, the "Popularity by Artist" bar chart shows that Drake is the most popular artist. Based on these insights, the organization should prioritize focusing on the 'POP' genre, followed by other genres in chronological order of popularity. |

# 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 | Fig: Dashboard |
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| What did you find and any reflections on how the NHS could use this? | The dashboard shows there is a relationship between BMI and life expectancy. It indicates that countries such as Canada, European nations, and Australia have similar life expectancies of around 74 years, with an average BMI of approximately 24. However, very low or very high BMI levels are associated with lower life expectancy. For example, in Africa, the average life expectancy is only 48 years, where the average BMI is about 20.  Additionally, the map shows that Western countries generally have higher average life expectancy compared to Southern and Eastern countries, with the exception of Australia and parts of South America.  The bar chart shows that China has the largest negative impact on life expectancy, largely due to a dramatically higher rate of cancer, although the overall life expectancy remains close to that of the United Kingdom.  Furthermore, the line graph suggests that a higher rate of population growth has a negative impact on overall health, which in turn reduces life expectancy. For example, Africa shows the highest population growth rate and the lowest life expectancy, while Europe shows the lowest population growth and the highest life expectancy.  In conclusion, women have higher life expectancy than men. Health professionals may need to take additional measures to address these issues. |

# 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 | Lab 1 - Get Data in Power Bi Desktop |

# 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 | Lab 2 - Load Transformed Data in Power BI Desktop |

# 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 | Versus previous, running sum and moving average by year    Create a matrix visual and add calculation    Sum of sales and running sum by year and quarter |

# 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 | Design page 1 - Overview    Design page 2 - Profit    Design Page 3    Publish Reports |

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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.

I am grateful to my teacher, Dr. Alaa Mostafa, for his remarkable dedication in ensuring engagement and effective learning. Despite my lack of prior knowledge regarding the tools Tableau and Power BI, he effectively conducted four consecutive lessons that established a strong foundation in these applications. Additionally, I appreciate his guidance on external resources, which will contribute to further developing our knowledge and help us stay updated with the latest changes. Thanks to his exceptional support, I have acquired many skills in Tableau and Power BI. Some of these are listed below:

Tableau:

* Handling missing value and replacing
* Relationship between tables
* Creating variety of charts including maps for data analysis
* Sorting data and use the features calculated field
* Facilitating to use external data sources
* Visual, graphical interactive dashboard, which gives data in the form of stories.
* Wide range of data sources, including local files, spreadsheets, relational and non-relational databases, data warehouses, and on cloud data.
* The map data, including cities, postal codes, administrative borders, and so on.
* Forecasting

Power BI:

- Power Query

- Interactive visualisations

- Connecting wide area of data sources

- Data modelling and relationship

- Schemas

- Data Analysis Expression (DAX)

- Formulas, Calculated measures

- Importing visuals, Formatting, Slicers, Filtering, Analyse features

- Key Performance Indicator (KPI)

- Dynamic reports

- Dashboard

- Interactive LABs

- Publish

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** |