# Data Technician

**Name: Sergios Vasileiou**

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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'.

| Different Tableau versions | **Tableau Desktop** is primarily for users to create and analyse data visualizations. It provides full access to all data connectors and advanced analytics capabilities. Ability to create dashboards and share them via Tableau Server or Tableau Online. Supports local data storage.<br><br>**Tableau Server** is used by organizations to share and collaborate on Tableau workbooks. It offers a centralized management of Tableau content and security features. It provides the ability to publish dashboards created in Tableau Desktop and supports data refresh and automation.<br><br>**Tableau Online** is a cloud-based version of Tableau Server. It offers similar functionalities to Tableau Server, but it is hosted in the cloud, thus, there is no need for on-premises infrastructure.<br><br>**Tableau Prep** is used for data preparation and cleaning before analysis. It offers a visual interface for data cleaning and shaping, with the ability to combine data from multiple sources. It also integrates with Tableau.<br><br>**Tableau Public** is a free version for sharing visualizations publicly. It allows users to create and share visualizations online. Also, it provides access to a community gallery for inspiration and sharing. |
| | **Tableau Public** does come with some significant limitations:<br>• **Limited Data Source Connections**: Users can only connect to a restricted set of data sources, such as Excel and text files. More advanced connections (like databases) are not available.<br>• **Security Concerns**: All data uploaded to Tableau Public is accessible to anyone. There's no option for private sharing.<br>• **No Local Saving**: Workbooks cannot be saved locally; they must be published to Tableau Public, making it impossible to keep work private.<br>• **Data Limits**: There is a row limitation of **1 million rows**. If your dataset exceeds this, you will encounter errors when trying to open or publish your workbook. |

## 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.

## Day 2: Task 1
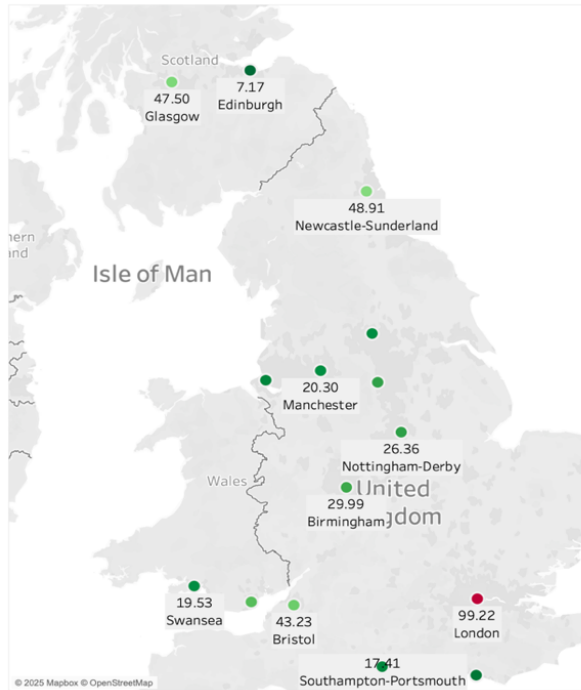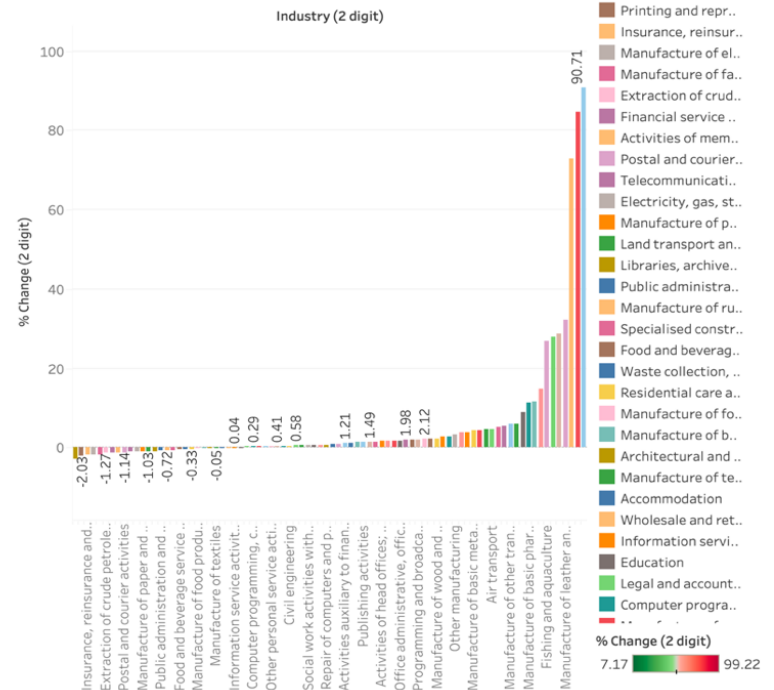
Using the Spotify data set, conduct an analysis to find trends and key information that could be used by an organisation for future projects.

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



| | |
|---|---|
| **Paste your print screens here** | |

| | |
|---|---|
| **What did you find?** | 1) All genres keep a high tempo (>100), but the energy and instrumental-ness appear to mirror each other. When songs have high energy, they tend to have low instrumentals and vice versa. |
| | 2) We can see that the top 3 most popular genres share the same key order in a relatively similar capacity, On the other hand, the bottom 3 have a more liberal approach to the order and capacity of each note. |
| | 3) Popularity does not to seem affected heavily by the danceability, acoustic-ness or energy of a song. There is a shift towards higher energy and danceable songs; whereas, mid- lower acoustic-ness is more favoured. |
| | 4) There is a trend where most songs keep their duration around 4 minutes. Only a few outliers are noticeable on both sides of the spectrum (lower and higher). |
| | 5) Mid acoustic songs are significantly more popular compared to High and Low. Specific genres like classical and soundtracks prefer high acoustics; while, RnB and reggaeton highly favour mid-acoustics over low or high. |

## 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.

**Paste your print screens here**



**What did you find and any reflections(recommendations) on how the NHS could use this?**
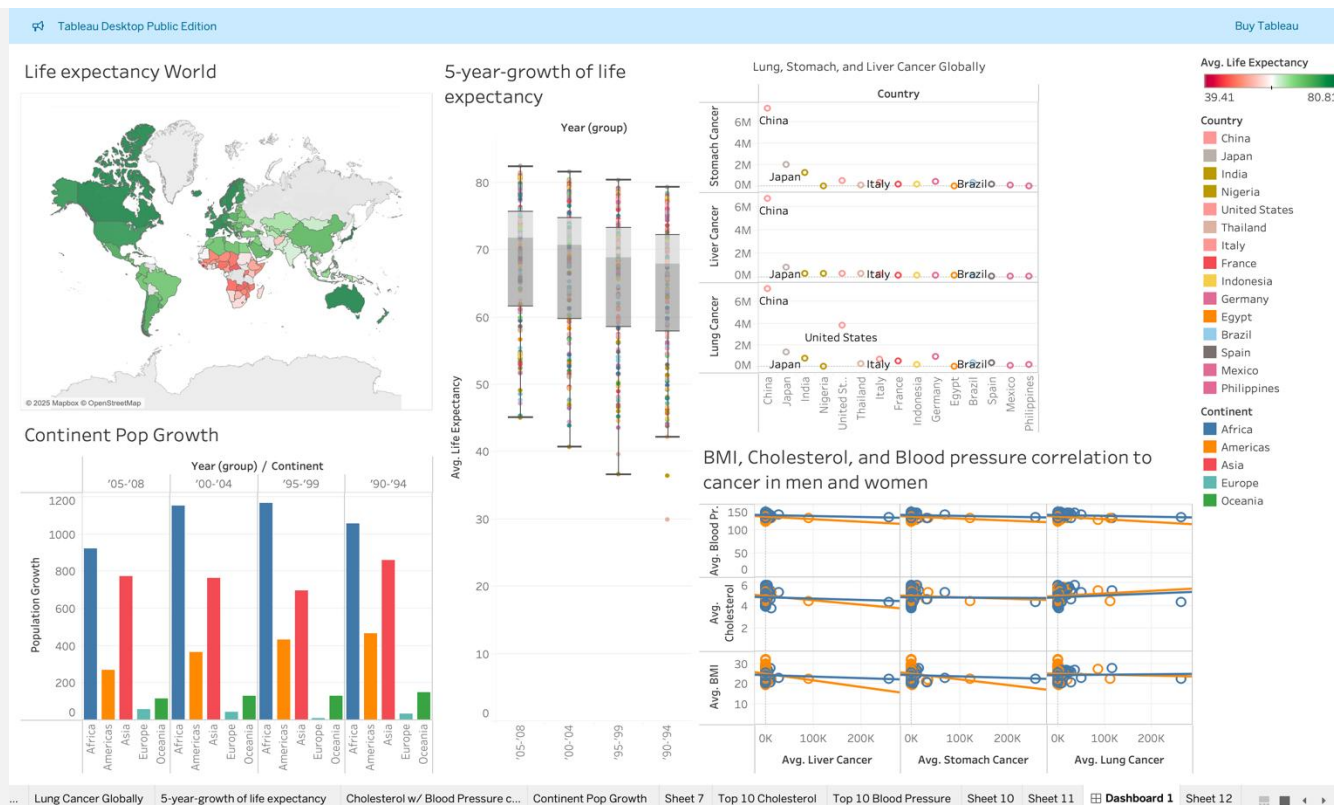
1) Average life expectancy globally is around 70 years; Africa shows an alarming low life expectancy around 50 years.

A recommendation is for the NHS to partner with international health organizations to address health disparities and share best practices.

2) All continents have shown a relatively different population growth. Europe specifically showed an initial decrease in the second decade of the '90s, but then a steady increase.

A suggestion is for the NHS to develop flexible healthcare services that can adapt to the changing population dynamics, including increased demand for elderly care.

3) There is a clear, slow and steady increase of the life expectancy withing the last 20 years.

The NHS could utilize data analytics to identify trends in life expectancy and tailor health programs accordingly.

4) China is leading in the 3 cancers with the States coming second for lung cancer while Japan come second for stomach and liver cancers.

The NHS could invest in research to understand the environmental and lifestyle factors contributing to cancer prevalence in these countries, applying relevant findings to local contexts.

5) There is not a strong correlation between BMI, cholesterol, or blood pressure and any of the 3 cancers for either gender.

NHS should invest in public health education. By increasing public awareness about cancer risk factors and by encouraging a wider understanding of health that includes genetics, environment, and lifestyle people would learn to be more vigilant and pay attention to details regarding their health.

## 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"
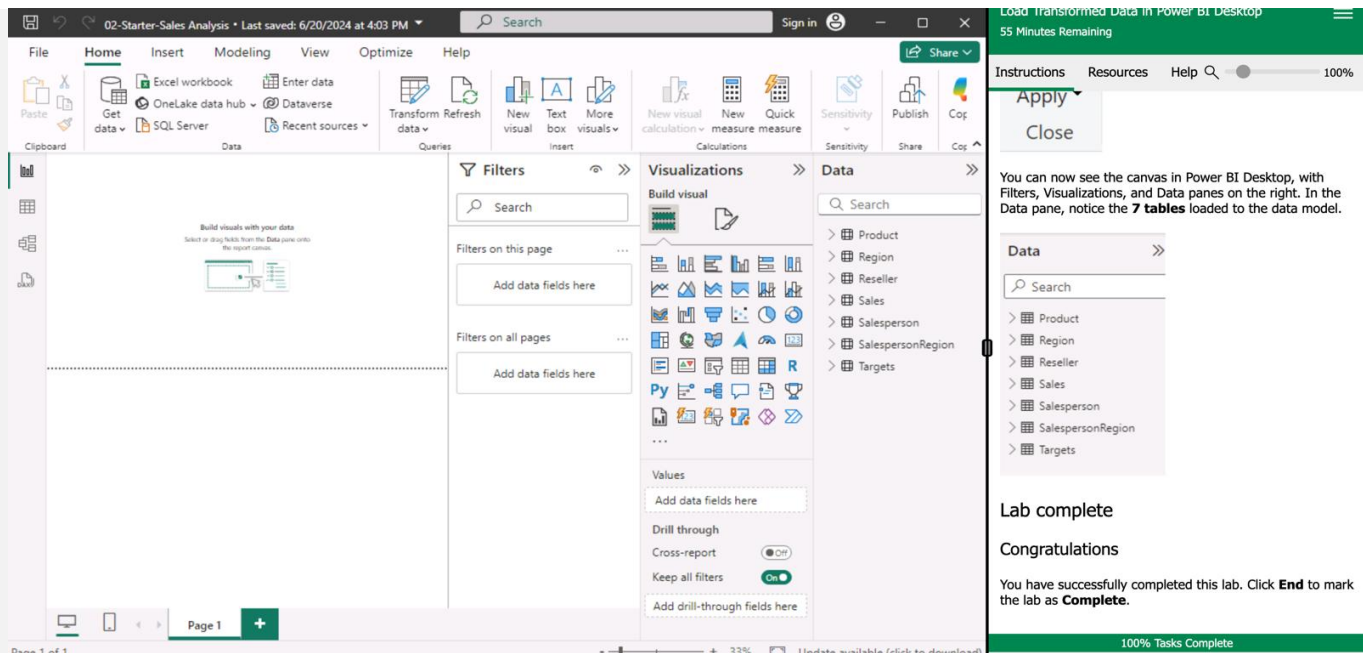
**Paste your completed lab here**

## 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"
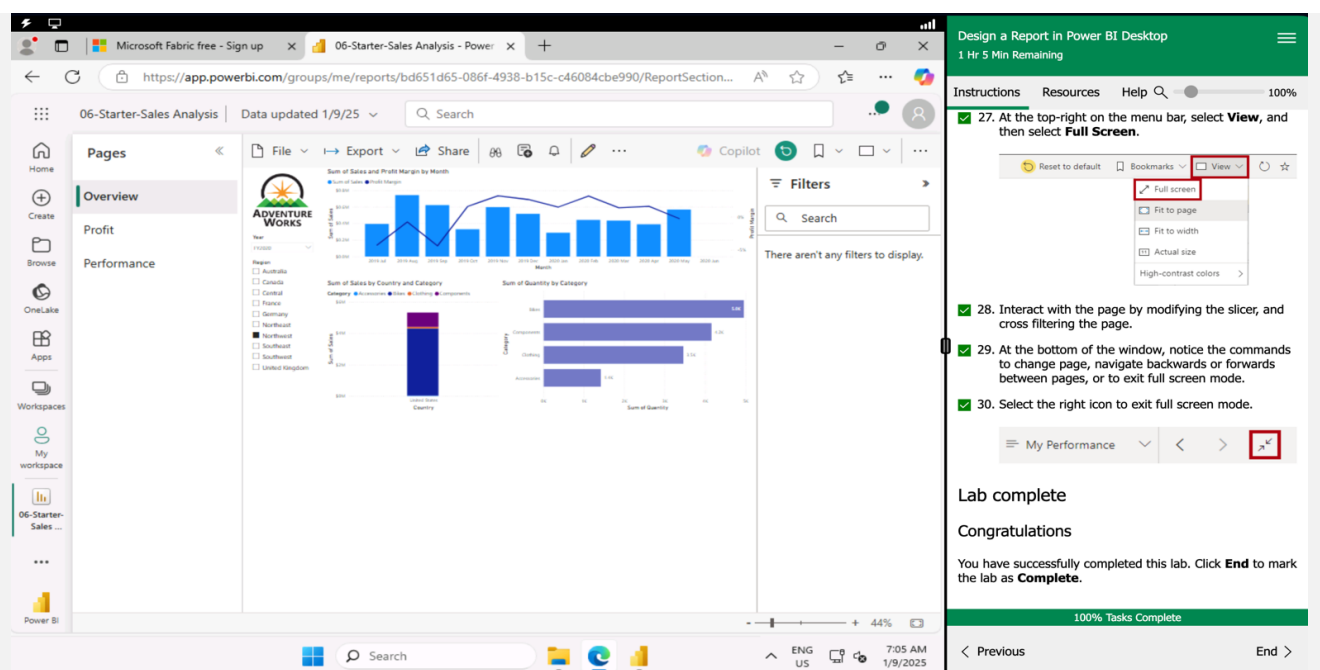
**Paste your completed lab here**



## 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"

**Paste your completed lab here**


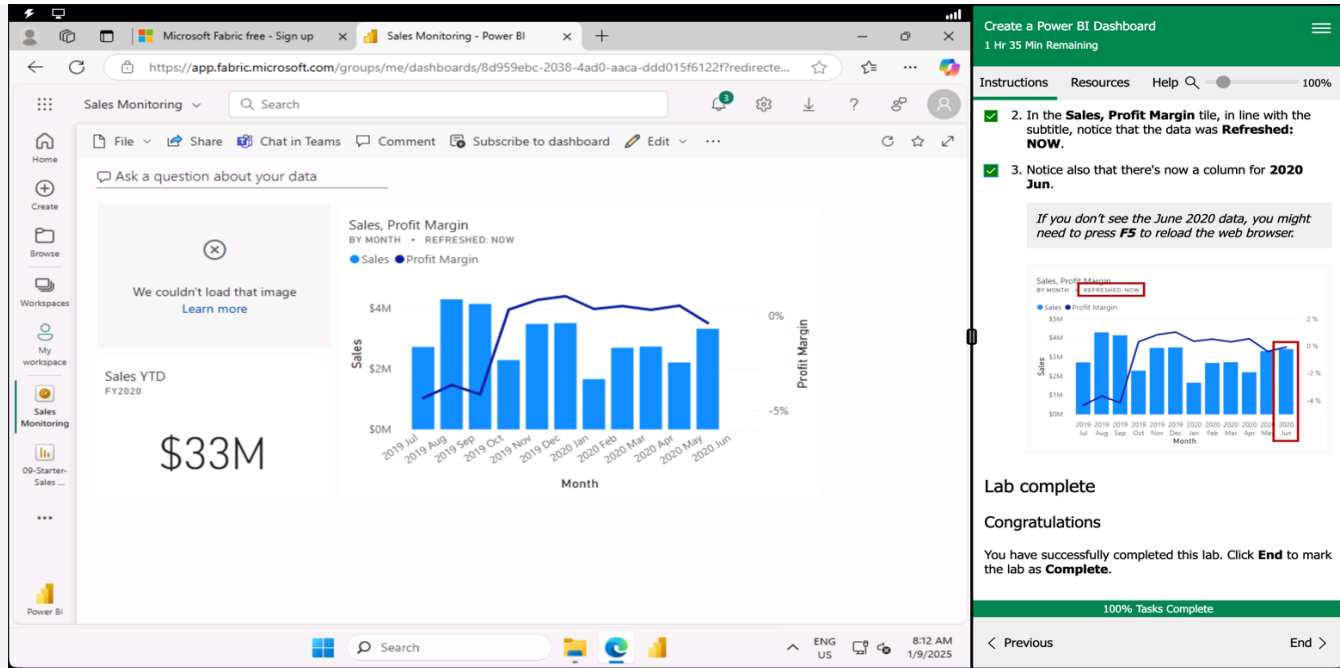
**Data Technician | Workbook | v1.**

## 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"

**Paste your completed lab here**

## 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.**