Just IT

B2W group

Apprenticeships | Training | Recruitment

Data Technician

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Course Date: 25/04/2025

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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'.

Different Tableau versions

Feature	Tableau public (free)	Tableau desktop (paid)	Tableau Reader (Free)
Cost	Free	Paid	Free
Privacy & Security	No data protection, all public	Allows private sharing with access controls	View only access
Data Storage	Cannot save workbooks locally and instead is published to public server	Save workbooks locally or publish to server	Yes, view files saved by others
Best for	Beginners, students, bloggers	Analysts, professionals, businesses	Stakeholders who just need to view dashboards
Advanced features	Basic charts and dashboards only	Full access to advanced analytics, calculations and custom visuals	None, cannot build or edit dashboards
View access	Everyone	You control who can see your work	Only people with access
Data sources supported	Excel, csv, google sheets, web data connectors	Almost all, Excel, databases, cloud apps, big data, etc.	None, View only

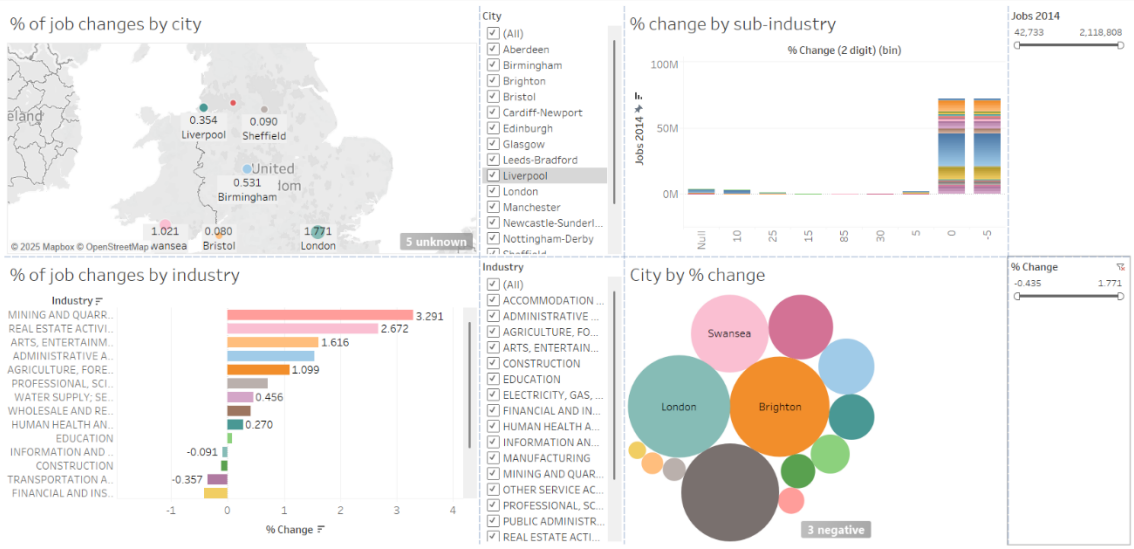
Tableau public is ideal for individuals exploring data visualisation and sharing insights publicly. However for professionals and increased data security, the desktop version is a better choice.

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.

Paste your print scree n here

Dashboard



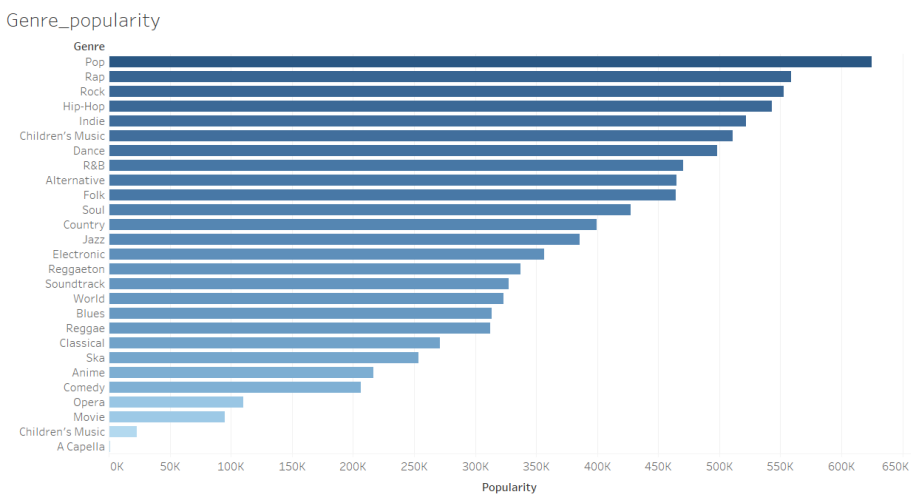
Day 2: Task 1

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

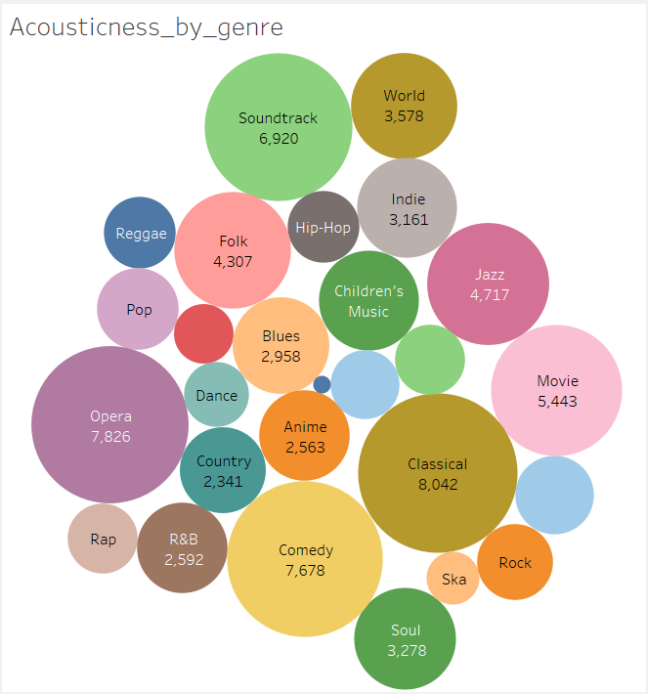
There is no set scope for the analysis, simply to find trends and document them below:

Paste your print screens here

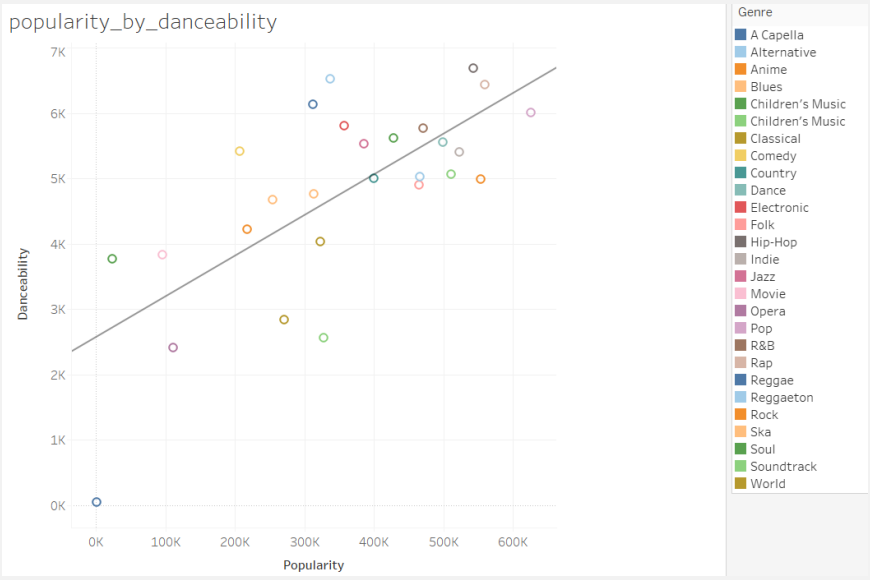
1.



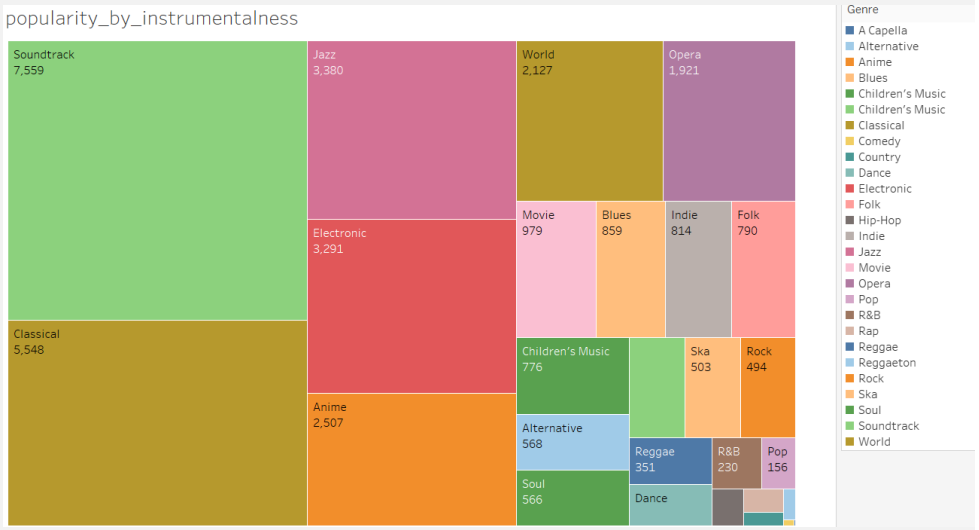
2.



3.


popularity_by_danceability
Danceability
7K
6K
5K
4K
3K
2K
1K
0K
0K
100K
200K
300K
400K
500K
600K
Popularity
Genre
A Capella
Alternative
Anime
Blues
Children's Music
Children's Music
Classical
Comedy
Country
Dance
Electronic
Folk
Hip-Hop
Indie
Jazz
Movie
Opera
Pop
R&B
Rap
Reggae
Reggaeton
Rock
Ska
Soul
Soundtrack
World

4.


popularity_by_instrumentalness
Soundtrack
7,559
Jazz
3,380
World
2,127
Opera
1,921
Classical
5,548
Electronic
3,291
Movie
979
Blues
859
Indie
814
Folk
790
Children's Music
776
Ska
503
Rock
494
Anime
2,507
Alternative
568
Reggae
351
R&B
230
Pop
156
Soul
566
Dance
Genre
A Capella
Alternative
Anime
Blues
Children's Music
Children's Music
Classical
Comedy
Country
Dance
Electronic
Folk
Hip-Hop
Indie
Jazz
Movie
Opera
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R&B
Rap
Reggae
Reggaeton
Rock
Ska
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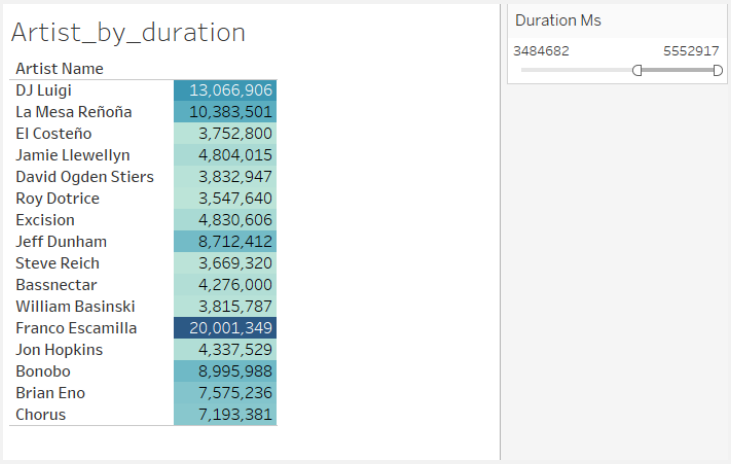
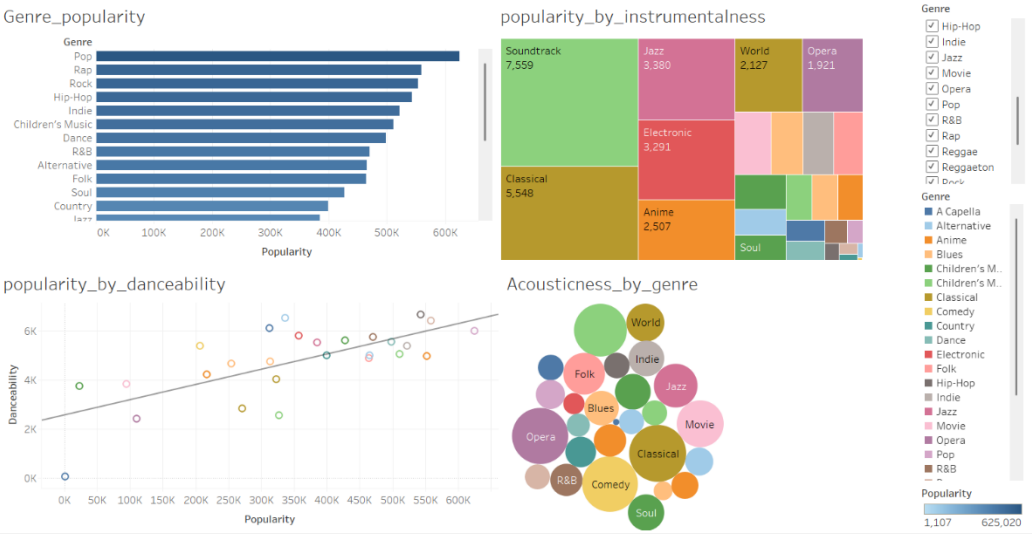
World

5.


Artist_by_duration
Artist Name
DJ Luigi 13,066,906
La Mesa Reñoña 10,383,501
El Costeño 3,752,800
Jamie Llewellyn 4,804,015
David Ogden Stiers 3,832,947
Roy Dotrice 3,547,640
Excision 4,830,606
Jeff Dunham 8,712,412
Steve Reich 3,669,320
Bassnectar 4,276,000
William Basinski 3,815,787
Franco Escamilla 20,001,349
Jon Hopkins 4,337,529
Bonobo 8,995,988
Brian Eno 7,575,236
Chorus 7,193,381
Duration Ms
3484682
5552917

Dashboard



What did you find?

In my findings I can see that Pop is the most popular genre by about 625,000 votes.

In figure 2 I can see that classical has the best acoustics closely followed by opera.

Figure 3 shows the popularity of genres based on their danceability. There is a positive correlation between popularity and danceability. Pop being the highest and acapella having the lowest.

Figure 4 shows a tree map of showing instrumentalness by genre. Soundtrack appears to have the highest use of instrumentals.

Figure 5 shows a filtered table of artists by set duration. This shows values between 3484682 and 5552917 Ms.

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

1.

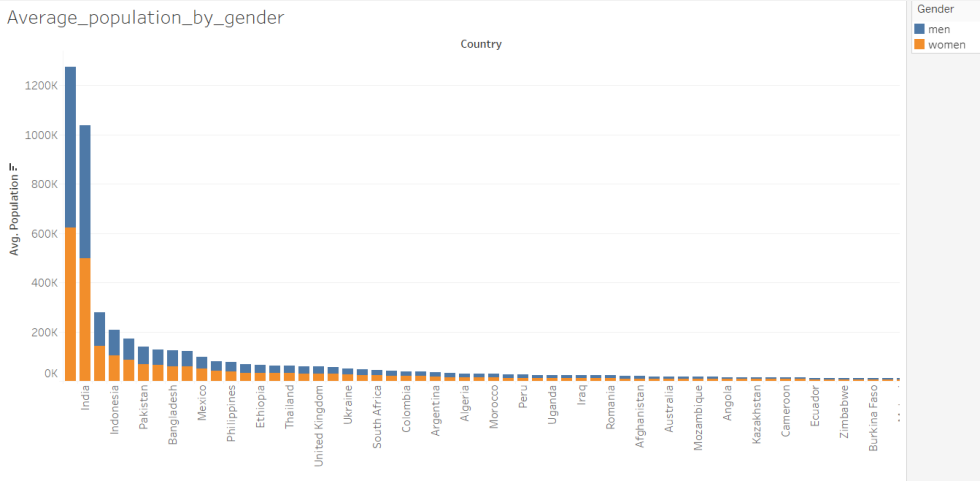


Figure 1 is showing the average population in descending order, highlighting gender. E.g. India is the second most populated country with just under 500k women and just over 500k men.

2.

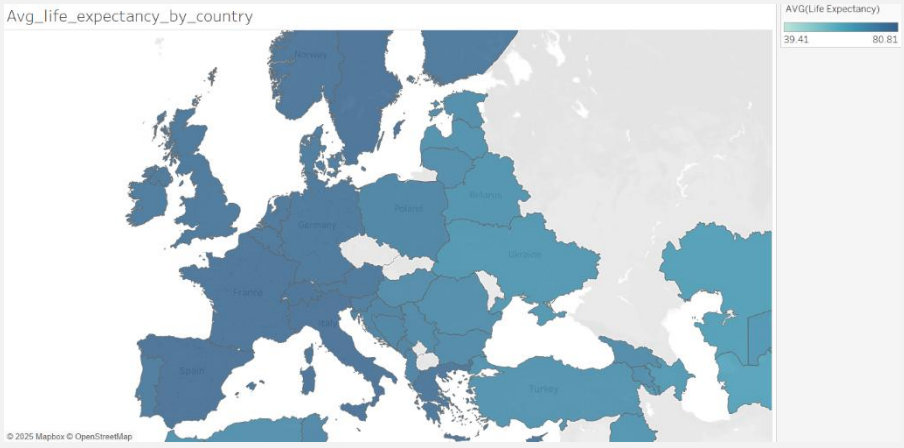


Figure 2 is a graph map showing the average life expectancy by country. The lighter shades are lower ages and the darker shades are higher life expectancy. E.g. France have a higher life expectancy than Turkey.

3.

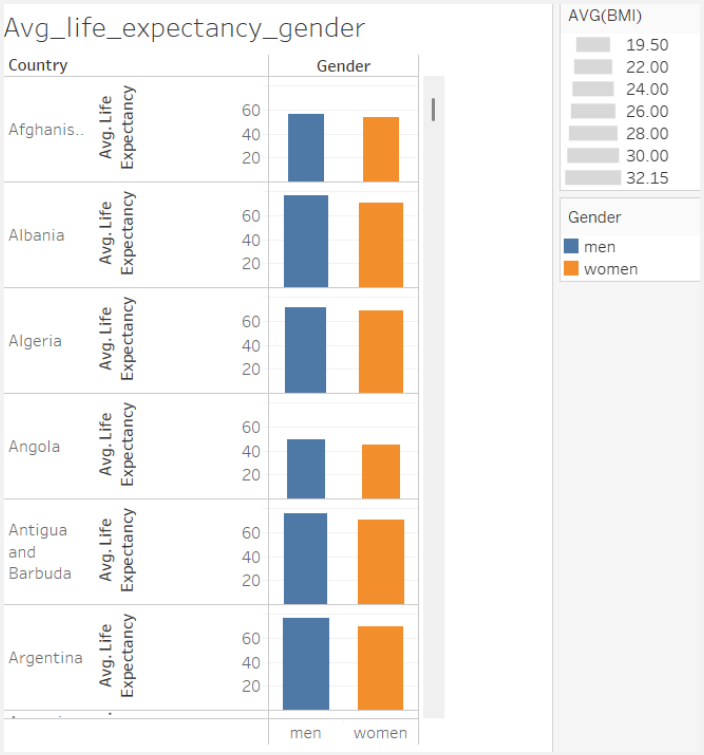


Figure 3 shows the average life expectancy by country and gender considering the average BMI of the population in that country. The width of the bar corresponds to the value of the BMI.

4.

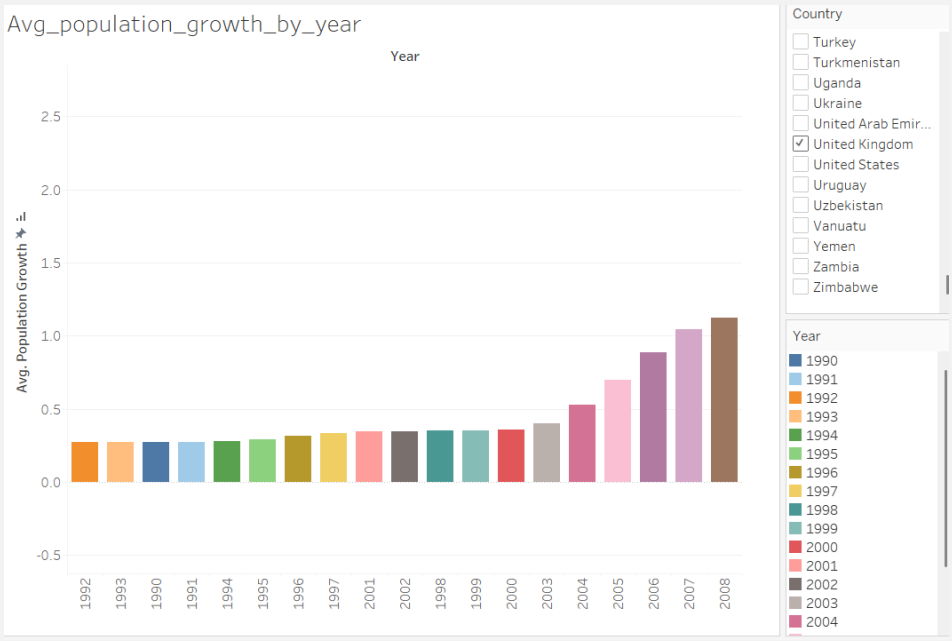


Figure 4 shows the average population growth in the UK yearly from 1990 to 2004. This is showing a positive growth. It is filtered.

5.

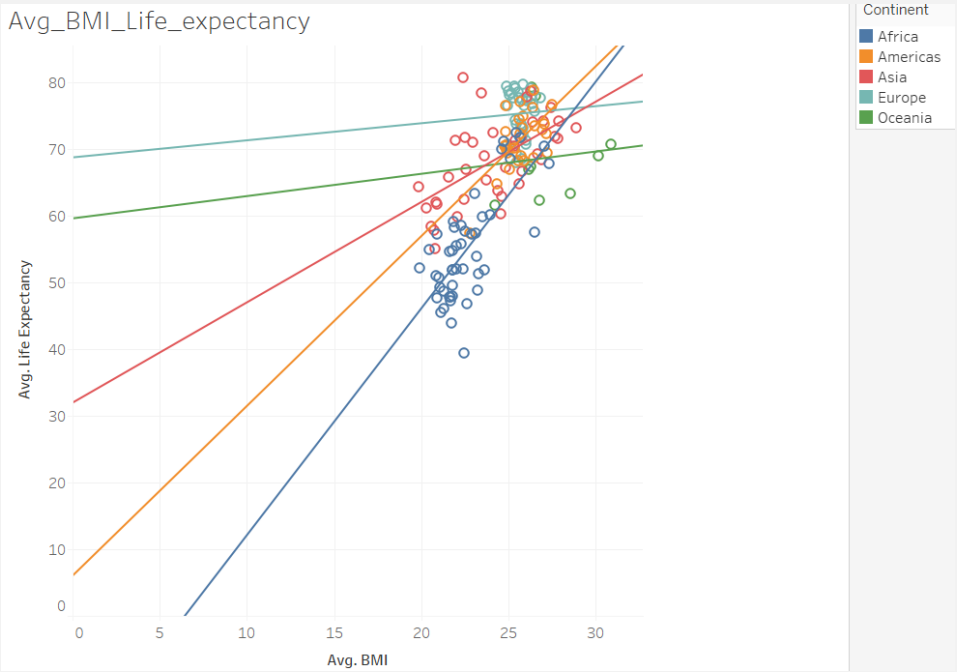


Figure 5 is showing the trend between the average BMI and average life expectancy from each continent.

6.

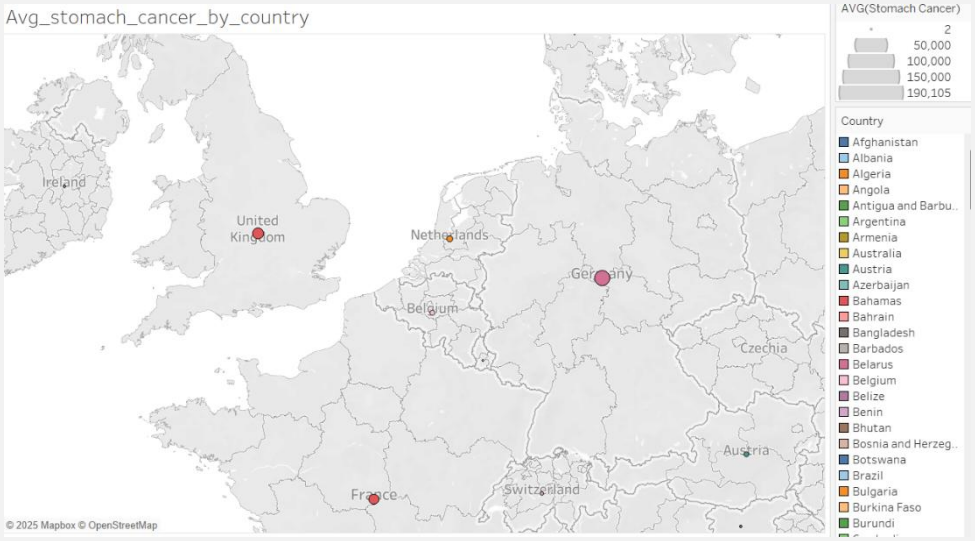


Figure 6 shows the average amount of people with stomach cancer with the size of the circle.

7.

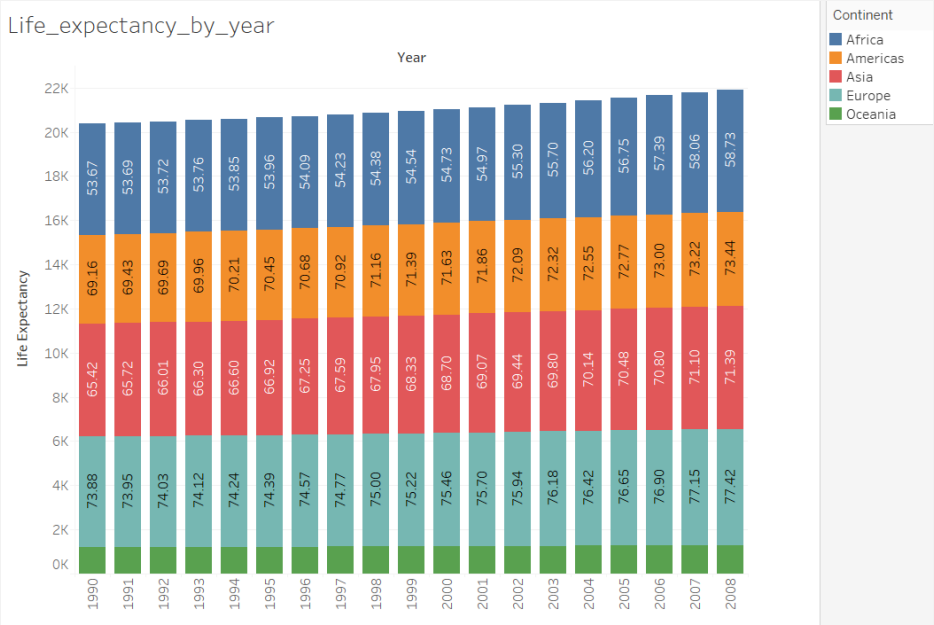
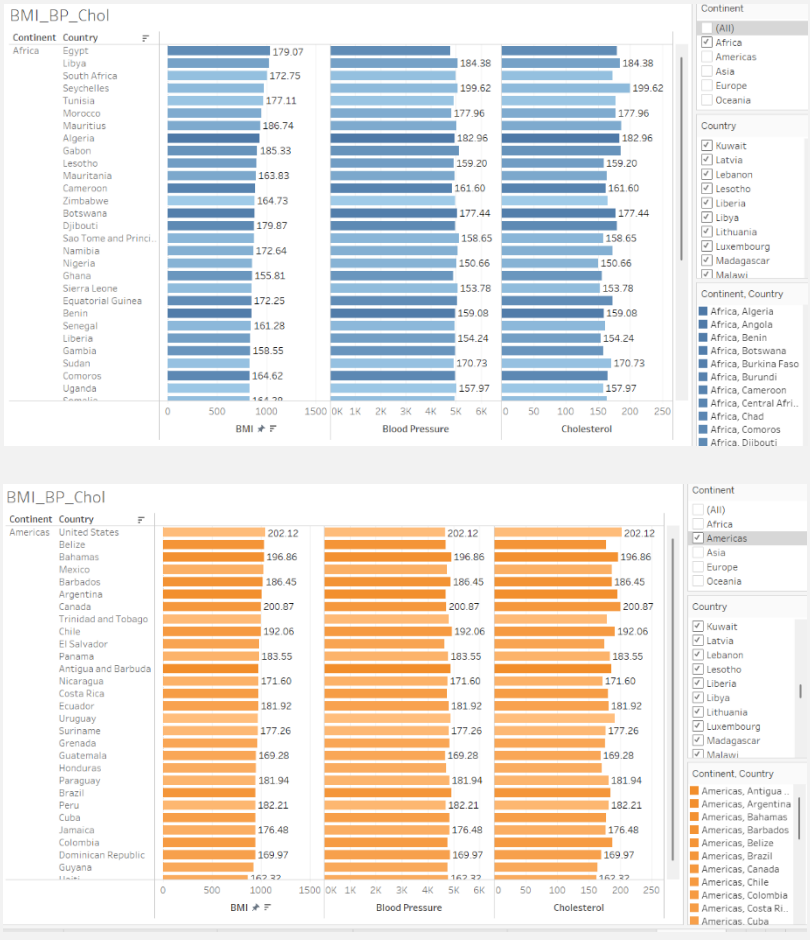


Figure 7 shows life expectancy yearly by continent with the average life expectancy labelled.

8.



These figures show the BMI, Blood pressure and Cholesterol levels from each country.

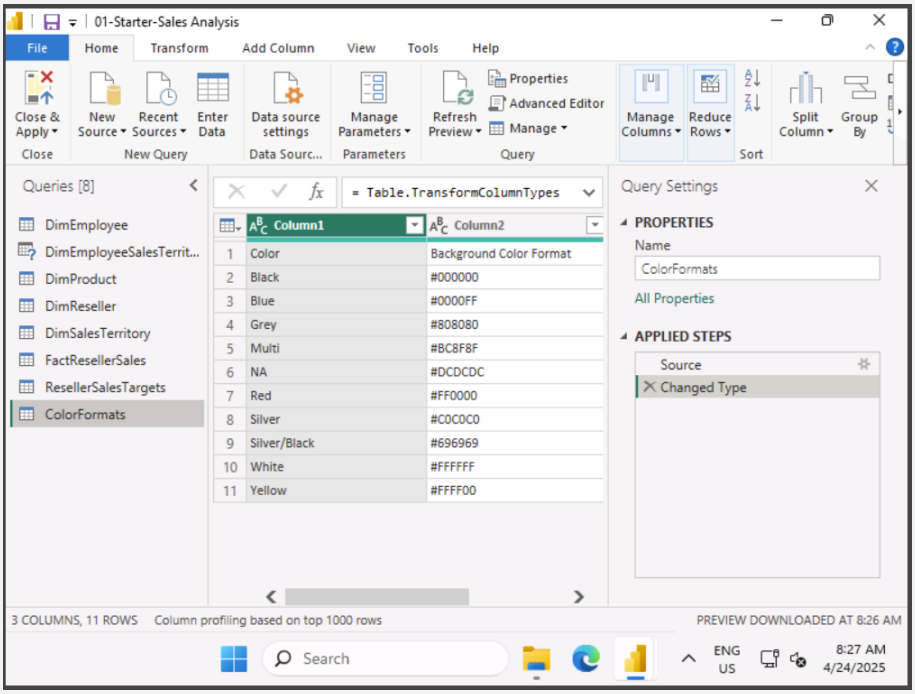
What did you find and any reflections on how the NHS could use this?	Figures explained above. The NHS could use this to spot health risks early and create preventions by offering free health checks in the specific areas. Through the data they can track who is most at risk. They can filter the data to the UK only to make it more personal. They can look at trends over time e.g. life expectancy increasing, to understand what is working and what needs more focus. They can target specific problems such as if lung is increasing in a specific region or stomach cancer is more common in men than women, this helps the NHS know where to direct resources or fund more research into the diseases.

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

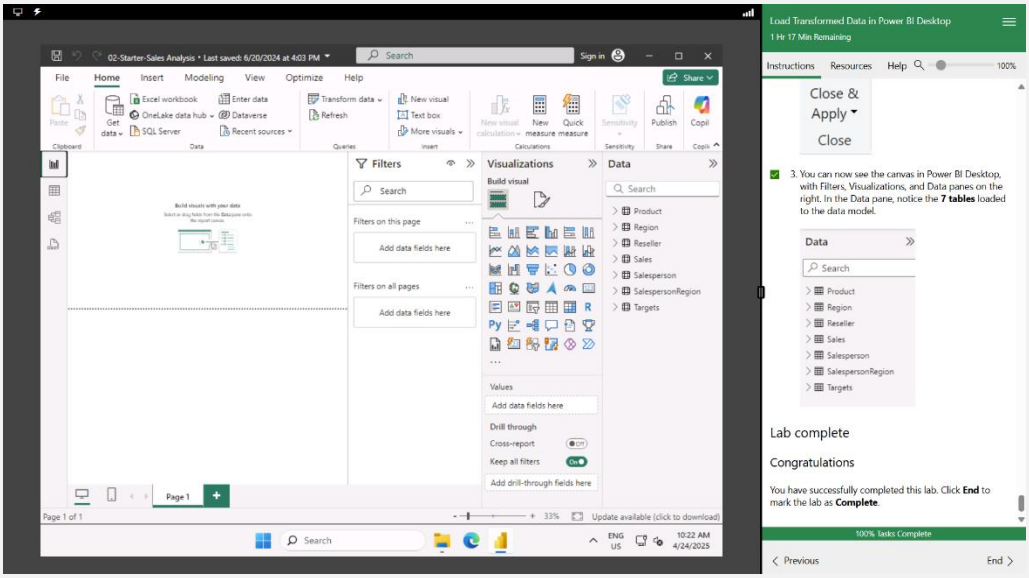


Day 3: Task 2

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

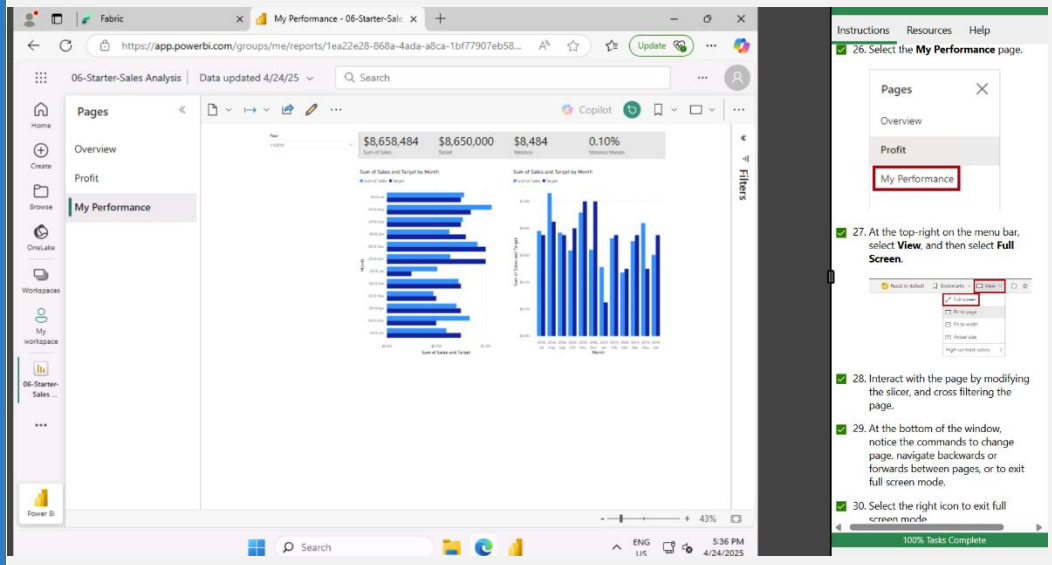


Day 4: Task 1

Please complete Lab 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"

Paste your completed lab here

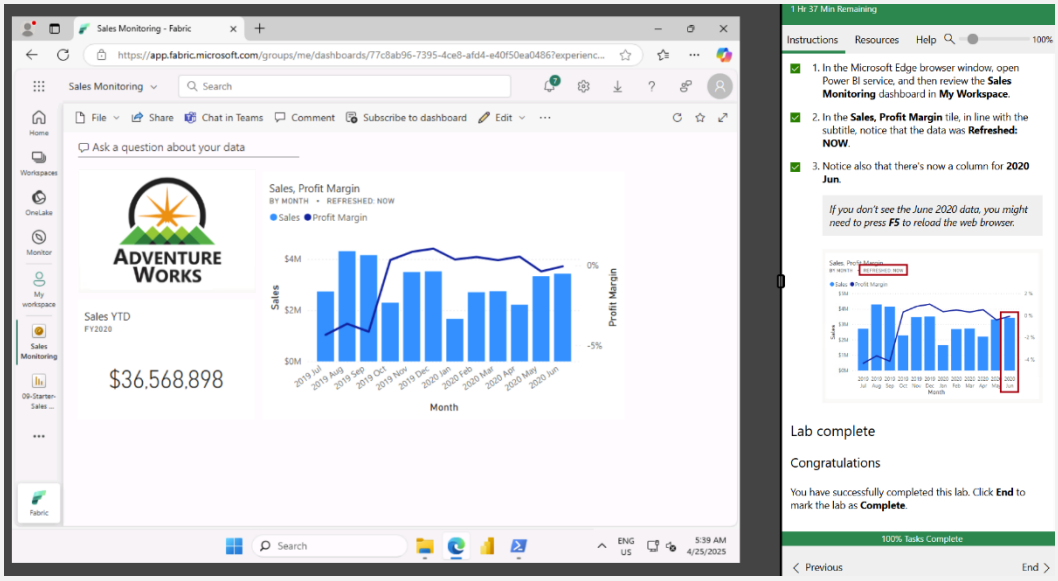


Day 4: Task 2

Please complete Lab 09 ‘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.

Data Visualisations

Visual tools are excellent tools for data analytics as it presents information clearly and allows users to interact with the data.

Tableau
Great for storytelling
Data visualisation tool
Good for large datasets
Integrates easily with external data sources
No coding knowledge required
Wide range of built-in custom charts

Data types
String
Date & time
Numeric
Boolean
Geographic

Quantitative	
Discrete data	*Continuous data*
Can only take specific values	*Can take any value*
Can be counted	*Can be measured*
Age, shoesize	*Temperature and distance*

Can convert continuous to discrete by grouping them- by making them bins.
Continuous- use line graph
Discrete- use bar, column or pie chart

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.

Data roles in tableau

Discrete dimension
Common, coloured in blue
Finite amount of values
Cant be aggregated
E.g. eye colour, sex

Continuous dimension
Not common, coloured in green
Infinite amount of values
Cant be aggregated
E.g. date

Qualitative
Text or description
e.g. product, name

Tableau workflow
Import data > check data types > set relationship > handle missing values > build basic charts > build a dashboard

insert file
choose file type>pick one and should display in data source> click sheet 2 to work on it

To create a link between 2 sheets in one file that have different names> drag the shits and create a link

To create a geographical map, tableau auto creates latitude and longitude. Latitude in the rows and longitude in the columns.

PowerBI
Get data from other sources>home>get data>more>excel>transform
remove duplicates by home>remove rows

ETL- Extraction Transformation Loading
EDA- Explanatory Data Analysis

Add column>date>month>get month

Learn with sample data>use sample data>load sample data>choose sheet>transform

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.