



# Data Technician

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**Course Date: 6/01/2025**

## **Table of contents**

Day 1: Task 1 .....	2
Day 1: Task 2 .....	4
Day 2: Task 1 .....	5
Day 2: Task 2 .....	11
Day 3: Task 1 .....	16
Day 3: Task 2 .....	18
Day 4: Task 1 .....	21
Day 4: Task 2 .....	22
Course Notes .....	23
Additional Information.....	23

## **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 server

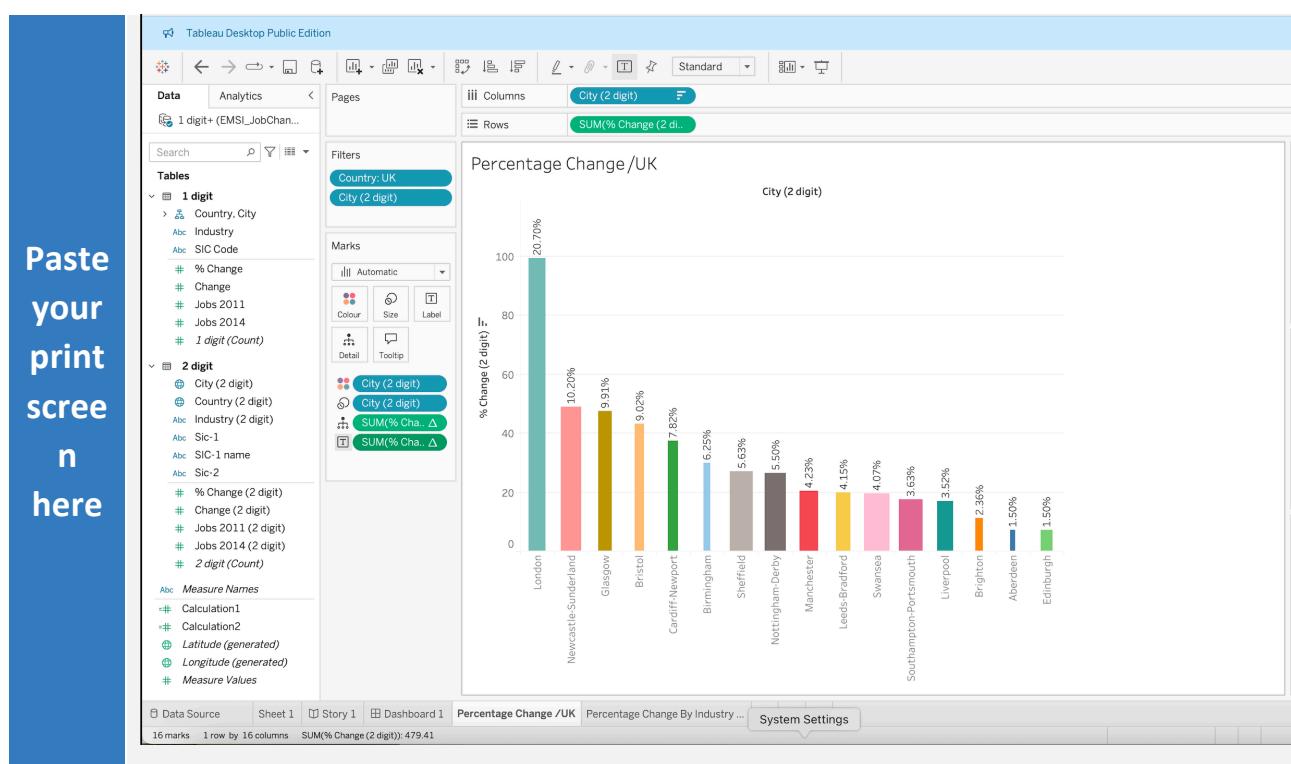


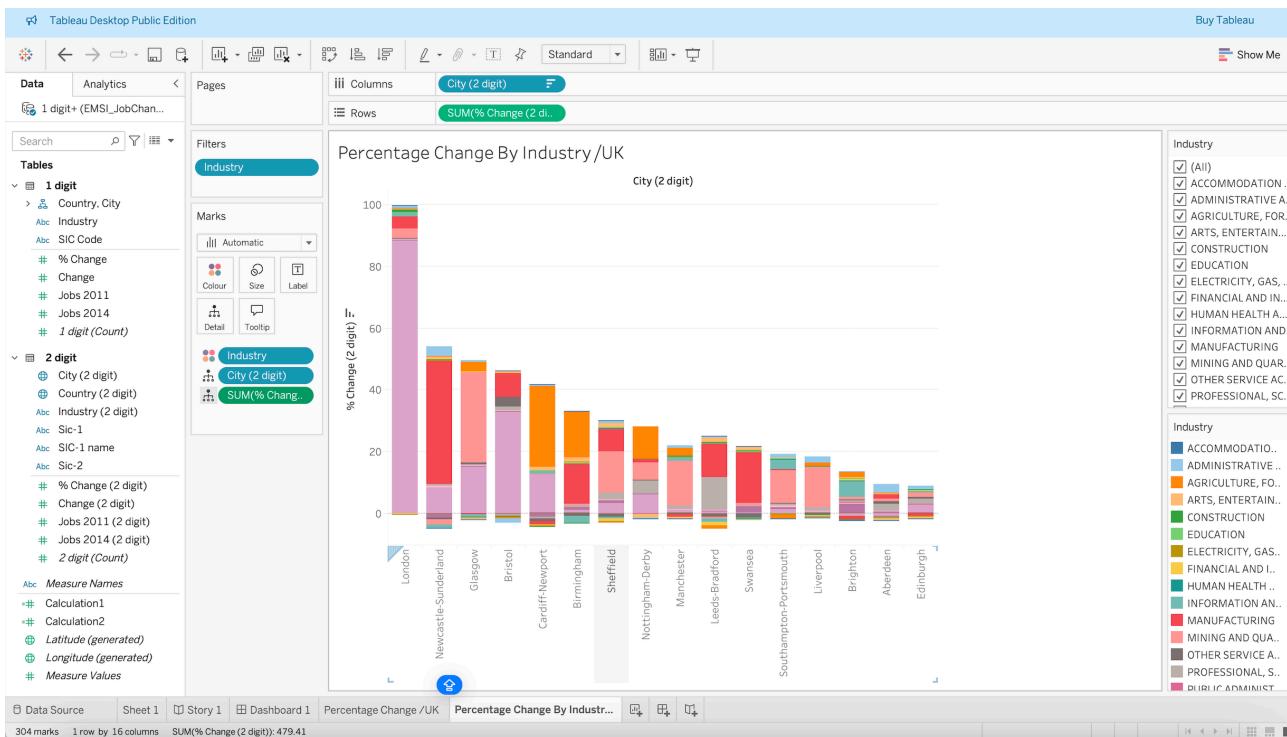
Tableau server	Tableau Public	Tableau Online	Tableau Desktop
<ul style="list-style-type: none"> <li>Paid business intelligence applications designed for windows or Linux server</li> <li>It helps users to edit, organise, and share tableau dashboards with others</li> <li>It can store data on premises or on specified cloud</li> <li>Offers APIs that enable the user to tailor their dashboard to their own desired needs</li> <li>Great tool for creating custom views</li> </ul>	<ul style="list-style-type: none"> <li>Free server on to each <u>visualisations</u> and ideas can be posted</li> <li>This provides users with access to the <u>worlds</u> largest stored data visualisations</li> <li>This can therefore allow users to create their own online work portfolios</li> <li>Its interface is to be considered as user-friendly</li> <li>In addition, data collaboration is streamlined when using tableau public servers</li> <li>It also provides cloud supported capabilities and real-life analytics</li> </ul>	<ul style="list-style-type: none"> <li>It is a paid analytics platform which is hosted in the cloud</li> <li>Makes it easier to set up, use and manage content on a variety of mobile devices</li> <li>Tableau maintains the system and hardware outside of the user firewall</li> <li>Tailored company logos can be uploaded into tableau online to make for custom branding</li> </ul>	<ul style="list-style-type: none"> <li>It is a paid desktop application that enables developers to make dash boards, charts and formulas</li> <li>Users are able to connect to data in order to create their own personalised stories, dashboards, and workbooks</li> <li>After that they also have the option to publish and share their work onto their tableau site</li> </ul>



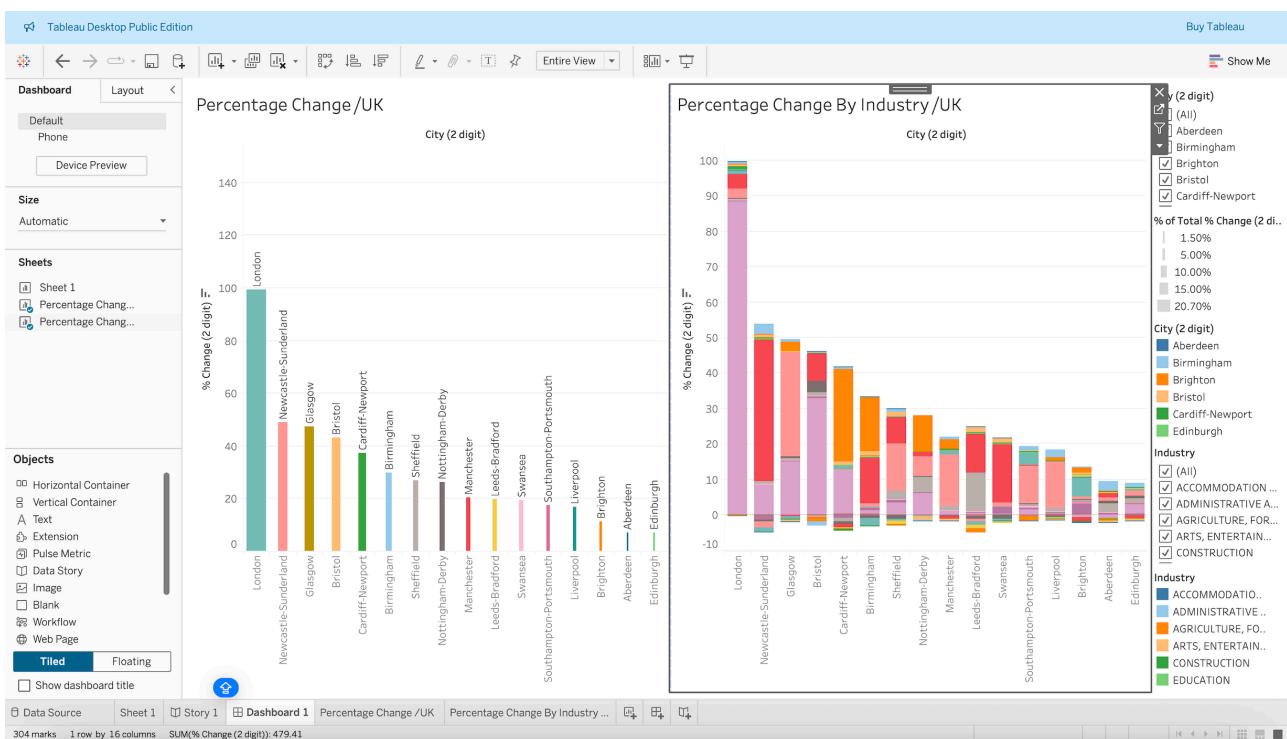
## Day 1: Task 2

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.





A chart showing sum of percentage change of the industry over cities in the UK



## A dashboard containing two visualisation charts

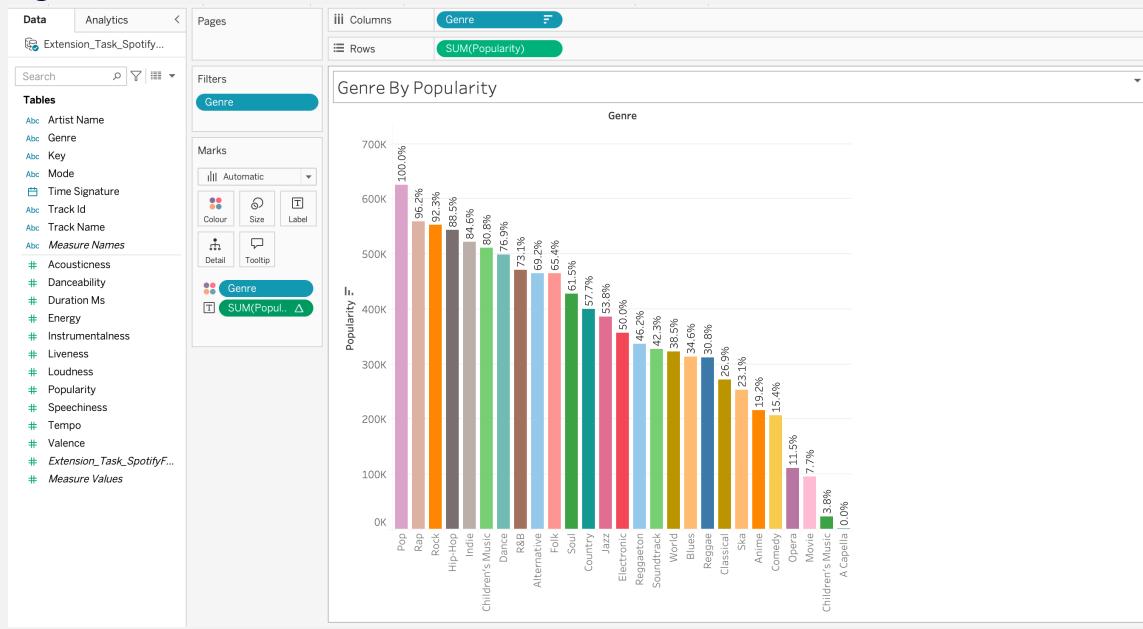
## Day 2: Task 1

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

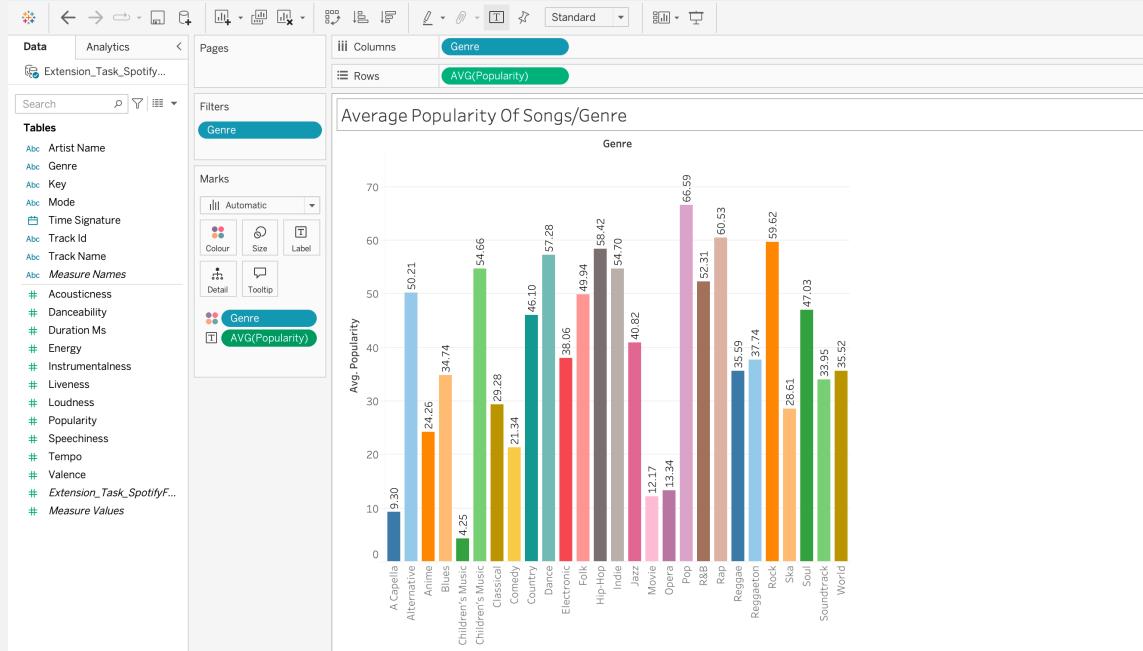
There is no set scope for the analysis, simply to find trends and document them below:

Paste  
your  
print  
screen  
s here

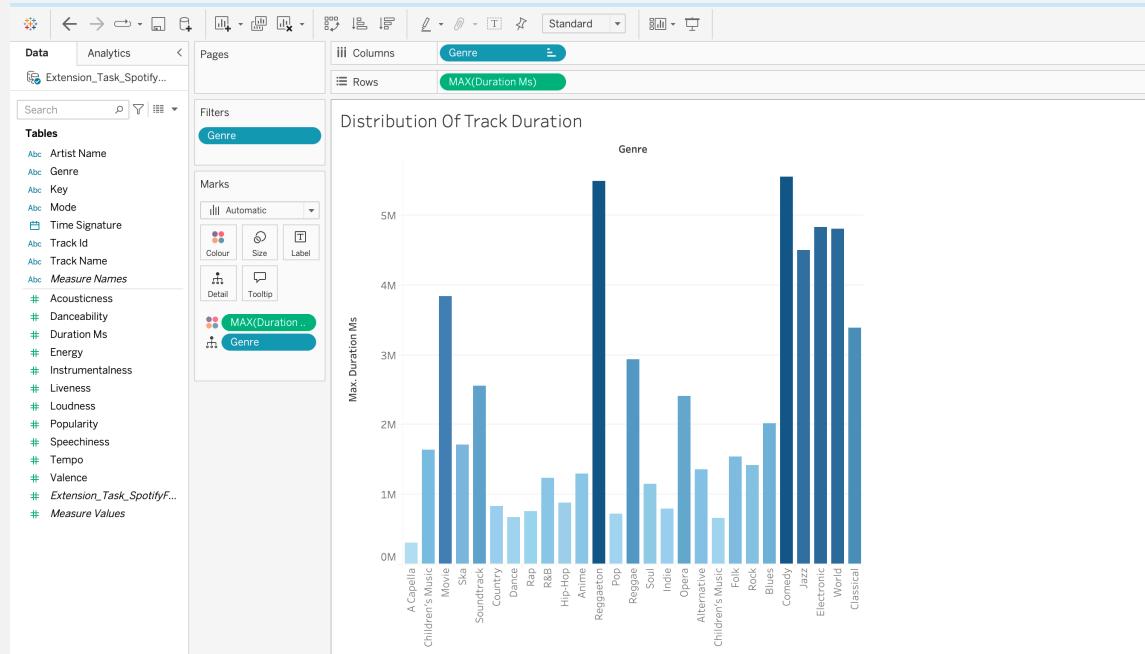
1) Based on their popularity score it can be determined that Pop has the highest with a score of 100%.



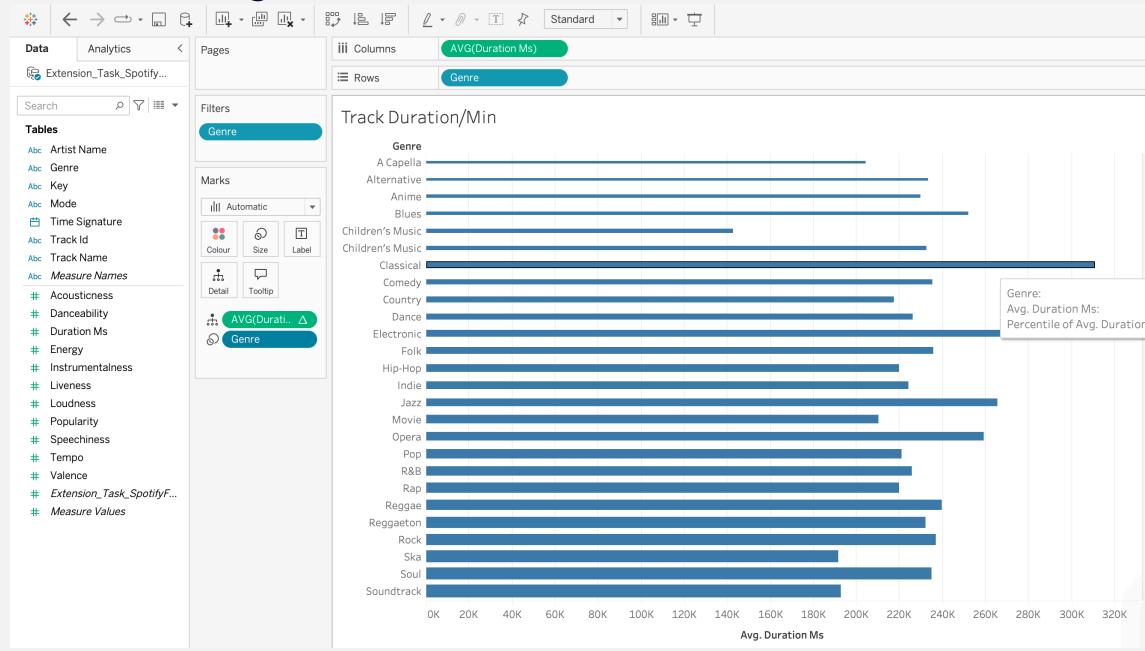
2) In this insight we can evaluate that the genre of Pop music is the most popular amongst tracks.

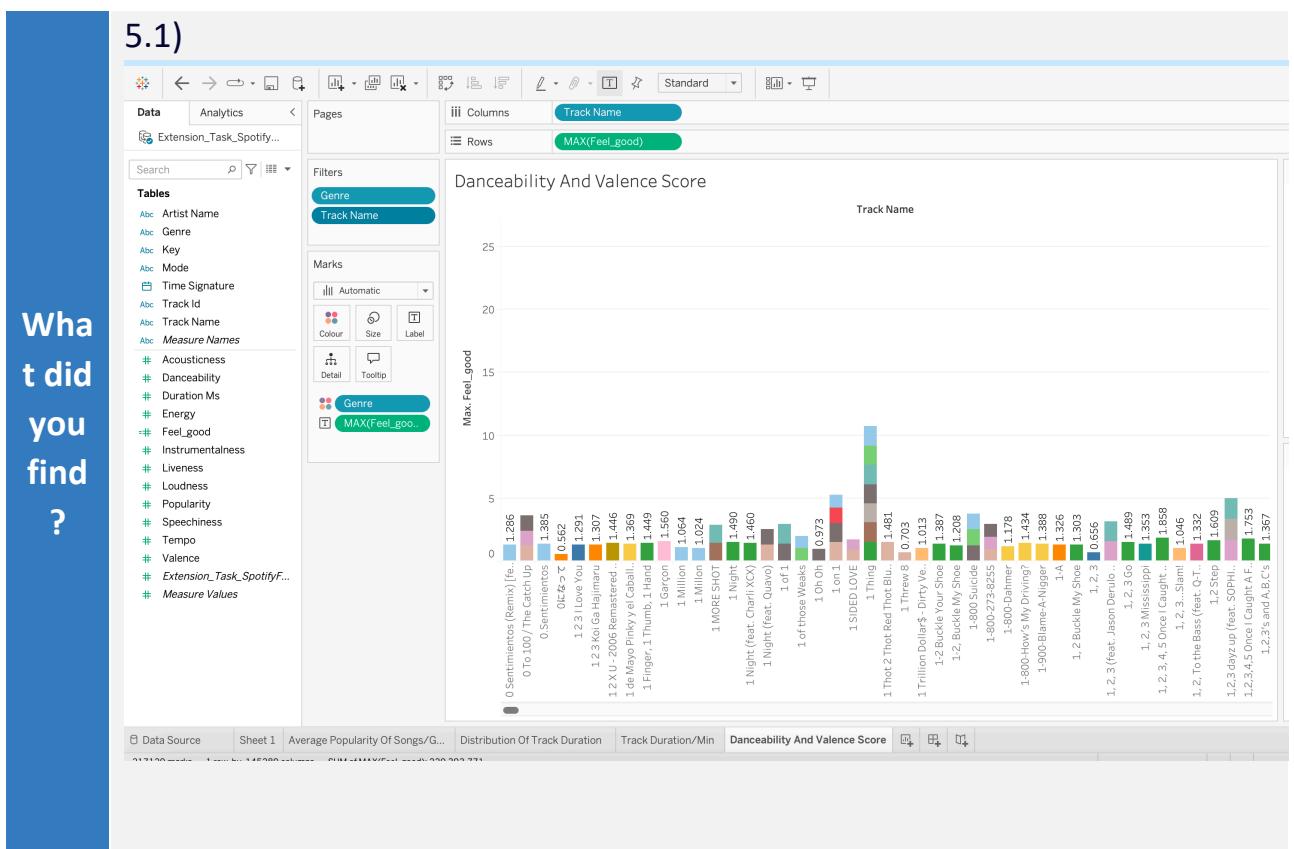
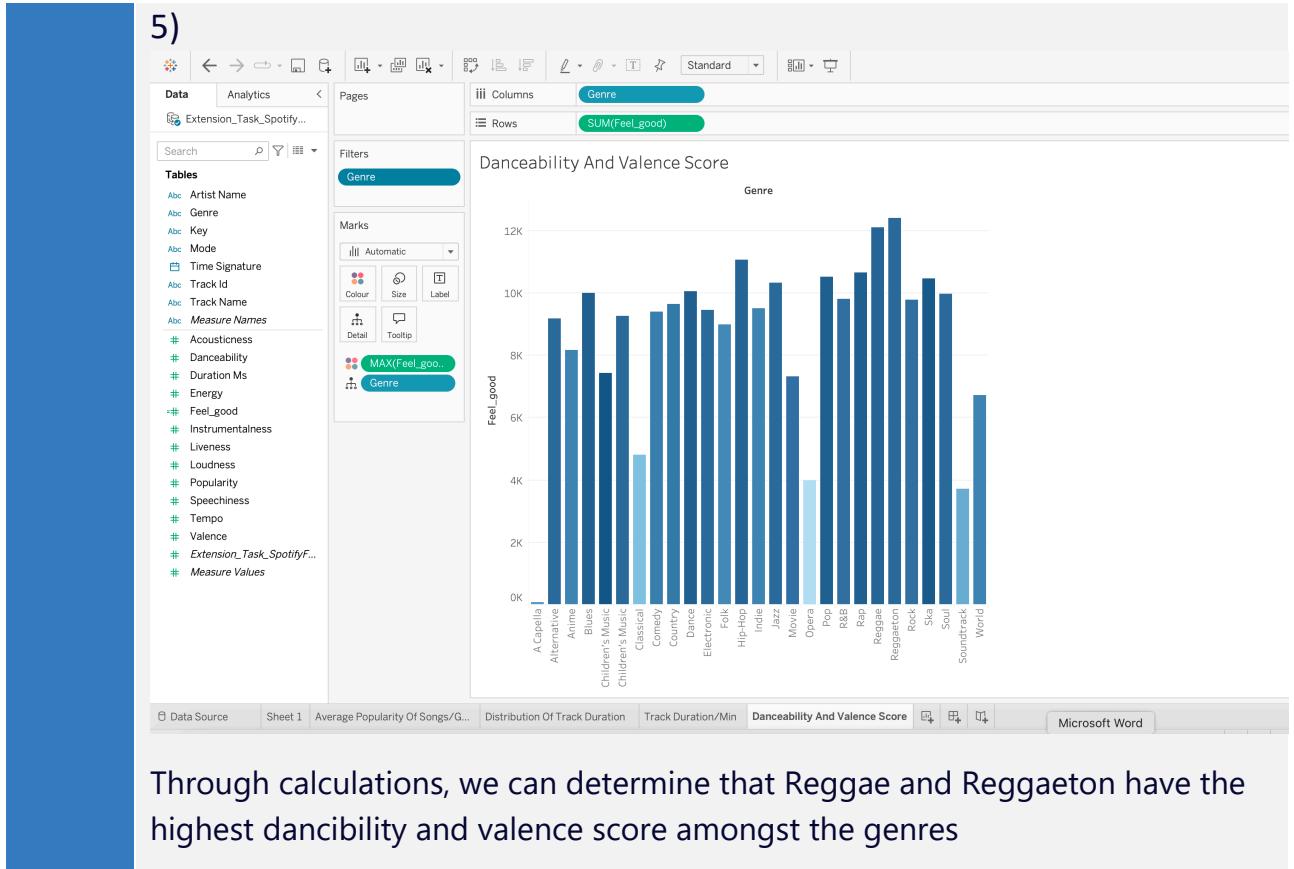


3) Based on duration, it can be seen that both Reggaeton and Comedy have the longest track duration.

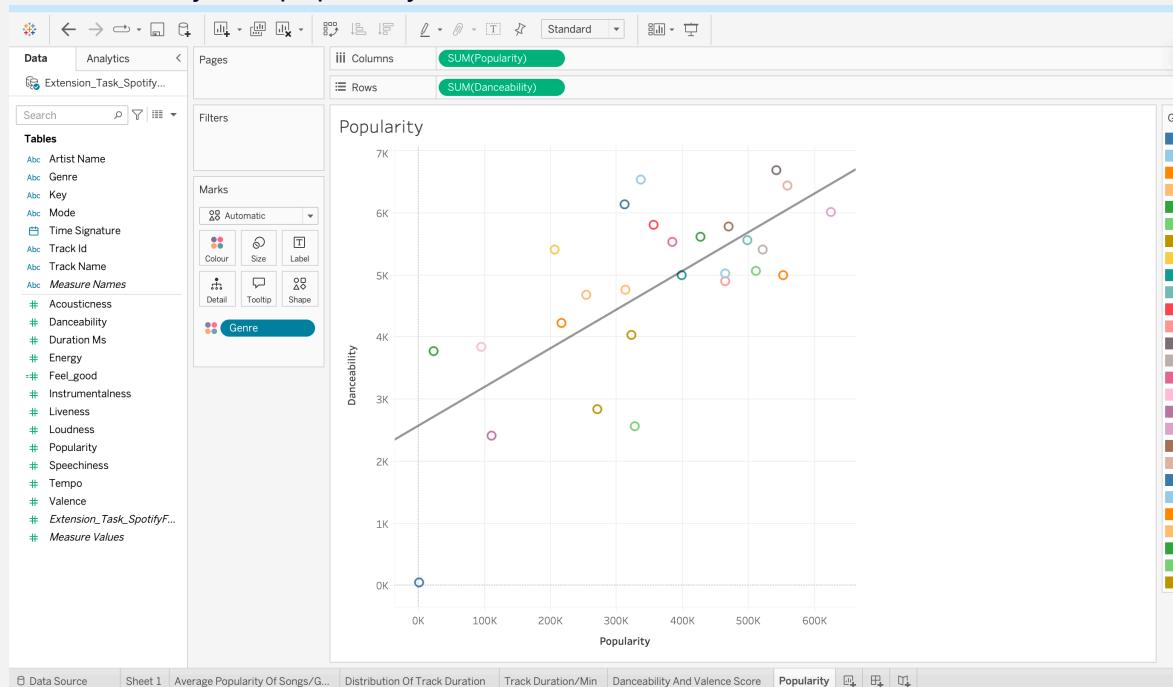


4) This insight provides data showing the average track length per minute across genres.

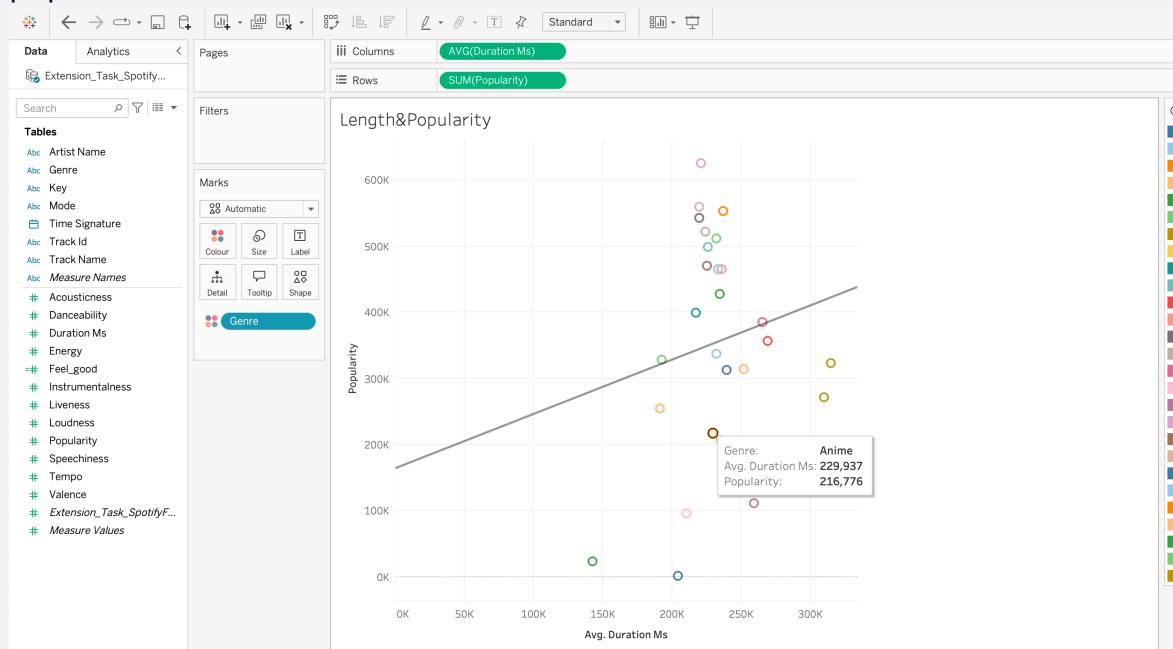




6) In this insight we can see that there is a weak positive correlation between the dancibility and popularity of the tracks.



7) It can in fact be evaluated that the longer the length of a track the more popular it is.





## Day 2: Task 2

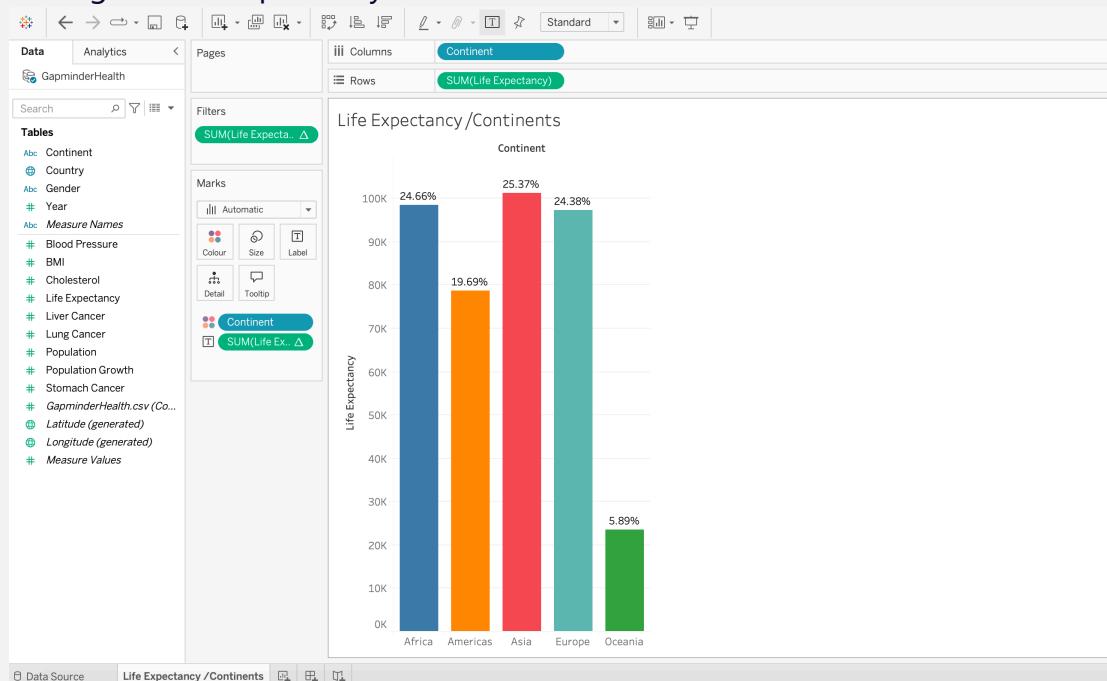
Using the Health, conduct an analysis to find trends and key information that could be used by an organisation for future support.

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

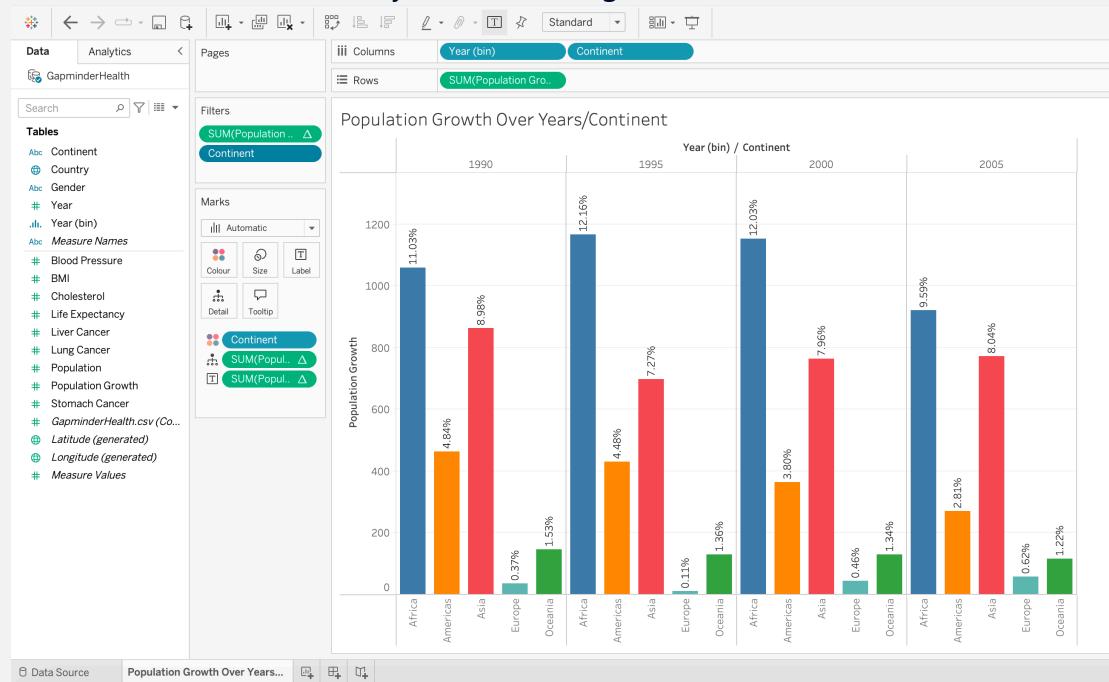
1) From this visual I can determine that comparing the life expectancies from all the continents, Oceania has the lowest life expectancy, whereas Asia has the highest life expectancy.



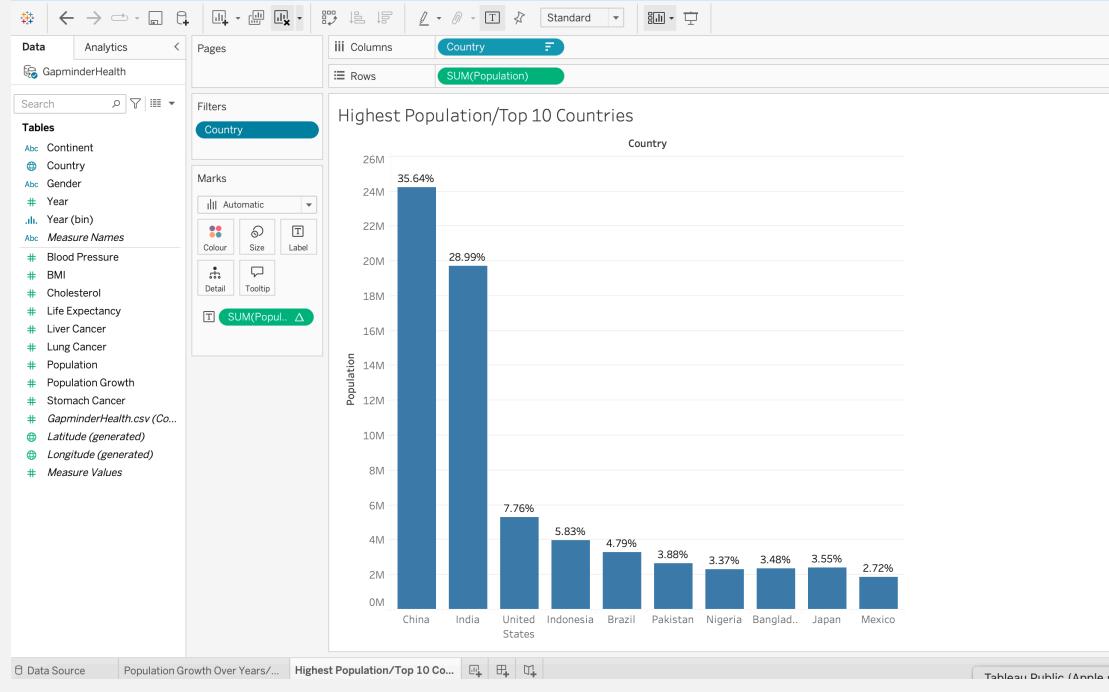
2) In this chart, it can be evaluated that as the years increase, the for the population for the continent of America is slowly decreasing at a steady rate. Whereas the population growth for the continent of Africa beginnd to slowly



increase however after the year 2000 it begins to decrease.

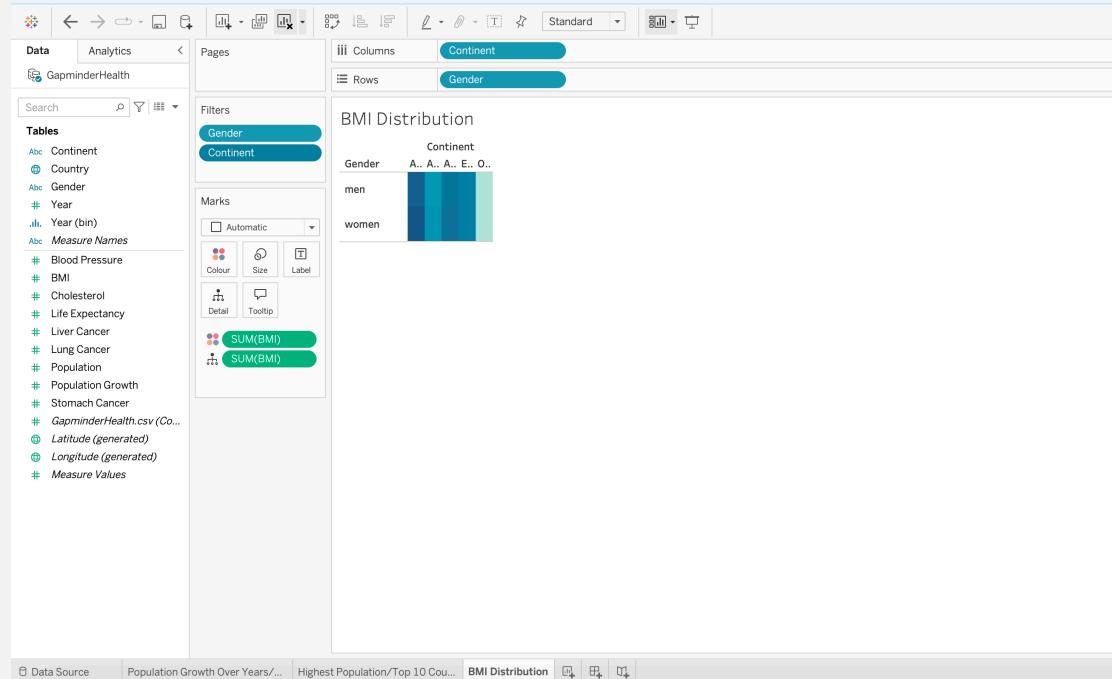


3) In this visualisation we can see the top 10 countries with the highest populations across the world, with China having the highest population.

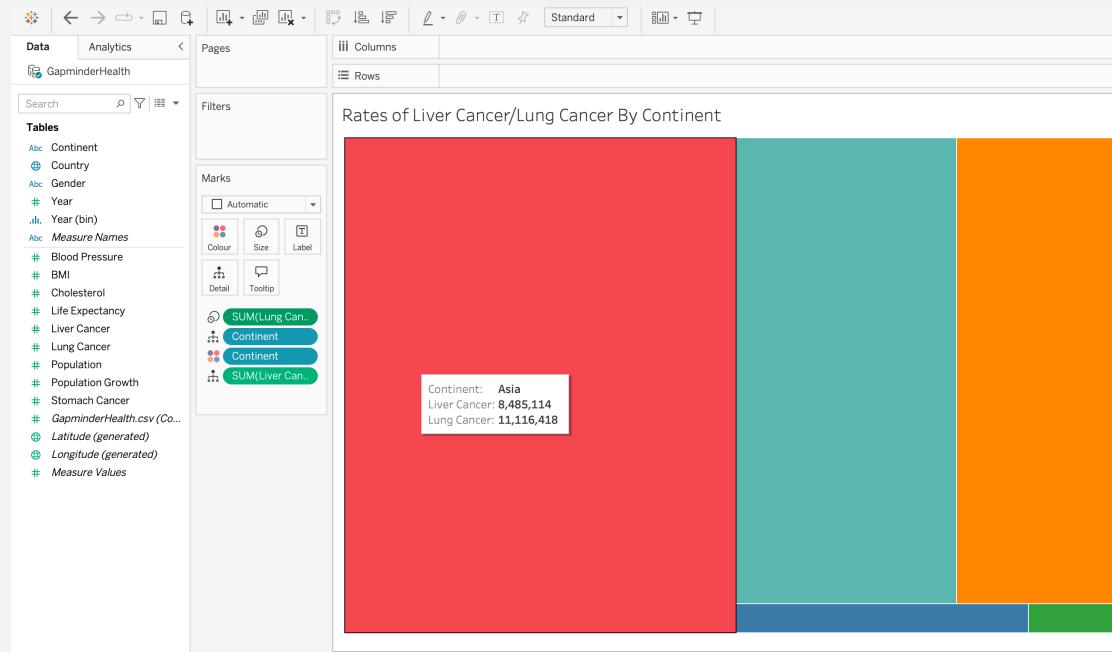


What did you find and any reflections on how the NHS could use this?

4) Here we have created a heat map showing the distribution of the BMI by continent and gender.



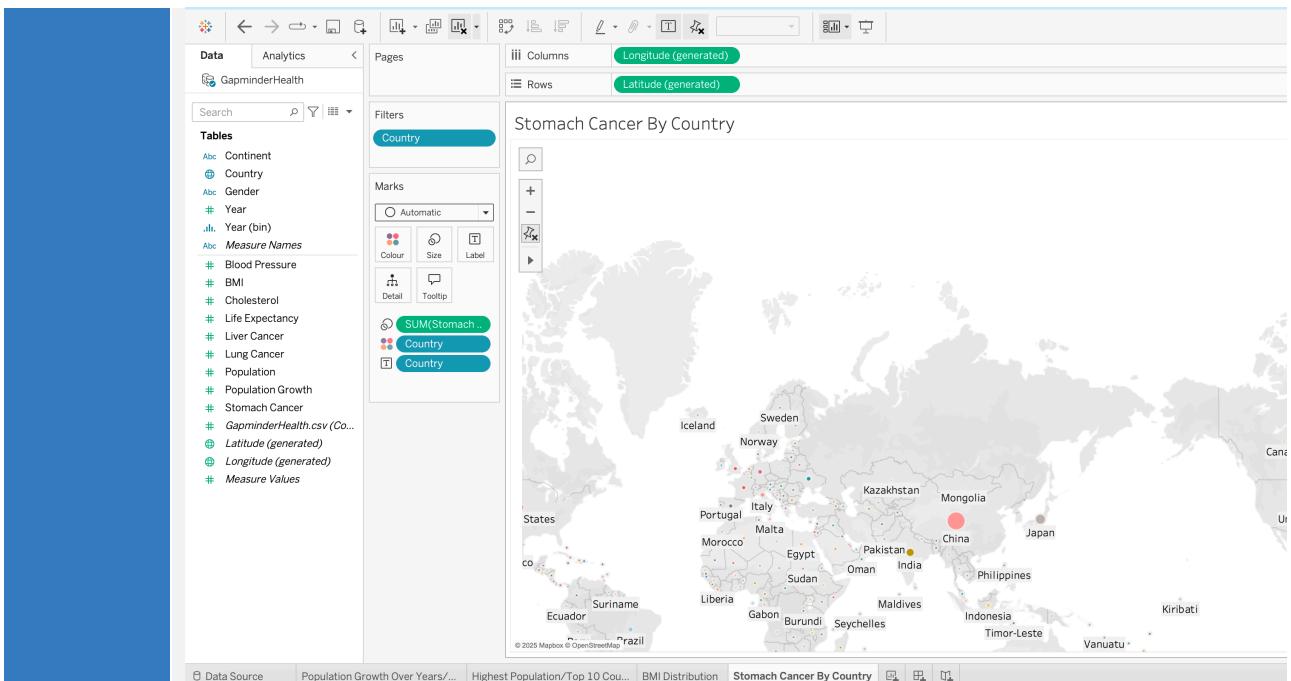
5) By clicking on the differently coloured shapes which each represent a continent the user is able to compare the number of cases of lung cancer with the number of cases of liver cancer in each continent.



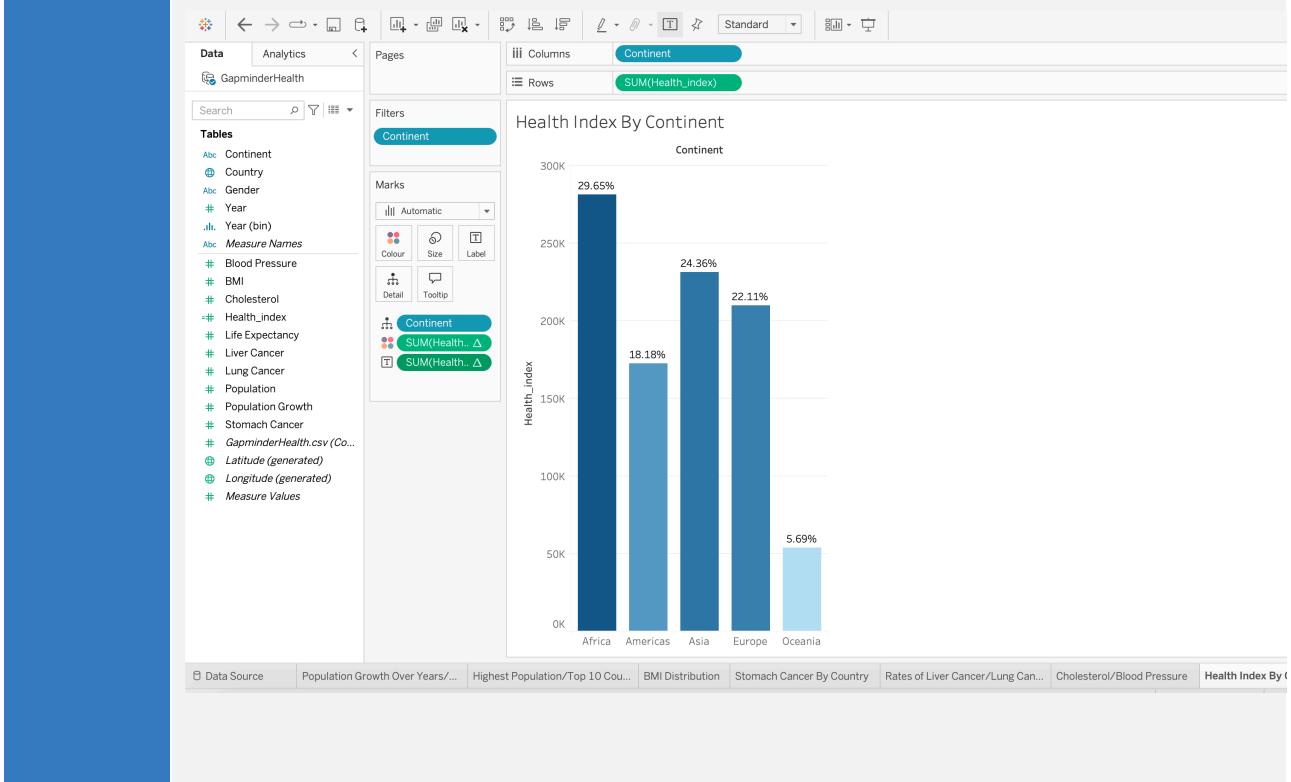
6) In this insight we can determine that there is a strong positive correlation between cholesterol and blood pressure. This means that as cholesterol increases the blood pressure increases by similar rate

8) Using geographic coordinates, we as the user can evaluate that the country with the highest number of cases of stomach cancer is China

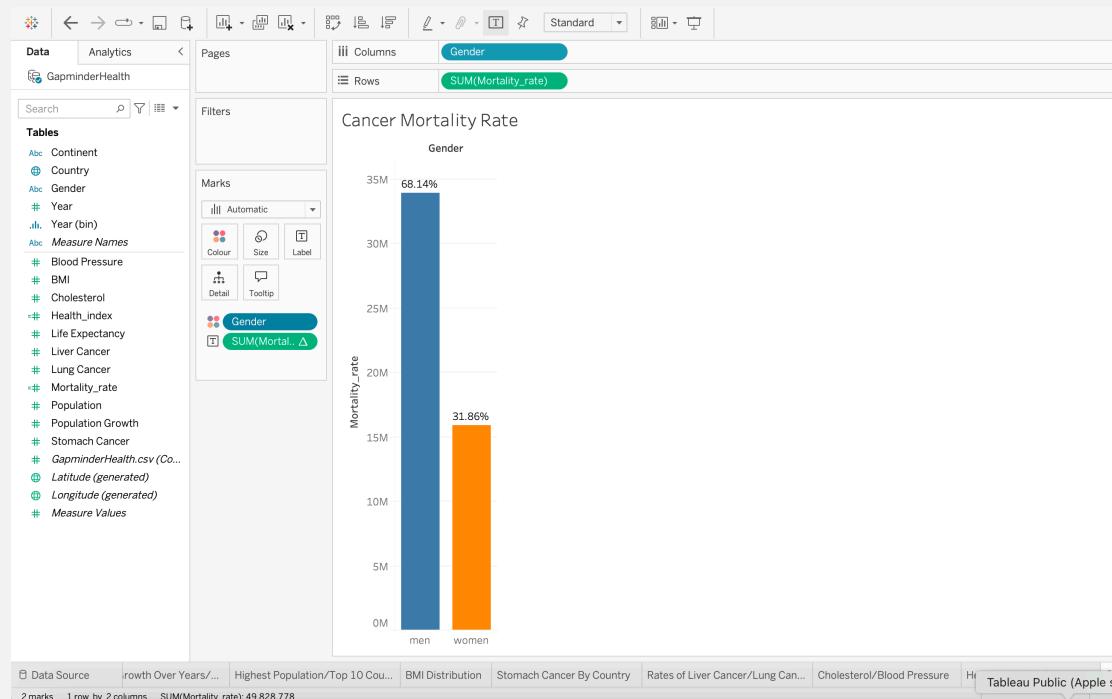




11) Throughout the continents, it can be seen that Africa has the highest Health Index whereas Oceania has the lowest.

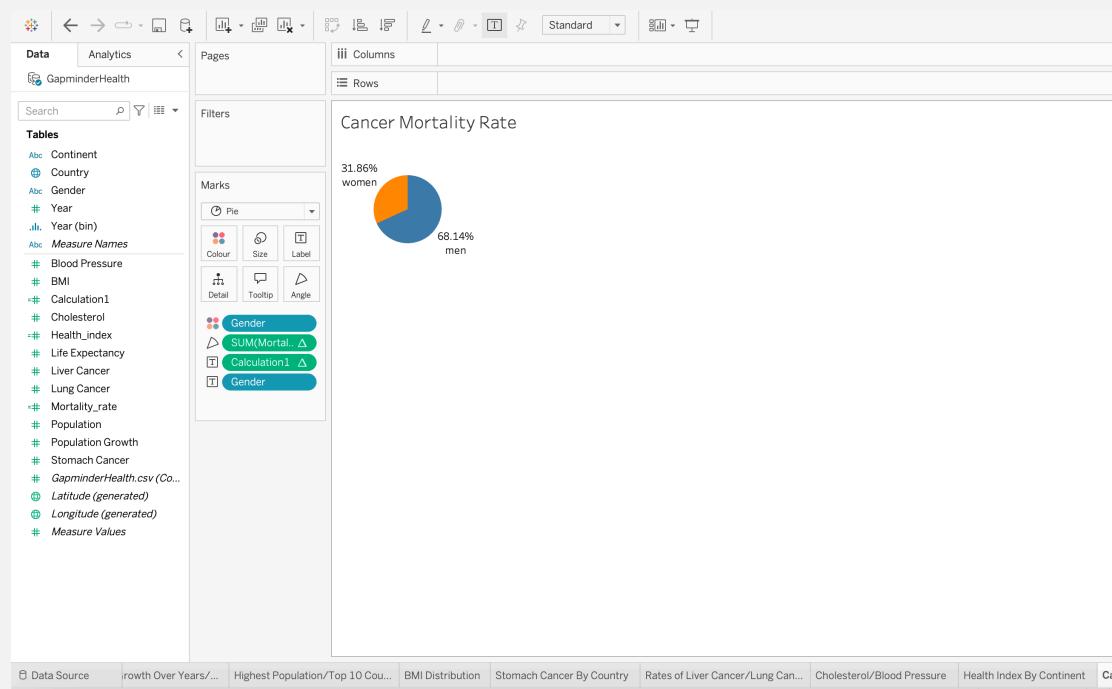


13).



Through the use of calculations, we can determine that men have a higher mortality rate, when it comes to cancer compared to women

### 13)Pie Chart



What did you find and any reflections on how the NHS could use this?

By using these analysis', we can see that the NHS can use it to help them have a better vision in the life expectancy due to reduction in death, however we can add a chart including cardiovascular disease which has a big impact in the mortality rate as well as cancer.

By looking after people and how to guide them to have a healthy lifestyle.

Improvements to pathways could lead to improvements in efficiency.

Work on pathways could result in hospitals being able to discharge patients sooner through better use of social care or better use of primary care avoiding demand for emergency care.

## 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"

# 1)Get data in power BI desktop using a Hands on lab

The screenshot shows the Power BI Desktop interface with the following details:

- File** tab selected.
- Queries [8]** pane on the left lists: DimEmployee, DimEmployeeSalesTerritory, DimProduct, DimReseller, DimSalesTerritory, FactResellerSales, ResellerSalesTargets, and **ColorFormats**.
- Transform** ribbon tab selected.
- Table.TransformColumnTypes** step is highlighted in the **APPLIED STEPS** pane.
- Properties** pane shows the **Name** is set to **ColorFormats**.
- ColorFormats.csv** file is open in the preview pane.
- Instructions** and **Resources** tabs are visible on the right.
- Lab complete**, **Congratulations**, and **You have successfully completed the lab as Complete.** messages are displayed.

Paste your completed lab here

Color	Background Color Format	Font Color Format
1 Color	#000000	#FFFFFF
2 Black	#0000FF	#FFFFFF
3 Blue	#808080	#FFFFFF
4 Grey	#BCBFBF	#000000
5 Multi	#DCDCDC	#000000
6 NA	#FF0000	#FFFFFF
7 Red	#COCOCO	#000000
8 Silver	#696969	#FFFFFF
9 Silver/Black	#FFFFFF	#000000
10 White	#FFFF00	#000000
11 Yellow		



## Day 3: Task 2

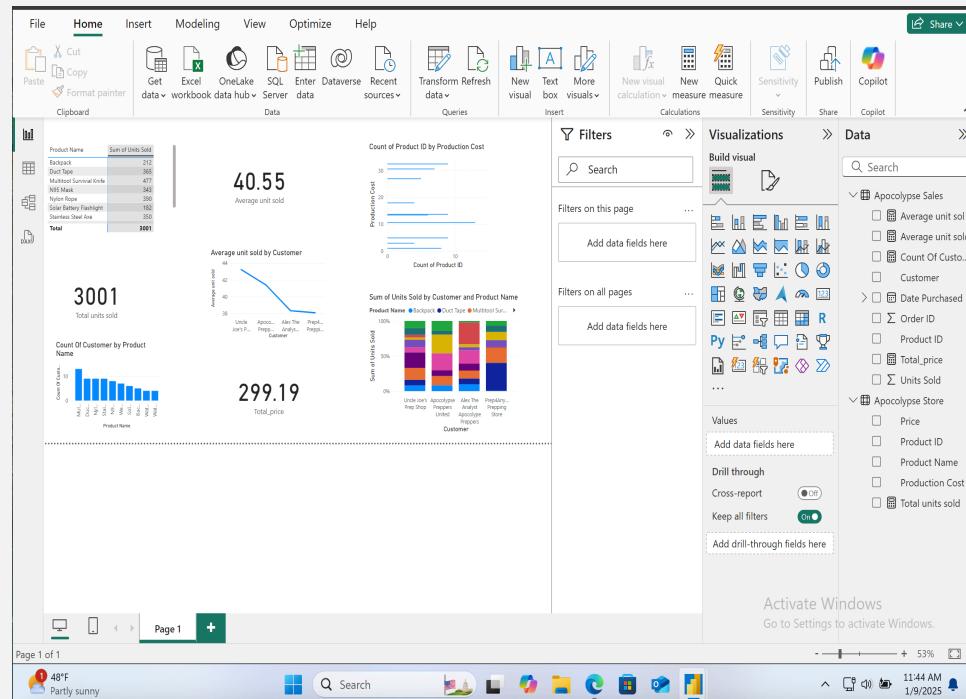
Please complete Lab 2 'Load Transformed Data in Power BI Desktop'. Once complete, paste a print screen below and in the collaboration board.

"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"

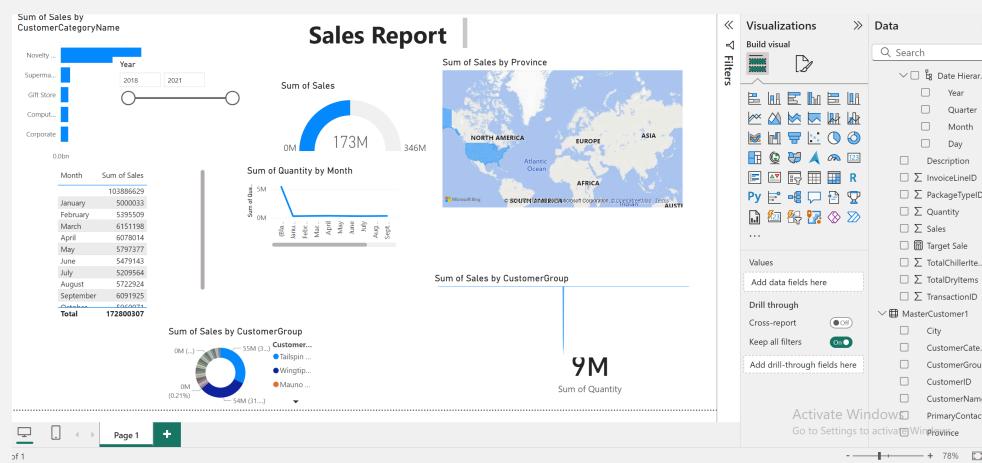
2) Load transformed data in Power BI desktop using Hands on lab

Paste your completed lab here

This is a practice report which overall shows the sum of unit sold.



This is another practice which has been demonstrated.



## Create visual calculations on Power BI Desktop using Microsoft lab.

The screenshot shows a Power BI desktop interface with a dashboard containing two bar charts and a message card:

- Top Card:** Sum of Sales (\$8,658.4M), Target (\$8,650.0M), Variance (\$8,484.4M), Variance Margin (0.10%).
- Left Chart:** "Sum of Sales and Target by Month" comparing actual sales to target for each month from 2018 Mar to 2019 Jun.
- Right Chart:** "Sum of Sales and Target" showing monthly sales volume from 2018 Jul to 2019 Jun.
- Message Card:** A red message: "Severe winter storms moving across the United States may impact customer service response times. Thank you in advance for your patience."

Task list on the right side:

27. At the top-right on the menu bar, select **View**, and then select **Full Screen**.
28. Interact with the page by modifying the slicer, and cross filtering the page.
29. At the bottom of the window, notice the commands to change page, navigate backwards or forwards between pages, or to exit full screen mode.

Activation status: 96% Tasks Complete



## 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

The screenshot shows a Power BI report titled "Adventure Works". It contains three main visualizations:

- Sum of Sales and Profit Margin by Month:** A dual-axis chart showing monthly sales volume and profit margin. The left Y-axis is "Sum of Sales" (\$0.0M to \$0.3M) and the right Y-axis is "Profit Margin" (-20% to 0%).
- Sum of Sales by Region and Category:** A stacked bar chart showing sales by region (Australia, Canada, Central, France, Germany, North, Northwest, Southwest, Southeast, Southwest, United Kingdom) and category (Accessories, Bikes, Clothing, Components).
- Sum of Quantity by Category:** A horizontal bar chart showing the quantity of items sold by category (Bikes, Clothing, Components, Accessories).

The report interface includes a navigation bar at the top, a search bar, and a sidebar on the right containing instructions, resources, and a list of 20 tasks related to report design. A green banner at the top right indicates "59 Minutes Remaining".



## 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"

Paste your completed lab here

Creating a Power BI Dashboard, this is a screenshot taken from my workplace in my Power BI Desktop.

Sales, Profit Margin  
BY MONTH • REFRESHED: 30 SECONDS AGO  
● Sales ● Profit Margin

Sales YTD  
FY2020

\$33M

Sales, Profit Margin  
are missing. If you see this message, press F5 to refresh the browser.

● Sales ● Profit Margin

2019 Jul Aug Sep Oct Nov Dec 2020 Jan Feb Mar Apr May Jun

Month

0%  
-5%

Instructions Resources Help

2. In the Sales, Profit Margin tile, in line with the subtitle, notice that the data was Refreshed: NOW.

3. Notice also that there's now a column for 2020 Jun.

If you don't see the June 2020 data, you might need to press F5 to reload the web browser.

Lab complete

Congratulations

You have successfully completed this lab. Click End to mark the lab as Complete.

100% Tasks Complete



## 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.**

