Just IT

B2W group

Apprenticeships | Training | Recruitment

Data Technician

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'.

Different Tableau versions

Tableau Versions Overview

Version	Primary Use	Key Features	Limitations
Tableau Desktop	Data analysis & dashboard creation	- Full data connectivity- Advanced analytics- Local saves- Primary tool for analysts	- Licensed software- No built-in collaboration (requires Tableau Server/Cloud to share)

Tableau Server	Self-hosted sharing & collaboration	- Enterprise deployment- User access control- Dashboard sharing- Automation	- Requires infrastructure & IT setup- Higher maintenance burden
Tableau Cloud	Cloud-hosted sharing & collaboration	- Fully managed by Tableau (Salesforce)- Similar features as Server- Scalable, no hosting needed	- Subscription pricing- Data residency concerns (for regulated industries)
Tableau Prep	Data cleaning & preparation	- Easy drag-and-drop data transformation- Integrates with Desktop/Server	- Not for visualization- Requires separate install or license
Tableau Public	Free data visualization (public only)	- Free version- Publish to Tableau Public gallery- Great for learning, blogging	- Only public dashboards- Limited data source support- No automation or security

Tableau Public Limitations

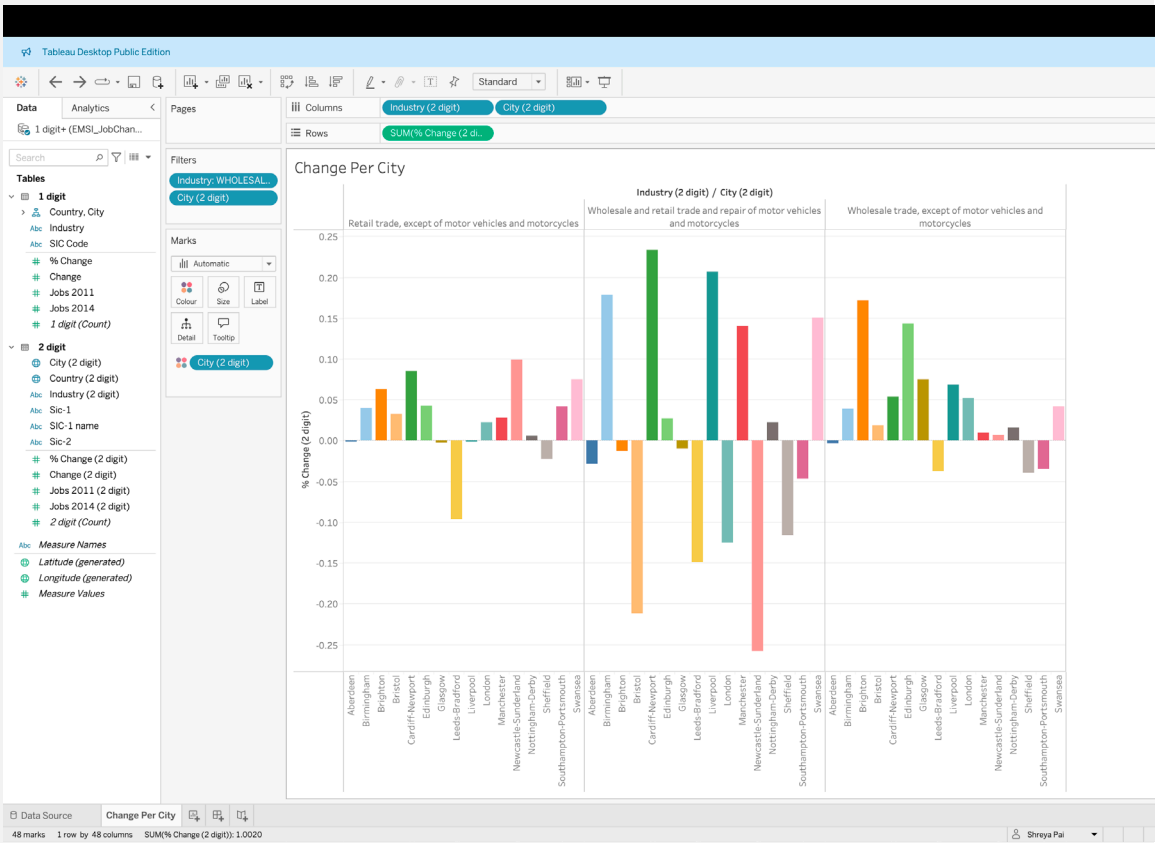
- **Only public dashboards** (no private saves)-can't handle **sensitive or proprietary data.**
- **Limited data sources** (e.g. Excel, CSV, Google Sheets)-(Dependability)Need for **database connectivity**, cloud platforms, or live data sources beyond Google Sheets.
- **No database/cloud connections**
- **No user access control or collaboration-**Require **collaboration tools, version control, user-based access permissions**, or enterprise governance.
- **No scheduling or automation-**Require **automated refresh**, scheduling of dashboards, or live connections.

- **Limited storage (~10 GB)**

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 screen here



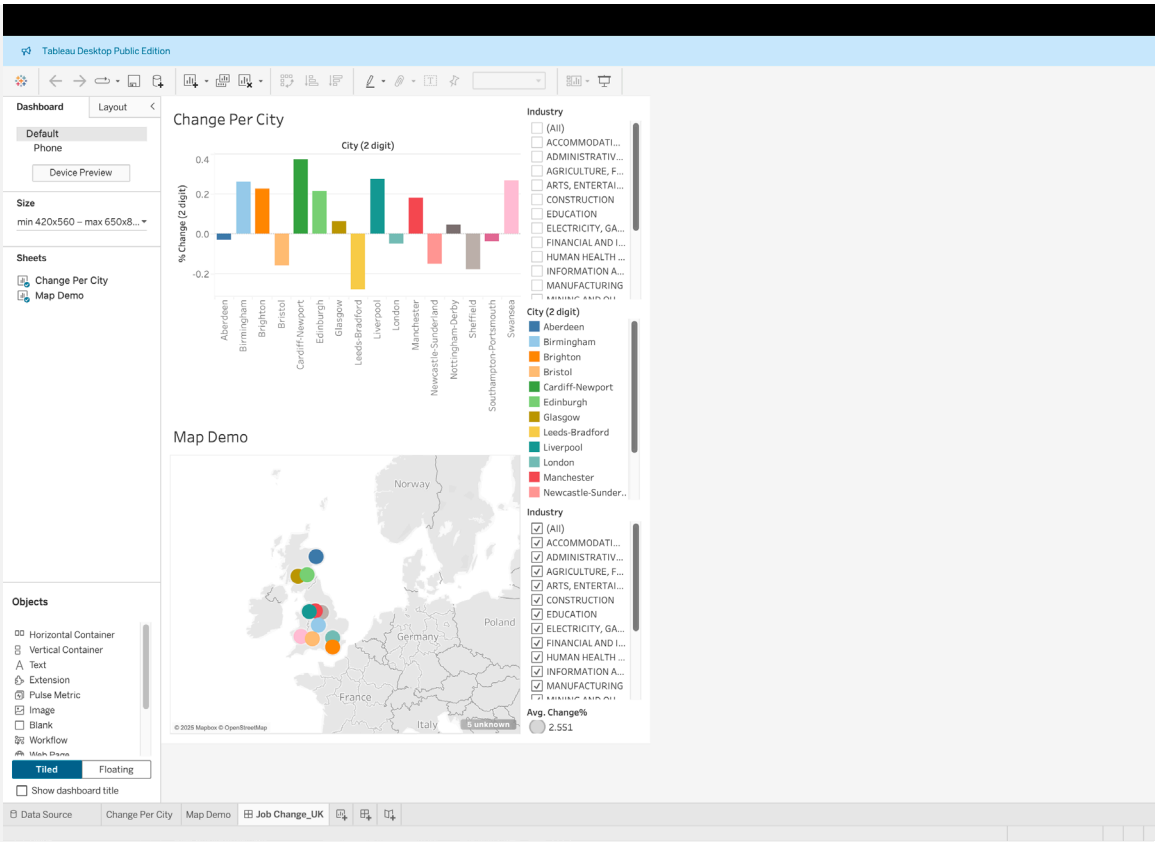


Tableau Desktop Public Edition
Change Per City
City (2 digit)
% Change (2 digit)
Map Demo
Industry
City (2 digit)
Objects
Data Source
Change Per City
Map Demo
Job Change_UK

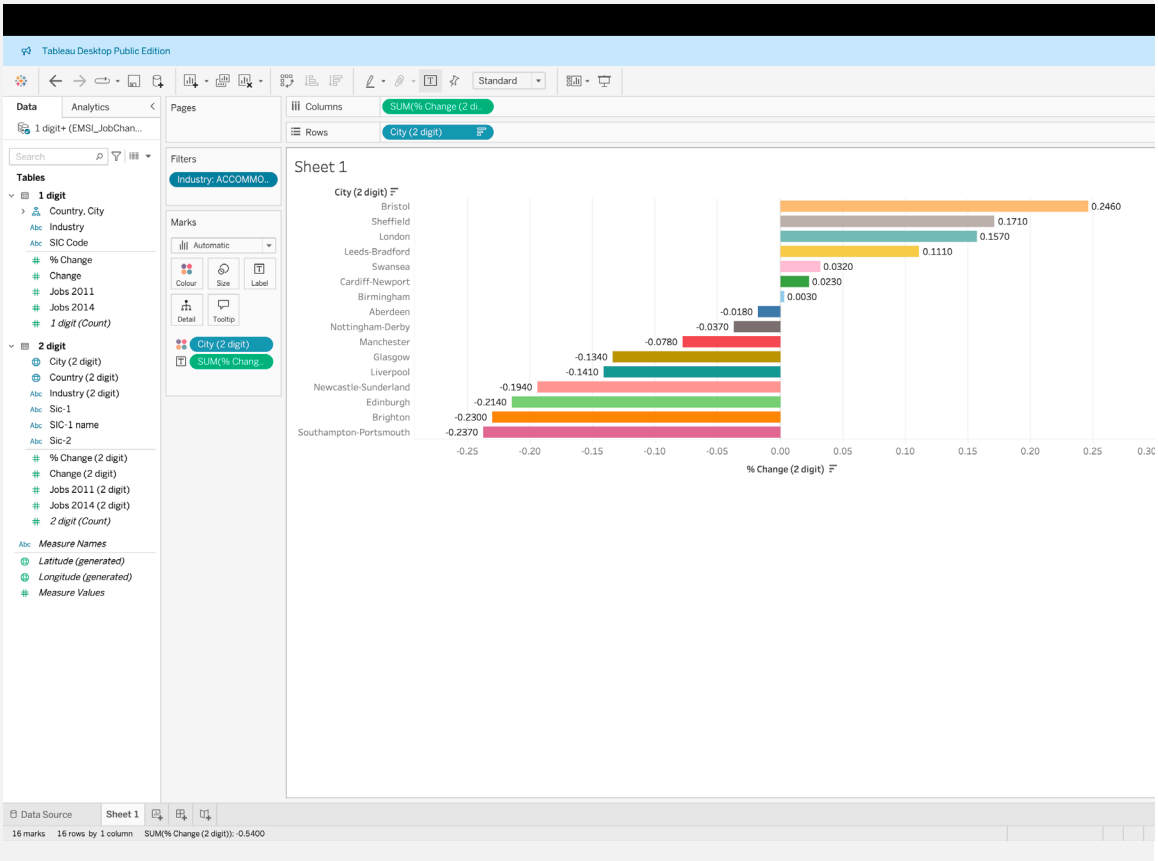


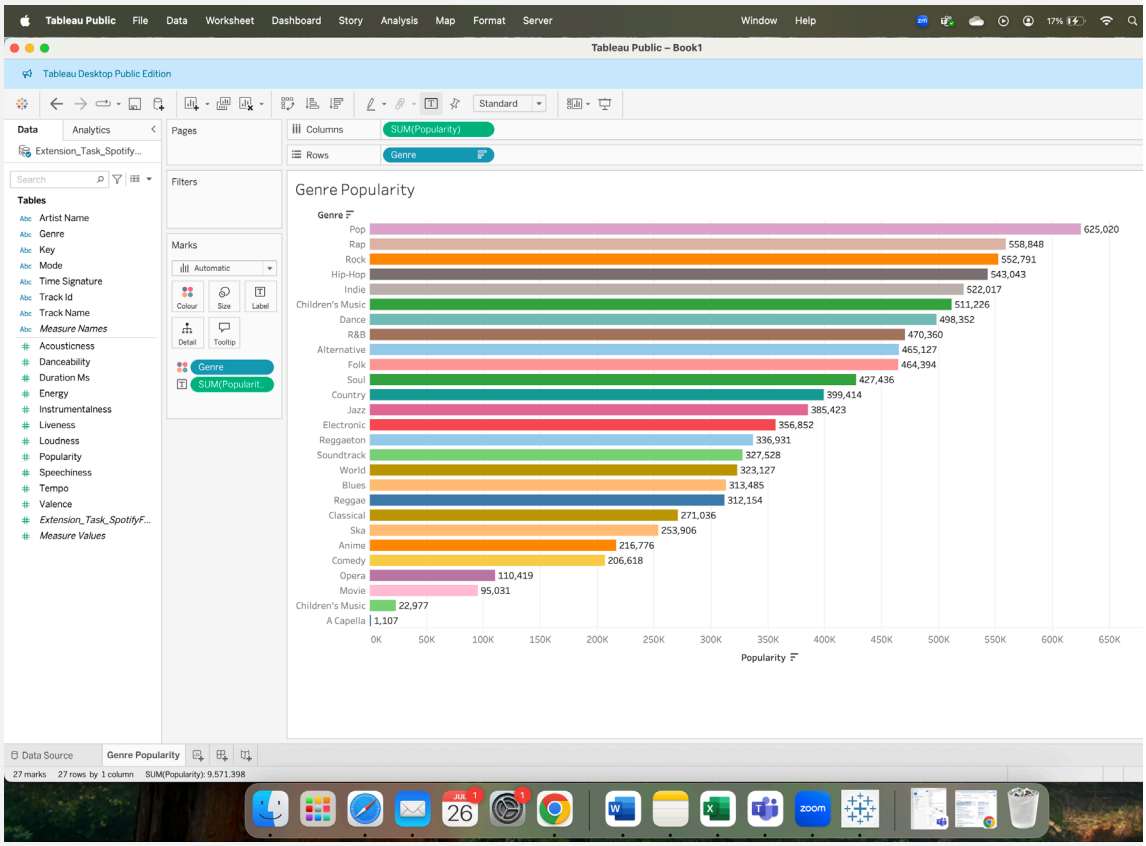
Tableau Desktop Public Edition
Sheet 1
Columns
Rows
Pages
Filters
Marks
Data Source
Sheet 1

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



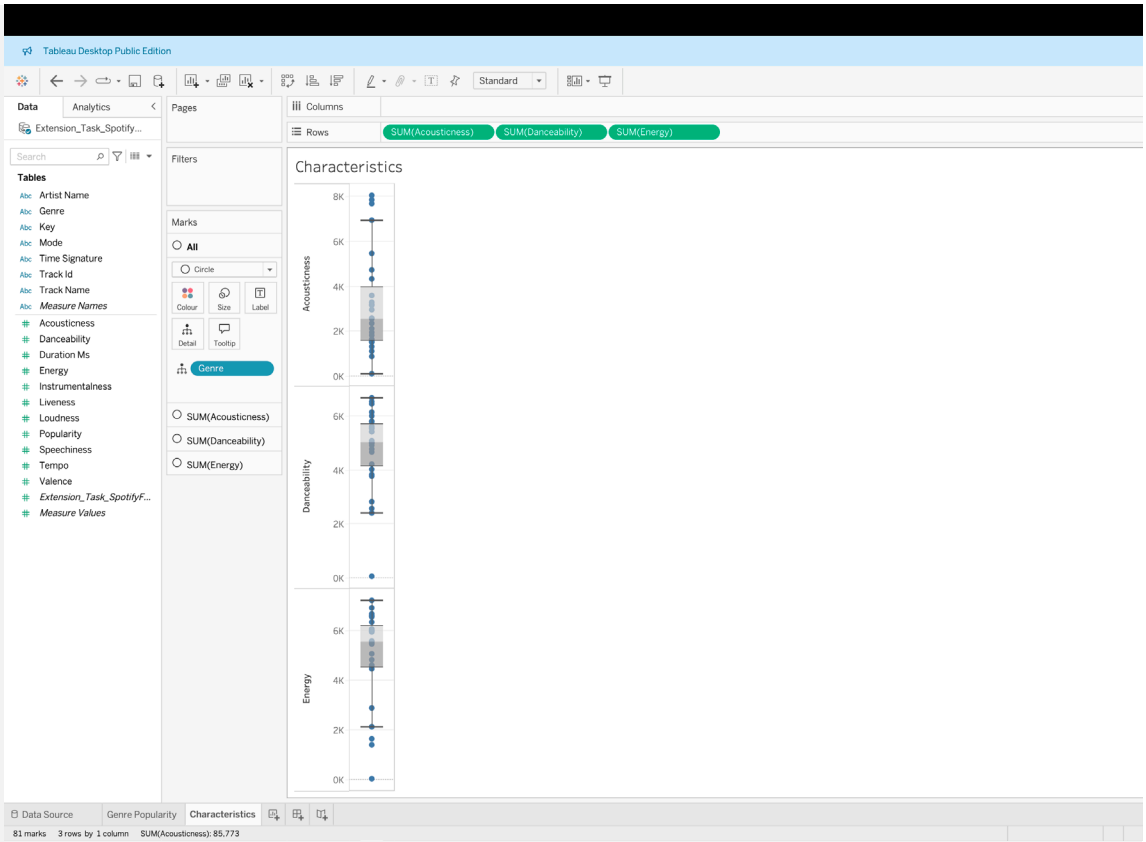


Tableau Desktop Public Edition
Standard
Data
Analytics
Extension_Task_Spotify...
Search
Tables
Abc Artist Name
Abc Genre
Abc Key
Abc Mode
Abc Time Signature
Abc Track Id
Abc Track Name
Abc Measure Names
Acousticness
Danceability
Duration Ms
Energy
Instrumentalness
Liveness
Loudness
Popularity
Speechiness
Tempo
Valence
Extension_Task_SpotifyF...
Measure Values
Pages
Filters
Marks
All
Circle
Colour
Size
Label
Detail
Tooltip
Genre
SUM(Acousticness)
SUM(Danceability)
SUM(Energy)
Columns
Rows
SUM(Acousticness)
SUM(Danceability)
SUM(Energy)
Characteristics
Acousticness
Danceability
Energy
8K
6K
4K
2K
0K
Data Source
Genre Popularity
Characteristics
81 marks
3 rows by 1 column
SUM(Acousticness): 85.773

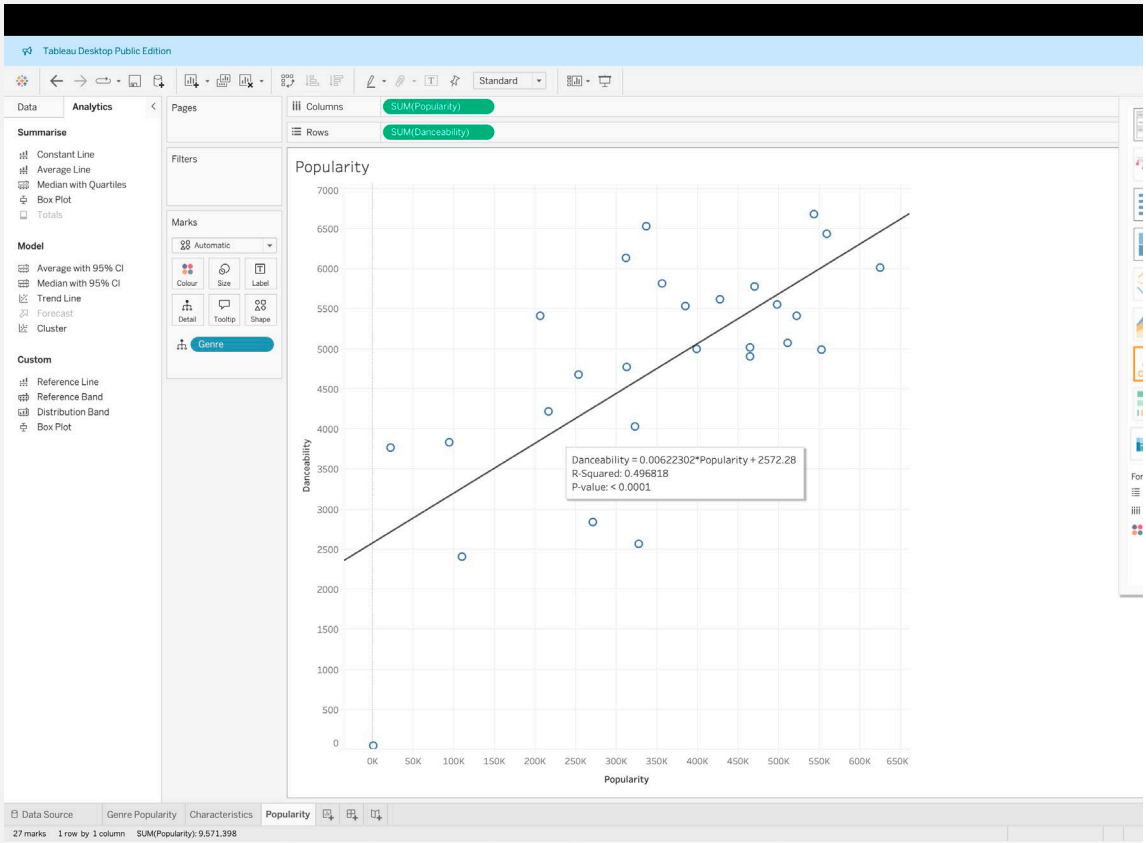


Tableau Desktop Public Edition
Standard
Data
Analytics
Summarise
Constant Line
Average Line
Median with Quartiles
Box Plot
Totals
Model
Average with 95% CI
Median with 95% CI
Trend Line
Forecast
Cluster
Custom
Reference Line
Reference Band
Distribution Band
Box Plot
Pages
Filters
Marks
Automatic
Colour
Size
Label
Detail
Tooltip
Shape
Genre
Columns
SUM(Popularity)
Rows
SUM(Danceability)
Popularity
Danceability = 0.00622302*Popularity + 2572.28
R-Squared: 0.496818
P-value: < 0.0001
Danceability
Popularity
7000
6500
6000
5500
5000
4500
4000
3500
3000
2500
2000
1500
1000
500
0
0K
50K
100K
150K
200K
250K
300K
350K
400K
450K
500K
550K
600K
650K
Data Source
Genre Popularity
Characteristics
Popularity
27 marks
1 row by 1 column
SUM(Popularity): 9,571,398

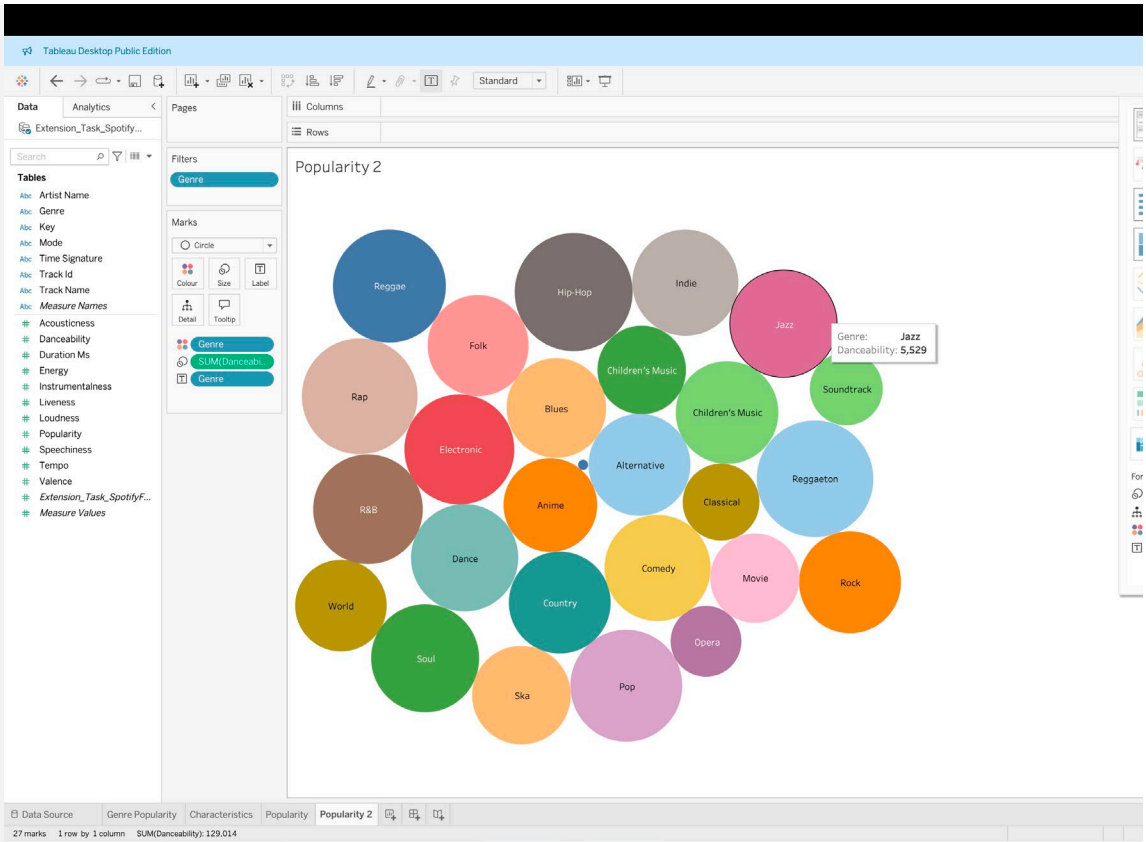


Tableau Desktop Public Edition
Popularity 2
Reggae
Hip-Hop
Indie
Jazz
Folk
Children's Music
Rap
Blues
Children's Music
Soundtrack
Electronic
Alternative
Reggaeton
R&B
Anime
Classical
Dance
Comedy
Movie
Rock
World
Country
Opera
Soul
Ska
Pop
Genre: Jazz
Danceability: 5,529

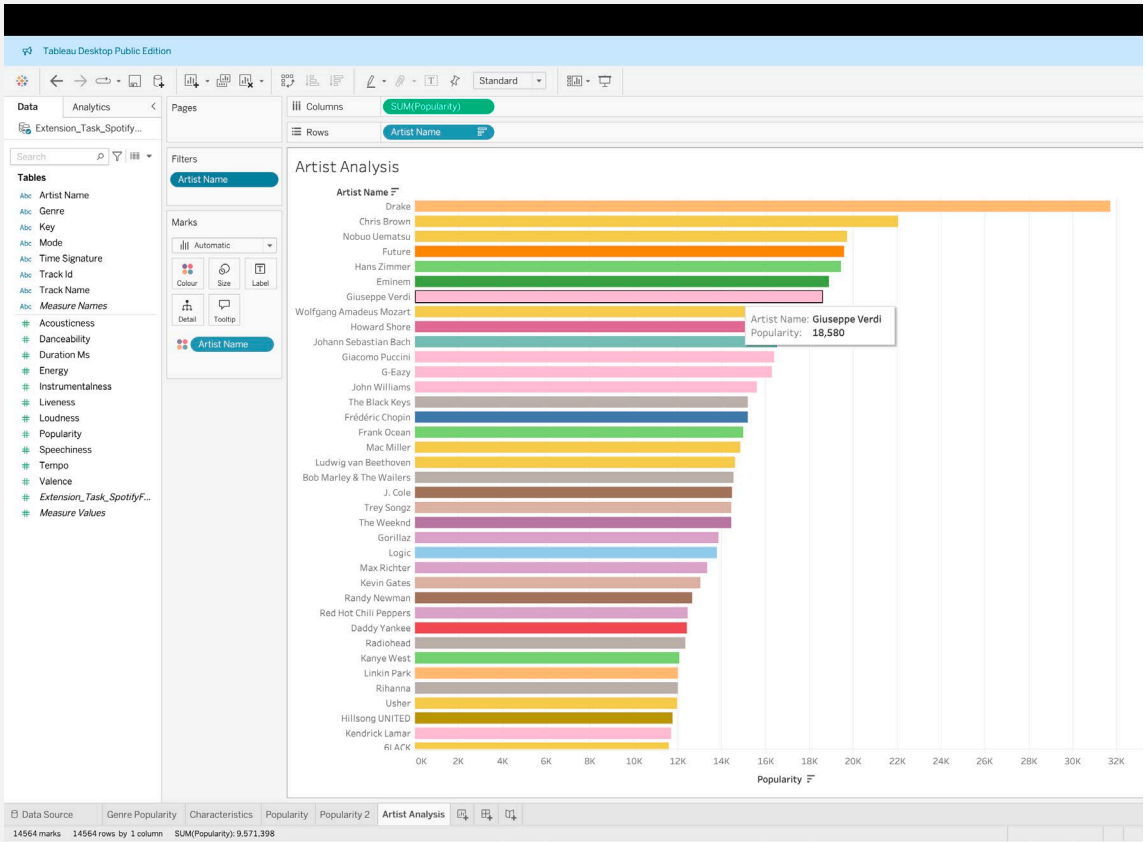


Tableau Desktop Public Edition
Artist Analysis
Artist Name: Giuseppe Verdi
Popularity: 18,580
Popularity

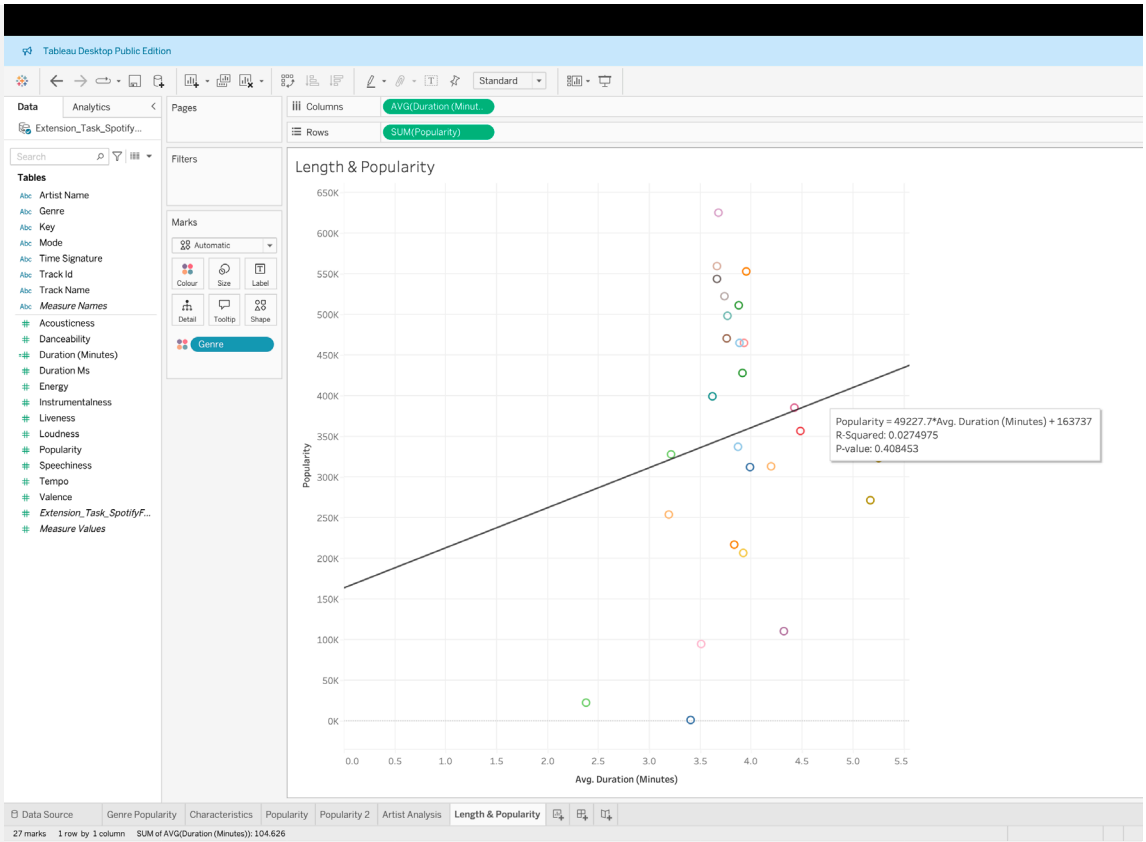


Tableau Desktop Public Edition
Length & Popularity
Popularity = 49227.7*Avg. Duration (Minutes) + 163737
R-Squared: 0.0274975
P-value: 0.408453
Popularity
Avg. Duration (Minutes)

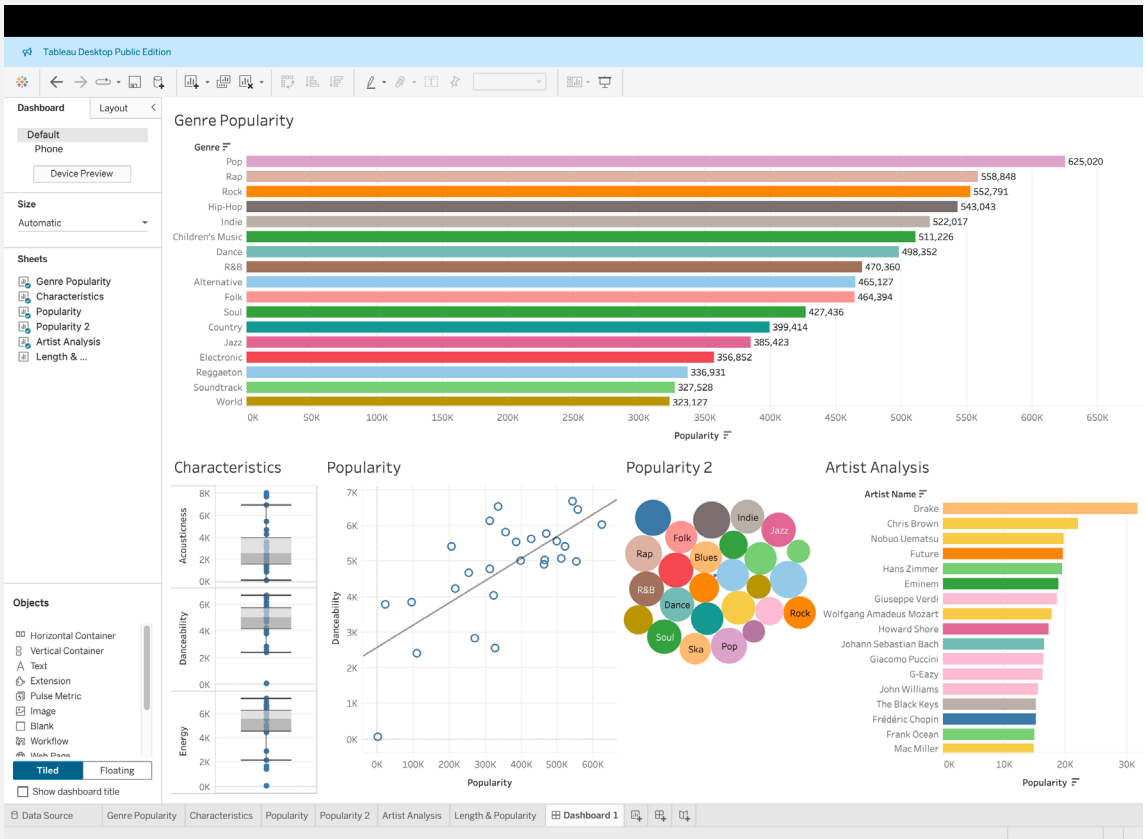


Tableau Desktop Public Edition
Genre Popularity
Pop 625,020
Rap 558,848
Rock 552,791
Hip-Hop 543,043
Indie 522,017
Children's Music 511,226
Dance 498,352
R&B 470,360
Alternative 465,127
Folk 464,394
Soul 427,436
Country 399,414
Jazz 385,423
Electronic 356,852
Reggaeton 336,931
Soundtrack 327,528
World 323,127
Characteristics
Popularity
Popularity 2
Artist Analysis

What did you find?

Spotify Trends- Spotify dataset to see what types of music are really connecting with people.

1. Pop, Rap, and Rock Dominate

These three genres lead the pack, with **Pop** being the most popular overall, followed closely by **Rap** and **Rock**. This isn't surprising, but it confirms that if you want to reach a **broad, mainstream audience**, those genres are your safest bet.

2. Danceability and Energy = Hits

There's a clear trend: the more **danceable** and **energetic** a track is, the more likely it is to be popular. Tracks with a bit of bounce and energy tend to rise to the top — think songs you'd hear at the gym, on TikTok, or out with friends.

3. Not Just Pop Stars — Composers Are Popular Too

Surprisingly, artists like **Hans Zimmer**, **Nobuo Uematsu** (famous for video game music), and even **Mozart** are near the top in popularity. So it's not just radio hits — **soundtracks and instrumental music** have big audiences too.

4. Genres Cluster by Mood & Audience

Looking at how genres are grouped, we saw that **Pop, Rap, Hip-hop**, and **Dance** sit close together — they share a similar vibe and often attract the same listeners. Genres like **Jazz, Folk, and Blues** sit off to the side — more niche, but still valuable.

5. Acoustic and Low-Energy Music Has a Place Too

While most hits are upbeat, there's also demand for calmer, more acoustic tracks — especially in genres like **Indie**, **Folk**, and **Classical**.

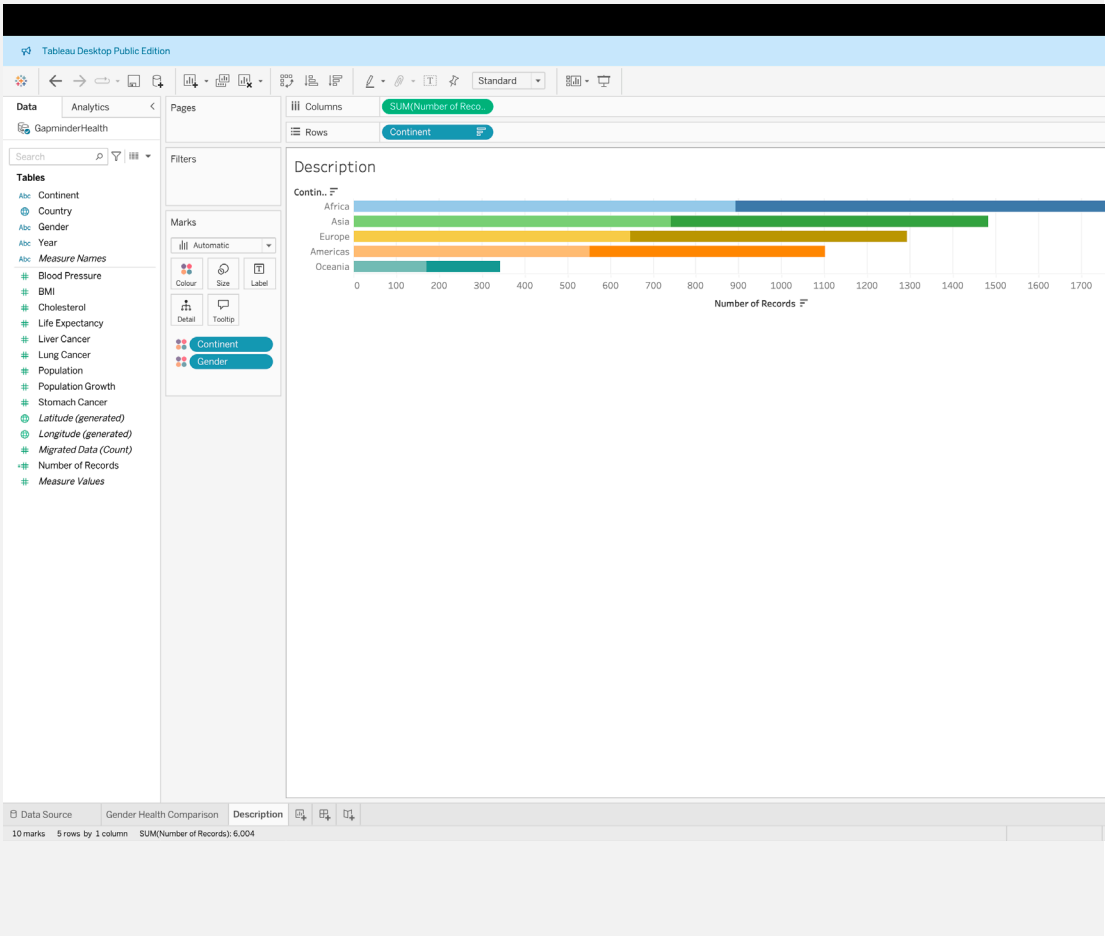
Day 2: Task 2

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



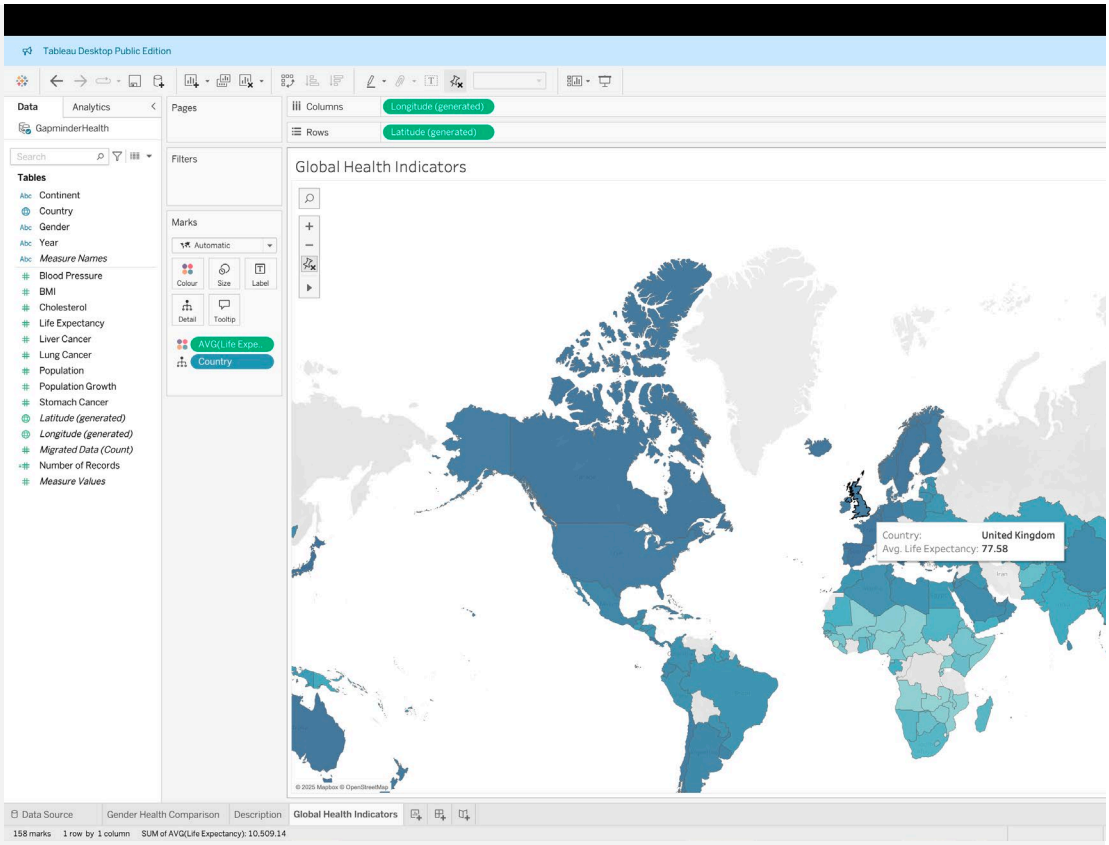


Tableau Desktop Public Edition
Data
Analytics
GapminderHealth
Tables
Continent
Country
Gender
Year
Measure Names
Blood Pressure
BMI
Cholesterol
Life Expectancy
Liver Cancer
Lung Cancer
Population
Population Growth
Stomach Cancer
Latitude (generated)
Longitude (generated)
Migrated Data (Count)
Number of Records
Measure Values
Pages
Filters
Marks
Automatic
Colour
Size
Label
Detail
Tooltip
AVG(Life Expe..
Country
Columns
Longitude (generated)
Rows
Latitude (generated)
Global Health Indicators
Country: United Kingdom
Avg. Life Expectancy: 77.58
Data Source
Gender Health Comparison
Description
Global Health Indicators
158 marks
1 row by 1 column
SUM of AVG(Life Expectancy): 10,509.14

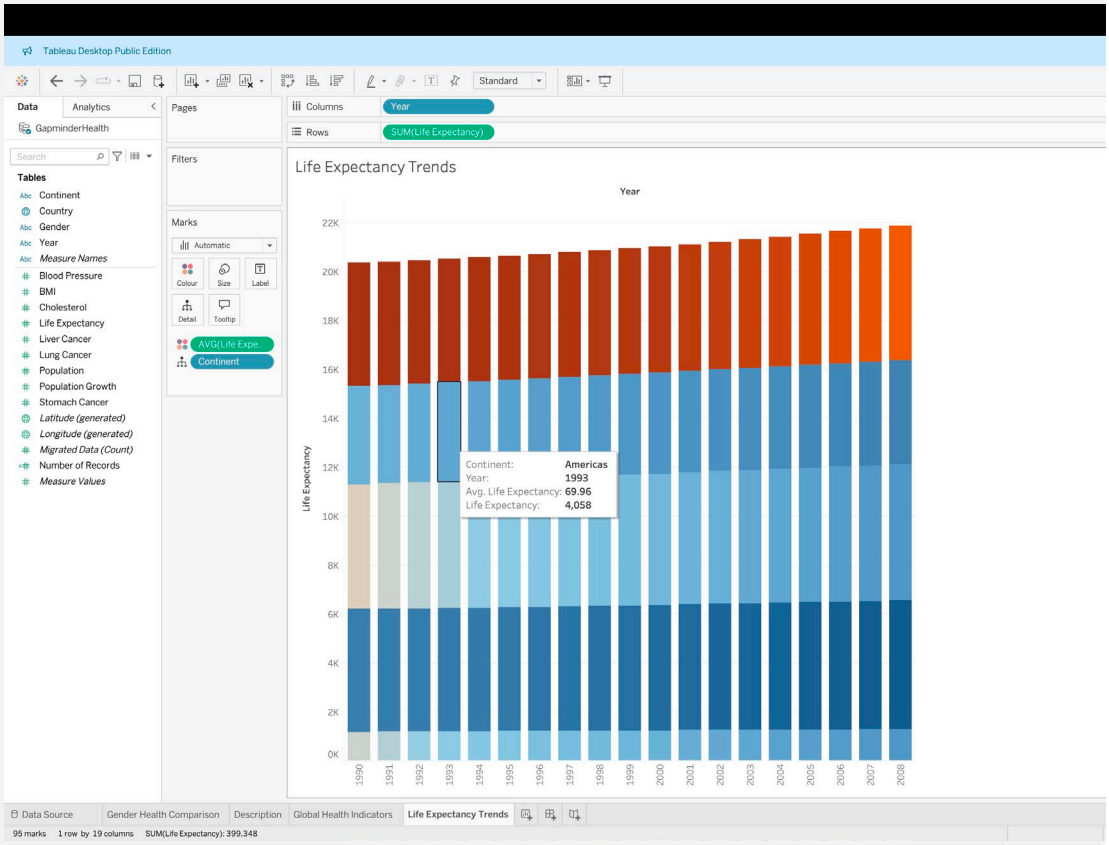


Tableau Desktop Public Edition
Standard
Data
Analytics
GapminderHealth
Tables
Continent
Country
Gender
Year
Measure Names
Blood Pressure
BMI
Cholesterol
Life Expectancy
Liver Cancer
Lung Cancer
Population
Population Growth
Stomach Cancer
Latitude (generated)
Longitude (generated)
Migrated Data (Count)
Number of Records
Measure Values
Pages
Filters
Marks
Automatic
Colour
Size
Label
Detail
Tooltip
AVG(Life Expe..
Continent
Columns
Year
Rows
SUM(Life Expectancy)
Life Expectancy Trends
Year
Life Expectancy
22K
20K
18K
16K
14K
12K
10K
8K
6K
4K
2K
0K
1990
1991
1992
1993
1994
1995
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
Continent: Americas
Year: 1993
Avg. Life Expectancy: 69.96
Life Expectancy: 4,058
Data Source
Gender Health Comparison
Description
Global Health Indicators
Life Expectancy Trends
95 marks
1 row by 19 columns
SUM(Life Expectancy): 399,348

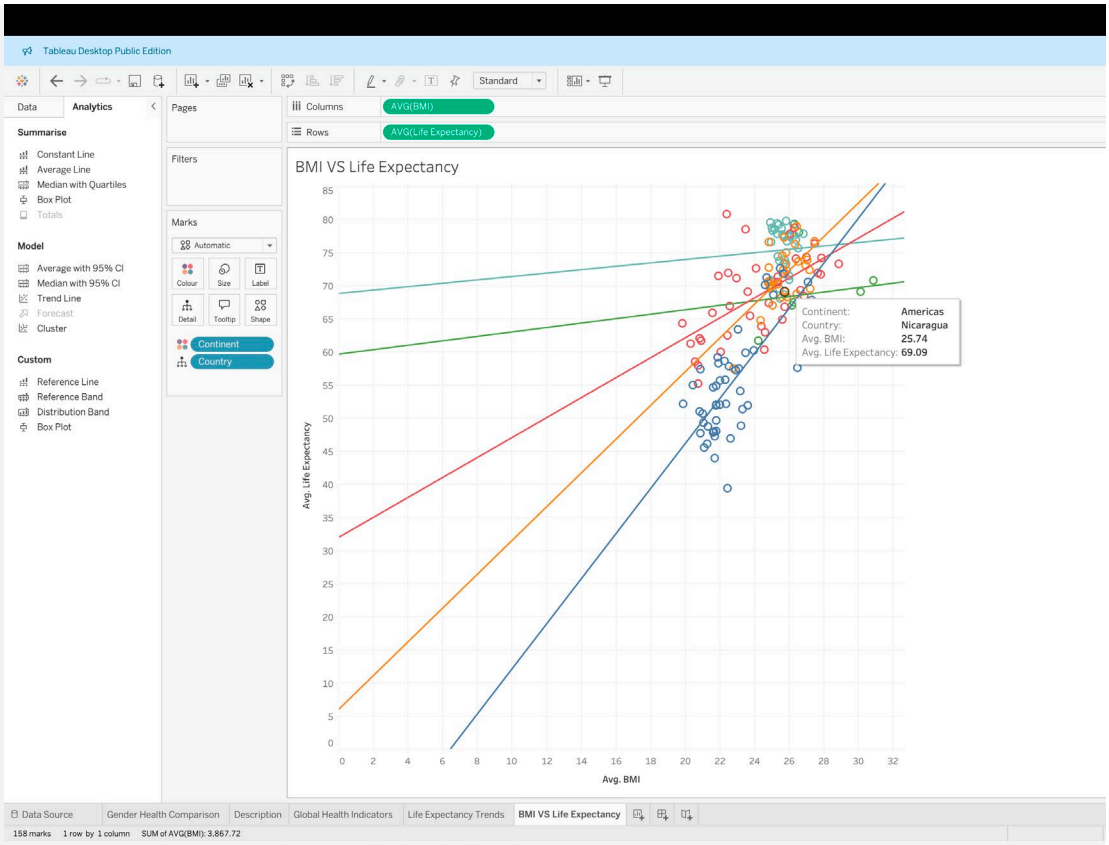


Tableau Desktop Public Edition
Data
Analytics
Summarise
Constant Line
Average Line
Median with Quartiles
Box Plot
Totals
Model
Average with 95% CI
Median with 95% CI
Trend Line
Forecast
Cluster
Custom
Reference Line
Reference Band
Distribution Band
Box Plot
Pages
Filters
Marks
Automatic
Colour
Size
Label
Detail
Tooltip
Shape
Continent
Country
Columns
AVG(BMI)
Rows
AVG(Life Expectancy)
BMI VS Life Expectancy
Continent: Americas
Country: Nicaragua
Avg. BMI: 25.74
Avg. Life Expectancy: 69.09
Avg. Life Expectancy
Avg. BMI
Data Source
Gender Health Comparison
Description
Global Health Indicators
Life Expectancy Trends
BMI VS Life Expectancy
158 marks
1 row by 1 column
SUM of AVG(BMI): 3,867.72

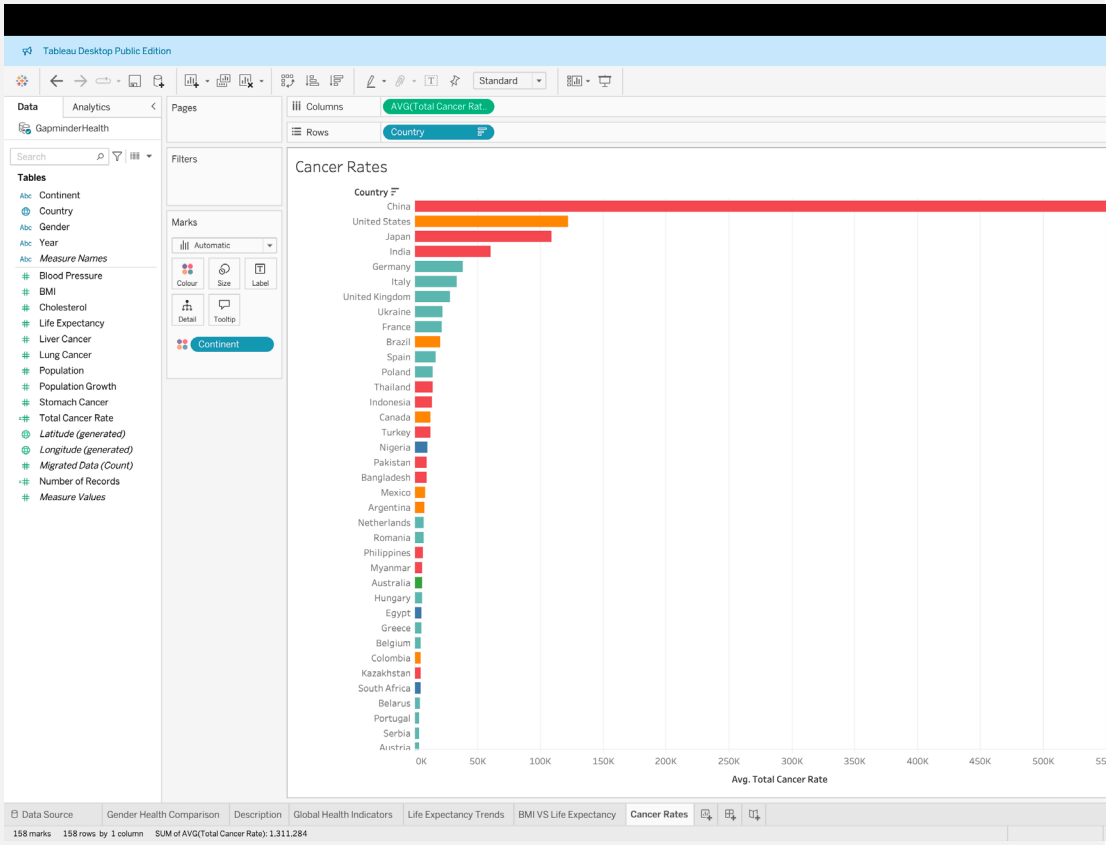


Tableau Desktop Public Edition
Data
Analytics
GapminderHealth
Search
Tables
Continent
Country
Gender
Year
Measure Names
Blood Pressure
BMI
Cholesterol
Life Expectancy
Liver Cancer
Lung Cancer
Population
Population Growth
Stomach Cancer
Total Cancer Rate
Latitude (generated)
Longitude (generated)
Migrated Data (Count)
Number of Records
Measure Values
Pages
Filters
Marks
Automatic
Colour
Size
Label
Detail
Tooltip
Continent
Columns
AVG(Total Cancer Rat..
Rows
Country
Cancer Rates
Country
China
United States
Japan
India
Germany
Italy
United Kingdom
Ukraine
France
Brazil
Spain
Poland
Thailand
Indonesia
Canada
Turkey
Nigeria
Pakistan
Bangladesh
Mexico
Argentina
Netherlands
Romania
Philippines
Myanmar
Australia
Hungary
Egypt
Greece
Belgium
Colombia
Kazakhstan
South Africa
Belarus
Portugal
Serbia
Austria
0K
50K
100K
150K
200K
250K
300K
350K
400K
450K
500K
Avg. Total Cancer Rate
Data Source
Gender Health Comparison
Description
Global Health Indicators
Life Expectancy Trends
BMI VS Life Expectancy
Cancer Rates
158 marks
158 rows by 1 column
SUM of AVG(Total Cancer Rate): 1,311.284

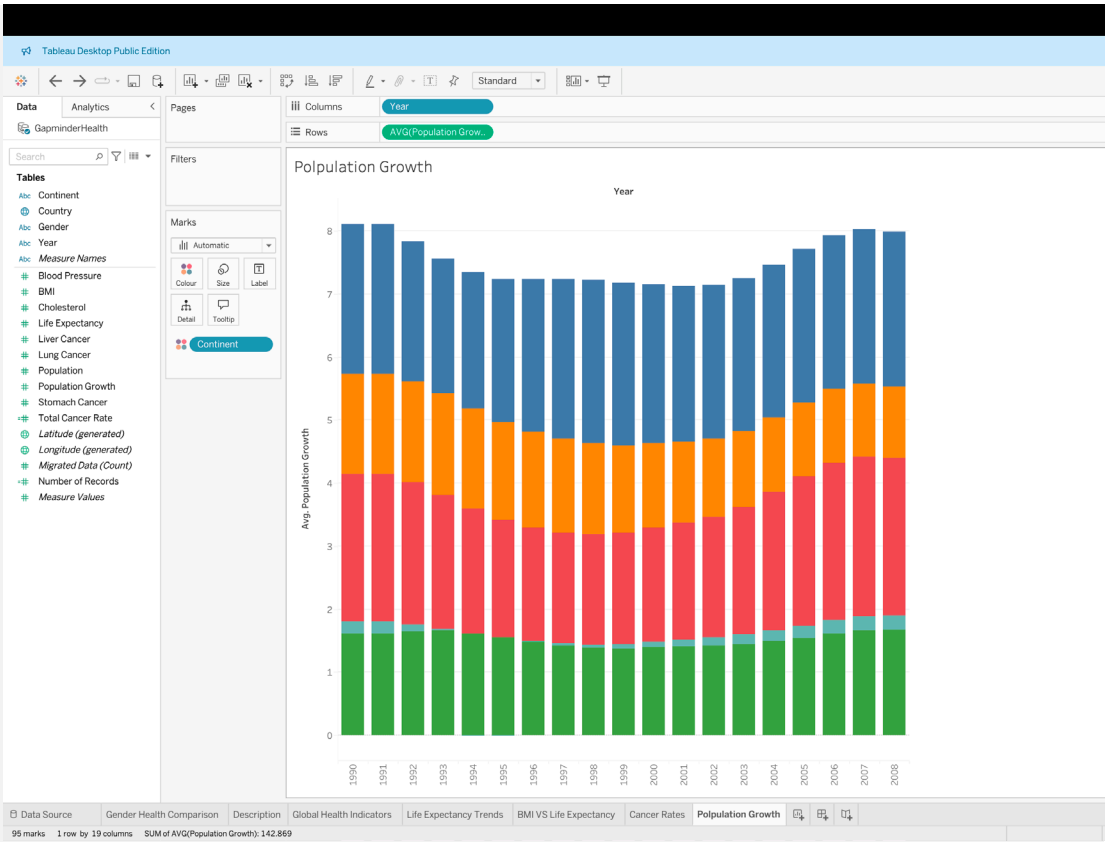


Tableau Desktop Public Edition
Data
Analytics
GapminderHealth
Tables
Continent
Country
Gender
Year
Measure Names
Blood Pressure
BMI
Cholesterol
Life Expectancy
Liver Cancer
Lung Cancer
Population
Population Growth
Stomach Cancer
Total Cancer Rate
Latitude (generated)
Longitude (generated)
Migrated Data (Count)
Number of Records
Measure Values
Pages
Filters
Marks
Automatic
Colour
Size
Label
Detail
Tooltip
Continent
Columns
Year
Rows
AVG(Population Grow..
Polpulation Growth
Year
Avg. Population Growth
Data Source
Gender Health Comparison
Description
Global Health Indicators
Life Expectancy Trends
BMI VS Life Expectancy
Cancer Rates
Polpulation Growth
95 marks
1 row by 19 columns
SUM of AVG(Population Growth): 142.869

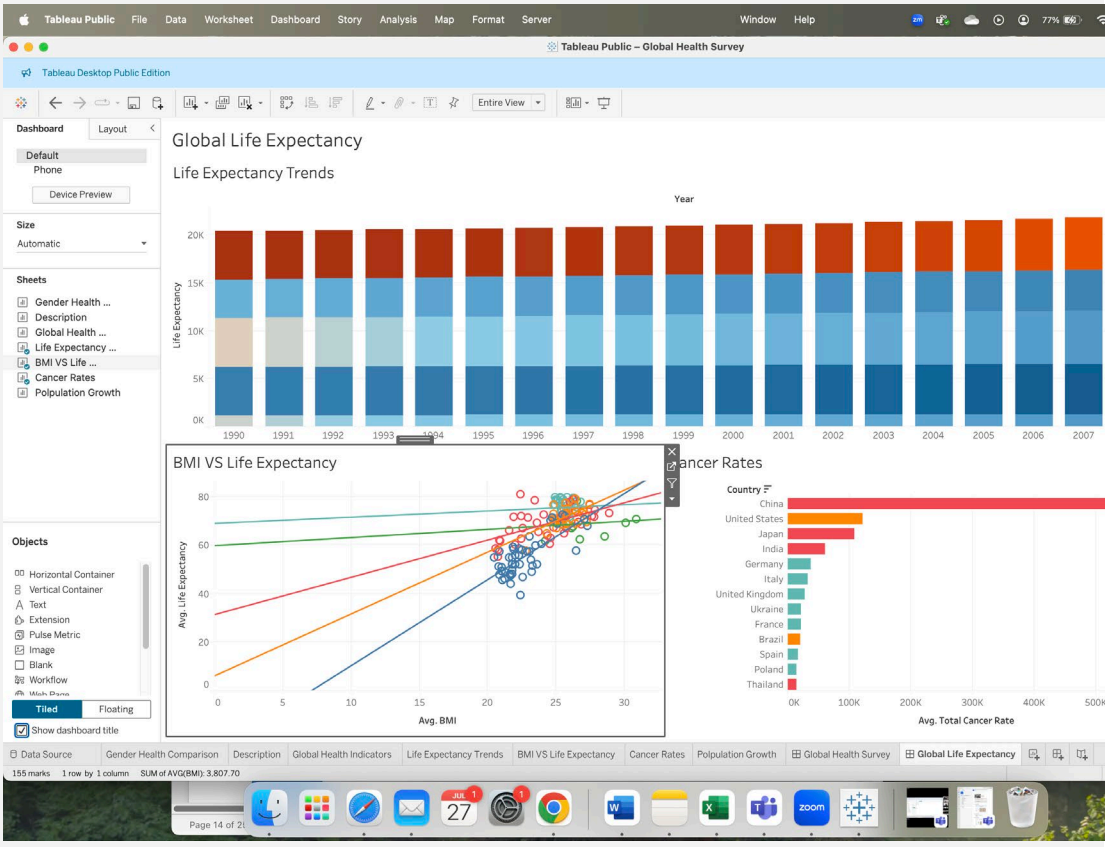
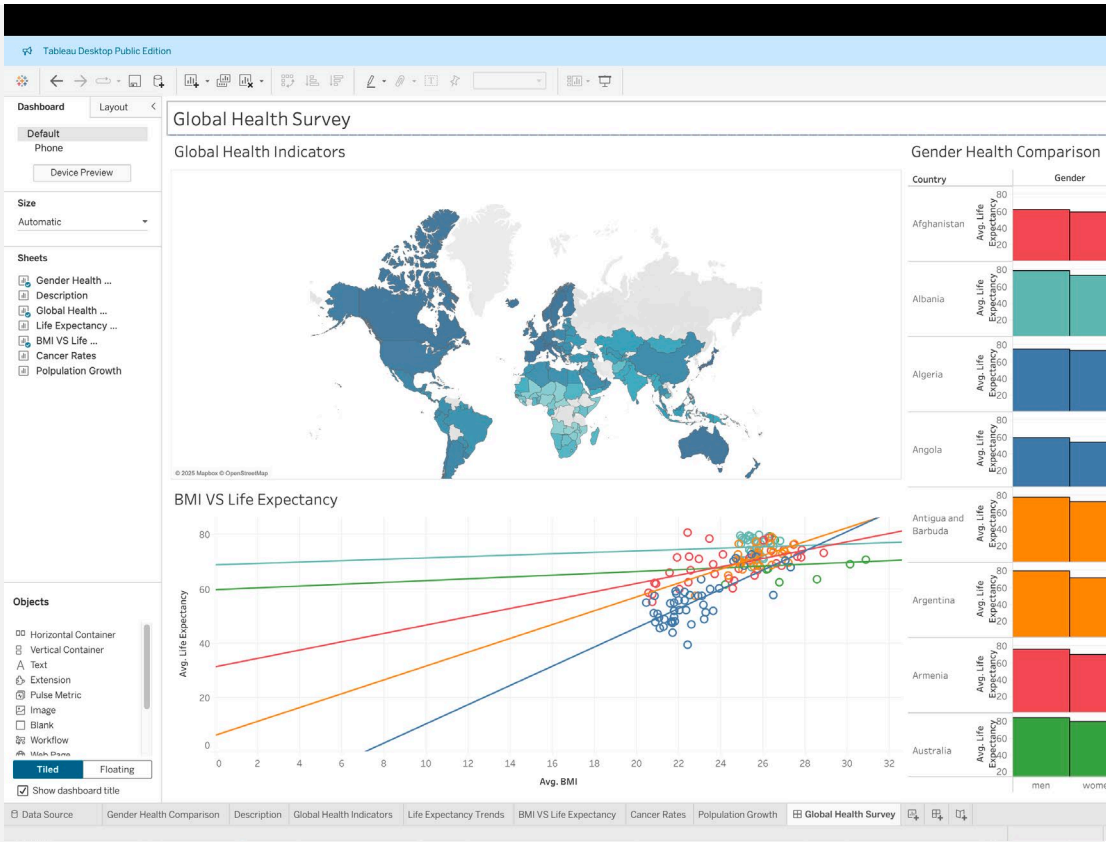


Tableau Public
File
Data
Worksheet
Dashboard
Story
Analysis
Map
Format
Server
Window
Help
Tableau Public – Global Health Survey
Tableau Desktop Public Edition
Entire View
Dashboard
Layout
Default
Phone
Device Preview
Size
Automatic
Sheets
Gender Health ...
Description
Global Health ...
Life Expectancy ...
BMI VS Life ...
Cancer Rates
Polpulation Growth
Objects
Horizontal Container
Vertical Container
Text
Extension
Pulse Metric
Image
Blank
Workflow
Tiled
Floating
Show dashboard title
Global Life Expectancy
Life Expectancy Trends
Year
Life Expectancy
BMI VS Life Expectancy
Avg. Life Expectancy
Avg. BMI
ancer Rates
Country
China
United States
Japan
India
Germany
Italy
United Kingdom
Ukraine
France
Brazil
Spain
Poland
Thailand
Avg. Total Cancer Rate
Data Source
Gender Health Comparison
Description
Global Health Indicators
Life Expectancy Trends
BMI VS Life Expectancy
Cancer Rates
Polpulation Growth
Global Health Survey
Global Life Expectancy
155 marks
1 row by 1 column
SUM of AVG(BMI): 3,807.70



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

Global Life Expectancy Trends:
The dashboard highlights a steady rise in life expectancy from 1990 to 2008 across most continents, with each region contributing differently to this global improvement.

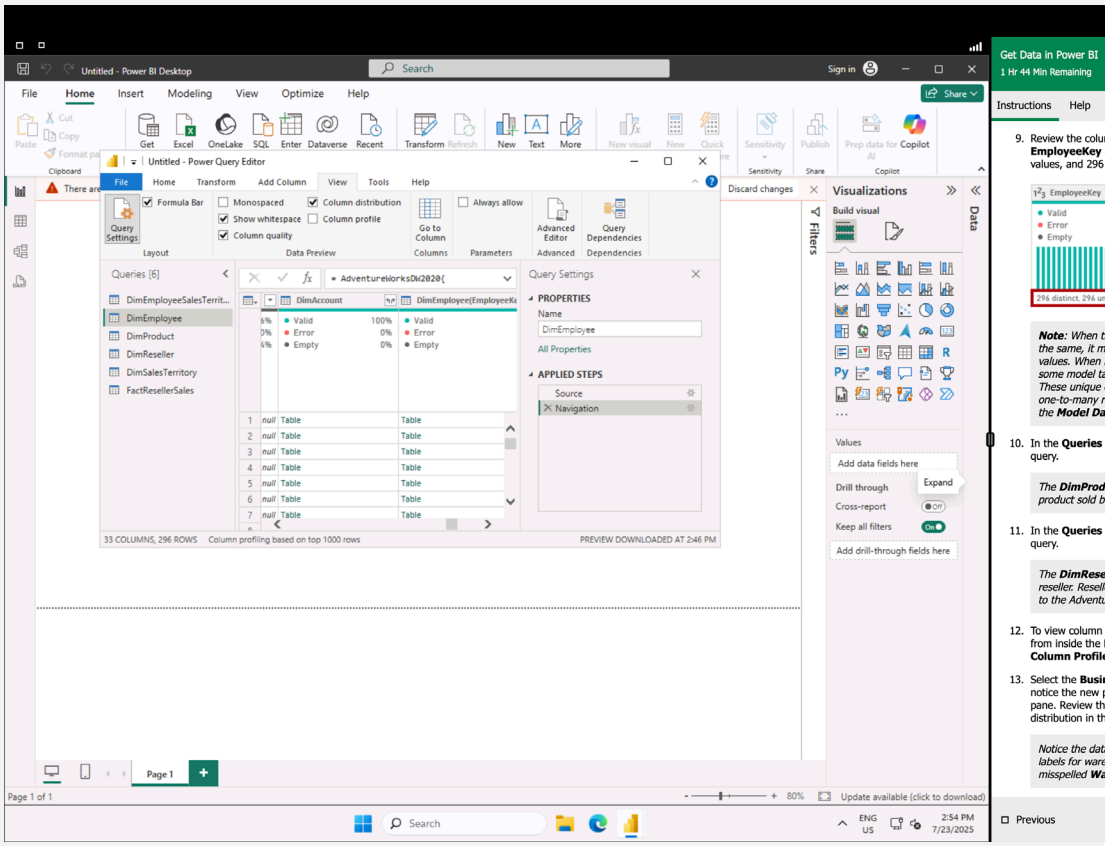
Reflections on NHS Usage:
Tools like these can be incredibly valuable for the NHS. By visualizing health trends, the NHS can better shape policies, allocate resources where they're needed most, and design targeted health programs. Comparing UK data with other countries also helps identify what's working and where we can improve. Plus, clear, engaging visuals can boost public awareness and encourage healthier choices.

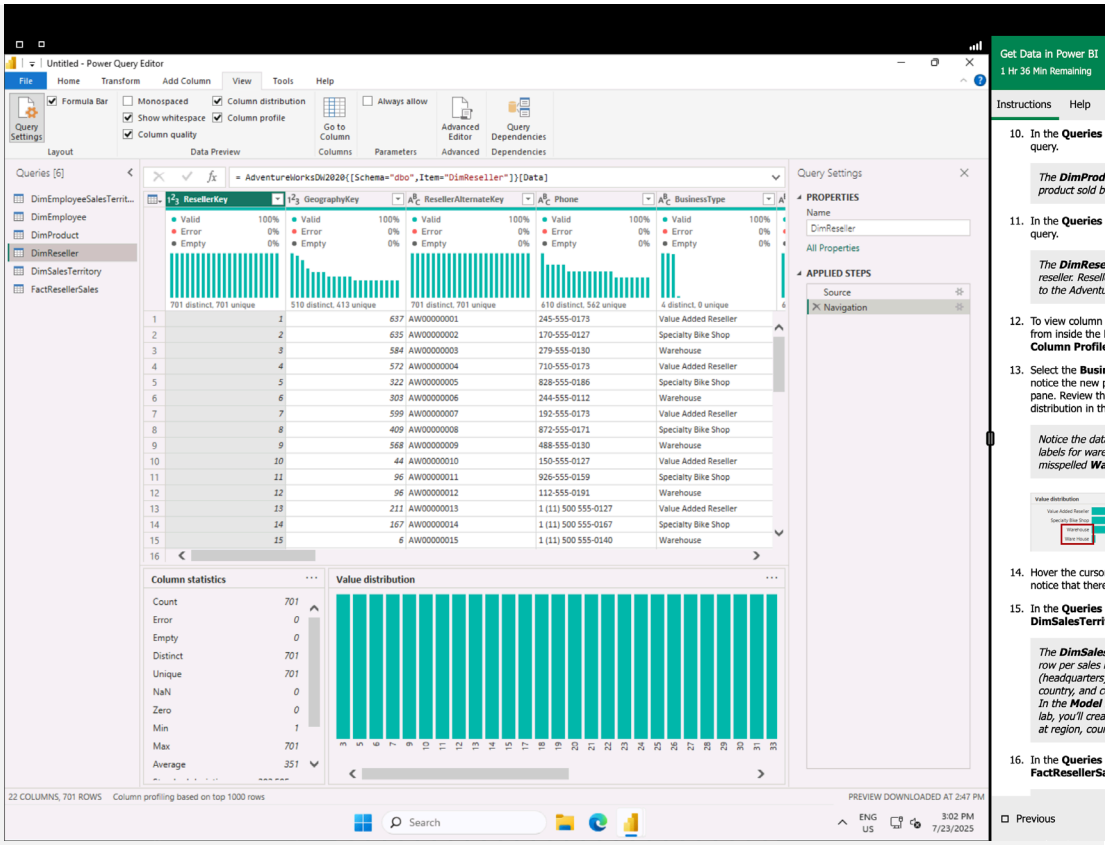
Day 3: Task 1

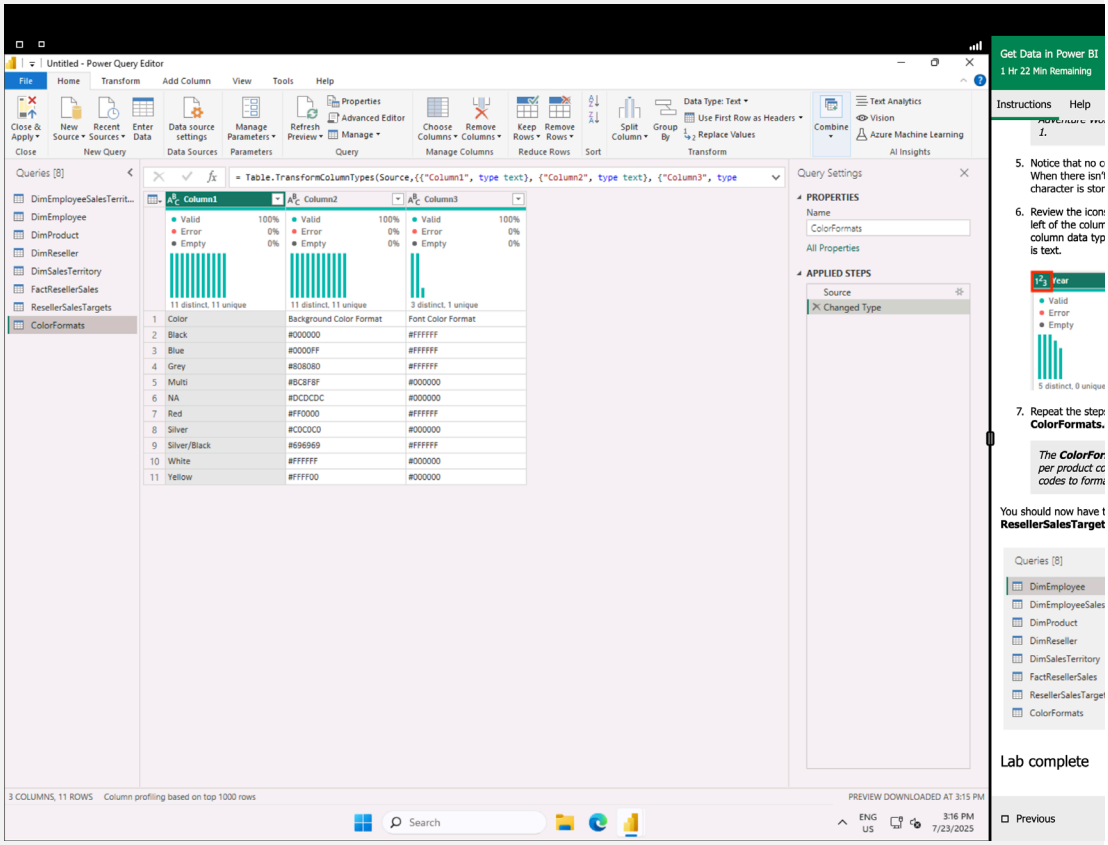
Please complete Lab 1 ‘Get Data in Power Bi Desktop’. Once complete, paste a print screen below and in the collaboration board.

“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




Untitled - Power Query Editor
Get Data in Power BI
1 Hr 36 Min Remaining
Instructions
Help
Queries [6]
DimEmployeeSalesTerrit...
DimEmployee
DimProduct
DimReseller
DimSalesTerritory
FactResellerSales
Query Settings
PROPERTIES
Name
DimReseller
All Properties
APPLIED STEPS
Source
Navigation
Column statistics
Value distribution
Previous

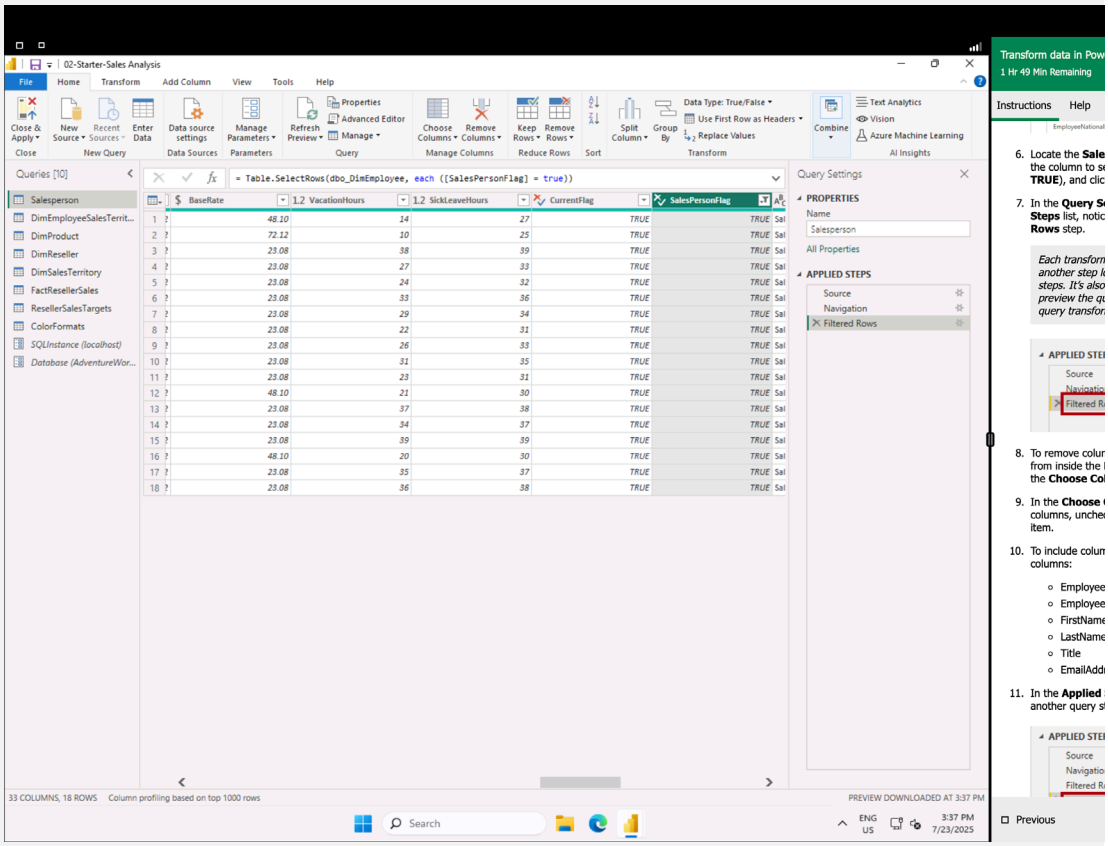

Untitled - Power Query Editor
Get Data in Power BI
1 Hr 22 Min Remaining
Instructions
Help
Queries [8]
DimEmployeeSalesTerrit...
DimEmployee
DimProduct
DimReseller
DimSalesTerritory
FactResellerSales
ResellerSalesTargets
ColorFormats
Query Settings
PROPERTIES
Name
ColorFormats
All Properties
APPLIED STEPS
Source
Changed Type
Lab complete
Previous

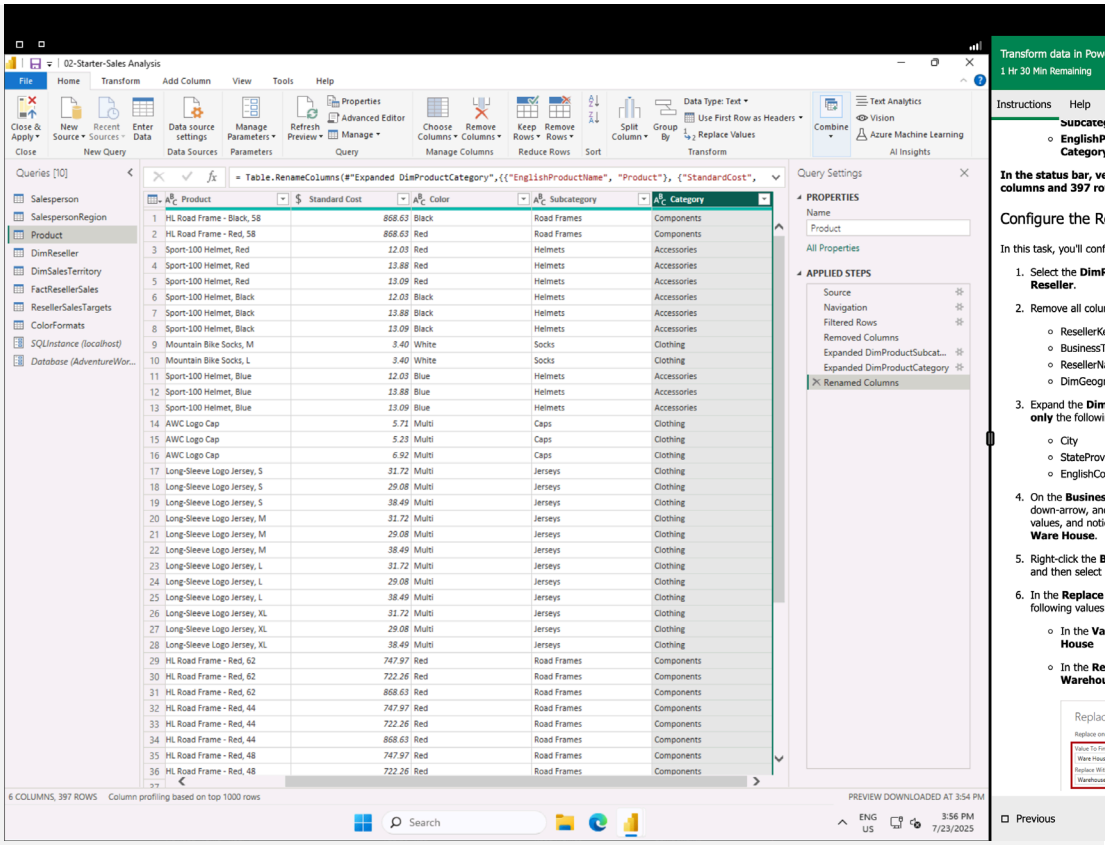
Day 3: Task 2

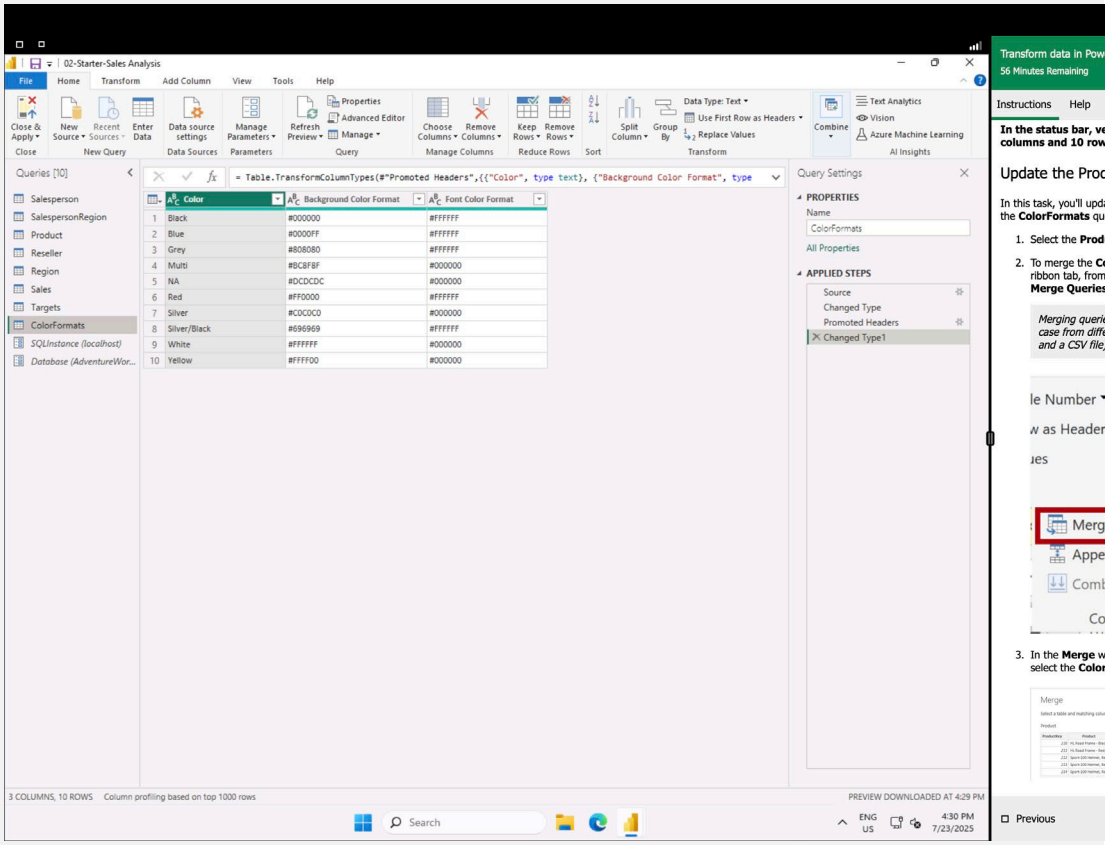
Please complete Lab 2 ‘Load Transformed Data in Power BI Desktop’. Once complete, paste a print screen below and in the collaboration board.

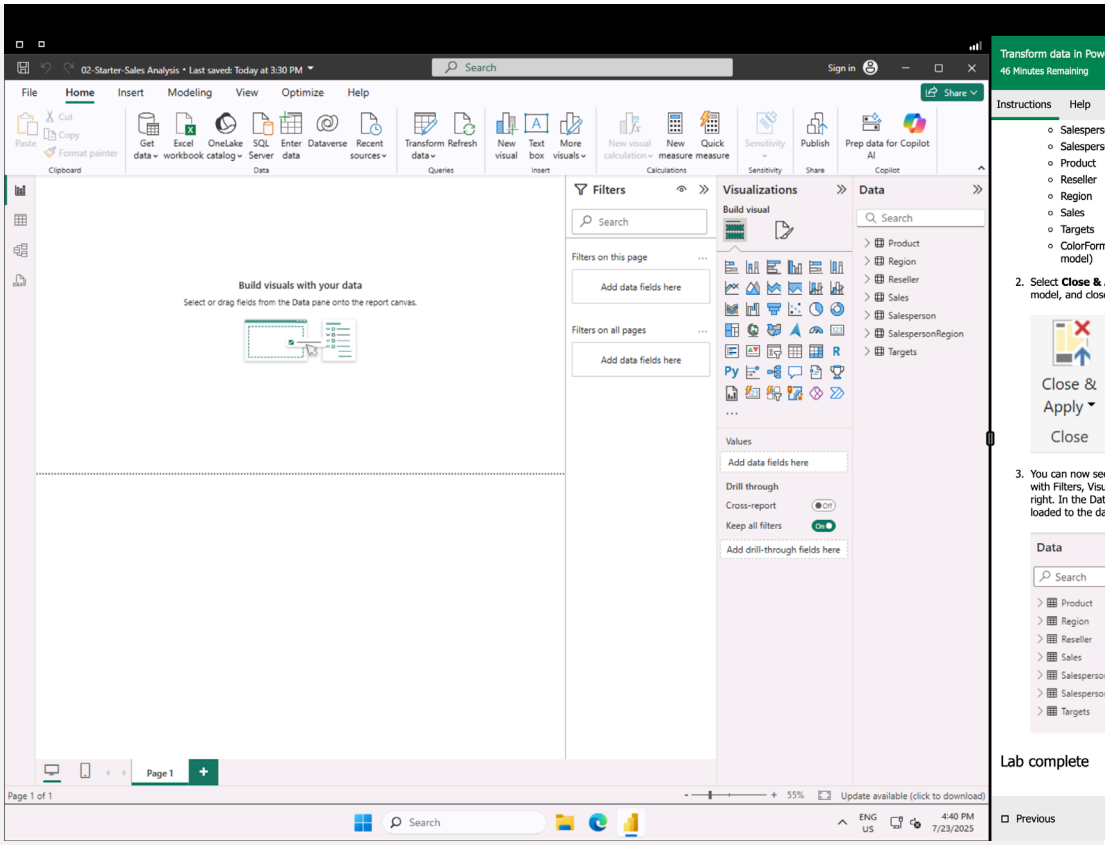
“Teaching is the best way to learn, so please listen out for support requests from the class and we’ll work through the challenges together”

Paste your completed lab here




02-Starter-Sales Analysis
Transform data in Pow
1 Hr 30 Min Remaining
Instructions
Help
Configure the R
Previous


02-Starter-Sales Analysis
Transform data in Pow
56 Minutes Remaining
Instructions
Help
Update the Proc
Previous

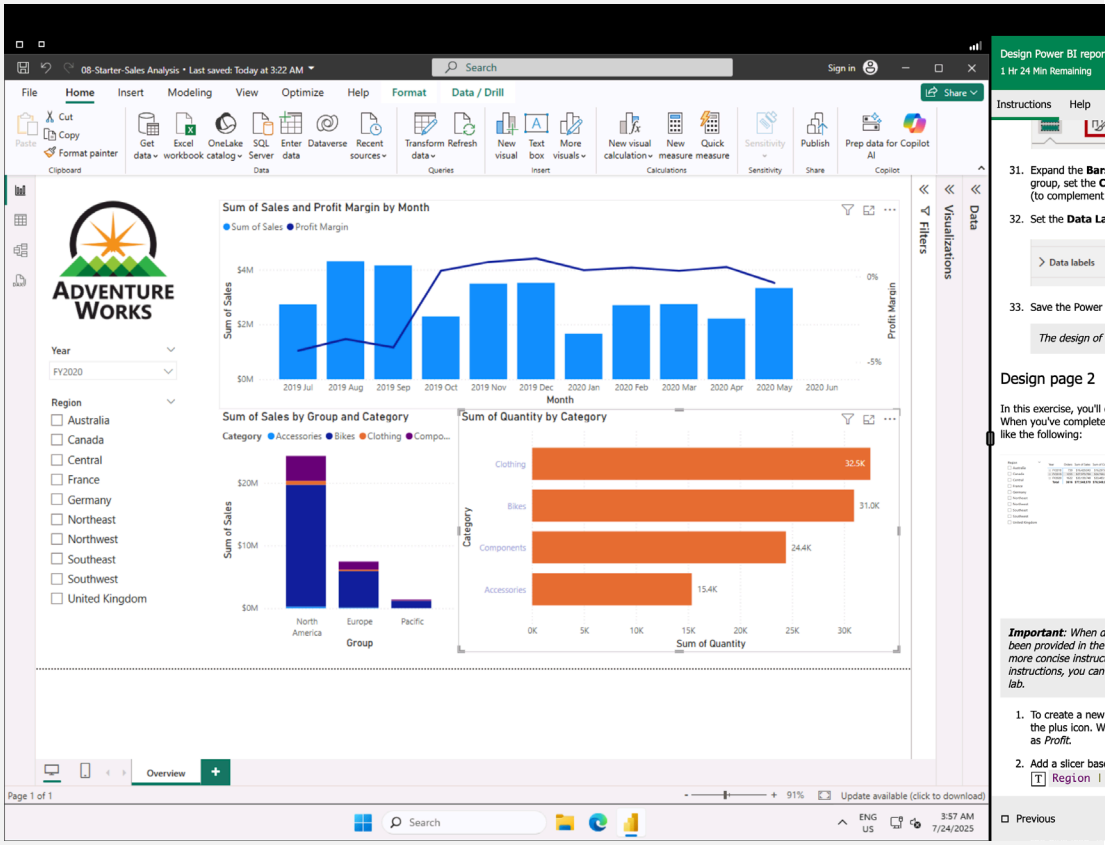

02-Starter-Sales Analysis • Last saved: Today at 3:30 PM
Search
Sign in
File
Home
Insert
Modeling
View
Optimize
Help
Share
Build visuals with your data
Select or drag fields from the Data pane onto the report canvas.
Filters
Filters on this page
Add data fields here
Filters on all pages
Add data fields here
Visualizations
Build visual
Values
Add data fields here
Drill through
Cross-report
Keep all filters
Add drill-through fields here
Data
Product
Region
Reseller
Sales
Salesperson
SalespersonRegion
Targets
Page 1
Page 1 of 1
Update available (click to download)
Transform data in Pow
46 Minutes Remaining
Instructions
Help
Close &
Apply
Close
Lab complete
Previous

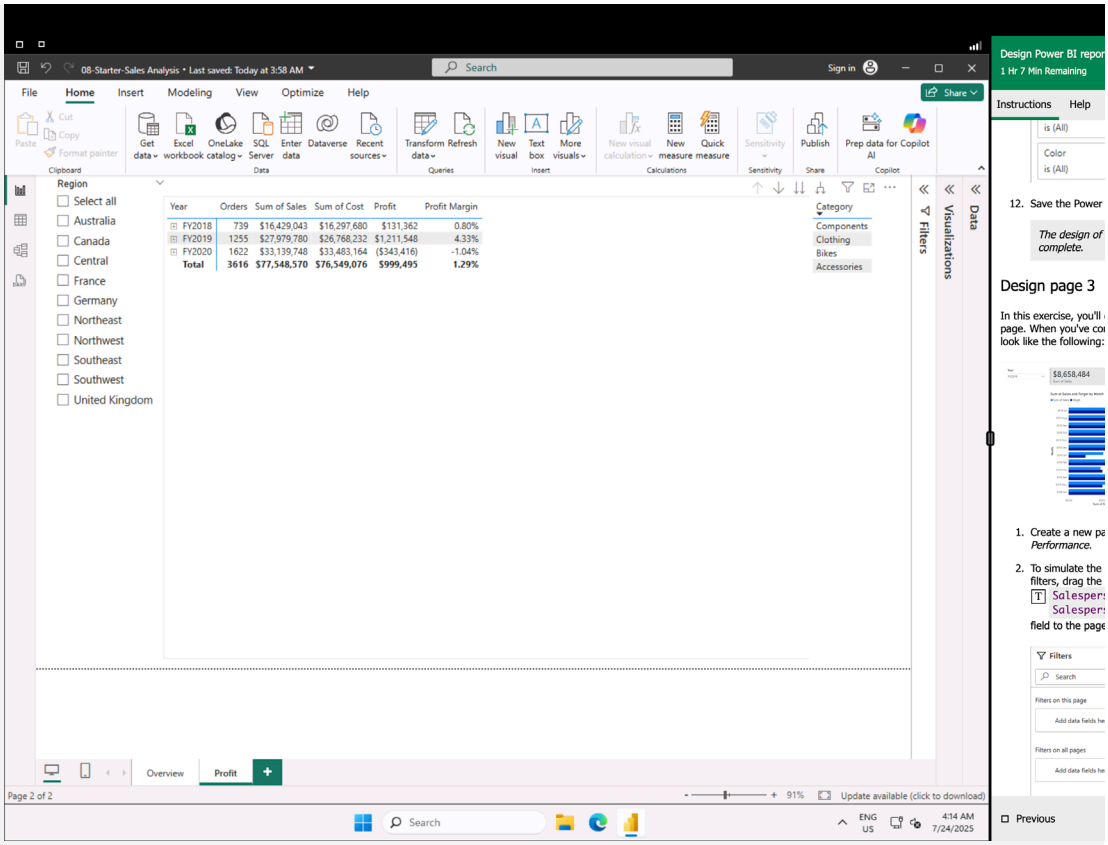
Day 4: Task 1

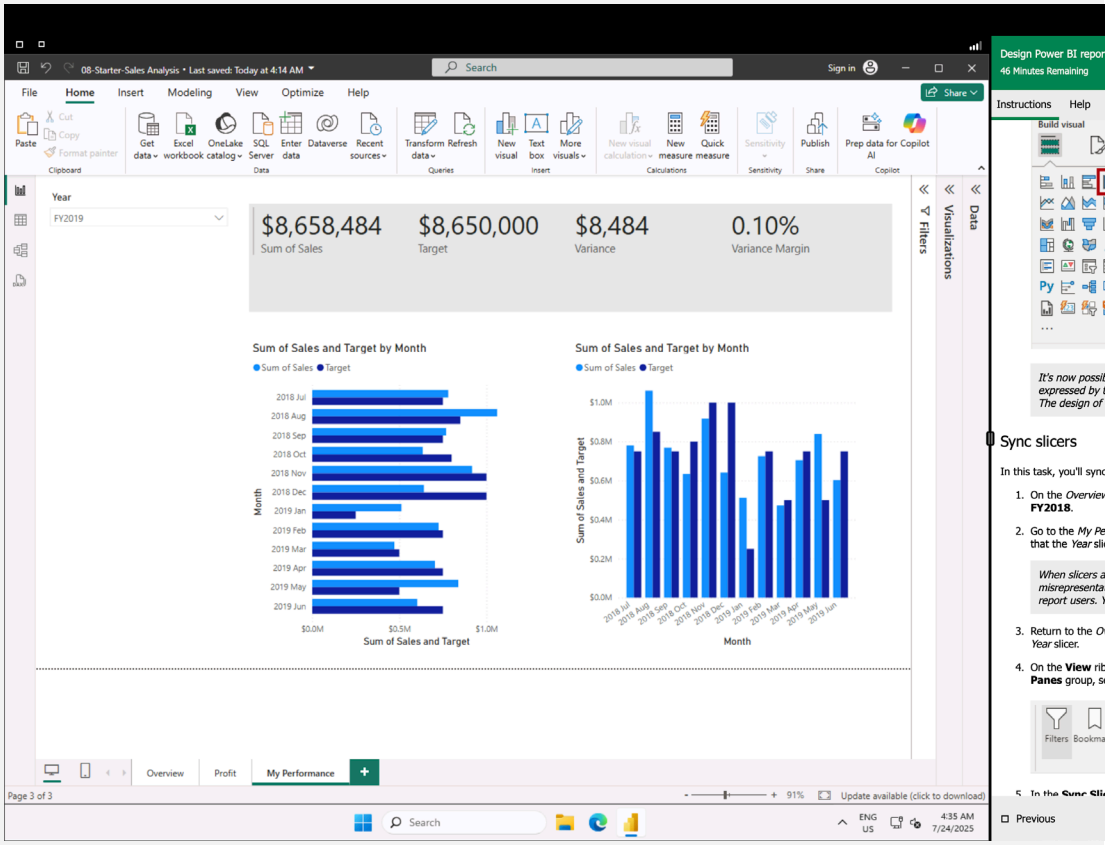
Please complete Lab 8 'Design a Report in Power BI Desktop'. Once complete, paste a print screen below and in the collaboration board.

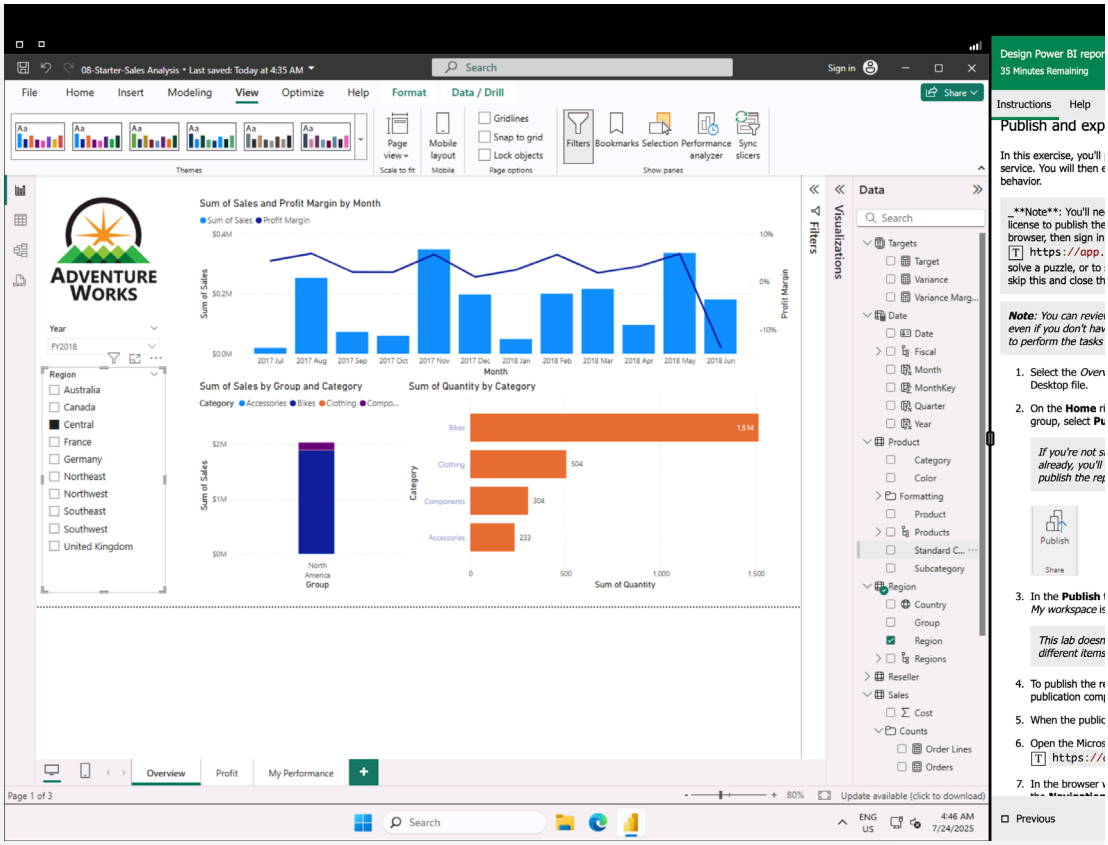
"Teaching is the best way to learn, so please listen out for support requests from the class and we'll work through the challenges together"

Paste your completed lab here




08-Starter-Sales Analysis • Last saved: Today at 3:58 AM
Search
Sign in
File
Home
Insert
Modeling
View
Optimize
Help
Share
Region
Select all
Australia
Canada
Central
France
Germany
Northeast
Northwest
Southeast
Southwest
United Kingdom
Year
Orders
Sum of Sales
Sum of Cost
Profit
Profit Margin
FY2018 739 $16,429,043 $16,297,680 $131,362 0.80%
FY2019 1255 $27,979,780 $26,768,232 $1,211,548 4.33%
FY2020 1622 $33,139,748 $33,483,164 ($343,416) -1.04%
Total 3616 $77,548,570 $76,549,076 $999,495 1.29%
Category
Components
Clothing
Bikes
Accessories
Filters
Visualizations
Data
Overview
Profit
Page 2 of 2
Update available (click to download)
Design Power BI report
1 Hr 7 Min Remaining
Instructions
Help
12. Save the Power
Design page 3
Previous


08-Starter-Sales Analysis • Last saved: Today at 4:14 AM
Search
Sign in
File
Home
Insert
Modeling
View
Optimize
Help
Share
Year
FY2019
$8,658,484
Sum of Sales
$8,650,000
Target
$8,484
Variance
0.10%
Variance Margin
Sum of Sales and Target by Month
Sum of Sales and Target by Month
Filters
Visualizations
Data
Overview
Profit
My Performance
Page 3 of 3
Update available (click to download)
Design Power BI report
46 Minutes Remaining
Instructions
Help
Sync slicers
Previous


08-Starter-Sales Analysis • Last saved: Today at 4:35 AM
Search
Sign in
File
Home
Insert
Modeling
View
Optimize
Help
Format
Data / Drill
Share
Gridlines
Snap to grid
Lock objects
Filters
Bookmarks
Selection
Performance analyzer
Sync slicers
Page view
Mobile layout
Themes
Scale to fit
Mobile
Page options
Show panes
ADVENTURE WORKS
Year
FY2018
Region
Australia
Canada
Central
France
Germany
Northeast
Northwest
Southeast
Southwest
United Kingdom
Sum of Sales and Profit Margin by Month
Sum of Sales
Profit Margin
Month
Sum of Sales by Group and Category
Category
Accessories
Bikes
Clothing
North America
Group
Sum of Quantity by Category
Bikes
Clothing
Components
Accessories
1,514
504
304
233
Sum of Quantity
Filters
Visualizations
Data
Search
Targets
Target
Variance
Variance Marg...
Date
Fiscal
Month
MonthKey
Quarter
Year
Product
Category
Color
Formatting
Product
Products
Standard C...
Subcategory
Region
Country
Group
Region
Regions
Reseller
Sales
Cost
Counts
Order Lines
Orders
Overview
Profit
My Performance
Page 1 of 3
80%
Update available (click to download)
Search
ENG US
4:46 AM 7/24/2025
Design Power BI report
35 Minutes Remaining
Instructions
Help
Publish and exp
In this exercise, you'll
service. You will then
behavior.
Note: You'll ne
license to publish the
browser, then sign in
https://app.
solve a puzzle, or to
skip this and close th
Note: You can revie
even if you don't hav
to perform the tasks
1. Select the Overv
Desktop file.
2. On the Home ri
group, select Pu
If you're not s
already, you'll
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Publish
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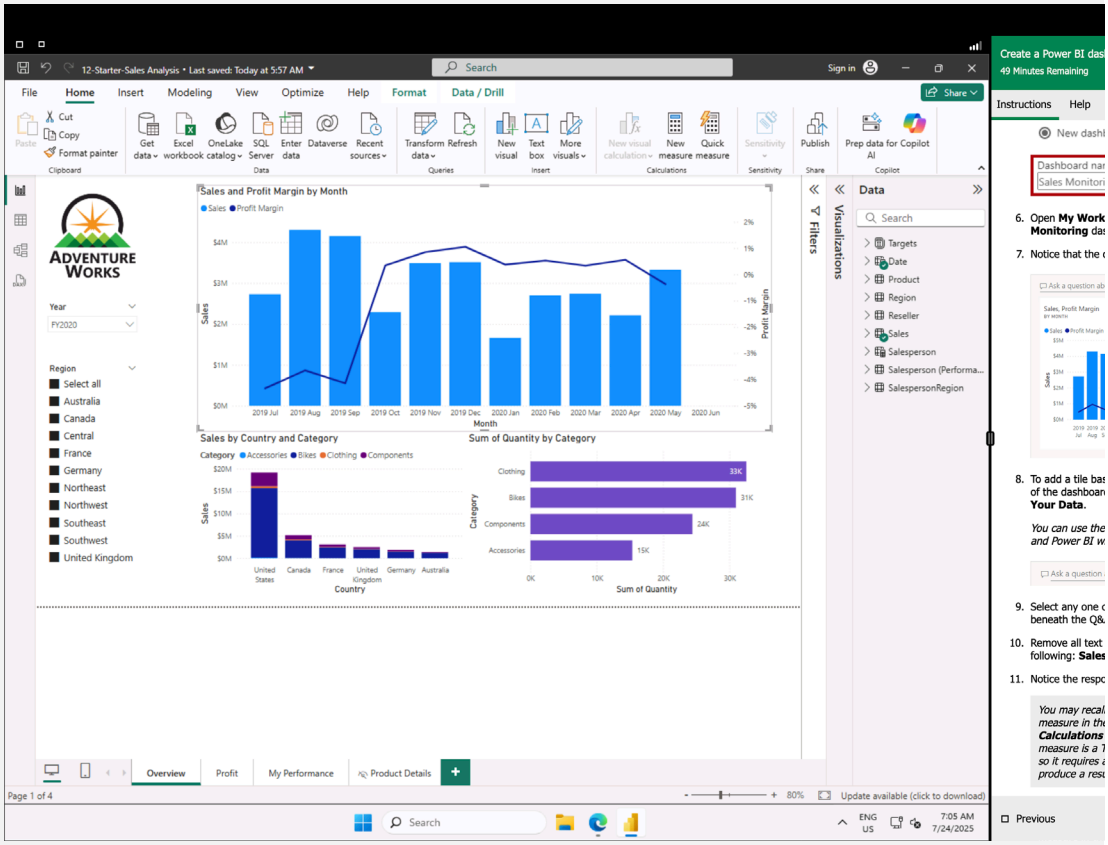
3. In the Publish
My workspace is
This lab doesn
different items
4. To publish the re
publication comp
5. When the public
6. Open the Micros
https://
7. In the browser
Previous

Day 4: Task 2

Please complete Lab 12 ‘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.