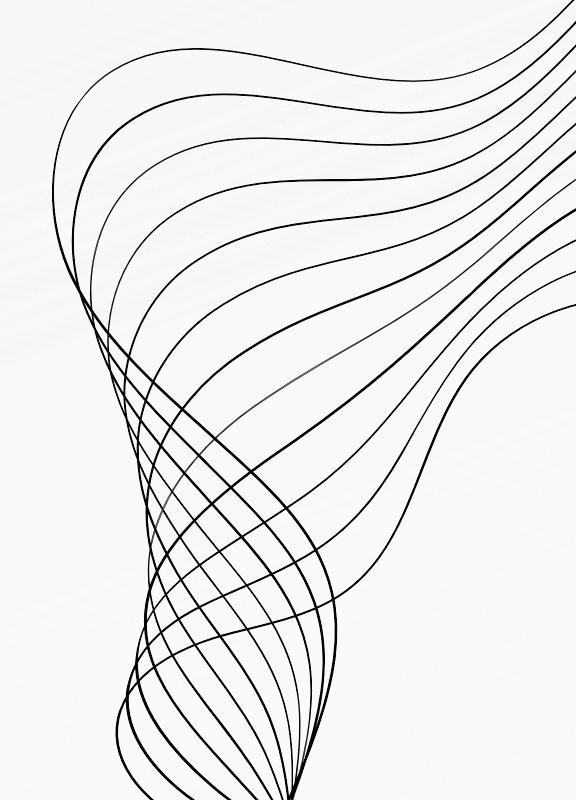




EXPLORATORY DATA ANALYSIS ON THE 2024 OLYMPIC MEDAL TABLE



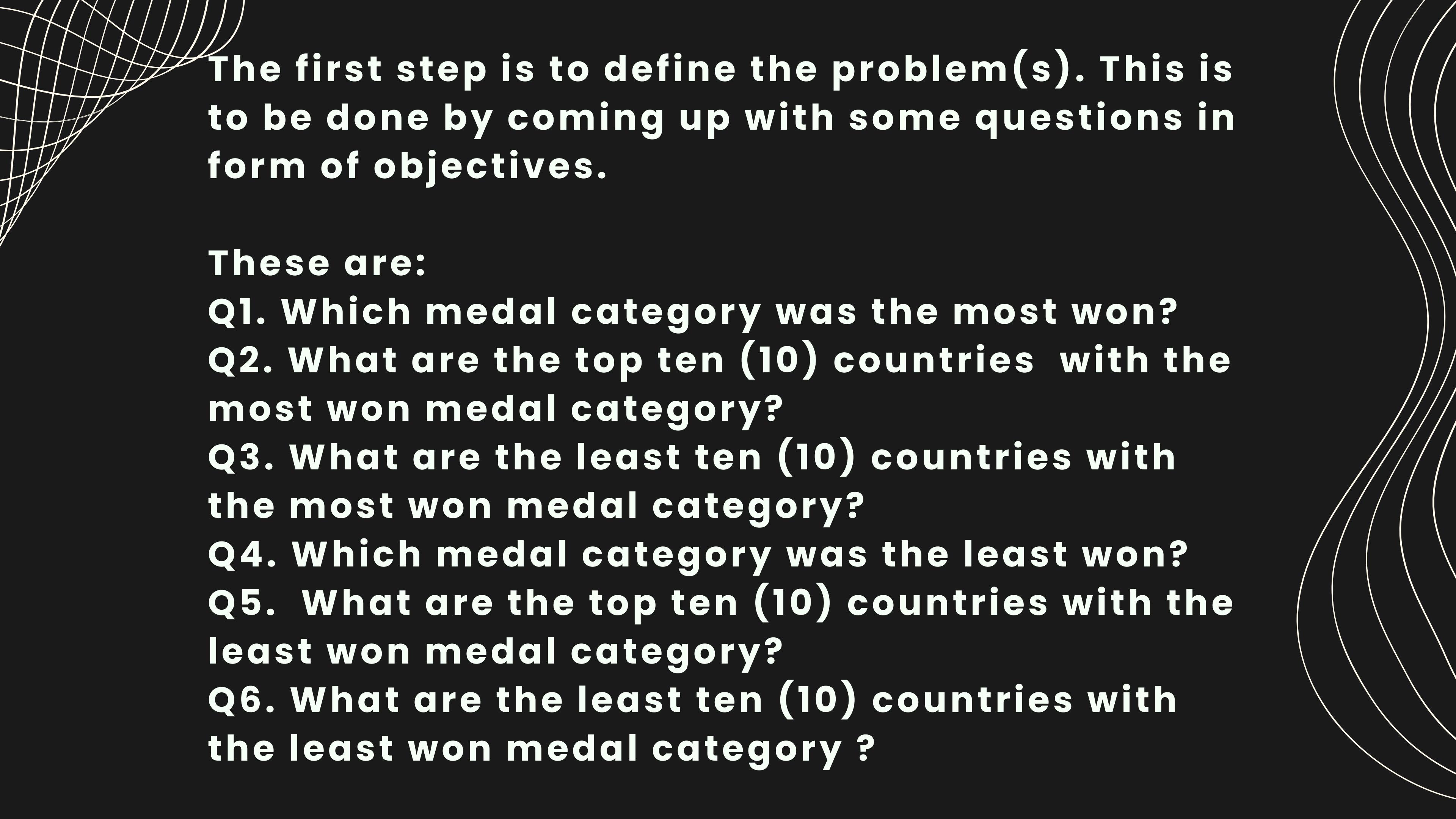
**PRESENTED BY:
OTUONYE PHILIP**



BACKGROUND

The Summer Olympics' event which usually takes place every four years has come and gone. This year's event was held in the city of Paris, France. It did not end without it's turns and twists, that also included several athletes winning a lot of medals for the various countries they represented.

In this report, I will be exploring the 2024 Summer Olympics medal table to uncover insights.



The first step is to define the problem(s). This is to be done by coming up with some questions in form of objectives.

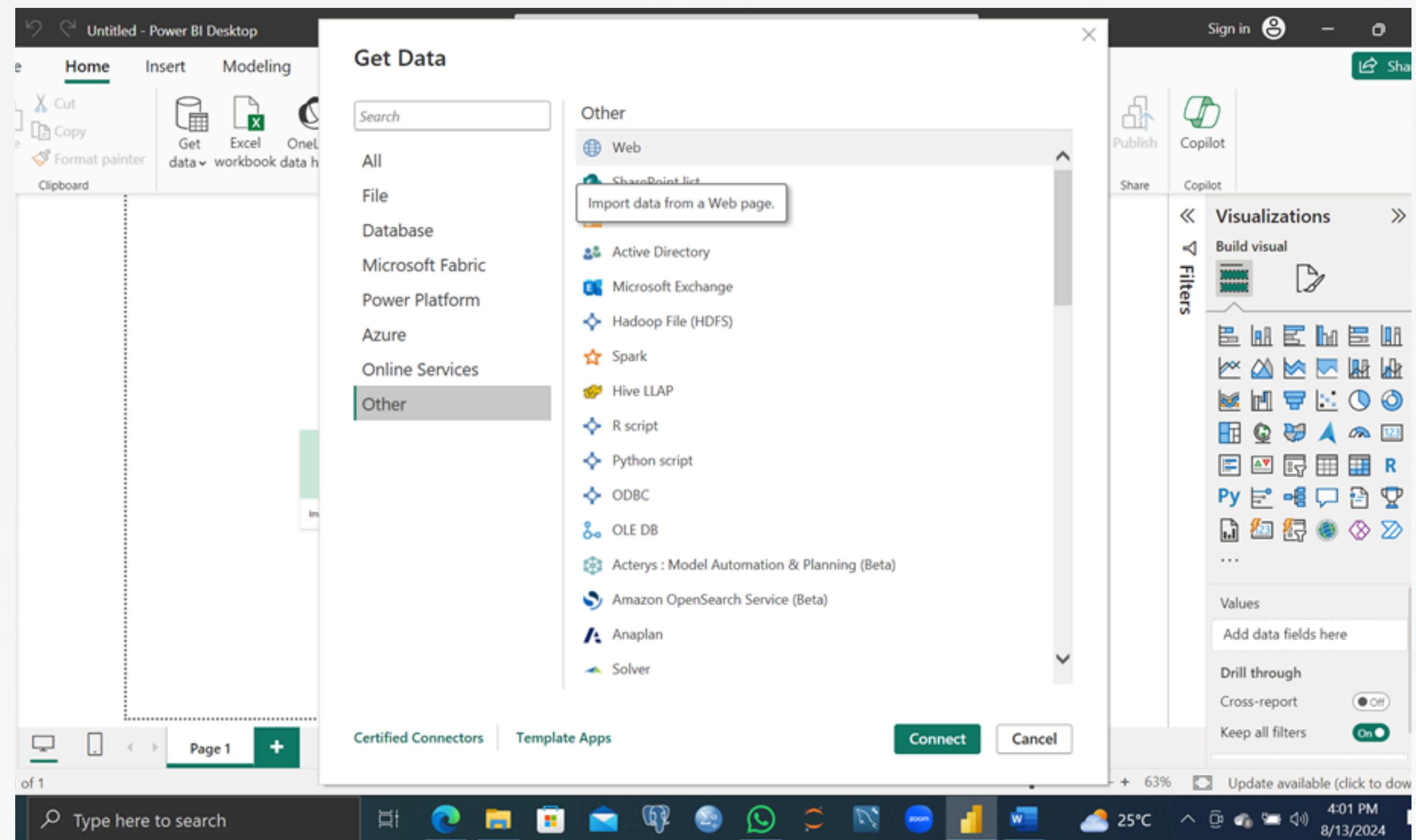
These are:

- Q1. Which medal category was the most won?**
- Q2. What are the top ten (10) countries with the most won medal category?**
- Q3. What are the least ten (10) countries with the most won medal category?**
- Q4. Which medal category was the least won?**
- Q5. What are the top ten (10) countries with the least won medal category?**
- Q6. What are the least ten (10) countries with the least won medal category ?**

DATA COLLECTION

In order to gain insights, we need DATA! I have downloaded the data from Wikipedia. ([2024 Summer Olympics medal table - Wikipedia](#)).

This dataset includes 92 rows and 6 columns with 'Rank', 'Countries', 'Gold Medal', 'Silver Medal', 'Bronze Medal' and 'Total Medal' column headers.



Untitled - Power BI

File Home Insert

Cut Copy Get data

Paste Format painter Clipboard

Navigator

Display Options

HTML Tables [8]

- Table 1
- Table 2
- Table 3
- 2024 Summer Olympics medal table[3...]
- List of official changes in medal standi...
- Table 4
- Table 5
- Table 6

Suggested Tables [8]

- Table 7
- Table 8
- Table 9
- Table 10
- Table 11
- Table 12
- Table 13
- Table 14

Text [2]

Page 1 of 1

Add Table Using Examples

Table View Web View

2024 Summer Olympics medal table[31][B]

Rank	NOC	Gold	Silver	Bronze
1	United States	40	44	
2	China	40	27	
3	Japan	20	12	
4	Australia	18	19	
5	France*	16	26	
6	Netherlands	15	7	
7	Great Britain	14	22	
8	South Korea	13	9	
9	Italy	12	13	
10	Germany	12	13	
11	New Zealand	10	7	
12	Canada	9	7	
13	Uzbekistan	8	2	
14	Hungary	6	7	
15	Spain	5	4	
16	Sweden	4	4	
17	Kenya	4	2	
18	Norway	4	1	
19	Ireland	4	0	
20	Brazil	3	7	

Load Transform Data Cancel

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values

Add data fields here

Drill through

Cross-report

Keep all filters

On

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4:49 PM 8/13/2024 13

Untitled - Power BI Desktop

File Home Help Table tools

Name: 2024 Summer Oly...

Mark as date table Calendars Manage relationships Relationships New measure New quick New measure column New table Calculations

Structure

Rank NOC Gold Silver Bronze Total

Rank	NOC	Gold	Silver	Bronze	Total
1	United States	40	44	42	126
2	China	40	27	24	91
3	Japan	20	12	13	45
4	Australia	18	19	16	53
5	France*	16	26	22	64
6	Netherlands	15	7	12	34
7	Great Britain	14	22	29	65
8	South Korea	13	9	10	32
9	Italy	12	13	15	40
10	Germany	12	13	8	33
11	New Zealand	10	7	3	20
12	Canada	9	7	11	27
13	Uzbekistan	8	2	3	13
14	Hungary	6	7	6	19
15	Spain	5	4	9	18
16	Sweden	4	4	3	11
17	Kenya	4	2	5	11
18	Norway	4	1	3	8
19	Ireland	4	0	3	7
20	Brazil	3	7	10	20
21	Iran	3	6	3	12

Table: 2024 Summer Olympics medal table[31][B] (93 rows)

Search

Sign in Share

Data

Search

2024 Summer Olympics me... ↗ ...

Σ Bronze
Σ Gold
NOC
Rank
Σ Silver
Σ Total

Update available (click to download)

Type here to search

Windows Start button

Cloud 25°C 4:51 PM 8/13/2024

DATA IMPORT

The dataset is downloaded into Microsoft Power BI Desktop Document (.pbix)

Head of dataset imported

Rank	Countries	Gold Medal	Silver Medal	Bronze Medal	Total Medal
1	United States‡	40	44	42	126
2	China	40	27	24	91
3	Japan	20	12	13	45
4	Australia	18	19	16	53
5	France*	16	26	22	64
6	Netherlands	15	7	12	34
7	Great Britain	14	22	29	65
8	South Korea	13	9	10	32
9	Italy	12	13	15	40
10	Germany	12	13	8	33
11	New Zealand	10	7	3	20
12	Canada	9	7	11	27
13	Uzbekistan	8	2	3	13
14	Hungary	6	7	6	19
15	Spain	5	4	9	18
16	Sweden	4	4	3	11
17	Kenya	4	2	5	11
18	Norway	4	1	3	8
19	Ireland	4	0	3	7
20	Brazil	3	7	10	20

DATA IMPORT

Tail of dataset imported

71	India	0	1	5	6
72	Moldova	0	1	3	4
73	Kosovo	0	1	1	2
74	Cyprus	0	1	0	1
	Fiji	0	1	0	1
	Jordan	0	1	0	1
	Mongolia	0	1	0	1
	Panama	0	1	0	1
79	Tajikistan	0	0	3	3
80	Albania	0	0	2	2
	Grenada	0	0	2	2
	Malaysia	0	0	2	2
	Puerto Rico	0	0	2	2
84	Cape Verde	0	0	1	1
	Ivory Coast	0	0	1	1
	Peru	0	0	1	1
	Qatar	0	0	1	1
	Refugee Olympic Team	0	0	1	1
	Singapore	0	0	1	1
	Slovakia	0	0	1	1
	Zambia	0	0	1	1

DATA CLEANING

The data needs to be processed and cleaned to get accurate results. Using messy, inconsistent data leads to inaccurate insights.

Let's dive into it!

Removal of unwanted row(s)

DATA CLEANING

Untitled - Power Query Editor

File Home Transform Add Column View Tools Help

Close & Apply New Source Recent Enter Data Data source settings Manage Parameters Refresh Preview Advanced Editor Choose Columns Remove Columns Keep Rows Remove Rows Split Column Group By Data Type: Text Use First Row as Headers Merge Queries Text Analytics Append Queries Vision Combine Files Azure Machine Learning Close New Query Data Sources Parameters Query Manage Columns Reduce Rows Sort Transform Combine AI Insights

Queries [1]

2024 Summer Olym...

= Table.TransformColumnTypes(#"Promoted Headers",{{"Rank", type text}, {"NOC", type text}, {"Gold", type number}, {"Silver", type number}, {"Bronze", type number}})

	Rank	Countries	Gold	Silver	Bronze
1	1	United States	40	44	
2	2	China	40	27	
3	3	Japan	20	12	
4	4	Australia	18	19	
5	5	France*	16	26	
6	6	Netherlands	15	7	
7	7	Great Britain	14	22	
8	8	South Korea	13	9	
9	9	Italy	12	13	
10	10	Germany	12	13	
11	11	New Zealand	10	7	
12	12	Canada	9	7	
13	13	Uzbekistan	8	2	
14	14	Hungary	6	7	
15	15	Spain	5	4	
16	16	Sweden	4	4	
17	17	Kenya	4	2	
18	18	Norway	4	1	
19	19	Ireland	4	0	
20	20	Brazil	3	7	
21	21	Iran	3	6	

6 COLUMNS, 93 ROWS Column profiling based on top 1000 rows

PREVIEW DOWNLOADED AT 5:20 PM

Type here to search

5:24 PM 8/13/2024

25°C

Properties

Advanced Editor

Choose Columns

Remove Columns

Keep Rows

Remove Rows

Split Column

Group By

Sort

Transform

Query Settings

PROPERTIES

Name: 2024 Summer Olympics medal table[31]

All Properties

APPLIED STEPS

Source

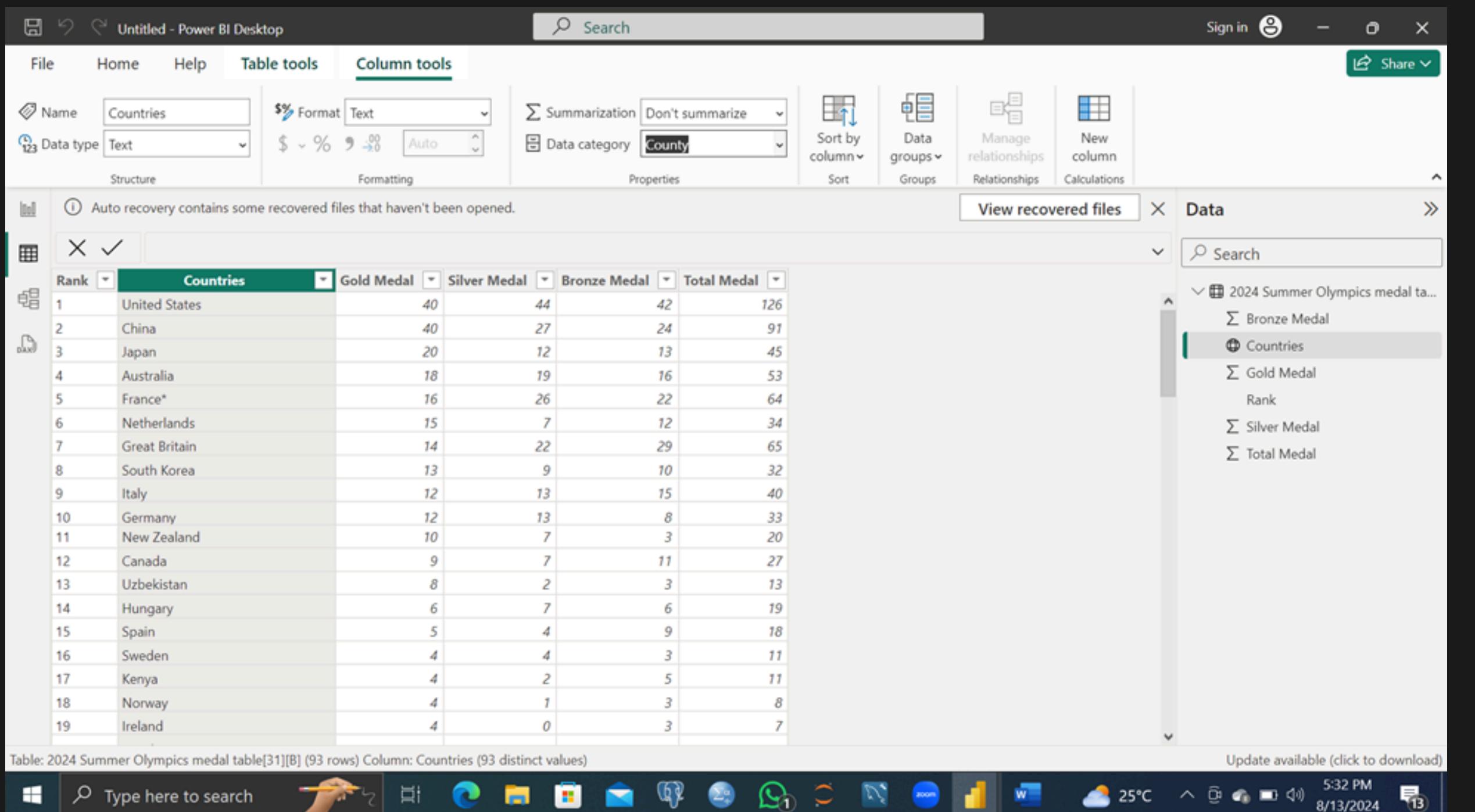
Extracted Table From Html

Promoted Headers

Changed Type

DATA CLEANING

Renaming of columns' headers



The screenshot shows the Power BI Desktop interface with a table titled "2024 Summer Olympics medal table". The table has 19 rows and 6 columns: Rank, Countries, Gold Medal, Silver Medal, Bronze Medal, and Total Medal. The "Countries" column is currently selected, as indicated by a context menu that is open over the column header. The context menu includes options for "Name", "Format", "Summarization", "Data category", "Sort by column", "Data groups", "Manage relationships", and "New column". The "Name" option is highlighted. The "Data" pane on the right shows the structure of the data, with "Countries" selected. The Power BI ribbon at the top has the "Table tools" tab selected. The status bar at the bottom shows the table has 93 rows and 93 distinct values in the "Countries" column.

Rank	Countries	Gold Medal	Silver Medal	Bronze Medal	Total Medal
1	United States	40	44	42	126
2	China	40	27	24	91
3	Japan	20	12	13	45
4	Australia	18	19	16	53
5	France*	16	26	22	64
6	Netherlands	15	7	12	34
7	Great Britain	14	22	29	65
8	South Korea	13	9	10	32
9	Italy	12	13	15	40
10	Germany	12	13	8	33
11	New Zealand	10	7	3	20
12	Canada	9	7	11	27
13	Uzbekistan	8	2	3	13
14	Hungary	6	7	6	19
15	Spain	5	4	9	18
16	Sweden	4	4	3	11
17	Kenya	4	2	5	11
18	Norway	4	1	3	8
19	Ireland	4	0	3	7

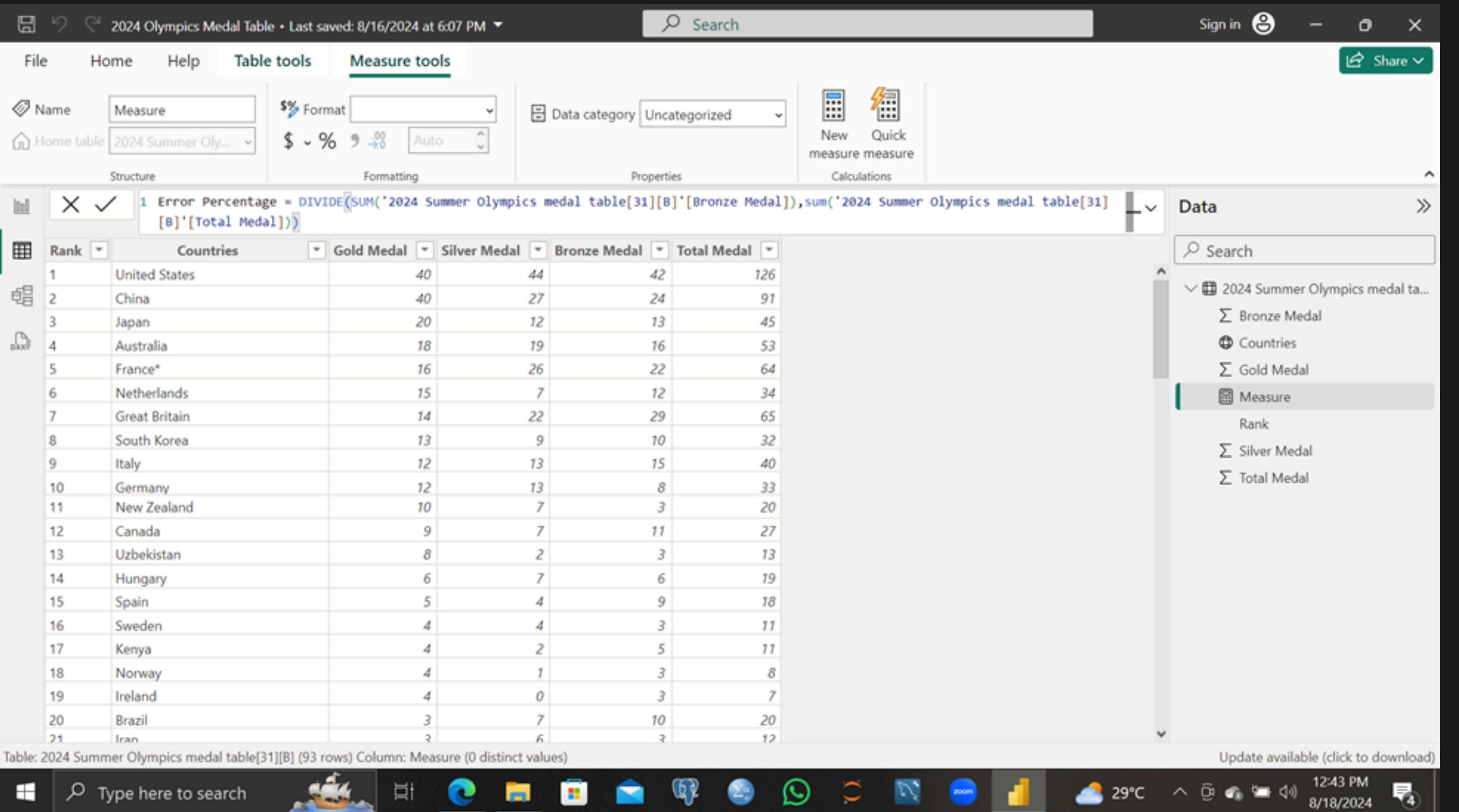
Table: 2024 Summer Olympics medal table[31][B] (93 rows) Column: Countries (93 distinct values)

Update available (click to download)

5:32 PM 25°C 8/13/2024

DATA CLEANING

Creation of Measures using DAX



The screenshot shows the Power BI Data Editor interface. The top navigation bar includes File, Home, Help, Table tools, Measure tools (selected), and a Share button. The ribbon tabs are Measure tools, Structure, Formatting, Properties, and Calculations. The main area displays a table of medal counts for the 2024 Summer Olympics. A new measure, 'Error Percentage', is being defined in the Measure tools ribbon. The formula is: `Error Percentage = DIVIDE(SUM('2024 Summer Olympics medal table'[31][B][Bronze Medal]),sum('2024 Summer Olympics medal table'[31][B][Total Medal]))`. The table has columns: Rank, Countries, Gold Medal, Silver Medal, Bronze Medal, and Total Medal. The data shows the top 21 countries. The Power BI Data view on the right shows the structure of the data, including the newly created measure. The taskbar at the bottom shows various pinned icons and the system tray with the date 8/18/2024 and time 12:43 PM.

Rank	Countries	Gold Medal	Silver Medal	Bronze Medal	Total Medal
1	United States	40	44	42	126
2	China	40	27	24	91
3	Japan	20	12	13	45
4	Australia	18	19	16	53
5	France*	16	26	22	64
6	Netherlands	15	7	12	34
7	Great Britain	14	22	29	65
8	South Korea	13	9	10	32
9	Italy	12	13	15	40
10	Germany	12	13	8	33
11	New Zealand	10	7	3	20
12	Canada	9	7	11	27
13	Uzbekistan	8	2	3	13
14	Hungary	6	7	6	19
15	Spain	5	4	9	18
16	Sweden	4	4	3	11
17	Kenya	4	2	5	11
18	Norway	4	1	3	8
19	Ireland	4	0	3	7
20	Brazil	3	7	10	20
21	Iran	2	6	3	12

Table: 2024 Summer Olympics medal table[31][B] (93 rows) Column: Measure (0 distinct values)

Update available (click to download)

12:43 PM 8/18/2024

2024 Olympics Medal Table • Last saved: 8/16/2024 at 6:07 PM

Search

Sign in

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File Home Help Table tools Measure tools

Name: Percentage(Silver) Format: General Data category: Uncategorized

Home table: 2024 Summer Oly... \$ % Auto

Structure Formatting Properties Calculations

New Quick measure measure

Measure tools

Percentage(Silver) = 1 - DIVIDE(sum('2024 Summer Olympics medal table'[31][B]['Silver Medal']), sum('2024 Summer Olympics medal table'[31][B]['Total Medal']))

Rank Countries Gold Medal Silver Medal Bronze Medal Total Medal

Rank	Countries	Gold Medal	Silver Medal	Bronze Medal	Total Medal
1	United States	40	44	42	126
2	China	40	27	24	91
3	Japan	20	12	13	45
4	Australia	18	19	16	53
5	France*	16	26	22	64
6	Netherlands	15	7	12	34
7	Great Britain	14	22	29	65
8	South Korea	13	9	10	32
9	Italy	12	13	15	40
10	Germany	12	13	8	33
11	New Zealand	10	7	3	20
12	Canada	9	7	11	27
13	Uzbekistan	8	2	3	13
14	Hungary	6	7	6	19
15	Spain	5	4	9	18
16	Sweden	4	4	3	11
17	Kenya	4	2	5	11
18	Norway	4	1	3	8
19	Ireland	4	0	3	7
20	Brazil	3	7	10	20
21	Iran	2	6	3	12

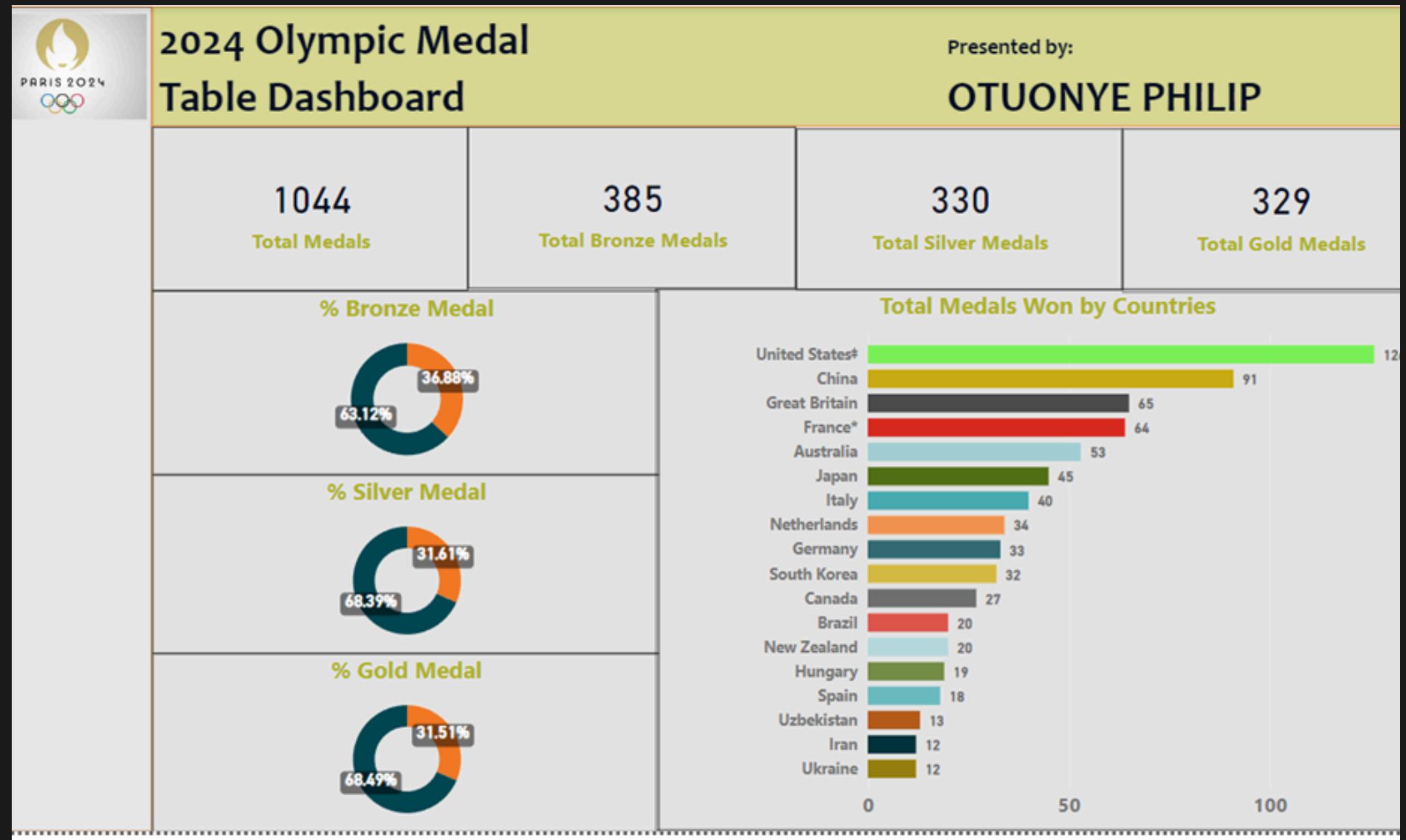
Table: 2024 Summer Olympics medal table[31][B] (93 rows) Column: Percentage(Silver) (0 distinct values)

Update available (click to download)

Windows Type here to search 1:05 PM 8/18/2024

29°C

DASHBOARD



EXPLORATORY DATA ANALYSIS

Now, the data is clean and consistent. Let's get started with our analysis. I am going to find the answers to the questions that I have mentioned above.

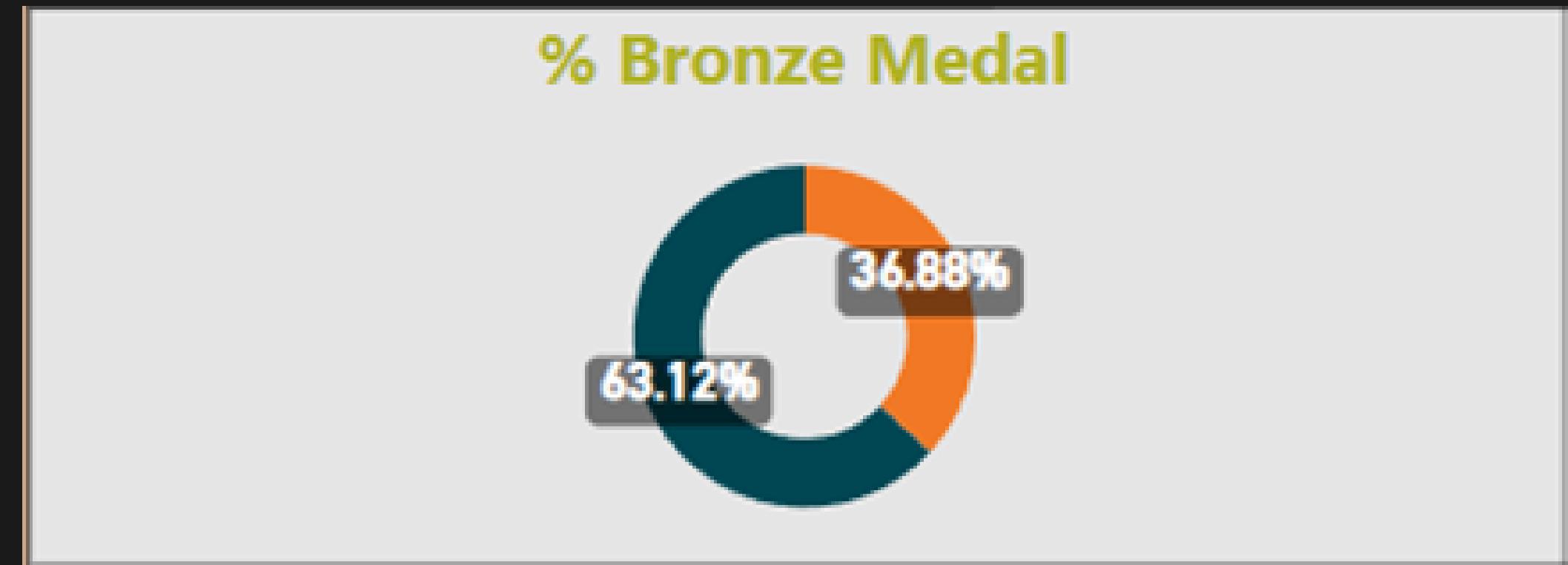
Q1. Which medal category was the most won?

385

Total Bronze Medals

EXPLORATORY DATA ANALYSIS

From the above the most won medal category the 'Bronze medal' category, accounts for 36.88% of the total medals won as shown below



EXPLORATORY DATA ANALYSIS

Q2. What are the top ten (10) countries with the most won medal category?

Countries	Gold Medal	Silver Medal	Bronze Medal	Total Medal
United States‡	40	44	42	126
Great Britain	14	22	29	65
China	40	27	24	91
France*	16	26	22	64
Australia	18	19	16	53
Italy	12	13	15	40
Japan	20	12	13	45
Netherlands	15	7	12	34
Canada	9	7	11	27
Brazil	3	7	10	20

EXPLORATORY DATA ANALYSIS

Q3. What are the least ten (10) countries with the most won medal category?

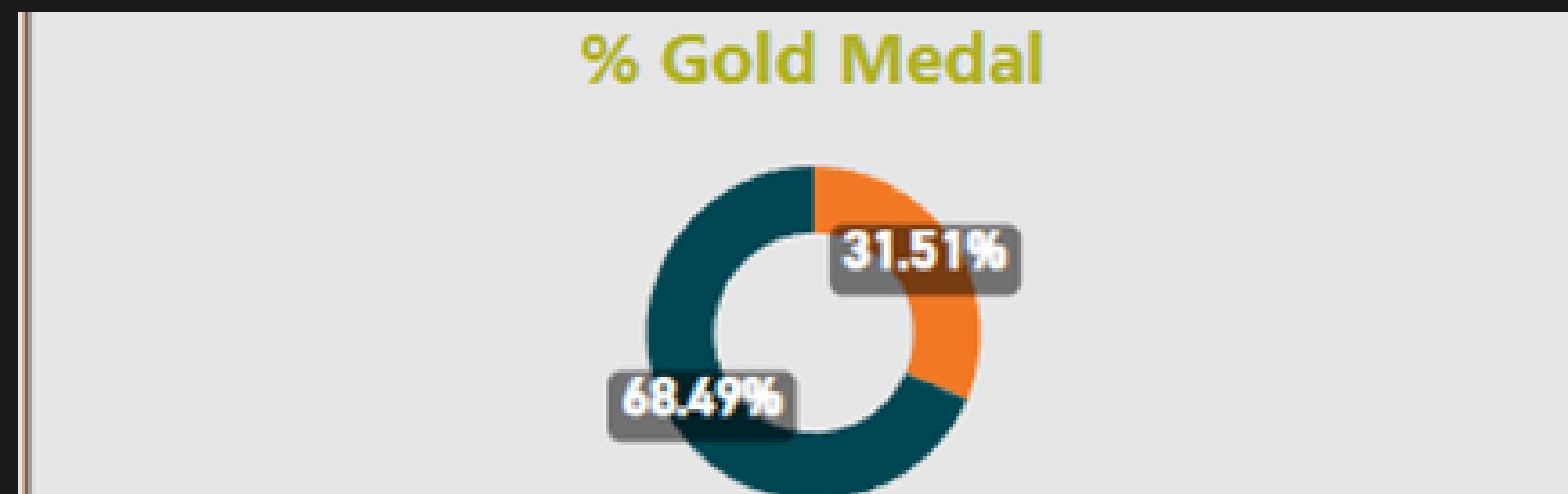
Countries	Gold Medal	Silver Medal	Bronze Medal	Total Medal
Armenia	0	3	1	4
Colombia	0	3	1	4
Kosovo	0	1	1	2
Cape Verde	0	0	1	1
Ivory Coast	0	0	1	1
Peru	0	0	1	1
Qatar	0	0	1	1
Refugee Olympic Team	0	0	1	1
Singapore	0	0	1	1
Slovakia	0	0	1	1

EXPLORATORY DATA ANALYSIS

Q4. Which medal category was the least won?



Gold medals won accounted for 31.51% of total medals won.



EXPLORATORY DATA ANALYSIS

Q5. What are the top ten (10) countries with the least won medal category?

Countries	Gold Medal	Silver Medal	Bronze Medal	Total Medal
United States‡	40	44	42	126
China	40	27	24	91
Japan	20	12	13	45
Australia	18	19	16	53
France*	16	26	22	64
Netherlands	15	7	12	34
Great Britain	14	22	29	65
South Korea	13	9	10	32
Italy	12	13	15	40
Germany	12	13	8	33

EXPLORATORY DATA ANALYSIS

Q6. What are the least ten (10) countries with the least won medal category ?

Countries	Gold Medal	Silver Medal	Bronze Medal	Total Medal
Uganda	1	1	0	2
Israel	1	5	1	7
Poland	1	4	5	10
Kazakhstan	1	3	3	7
Jamaica	1	3	2	6
South Africa	1	3	2	6
Thailand	1	3	2	6
Individual Neutral Athletes[A][B]	1	3	1	5
Ethiopia	1	3	0	4
Switzerland	1	2	5	8

INSIGHTS

The US led in both the most won and least won medal categories of 'Bronze medal' and 'Gold medal' with 42 and 40 respectively.

Great Britain came second in the most won medal category of 'Bronze medal'. Followed by China, France and Australia. Completing the first five (5) in that category.

While in the least won medal category of 'Gold Medal', the following in addition to the US made up the first five (5) They are : China, Japan, Australia and France.

The above shows the competitiveness of these nations not only in economics and politics, but also in sporting events.

RECOMMENDATION

- 1. Leaders and citizens alike of other nations notably from Africa should take sporting events such as the Olympics seriously as this can also be an avenue to command respect in the comity of nations. As such considerable amount of investment in terms time, efforts, expertise and resources should be put in place.**
- 2. For businesses, a sporting event such as this is indeed a veritable avenue to connect with their target markets with solution offerings, fair pricing, effective promotion and far-reaching distributive platforms.**