

Assignment 2 Data Visualization

Please ensure that the final submission adheres to the following guidelines:

- File Format:** The submission should be in the form of a Tableau Workbook (twb not twbx, one can save the workbook as a twb file by selecting 'File' -> 'Export As' -> 'Tableau Workbook').
- File Name:** The file should be named as `Assignment2_Student_ID_Name.twb`.
- Content:** The workbook should contain the following sections:
 - Sheet 1:** Number of Circuits in Each Country
 - Sheet 2:** Detailed Information of Circuits
 - Sheet 3:** Average Circuit Altitude
 - Dashboard:** The workbook should contain a dashboard that combines the three sheets.

Dataset:

In the Week 6 folder on Canvas, you will find a dataset titled 'circuits.csv'. This file comprises detailed information about the circuits used in the Formula 1 racing series. The dataset contains the following columns:

Name
circuits.csv

Fields

Type	Field Name	Physical Table	Remote Field Na...
#	Circuit Id	circuits.csv	circuitId
Abc	Circuit Ref	circuits.csv	circuitRef
Abc	Name	circuits.csv	name
Abc	Location	circuits.csv	location
🌐	Country	circuits.csv	country
📍	Lat	circuits.csv	lat
📍	Lng	circuits.csv	lng

#	Abc	Abc	Abc	🌐	📍	📍	#	Abc
Circuit Id	Circuit Ref	Name	Location	Country	Lat	Lng	Alt	Url
1	albert_park	Albert Park Grand Prix Circuit	Melbourne	Australia	-37.8497	144.968	10	http://en.wikipedia.org/wiki/...
2	sebang	Sepang International Circuit	Kuala Lumpur	Malaysia	2.7608	101.738	18	http://en.wikipedia.org/wiki/...
3	bahrain	Bahrain International Circuit	Sakhir	Bahrain	26.0325	50.511	7	http://en.wikipedia.org/wiki/...
4	catalunya	Circuit de Barcelona-Catalun...	Montmeló	Spain	41.5700	2.261	109	http://en.wikipedia.org/wiki/...
5	istanbul	Istanbul Park	Istanbul	Turkey	40.9517	29.405	130	http://en.wikipedia.org/wiki/...
6	monaco	Circuit de Monaco	Monte-Carlo	Monaco	43.7347	7.421	7	http://en.wikipedia.org/wiki/...
7	villeneuve	Circuit Gilles Villeneuve	Montreal	Canada	45.5000	-73.523	13	http://en.wikipedia.org/wiki/...
8	magny_cours	Circuit de Nevers Magny-Cou...	Magny Cours	France	46.8642	3.164	228	http://en.wikipedia.org/wiki/...
9	silverstone	Silverstone Circuit	Silverstone	UK	52.0786	-1.017	153	http://en.wikipedia.org/wiki/...
10	hockenheimring	Hockenheimring	Hockenheim	Germany	49.3278	8.566	103	http://en.wikipedia.org/wiki/...

Task and Expected Output:

The task is to visualize the data in the dataset. Using the tableau and the skills learned in the class, one should create a dashboard as follows:

Number of Circuits in Each Country

Number of circuits

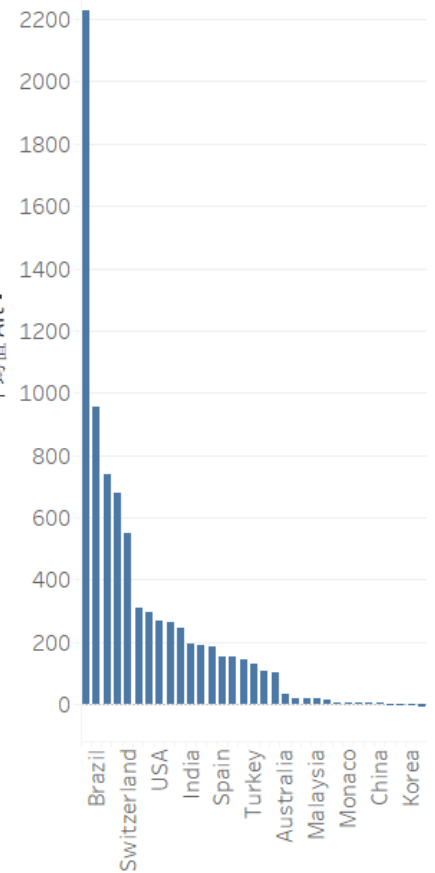
1 11



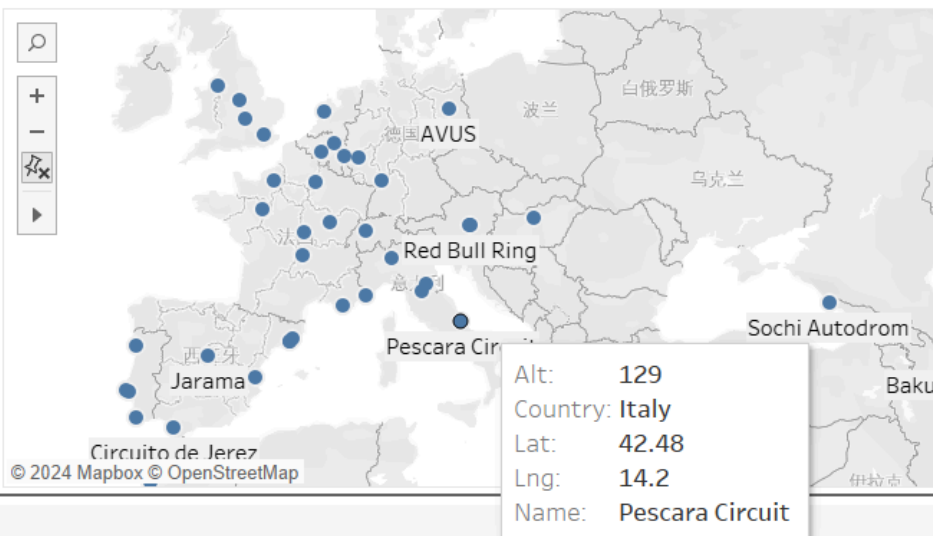
© 2024 Mapbox © OpenStreetMap

Average Circuit Altitude

Country



Detailed Information of Circuits



Hints:

1. Sheet 1: Number of Circuits in Each Country

- Use the **country** field to create a geographical map.
- Use the **circuit ID** field to count the number of circuits in each country.
- Use the **circuit ID** field to color the map based on the number of circuits in each country.

2. Sheet 2: Detailed Information of Circuits

- Change the data type of latitude and longitude to **geographical role**.
- Use latitude and longitude to create a map by placing them on the **rows** and **columns** shelves, and right clicking on the **latitude** and **longitude** fields to change their aggregation to **dimension**.
- Use the **name** field to display the name of the circuit.
- Add the **country** field to the **Detail** shelf to display the country name.
- Add the **alt** field to the **Detail** shelf to display the altitude of the circuit.

3. Sheet 3: Average Circuit Altitude

- Drag the **country** field to the **columns** shelf.

- Drag the `alt` field to the `rows` shelf and change the aggregation to `average` .
- Descending/asceding sort the average altitude of the circuits in each country.

4. **Dashboard:** The workbook should contain a dashboard that combines the three sheets.

5. **Save the workbook:** Save the workbook as a twb file by selecting 'File' -> 'Export As' -> 'Tableau Workbook'.

Note: you should deal with the missing values in the dataset during creating the visualization.