

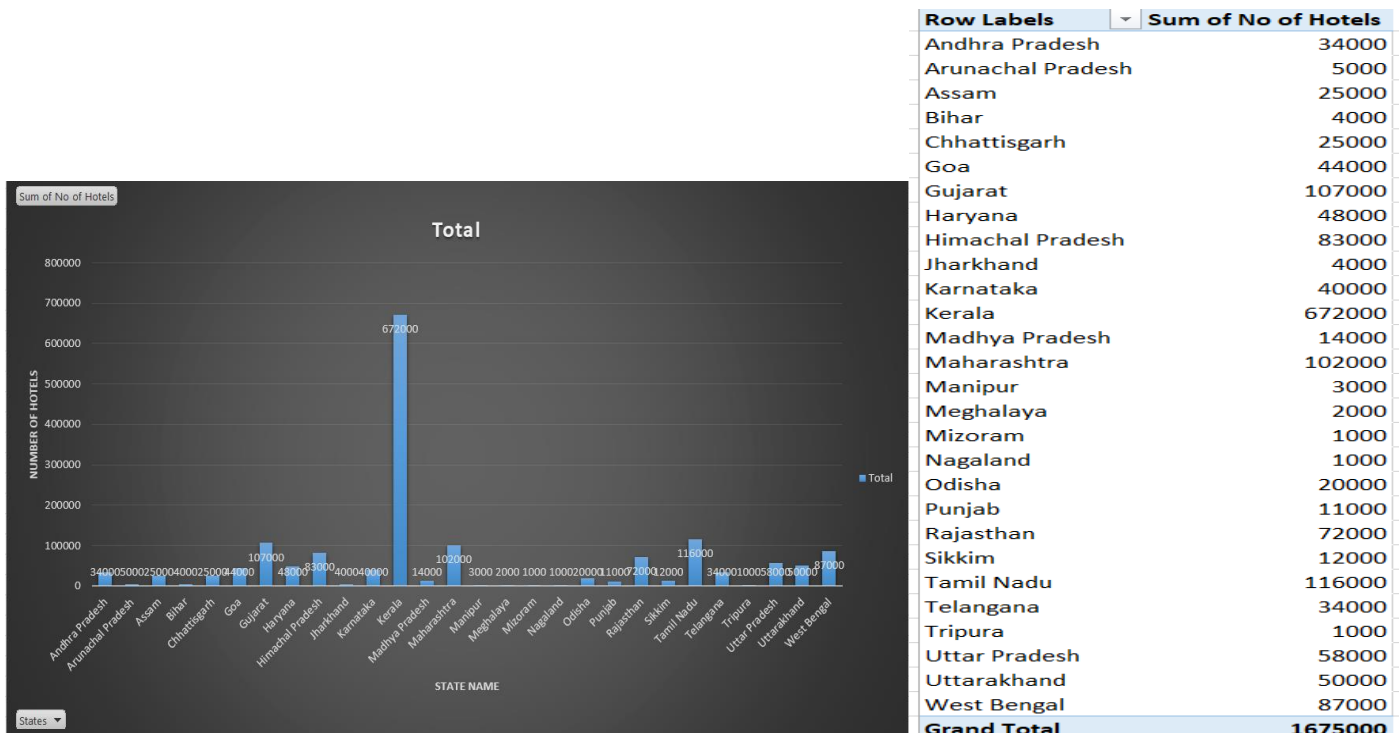
Project 2

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I have worked on given dataset and the provided image of weather report from every state. Here is what insights I have drawn out of it. Please note that here I am pasting the screenshots of every output that I got for command and its respective pivot chart as well.

Q1 : Which state has the highest number of hotels? Depict this via a bar graph that compares all states.

Ans:-



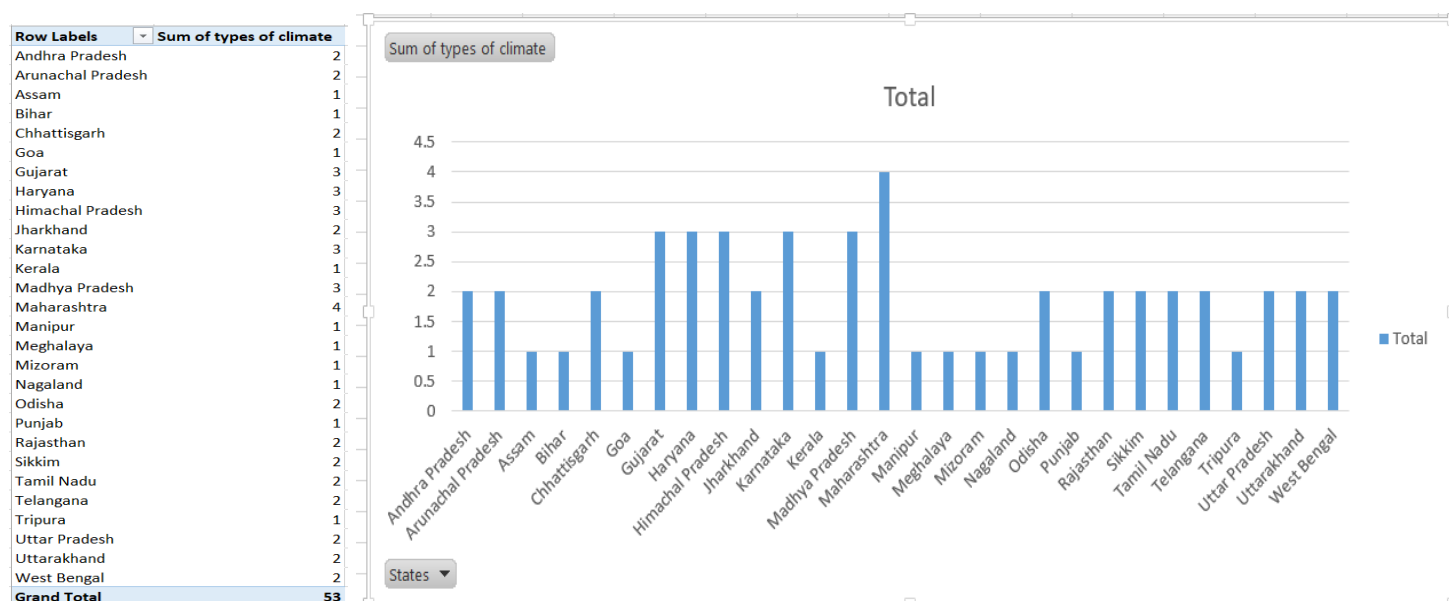
So from the above dataset and bar diagram we can conclude that Kerala has maximum number of hotels (672000) in it. Followed by Gujrat, Maharashtra and Tamil nadu which are still struggling around one lakh.

Q2: Which states have three types of climatic conditions? (Convert the map, an unstructured data, to an Excel file in a structured format and mention the number of climates along with the state)

Ans:-

Serial No.	States	No of Hotels	weather	conditions present						Total
				Arid,stepe,hot	mountain climate	humid subtropical	tropical savannah wet,dry	tropical monsoon	hot deserts arid	
1	Andhra Pradesh	34000	tropical savannah wet,dry	1			1			2
2	Arunachal Pradesh	5000	Arid,stepe,hot		1	1				2
3	Assam	25000	humid subtropical			1				1
4	Bihar	4000	humid subtropical			1				1
5	Chhattisgarh	25000	humid subtropical			1				2
6	Goa	44000	tropical savannah wet,dry				1			1
7	Gujarat	107000	tropical monsoon					1		1
			hot deserts arid						1	1
			Arid,stepe,hot				1			1
			tropical savannah wet,dry	1						3
8	Haryana	48000	Arid,stepe,hot							
			humid subtropical	1		1				2
			hot deserts arid						1	3
9	Himachal Pradesh	83000	Arid,stepe,hot	1						1
			humid subtropical	1	1	1				3
			mountain climate							
10	Jharkhand	4000	humid subtropical			1				1
			tropical savannah wet,dry				1			2
11	Karnataka	40000	tropical savannah wet,dry	1						1
			tropical monsoon				1	1		3
			Arid,stepe,hot							
12	Kerala	672000	tropical monsoon					1		1
			humid subtropical							
13	Madhya Pradesh	14000	tropical savannah wet,dry	1		1	1			3
			Arid,stepe,hot							
14	Maharashtra	102000	humid subtropical							
			tropical savannah wet,dry	1		1	1	1		4
			tropical monsoon							
			Arid,stepe,hot							
15	Manipur	3000	humid subtropical			1				1
16	Meghalaya	2000	humid subtropical			1				1
17	Mizoram	1000	humid subtropical			1				1
18	Nagaland	1000	humid subtropical			1				1
19	Odisha	20000	humid subtropical			1	1			2
			tropical savannah wet,dry							
20	Punjab	11000	Arid,stepe,hot	1						1
			hot deserts arid							
21	Rajasthan	72000	Arid,stepe,hot	1					1	2
22	Sikkim	12000	mountain climate		1	1				2
			humid subtropical							
23	Tamil Nadu	116000	Arid,stepe,hot	1				1		2
			tropical savannah wet,dry							
24	Telangana	34000	Arid,stepe,hot	1			1			2
			tropical savannah wet,dry							
25	Tripura	1000	humid subtropical			1				1
26	Uttar Pradesh	58000	humid subtropical			1				1
			Arid,stepe,hot	1						2
27	Uttarakhand	50000	mountain climate		1	1				2
			humid subtropical							
28	West Bengal	87000	humid subtropical			1	1			2
			tropical savannah wet,dry							

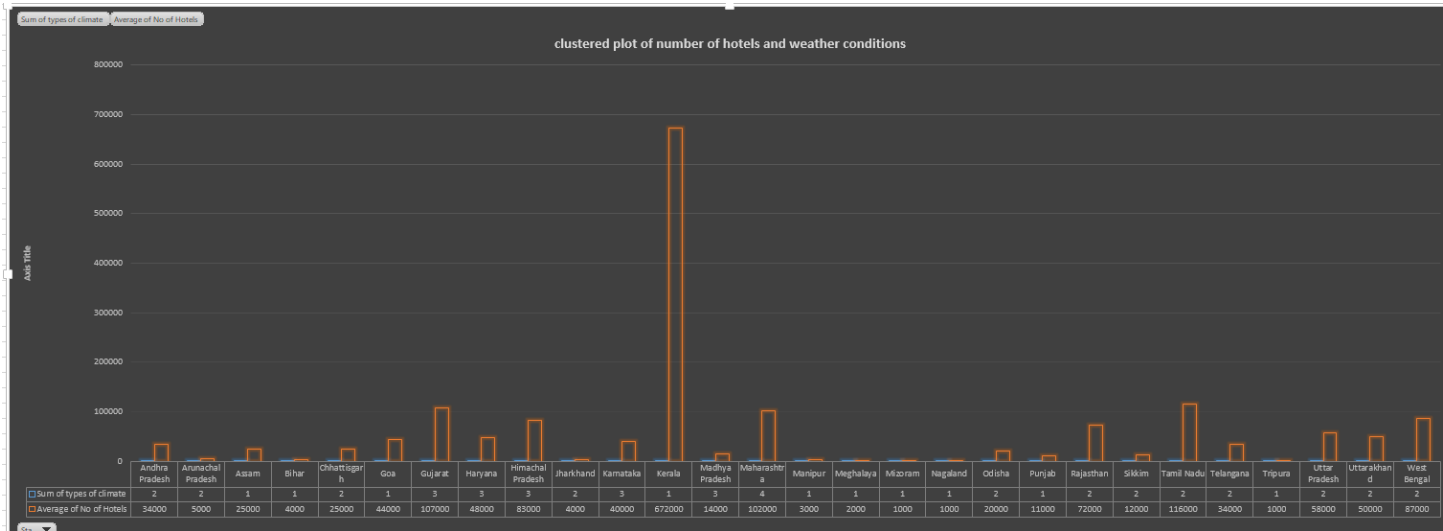
This is structured data of the weather conditions with respect to its state now I will be plotting pivot chart for the same (in above excel sheet 1 indicates the climate condition present in the selected state)



Now from the above table and the provided bar diagram we can clearly see that Gujarat, Madhya Pradesh, Haryana, Himachal Pradesh and Karnataka have 3 different types of weather whereas Maharashtra faces 4 types of climate situations.

Q3: Among the northeastern states which are best to set up a hotel? Use Clustered Column Chart and give recommendations for hotel industry investors.

Ans:-



As you can see from the clustered plot up top, all states show a positive trend line indicating that as the variety of climate increases, so too does the number of hotels, with the exception of Kerala, which has a large number of hotels inside its borders. On the other hand, one of the major factors limiting the availability of hotels in a state is the tropical monsoon.

Tropical monsoon and tropical savannah are the key factors that deals with availability of water that is in the region of tropical monsoon there would be a very huge amount of water resources that encourages the hospitality industry to set their business so we need to think of states from north-eastern India which has good amount of water reservoirs so that we can try setting out hotels in those regions. Assam, Meghalaya, and Sikkim are more likely to receive heavy rainfall from north-eastern India, yet Assam draws the most tourists of all the northeastern states. The Kamakhya Temple and Kaziranga National Park are the two most well-known tourist destinations.

We therefore get to the conclusion that we can try establishing up our hotels in Assam state from the North-East region based on the aforementioned analysis and environment and climate assistance.

Q4: Customise the pivot charts to add/change the fields in the fields list with other fields and by using chart styles to customise the charts. (choose the data and parameters according to your choice)

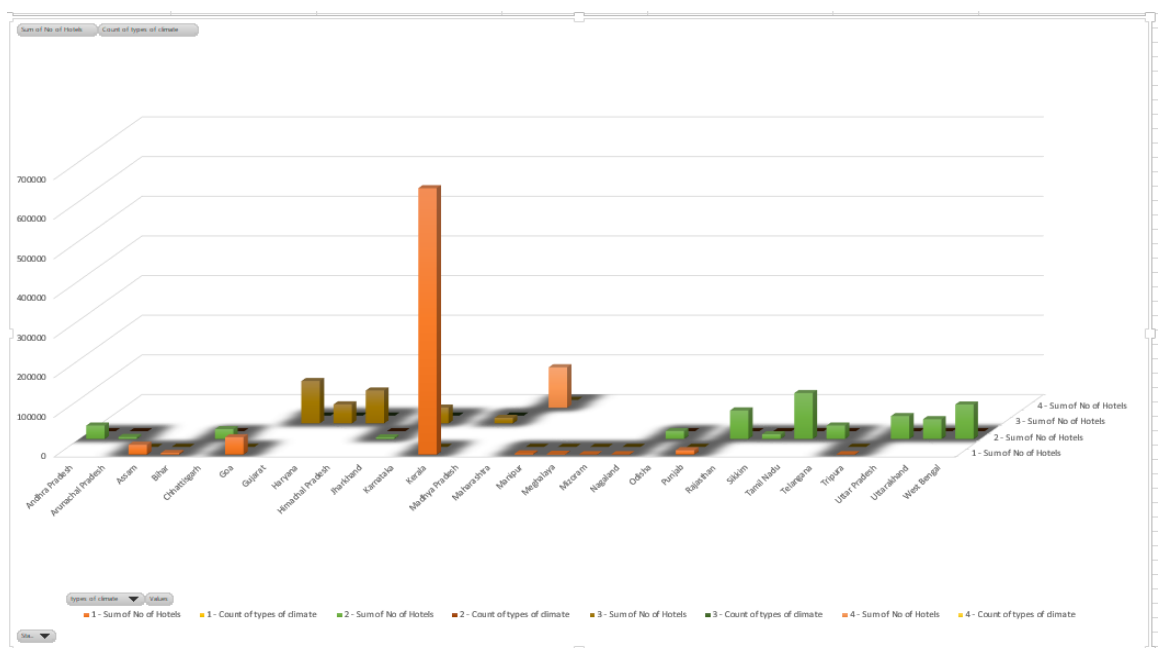
Ans:- here I am pasting my dataset which I have used to generate pivot table and pivot chart

Serial No.	States	No of Hotels	types of climate
1	Andhra Pradesh	34000	2
2	Arunachal Pradesh	5000	2
3	Assam	25000	1
4	Bihar	4000	1
5	Chhattisgarh	25000	2
6	Goa	44000	1
7	Gujarat	107000	3
8	Haryana	48000	3
9	Himachal Pradesh	83000	3
10	Jharkhand	4000	2
11	Karnataka	40000	3
12	Kerala	672000	1
13	Madhya Pradesh	14000	3
14	Maharashtra	102000	4
15	Manipur	3000	1
16	Meghalaya	2000	1
17	Mizoram	1000	1
18	Nagaland	1000	1
19	Odisha	20000	2
20	Punjab	11000	1
21	Rajasthan	72000	2
22	Sikkim	12000	2
23	Tamil Nadu	116000	2
24	Telangana	34000	2
25	Tripura	1000	1
26	Uttar Pradesh	58000	2
27	Uttarakhand	50000	2
28	West Bengal	87000	2

this was the dataset and now the next is pivot table

	Column Labels									
	1		2		3		4		Total Sum of No of Hotels	Total Count of types of climate
Row Labels	Sum of No of Hotels	Count of types of climate	Sum of No of Hotels	Count of types of climate	Sum of No of Hotels	Count of types of climate	Sum of No of Hotels	Count of types of climate		
Andhra Pradesh			34000	1					34000	1
Arunachal Pradesh			5000	1					5000	1
Assam	25000	1							25000	1
Bihar	4000	1							4000	1
Chhattisgarh			25000	1					25000	1
Goa	44000	1							44000	1
Gujarat					107000	1			107000	1
Haryana					48000	1			48000	1
Himachal Pradesh					83000	1			83000	1
Jharkhand			4000	1					4000	1
Karnataka					40000	1			40000	1
Kerala	672000	1							672000	1
Madhya Pradesh					14000	1			14000	1
Maharashtra							102000	1	102000	1
Manipur	3000	1							3000	1
Meghalaya	2000	1							2000	1
Mizoram	1000	1							1000	1
Nagaland	1000	1							1000	1
Odisha			20000	1					20000	1
Punjab	11000	1							11000	1
Rajasthan			72000	1					72000	1
Sikkim			12000	1					12000	1
Tamil Nadu			116000	1					116000	1
Telangana			34000	1					34000	1
Tripura	1000	1							1000	1
Uttar Pradesh			58000	1					58000	1
Uttarakhand			50000	1					50000	1
West Bengal			87000	1					87000	1
Grand Total	764000	10	517000	12	292000	5	102000	1	1675000	28

At last now I will be pasting my pivot chart to showcase this data.



Q5: Which is the best state for setting up a hotel? Why?

Ans:- As we previously mentioned when addressing the issue of opening a hotel in north-eastern India, we have come to the conclusion that the main variables influencing the expansion of the hospitality industry are that

- a) Availability of water
- b) Tourists spots
- c) Number of tourists visiting in a year

The states with a mountain climate, a tropical savannah, and a tropical monsoon are the ones with a good amount of water reservoirs, while Tamil Nadu, Maharashtra, Goa, Karnataka, and Himachal Pradesh are those with a significant amount of tourism in India. As a result, we will look to see which states can satisfy all of these requirements. Now, by considering these two factors—water availability and a big number of tourists—we arrive at the conclusion that Tamil Nadu is the greatest state to establish a hotel business since it can survive these two limitations.

Q6: What is the average number of days the rainy season lasts in Indian states?

Ans:- The main characteristic of the tropical savannah climate, which is prevalent throughout India, is that it produces significant amounts of rain from June to September. In contrast, the tropical monsoon climate has its rainy season from May to November. The mountain climate, which produces snowfall and rain during the winter months of October to December, is the third type of climate that experiences rain. According to the aforementioned data, the period from June to October is common to all climate types, and as a result, India experiences an average of 5 months of rain per year.