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# INTRODUCTION



#### Good cabs Overview:-

- Established: 2 years ago, focusing on tier-2 cities in India.
- Mission: Support local drivers and provide excellent service to passengers.
- Current Operations : Active in 10 tier-2 cities.

#### 2024 Goals :-

- Increase trip volume .
- Improve passenger satisfaction.
- Boost repeat passenger rate.
- Optimize trip distribution .
- Balance new and repeat passengers.

### PROBLEM STATMENT



#### Objective:-

- Analyze key metrics to assess Good cabs' performance for 2024, including:
- Trip volume
- Passenger satisfaction
- Repeat passenger rate
- Trip distribution
- Balance of new vs. repeat passengers

#### Challenge:-

- o The Chief of Operations Bruce Haryali needs this information immediately.
- Tony , the analytics manager, has delegated this task to Peter Pandey , a data analyst.

#### Goal:-

Provide insights that will help Good cabs improve performance and meet 2024 targets.



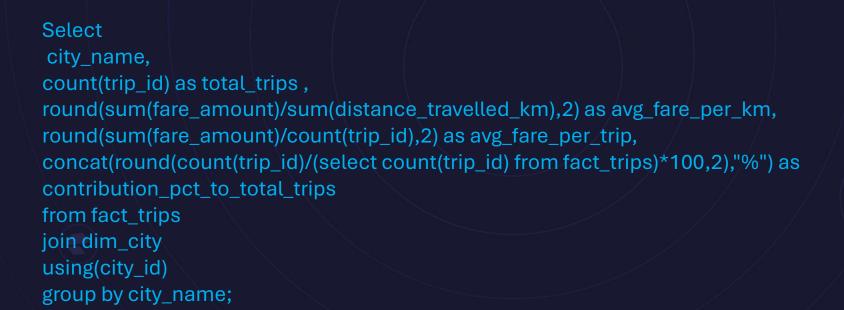
# EXECUTION OF MR. BRUCE HARYALI (CHIEF OPERATION OFFICER) REQUESTS

#### Business Request - 1: City-Level Fare and Trip Summary Report

Generate a report that displays the total trips, average fare per km, average fare per trip, and the percentage contribution of each city's trips to the overall trips. This report will help in assessing trip volume, pricing efficiency, and each city's contribution to the overall trip count.

#### Fields:

- city\_name
- total trips
- avg fare per km
- avg\_fare\_per\_trip
- %\_contribution\_to\_total\_trips





-					
	city_name	total_trips	avg_fare_per_km	avg_fare_per_trip	contribution_pct_to_total_trips
•	Chandigarh	38981	12.06	283.69	9.15%
	Coimbatore	21104	11.15	166.98	4.96%
	Indore	42456	10.90	179.84	9.97%
	Jaipur	76888	16.12	483.92	18.05%
	Kochi	50702	13.93	335.25	11.90%
	Lucknow	64299	11.76	147.18	15.10%
	Mysore	16238	15.14	249.71	3.81%
	Surat	54843	10.66	117.27	12.88%
	Vadodara	32026	10.29	118.57	7.52%
	Visakhapatnam	28366	12.53	282.67	6.66%



#### Business Request - 2: Monthly City-Level Trips Target Performance Report

Generate a report that evaluates the target performance for trips at the monthly and city level. For each city and month, compare the actual total trips with the target trips and categorise the performance as follows:

- If actual trips are greater than target trips, mark it as "Above Target".
- If actual trips are less than or equal to target trips, mark it as "Below Target".

Additionally, calculate the % difference between actual and target trips to quantify the performance gap.

#### Fields:

- City\_name
- month name
- actual trips
- target\_trips
- performance\_status
- %\_difference



```
with cte as
( select trips_db.fact_trips.city_id as city_id,
trips db.dim city.city name as city name,
month(trips_db.fact_trips.date)as dt,
monthname(trips_db.fact_trips.date) as month_name,
count(trips_db.fact_trips.trip_id) as actual_trips
from trips_db.dim_city
join trips_db.fact_trips
on trips_db.dim_city.city_id=trips_db.fact_trips.city_id
join targets db.monthly target trips
on trips_db.fact_trips.city_id=targets_db.monthly_target_trips.city_id
and month(trips_db.fact_trips.date) = month(targets_db.monthly_target_trips.month)
group by 1,2,3,4)
select cte.city_name, cte.month_name, cte.actual_trips, sum(targets_db.monthly_target_trips.total_target_trips) as
target_trips,
Case
when cte.actual_trips >= sum(targets_db.monthly_target_trips.total_target_trips) then "Above Target"
else "Below Target"
end as performance_status,
concat(round(cte.actual trips-
sum(targets_db.monthly_target_trips.total_target_trips))/sum(targets_db.monthly_target_trips.total_target_trips)*100,
2),"%") as difference_pct
from targets_db.monthly_target_tripsjoin cte
on targets_db.monthly_target_trips.city_id=cte.city_id and month(targets_db.monthly_target_trips.month) = cte.dt
group by cte.city_id, cte.dt, cte.month_name:
```

	city_name	month_name	actual_trips	target_trips	performance_status	difference_pct
þ	Visakhapatnam	January	4468	4500	Below Target	-0.71%
	Chandigarh	January	6810	7000	Below Target	-2.71%
	Surat	January	8358	9000	Below Target	-7.13%
	Vadodara	January	4775	6000	Below Target	-20.42%
	Mysore	January	2485	2000	Above Target	24.25%
	Kochi	January	7344	7500	Below Target	-2.08%
	Indore	January	6737	7000	Below Target	-3.76%
	Jaipur	January	14976	13000	Above Target	15.20%
	Coimbatore	January	3651	3500	Above Target	4.31%
	Lucknow	January	10858	13000	Below Target	-16.48%

_						
	city_name	month_name	actual_trips	target_trips	performance_status	difference_pct
	Visakhapatnam	February	4793	4500	Above Target	6.51%
	Chandigarh	February	7387	7000	Above Target	5.53%
	Surat	February	9069	9000	Above Target	0.77%
	Vadodara	February	5228	6000	Below Target	-12.87%
	Mysore	February	2668	2000	Above Target	33.40%
	Kochi	February	7688	7500	Above Target	2.51%
	Indore	February	7210	7000	Above Target	3.00%
	Jaipur	February	15872	13000	Above Target	22.09%
	Coimbatore	February	3404	3500	Below Target	-2.74%
	Lucknow	February	12060	13000	Below Target	-7.23%
	1					



#### Business Request - 3: City-Level Repeat Passenger Trip Frequency Report

Generate a report that shows the percentage distribution of repeat passengers by the number of trips they have taken in each city. Calculate the percentage of repeat passengers who took 2 trips, 3 trips, and so on, up to 10 trips.

Each column should represent a trip count category, displaying the percentage of repeat passengers who fall into that category out of the total repeat passengers for that city.

This report will help identify cities with high repeat trip frequency, which can indicate strong customer loyalty or frequent usage patterns.

Fields: city\_name, 2-Trips, 3-Trips, 4-Trips, 5-Trips, 6-Trips, 7-Trips, 8-Trips, 9-Trips,
 10-Trips

select c.city\_name, round(sum(case when r.trip\_count = '2-trips' then r.repeat\_passenger\_count else 0 end)/sum(r.repeat\_passenger\_count)\*100,2) as 2\_trips, round(sum(case when r.trip\_count = '3-trips' then r.repeat\_passenger\_count else 0 end)/sum(r.repeat\_passenger\_count)\*100,2) as 3\_trips round(sum(case when r.trip count = '4-trips' then r.repeat passenger count else 0 end)/sum(r.repeat\_passenger\_count)\*100,2) as 4\_trips, round(sum(case when r.trip\_count = '5-trips' then r.repeat\_passenger\_count else 0 end)/sum(r.repeat\_passenger\_count)\*100,2) as 5\_trips, round(sum(case when r.trip\_count = '6-trips' then r.repeat\_passenger\_count else 0 end)/sum(r.repeat\_passenger\_count)\*100,2) as 6\_trips, round(sum(case when r.trip\_count = '7-trips' then r.repeat\_passenger\_count else 0 end)/sum(r.repeat\_passenger\_count)\*100,2) as 7\_trips, round(sum(case when r.trip\_count = '8-trips' then r.repeat\_passenger\_count else 0 end)/sum(r.repeat\_passenger\_count)\*100,2) as 8\_trips round(sum(case when r.trip count = '9-trips' then r.repeat passenger count else 0 end)/sum(r.repeat\_passenger\_count)\*100,2) as 9\_trips, round(sum(case when r.trip\_count = '10-trips' then r.repeat\_passenger\_count else 0 end)/sum(r.repeat\_passenger\_count)\*100,2) as 10\_trips from dim repeat trip distribution r join dim\_city c on r.city\_id = c.city\_id group by c.city\_name order by c.city\_name;



	city_name	2_trips	3_trips	4_trips	5_trips	6_trips	7_trips	8_trips	9_trips	10_trips
	Chandigarh	32.31	19.25	15.74	12.21	7.42	5.48	3.47	2.33	1.79
	Coimbatore	11.21	14.82	15.56	20.62	17.64	10.47	6.15	2.31	1.22
•	Indore	34.34	22.69	13.40	10.34	6.85	5.24	3.26	2.38	1.51
	Jaipur	50.14	20.73	12.12	6.29	4.13	2.52	1.90	1.20	0.97
	Kochi	47.67	24.35	11.81	6.48	3.91	2.11	1.65	1.21	0.81
	Lucknow	9.66	14.77	16.20	18.42	20.18	11.33	6.43	1.91	1.10
	Mysore	48.75	24.44	12.73	5.82	4.06	1.76	1.42	0.54	0.47
	Surat	9.76	14.26	16.55	19.75	18.45	11.89	6.24	1.74	1.35
	Vadodara	9.87	14.17	16.52	18.06	19.08	12.86	5.78	2.05	1.61
	Visakhapatnam	51.25	24.96	9.98	5.44	3.19	1.98	1.39	0.88	0.92



**Business Request - 4:** Identify Cities with Highest and Lowest Total New Passengers

Generate a report that calculates the total new passengers for each city and ranks them based on this value. Identify the top 3 cities with the highest number of new passengers as well as the bottom 3 cities with the lowest number of new passengers, categorising them as "Top 3" or "Bottom 3" accordingly.

#### Fields

- city\_name
- total\_new\_passengers
- city\_category ("Top 3" or "Bottom 3")

select city\_name, sum(new\_passengers) as total\_new\_passengers from dim\_city c join fact\_passenger\_summary f on f.city\_id = c.city\_id group by f.city\_id order by total\_new\_passengers desc limit 3) union (select city\_name, sum(new\_passengers) as total\_new\_passengers from dim\_city c join fact\_passenger\_summary f on f.city\_id = c.city\_id group by f.city\_id order by total\_new\_passengers asc limit 3);



	city_name	total_new_passengers
١	Jaipur	45856
	Kochi	26416
	Chandigarh	18908
	Coimbatore	8514
	Vadodara	10127
	Surat	11626



#### Business Request - 5: Identify Month with Highest Revenue for Each City

Generate a report that identifies the month with the highest revenue for each city. For each city, display the month\_name, the revenue amount for that month, and the percentage contribution of that month's revenue to the city's total revenue.

#### Fields

- city name
- highest revenue month
- revenue
- percentage\_contribution (%)

with monthly\_revenue as ( select c.city\_name, monthname(ft.date) as month, sum(ft.fare\_amount) as monthly\_revenue from fact\_trips ft join dim\_city c on ft.city\_id = c.city\_id group by c.city\_name, monthname(ft.date)), total\_revenue as ( select city\_name , sum(monthly\_revenue) as total revenue from monthly revenue group by city\_name) select mr.city\_name, mr.month as highest\_revenue\_month, mr.monthly\_revenue as revenue, round((mr.monthly\_revenue/tr.total\_revenue)\*100,2) as percentage\_contribution from monthly\_revenue mr join total\_revenue tr on mr.city\_name = tr.city\_name where mr.monthly\_revenue=(select max(monthly\_revenue) from monthly\_revenue where city\_name=mr.city\_name) order by mr.city\_name;

	_/			
	city_name	highest_revenue_month	revenue	percentage_contribution
•	Chandigarh	February	2108290	19.07
	Coimbatore	April	612431	17.38
	Indore	May	1380996	18.09
	Jaipur	February	7747202	20.82
	Kochi	May	3333746	19.61
	Lucknow	February	1777269	18.78
	Mysore	May	745170	18.38
	Surat	April	1154909	17.96
	Vadodara	April	706250	18.60
	Visakhapatnam	April	1390682	17.34



#### Business Request - 6: Repeat Passenger Rate Analysis

Generate a report that calculates two metrics:

- Monthly Repeat Passenger Rate: Calculate the repeat passenger rate for each city and month by comparing the number of repeat passengers to the total passengers.
- 2. City-wide Repeat Passenger Rate: Calculate the overall repeat passenger rate for each city, considering all passengers across months.

These metrics will provide insights into monthly repeat trends as well as the overall repeat behaviour for each city.

#### Fields:

- city\_name
- month
- total\_passengers
- repeat\_passengers
- monthly\_repeat\_passenger\_rate (%): Repeat passenger rate at the city and month level
- city\_repeat\_passenger\_rate (%): Overall repeat passenger rate for each city, aggregated across months



```
with cte as
(select city_name,
city_id,
month(month) as month,
monthname(month) as months,
sum(total_passengers) as total_passengers,
sum(repeat_passengers) as repeat_passengers
from fact_passenger_summary
join dim_city
using (city_id)
group by 1,2,3,4
order by 1 asc, 3 asc)
select cte.city_name,
cte.months,
cte.total_passengers,
cte.repeat_passengers,
concat(round(cte.repeat_passengers/(cte.total_passengers)*100,2),"%") as monthly_repeat_passenger_rate,
concat(round(cte.repeat_passengers/(sum(cte.total_passengers))*100,2),"%") as city_repeat_passenger_rate
from cte
join fact_passenger_summary
on cte.city_id= fact_passenger_summary.city_id
group by 1,2,3,4,cte.month
order by 1 asc, cte.month;
```

	city_name	months	total_passengers	repeat_passengers	monthly_repeat_passenger_rate
•	Chandigarh	January	4640	720	15.52%
	Chandigarh	February	4957	853	17.21%
	Chandigarh	March	4100	872	21.27%
	Chandigarh	April	3285	789	24.02%
	Chandigarh	May	3699	969	26.20%
	Chandigarh	June	3297	867	26.30%
	Coimbatore	January	2214	392	17.71%
	Coimbatore	February	1993	346	17.36%
	Coimbatore	March	1965	427	21.73%
_	Coimbatore	April	1722	480	27.87%
(					>

Result 6 x









#### **BUSINESS OVERVIEW**

This view tells about the overview of business.



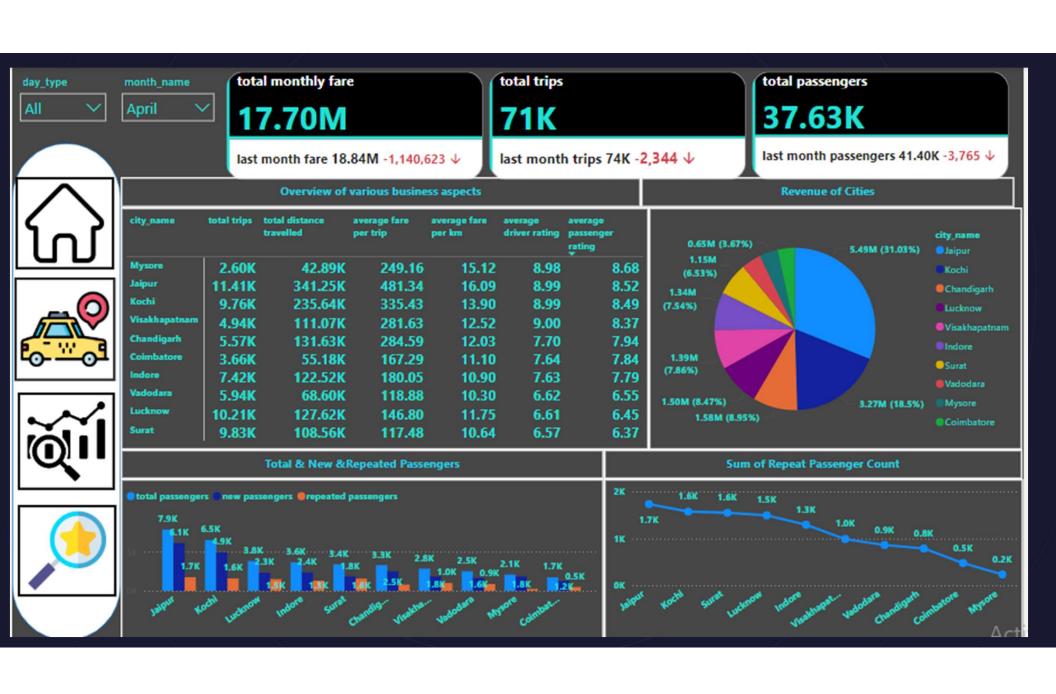
## CITY PERFORMANCE VS TARGET ANALYSIS

This view tells about the city performance and also make comparison of actual vs target and tell the difference.

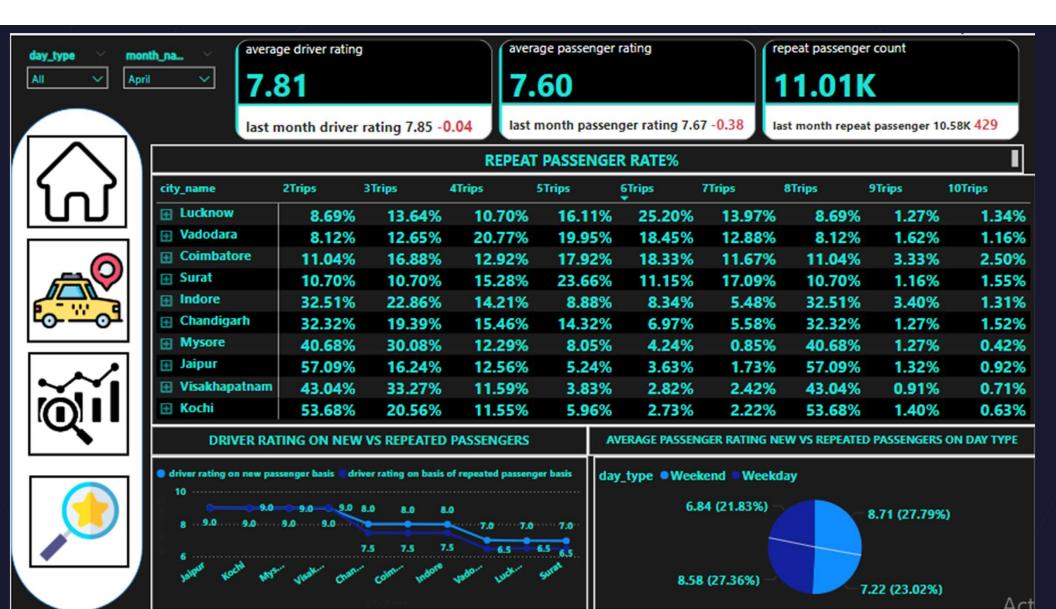


### REPEAT PASSENGER AND RATING ANALYSIS

This view tells about Repeat Passenger Behaviour and also make Driver and Passenger rating analysis.





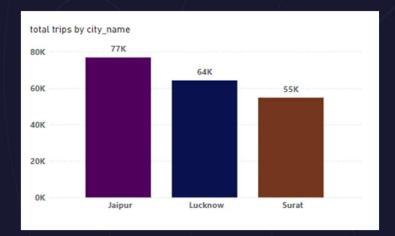




# PRIMARY QUESTIONS

- 1. Top and Bottom Performing Cities
  - Identify the top 3 and bottom 3 cities by total trips over the entire analysis period.







- The top 3 cities are Jaipur, Lucknow and Surat.
- The Bottom 3 cities are Visakhapatnam, Coimbatore and Mysore. Their total trips are very less, so we should analyze the problem over their and take corrective action plan to increase trips over their.

#### 2. Average Fare per Trip by City

 Calculate the average fare per trip for each city and compare it with the city's average trip distance. Identify the cities with the highest and lowest average fare per trip to assess pricing efficiency across locations.



city_name	average fare per trip	average trip distance
Jaipur	483.92	30.02
Kochi	335.25	24.07
Chandigarh	283.69	23.52
Visakhapatnam	282.67	22.55
Mysore	249.71	16.50
Indore	179.84	16.50
Coimbatore	166.98	14.98
Lucknow	147.18	12.51
Vadodara	118.57	11.52
Surat	117.27	11.00



- In this we calculate, average fare per trip and average trip distance for each city.
- Jaipur has highest average fare per trip and Surat has lowest average fare per trip .

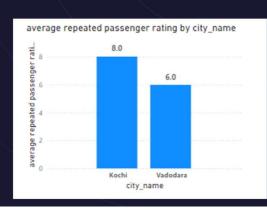


 Calculate the average passenger and driver ratings for each city, segmented by passenger type (new vs. repeat). Identify cities with the highest and lowest average ratings.



city_name	driver rating	passenger(new) rating	average passenger(repeated) rating	
Kochi	8.99	8.99	8.00	
Visakhapatnam	8.99	8.98	7.99	
Jaipur	8.99	8.99	7.99	
Mysore	8.98	8.98	7.98	
Chandigarh	7.72	8.49	7.49	
Coimbatore	7.69	8.49	7.48	
Indore	7.65	8.49	7.47	
Vadodara	6.65	7.98	5.98	
Lucknow	6.62	7.98	5.99	
Surat	6.59	7.98	6.00	







- 4. Peak and Low Demand Months by City
  - For each city, identify the month with the highest total trips (peak demand) and the month with the lowest total trips (low demand). This analysis will help Goodcabs understand seasonal patterns and adjust resources accordingly.

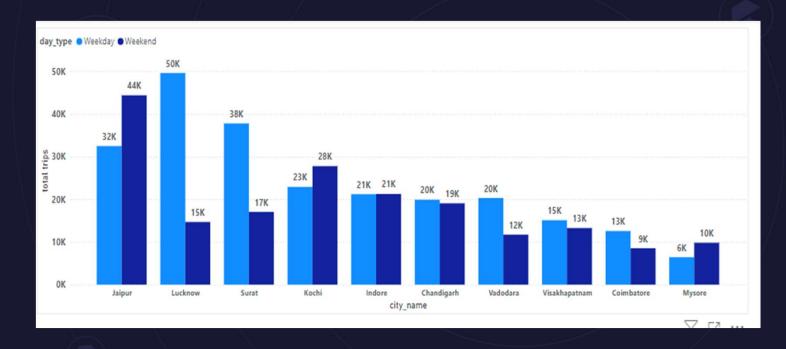


city_name	April	February	January	June	March	May
Chandigarh	5566	7387	6810	6029	6569	6620
Coimbatore	3661	3404	3651	3158	3680	3550
Indore	7415	7210	6737	6288	7019	7787
Jaipur	11406	15872	14976	9842	13317	11475
Kochi	9762	7688	7344	6399	9495	10014
Lucknow	10212	12060	10858	10240	11224	9705
Mysore	2603	2668	2485	2842	2633	3007
Surat	9831	9069	8358	8544	9267	9774
Vadodara	5941	5228	4775	4685	5598	5799
Visakhapatnam	4938	4793	4468	4478	4877	4812

City	Peak Demand	Low Demand
Jaipur	February	June
Lucknow	February	May
Surat	April	January
Kochi	May	June
Indore	May	June
Chandigarh	February	April
Vadodara	April	June
Visakhapatnam	April	January
Coimbatore	March	June
Mysore	May 🔱	January

- 5. Weekend vs. Weekday Trip Demand by City
  - Compare the total trips taken on weekdays versus weekends for each city over the six-month period. Identify cities with a strong preference for either weekend or weekday trips to understand demand variations.





- Jaipur have highest trip in weekend due to tourism factors, people visited more in weekend times.
- Lucknow have highest trip in weekday, it can be possible due to business factors.

- 6. Repeat Passenger Frequency and City Contribution Analysis
  - Analyse the frequency of trips taken by repeat passengers in each city (e.g., % of repeat passengers taking 2 trips, 3 trips, etc.). Identify which cities contribute most to higher trip frequencies among repeat passengers, and examine if there are distinguishable patterns between tourism-focused and business-focused cities.





- Monthly Target Achievement Analysis for Key Metrics
  - For each city, evaluate monthly performance against targets for total trips, new passengers, and average passenger ratings from targets\_db. Determine if each metric met, exceeded, or missed the target, and calculate the percentage difference. Identify any consistent patterns in target achievement, particularly across tourism versus business-focused cities.



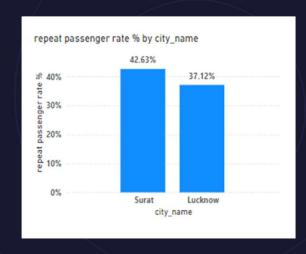
city_name	total trips	total target trips	percentage difference	new passengers	new passenger target	% difference (new passengers)	average passenger rating	average passenger rating target	% difference (passenger)
Mysore	16238	13500	20.28%	11681	12000	-2.66%	8.70	8.50	2.37%
Jaipur	76888	67500	13.91%	45856	54000	-15.08%	8.58	8.25	4.05%
Kochi	50702	49500	2.43%	26416	27000	-2.16%	8.52	8.50	0.19%
Coimbatore	21104	21000	0.50%	8514	7500	13.52%	7.88	8.25	-4.45%
Chandigarh	38981	39000	-0.05%	18908	21000	-9.96%	7.98	8.00	-0.29%
Visakhapatnam	28366	28500	-0.47%	12747	13500	-5.58%	8.43	8.50	-0.79%
Indore	42456	43500	-2.40%	14863	14100	5.41%	7.83	8.00	-2.15%
Surat	54843	57000	-3.78%	11626	10500	10.72%	6.42	7.00	-8.33%
Lucknow	64299	72000	-10.70%	16260	15600	4.23%	6.49	7.25	-10.49%
Vadodara	32026	37500	-14.60%	10127	9900	2.29%	6.61	7.50	-11.85%
Total	425903	429000	-0.72%	176998	185100	-4.38%	7.66	7.98	-3.94%

- Mysore and Jaipur have completed their target for trips and positive percentage difference, it is tourism focused city and their passenger rating is also positive.
- But they lack in completion of new passenger target, Surat completed their new passenger target with highest positive difference, it is possible due to business focused city factor.

- 8. Highest and Lowest Repeat Passenger Rate (RPR%) by City and Month
  - Analyse the Repeat Passenger Rate (RPR%) for each city across the sixmonth period. Identify the top 2 and bottom 2 cities based on their RPR% to determine which locations have the strongest and weakest rates.
  - Similarly, analyse the RPR% by month across all cities and identify the months with the highest and lowest repeat passenger rates. This will help to pinpoint any seasonal patterns or months with higher repeat passenger loyalty.

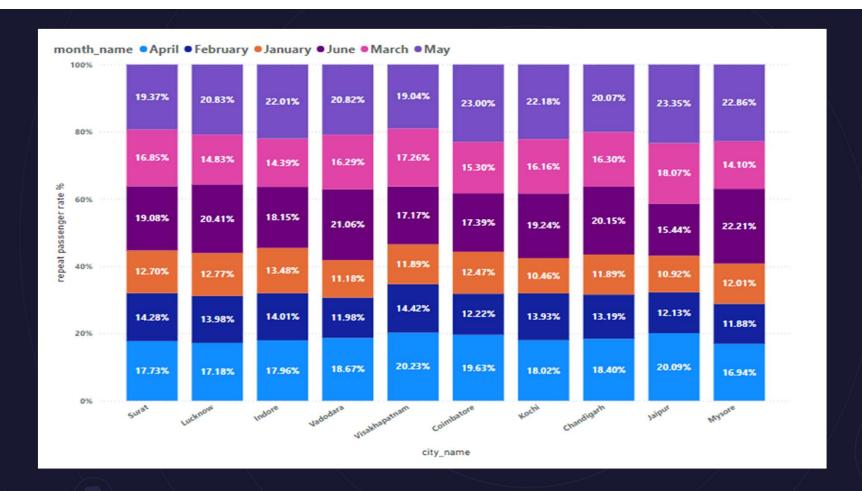


city_name re	peat passenger rate %
Chandigarh	21.14%
Coimbatore	23.05%
Indore	32.68%
Jaipur	17.43%
Kochi	22.40%
Lucknow	37.12%
Mysore	11.23%
Surat	42.63%
Vadodara	30.03%
Visakhapatnam	28.61%





- Surat and Lucknow have high repeat passenger rate%, it proves old passengers are happy with their services and want to have good cabs services again or it is a business focused city.
- Jaipur and Mysore have low repeat passenger rate %, it is due to tourism focused city or there is some problem with the services.





In every city, mostly May month have highest repeat passenger rate% and January month have lowest repeat passenger rate%.



# SECONDARY QUESTIONS

- Factors Influencing Repeat Passenger Rates
  - What factors (such as quality of service, competitive pricing, or city demographics) might contribute to higher or lower repeat passenger rates in different cities? Are there correlations with socioeconomic or lifestyle patterns in these cities?



Yes, the factors quality of service, competitive pricing or city demographics might contribute to highest and lowest passengers rates and these are correlated with socioeconomic or lifestyle patterns in different cities.

- Goodcabs should change their pattern according to city lifestyle or socioeconomic pattern.
- For example: There should be affordability in prices in city like Lucknow, Kochi etc.
- But they can charge high price for premium services in the cities where income of people is more and want quality of service like Chandigarh or Surat.
- Highly competitive cities which have multiple option, so there should be competitive price for repeat passenger but small cities have limited option so with quality of service and good pricing can leads to repeat passengers.

- 2. Tourism vs. Business Demand Impact
  - How do tourism seasons or local events (festivals, conferences) impact Goodcabs' demand patterns? Would tailoring marketing efforts to these events increase trip volume in tourism-oriented cities?



Tourism seasons or local events can increase goodcabs' demand patterns.

#### Marketing strategies:-

- Discount for tourists
- Collaborate with hotels or event managers
- o Enhanced online presence like social or digital campaigns

These are the techniques we can use to increase the demand pattern of goodcabs in tourism seasons or local events.

- 3. Emerging Mobility Trends and Goodcabs' Adaptation
  - What emerging mobility trends (such as electric vehicle adoption, green energy use) are impacting the cab service market in tier-2 cities? Should Goodcabs consider integrating electric vehicles or eco-friendly initiatives to stay competitive?



Yes, Goodcabs' should initiate the use of electric vehicles in tier 2 cities.

It is because of the following reasons:-

- ☐ It make their eco friendly image in the society and this image will give benefit to company.
- ☐ It reduces the cost of petrol and also reduce maintenance cost.
- ☐ It also fulfills corporate social responsibility towards society.
- it also helps in reducing urban pollution.

- 4. Partnership Opportunities with Local Businesses
  - Are there opportunities for Goodcabs to partner with local businesses (such as hotels, malls, or event venues) to boost demand and improve customer loyalty? Could these partnerships drive more traffic, especially in tourismheavy or high-footfall areas?



- Yes, opportunities should increase for Goodcabs' if they collabrate with hotels, malls or event organsiers.
- As on tourism based cities people will stay on hotels and they need cabs for going to hotels or visiting different places to see
- People also visit various event like book festival in Jaipur and it can help them to increase their business and demand for their cabs.

#### **FURTHER RECOMMENDATIONS**



- Goodcabs' should collaborate with hotels, events organizers to increase their demand in tourism focused cities.
- Goodcabs' should go for electric vehicles to make their image in the society, which increase their goodwill and also act their work as a corporate social responsibility towards society.
- ❖ They should analyze the lifestyle of different cities and work according to that like in small cities they should give low prices but better services.
- ❖ Repeat passenger rate% and new passenger target is very low in Jaipur as compared to other factors like target trips, passengers rating. So corrective action should be taken so that new passengers will take the service and also repeated passengers will come again and again. They should apply techniques like loyalty customer, so that repeat customers will come again.
- \* We should analyze every city, every factor that city and take decision accordingly.

