Goodcabs: Transportation & Mobility Domain

COMPANY OVERVIEW

Operates in 10 Tier-2 cities in India

Supports local drivers with steady incomes

Focuses on reliable service and passenger satisfaction

Established 2 years ago with ambitious 2024 growth goals

PROBLEM STATEMENT

JAIPUR

LUCKNOW

SURAT

KOCHI

INDORE

CHANDIGARH

VADODRA

VISAKHAPATNAM

COIMBATORE

MYSORE

Goodcabs operates in 10 cities and plans to expand in 2024 while improving passenger satisfaction. The management wants to analyze trip volume, passenger satisfaction, repeat passengers, and trip distribution. These insights will help Bruce Haryali, Chief of Operations, make better decisions to drive growth and improve services.

ROLES AND RESPONSIBILITY

Chief of Operations, Bruce Haryali, required urgent analysis.

Delivered accurate insights as the project data analyst.

Addressed primary, secondary, and ad-hoc questions.

Provide Insights and Recommendations

KEY METRICS

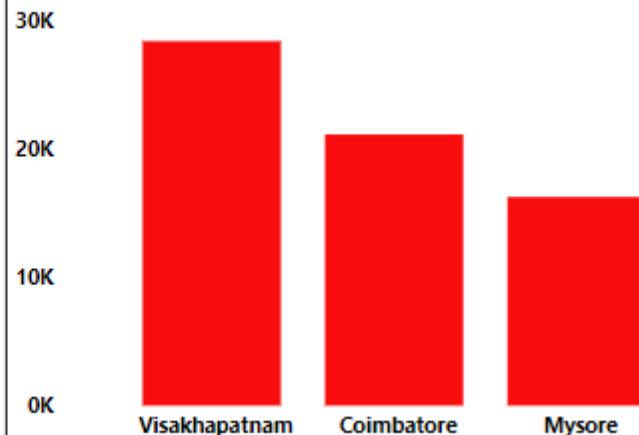|	
Total Trips	Average Trip Distance
Total Fare (Revenue)	Trip Distance (Max, Min)
Total Distance Travelled	Total Passengers
Average Ratings	New vs. Repeated Passenger Trips Ratio
Average Fare per Trip	Repeat Passenger Rate (%)
Average Fare per Km	Revenue Growth Rate (Monthly)
Target Achievement Rate	Average Passenger Rating Target

Primary Analysis

Top 3 cities by total trips — Jaipur, Lucknow, Surat
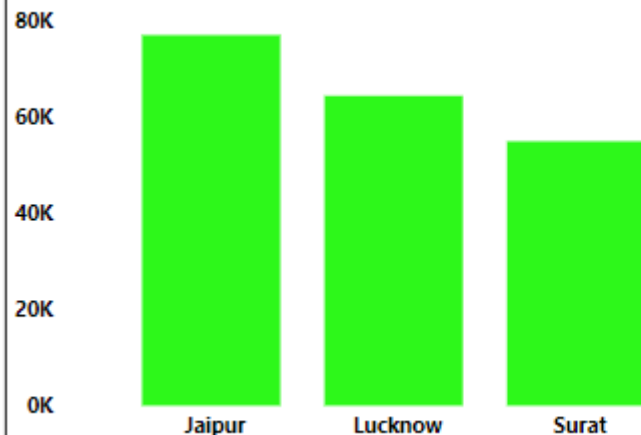
Bottom 3 cities by total trips — Visakhapatnam, Coimbatore, Mysore

PA2 · Average fare per trip vs avg trip distance by city

Avg Fare Per Trip in Rs vs Avg Trip Distance in Km by city name

| City	Avg Fare	Avg Distance
Jaipur	484	30.0
Kochi	335	24.1
Chandigarh	284	23.5
Visakhapatnam	283	22.6
Mysore	250	16.5
Indore	180	16.5
Coimbatore	167	15.0
Lucknow	147	12.5
Vadodara	119	11.5
Surat	147	11.5

Key Insight :
Jaipur is the top-performing city with the highest total trips, followed by Lucknow and Surat. On the other hand, Mysore has the lowest total trips, followed by Coimbatore and Visakhapatnam. Jaipur has the highest average fare per trip, indicating potentially higher pricing or premium services. Surat has the lowest average fare per trip, suggesting more cost-effective trips.

Primary Analysis

Cities with highest and lowest Average ratings by city and Passenger type

Avg Driver Rating and Avg Passenger Rating by passenger_type
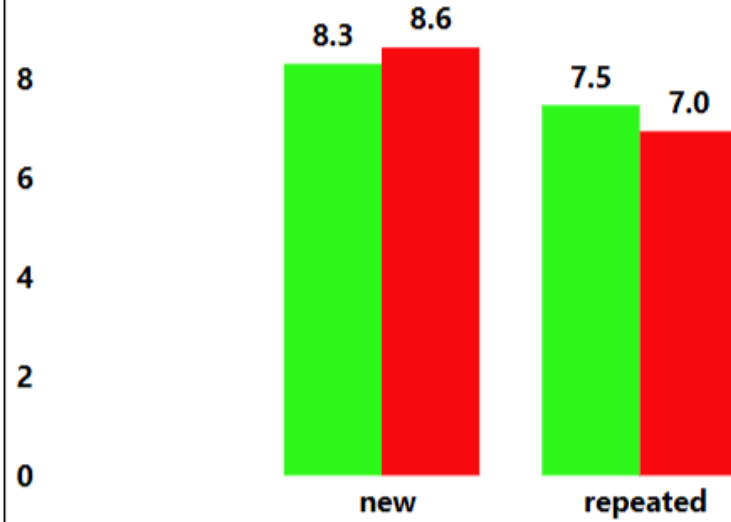
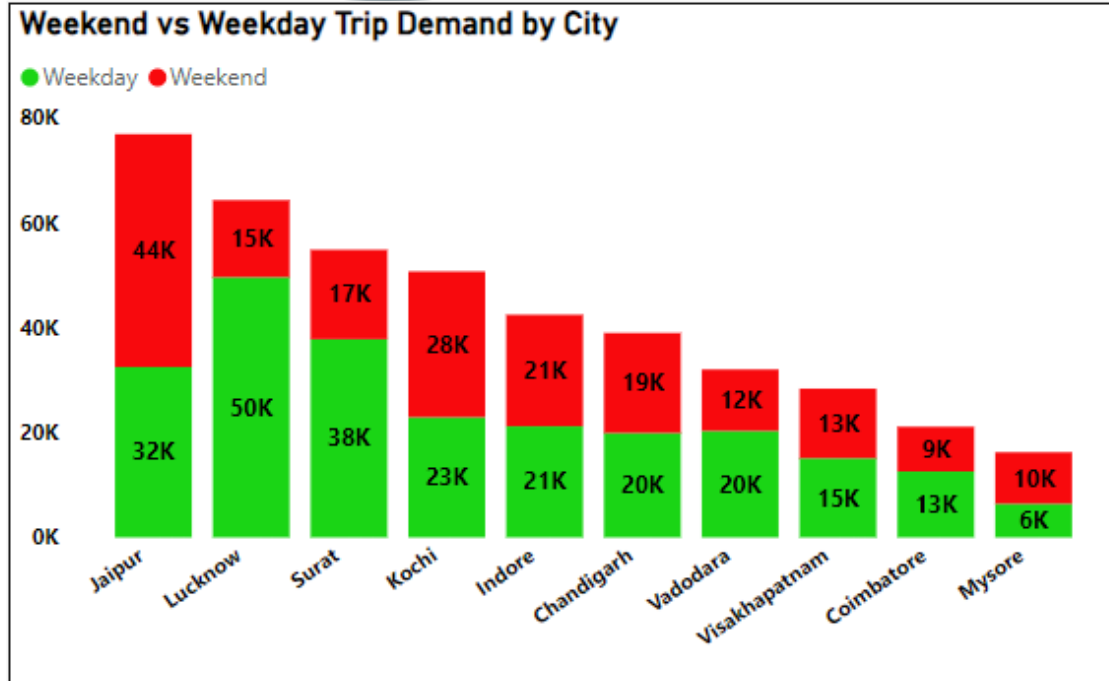**Peak and Low demand months for each city**

City Name	Peak Demand Months	Trip count	Low Demand Months	Trip count
Chandigarh	February	7387	April	5566
Coimbatore	March	3680	June	3158
Indore	May	7787	June	6288
Jaipur	February	15872	June	9842
Kochi	May	10014	June	6399
Lucknow	February	12060	May	9705
Mysore	May	3007	January	2485
Surat	April	9831	January	8358
Vadodara	April	5941	June	4685
Visakhapatnam	April	4938	January	4468

Key Insights : From insights I observed that for most of the cities the peak demand month are February and May & low demand months are January and June. In case of average ratings new passenger type is having highest ratings as compare to repeated passengers.

Primary Analysis

Weekend vs. Weekday Trip Demand by City

Weekend vs Weekday Trip Demand by City

● Weekday ● Weekend

City	Weekday	Weekend
Jaipur	32K	44K
Lucknow	50K	15K
Surat	38K	17K
Kochi	23K	28K
Indore	21K	21K
Chandigarh	20K	19K
Vadodara	20K	12K
Visakhapatnam	15K	13K
Coimbatore	13K	9K
Mysore	6K	10K

Trip frequency metrics by repeat passengers in city

city_name	trip-10	trip-2	trip-3	trip-4	trip-5	trip-6	trip-7	trip-8	trip-9
Visakhapatnam	0.92%	51.25%	24.96%	9.98%	5.44%	3.19%	1.98%	1.39%	0.88%
Vadodara	1.61%	9.87%	14.17%	16.52%	18.06%	19.08%	12.86%	5.78%	2.05%
Surat	1.35%	9.76%	14.26%	16.55%	19.75%	18.45%	11.89%	6.24%	1.74%
Mysore	0.47%	48.75%	24.44%	12.73%	5.82%	4.06%	1.76%	1.42%	0.54%
Lucknow	1.10%	9.66%	14.77%	16.20%	18.42%	20.18%	11.33%	6.43%	1.91%
Kochi	0.81%	47.67%	24.35%	11.81%	6.48%	3.91%	2.11%	1.65%	1.21%
Jaipur	0.97%	50.14%	20.73%	12.12%	6.29%	4.13%	2.52%	1.90%	1.20%
Indore	1.51%	34.34%	22.69%	13.40%	10.34%	6.85%	5.24%	3.26%	2.38%
Coimbatore	1.22%	11.21%	14.82%	15.56%	20.62%	17.64%	10.47%	6.15%	2.31%
Chandigarh	1.79%	32.31%	19.25%	15.74%	12.21%	7.42%	5.48%	3.47%	2.33%
Total	1.20%	30.06%	19.17%	14.09%	12.42%	10.77%	6.73%	3.88%	1.68%

Key Insights : Jaipur and Kochi show significantly higher demand for trips on weekends. In contrast, Lucknow has the highest demand on weekdays, followed by Surat, highlighting their focus on weekday activities. And I case of Repeat passenger trip frequency trip 2 Trip 2 has the highest frequency among all trip counts, followed by Trip 3 and Trip 4. Visakhapatnam, a business-focused city, has the highest repeat passenger rate for Trip 2.
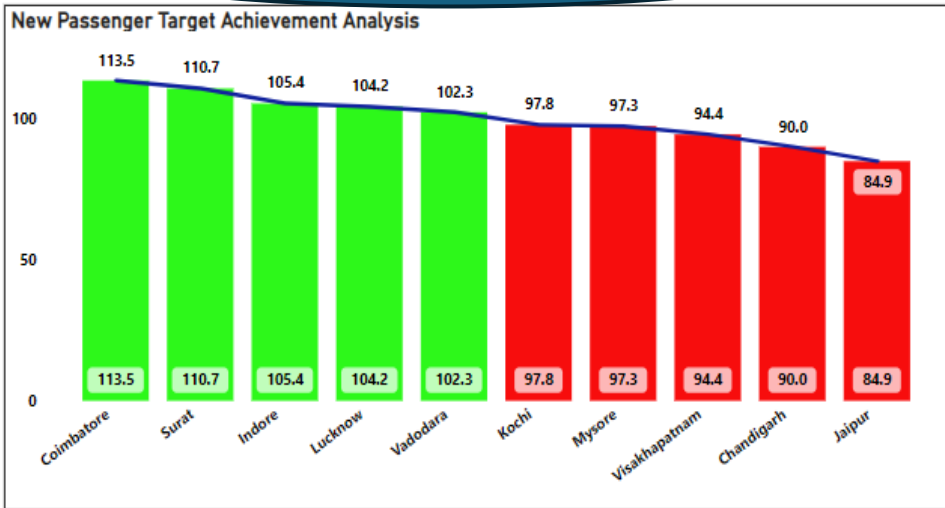
Primary Analysis

Target Achievement analysis for trip volume

Trips - Target vs Achieved Difference

City	Achieved	Target
Jaipur	77K	68K
Lucknow	64K	72K
Surat	55K	57K
Kochi	51K	50K
Indore	42K	44K
Chandigarh	39K	39K
Vadodara	32K	38K
Visakhapatnam	28K	29K
Coimbatore	21K	21K
Mysore	16K	14K
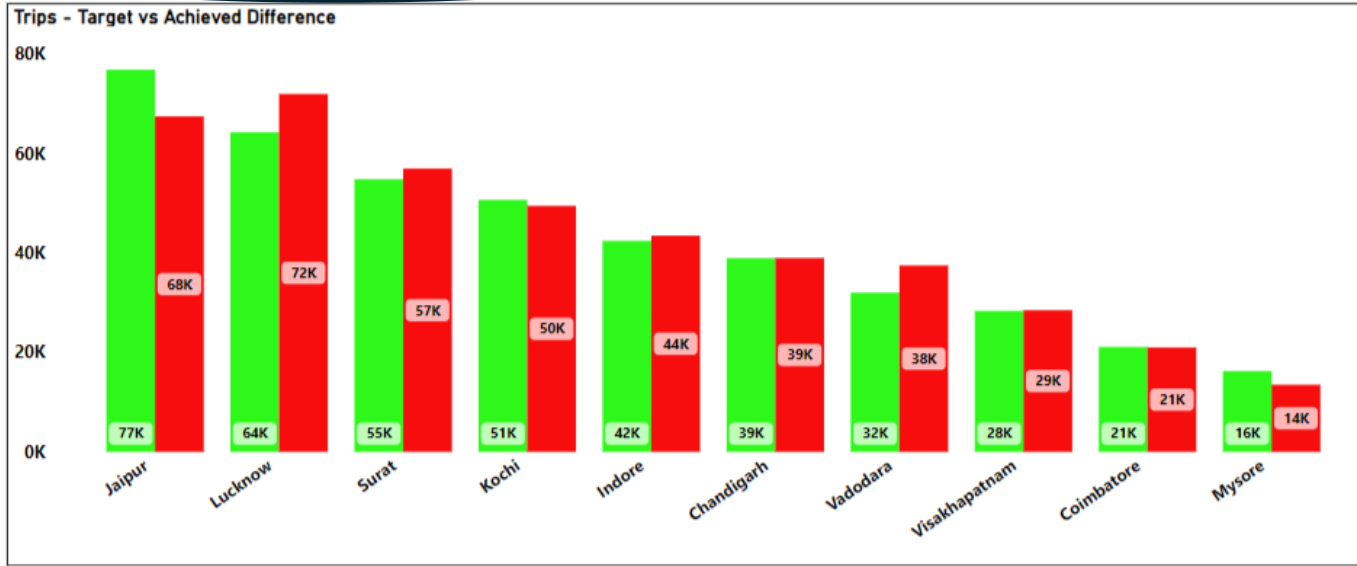
Target Achievement analysis for New Passengers

New Passenger Target Achievement Analysis

City	Value
Coimbatore	113.5
Surat	110.7
Indore	105.4
Lucknow	104.2
Vadodara	102.3
Kochi	97.8
Mysore	97.3
Visakhapatnam	94.4
Chandigarh	90.0
Jaipur	84.9

Target Achievement analysis for Average Ratings

Average Passenger Rating Target Analysis

| city_name	Avg Passenger Rating	Avg Passenger Rating Target	Avg Passenger rating % difference	Target Analysis for Avg passenger rating
Surat	6.42	7.00	91.7%	Missed
Lucknow	6.49	7.25	89.5%	Missed
Vadodara	6.61	7.50	88.2%	Missed
Chandigarh	7.98	8.00	99.7%	Missed
Indore	7.83	8.00	97.9%	Missed
Coimbatore	7.88	8.25	95.6%	Missed
Jaipur	8.58	8.25	104.0%	Met/Exceeded
Kochi	8.52	8.50	100.2%	Met/Exceeded
Mysore	8.70	8.50	102.4%	Met/Exceeded
Visakhapatnam	8.43	8.50	99.2%	Missed

Key Insights : For trip volume Jaipur, Kochi and Mysore exceeded the target whereas Lucknow, Surat, Indore, Chandigarh and Vadodra missed the targets. In case of New Passenger Achievement analysis business focused cities met the target whereas for Average passenger rating target analysis tourism focussed cities met the target.
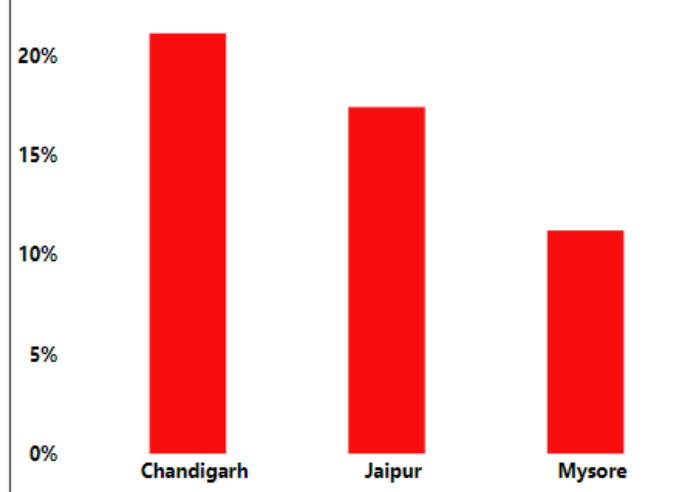
Primary Analysis

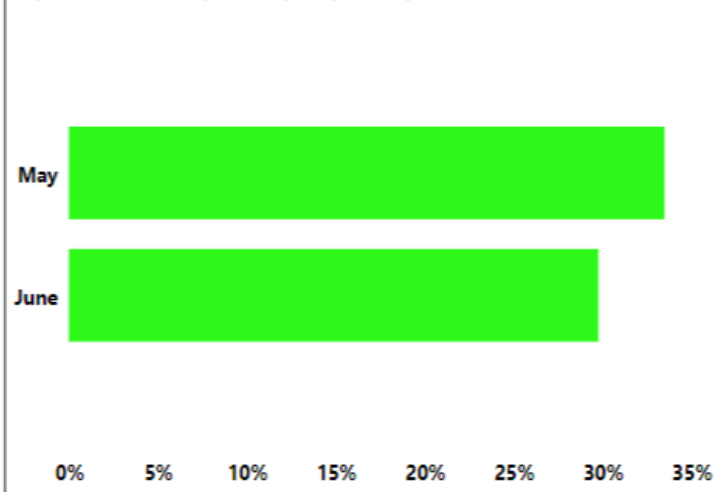**Repeat Passenger rate analysis by city and month**

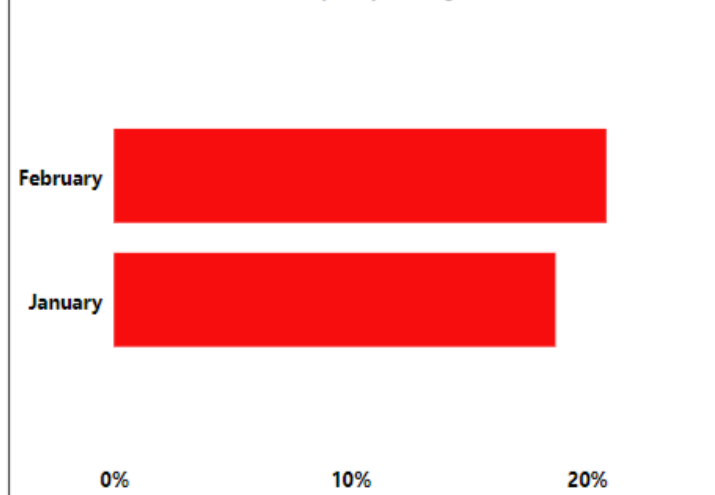Top cities with highest repeat passenger rate — Surat, Lucknow, Indore
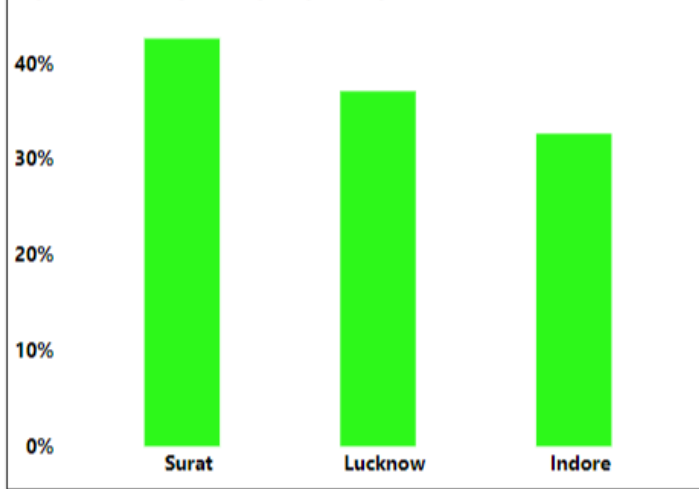
Bottom cities with lowest repeat passenger rate — Chandigarh, Jaipur, Mysore

Top months with highest repeat passenger rate — May, June

Bottom months with lowest repeat passenger rate — February, January

Key Insight: The analysis of Repeat Passenger Rate (RPR%) revealed that **Surat** and **Lucknow** have the highest repeat passenger loyalty, while **Mysore** and **Jaipur** have the lowest. In terms of months, **May** and **June** showed the highest repeat passenger rates, indicating strong customer loyalty during these months, while **January** and **February** had the lowest, suggesting weaker loyalty early in the year.

Secondary Analysis

- **Repeat Passenger Rates (RPR%) are influenced by service quality, affordable pricing, and city factors like demographics and economic activity. Cities with stable economies and reliable public transport often see higher loyalty among passengers.**

- **Tourism seasons and local events boost Goodcabs' demand, especially in cities with high repeat passengers like Surat and Lucknow. Targeted promotions during peak tourism months and events can also improve loyalty in cities like Mysore and Jaipur.**

- **Electric vehicles and green energy are growing trends in tier-2 cities, offering GoodCabs a chance to cut costs, attract eco-conscious customers, and stand out as a leader in sustainable mobility.**

- **Focus on Surat and Lucknow for partnerships due to high customer loyalty, and target Mysore and Jaipur to boost tourism potential. Prioritize partnerships in May-June for maximum impact, and improve January-February traffic with promotions.**

- **Collecting passenger feedback, trip details, and demographics helps understand customer preferences, while tracking promotions and seasonal trends identifies ways to boost repeat trips, satisfaction, and overall volume.**

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.

city_name	total_trips	avg_fare_per_km	avg_fare_per_trip	pct_contribution_to_total_trips
Visakhapatnam	28366	12.5332	282.6723	6.6602
Chandigarh	38981	12.0622	283.6870	9.1526
Surat	54843	10.6638	117.2729	12.8769
Vadodara	32026	10.2942	118.5662	7.5196
Mysore	16238	15.1366	249.7072	3.8126
Kochi	50702	13.9305	335.2451	11.9046
Indore	42456	10.8977	179.8386	9.9685
Jaipur	76888	16.1182	483.9181	18.0529
Coimbatore	21104	11.1476	166.9822	4.9551
Lucknow	64299	11.7622	147.1804	15.0971

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

Insights: Among all the cities Jaipur has the highest percentage contribution to overall trip count with highest average fare per trip followed by Lucknow and Surat.

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

Generate a monthly city-level report comparing actual trips to target trips. Categorize performance as "Above Target" if actual trips exceed targets, or "Below Target" otherwise. Calculate the % difference to quantify the performance gap.

city_name	month_name	actual_trips	target_trip	performance_status	pct_difference
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
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
Visakhapatnam	March	4877	4500	Above_Target	8.38
Chandigarh	March	6569	7000	Below_target	-6.16

city name	target trips	actual trips	month name	pct_difference	performance status
Chandigarh	6000	5566	April	-7.23	Below_target
Chandigarh	6000	6029	June	0.48	Above_Target
Chandigarh	7000	6569	March	-6.16	Below_target
Chandigarh	6000	6620	May	10.33	Above_Target
Chandigarh	7000	6810	January	-2.71	Below_target
Chandigarh	7000	7387	February	5.53	Above_Target
Coimbatore	3500	3158	June	-9.77	Below_target
Coimbatore	3500	3404	February	-2.74	Below_target
Coimbatore	3500	3550	May	1.43	Above_Target
Coimbatore	3500	3651	January	4.31	Above_Target
Coimbatore	3500	3661	April	4.60	Above_Target
Coimbatore	3500	3680	March	5.14	Above_Target
Indore	7500	6288	June	-16.16	Below_target
Indore	7000	6737	January	-3.76	Below_target
Indore	7000	7019	March	0.27	Above_Target
Indore	7000	7210	February	3.00	Above_Target
Indore	7500	7415	April	-1.13	Below_target
Indore	7500	7787	May	3.83	Above_Target
Jaipur	9500	9842	June	3.60	Above_Target
Jaipur	9500	11406	April	20.06	Above_Target
Jaipur	9500	11475	May	20.79	Above_Target
Jaipur	13000	13317	March	2.44	Above_Target
Jaipur	13000	14976	January	15.20	Above_Target
Jaipur	13000	15872	February	22.09	Above_Target
Total	429000			45.03	

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

Create a report showing the percentage of repeat passengers by trip count (2 to 10 trips) for each city, with each column representing a trip count category.

| city_name	2-Trips_pct	3-Trips_pct	4-Trips_pct	5-Trips_pct	6-Trips_pct	7-Trips_pct	8-Trips_pct	9-Trips_pct	10-Trips_pct
Visakhapatnam	51.25	24.96	9.98	5.44	3.19	1.98	1.39	0.88	0.92
Chandigarh	32.31	19.25	15.74	12.21	7.42	5.48	3.47	2.33	1.79
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
Mysore	48.75	24.44	12.73	5.82	4.06	1.76	1.42	0.54	0.47
Kochi	47.67	24.35	11.81	6.48	3.91	2.11	1.65	1.21	0.81
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
Coimbatore	11.21	14.82	15.56	20.62	17.64	10.47	6.15	2.31	1.22
Lucknow	9.66	14.77	16.20	18.42	20.18	11.33	6.43	1.91	1.10

Insight: Among all trip count categories, trip-2 count category is showing highest percentage of repeat passengers. And in this category Visakhapatnam is the city with highest repeat passengers rate followed by Jaipur and Mysore

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, categorizing them as "Top 3" or "Bottom 3" accordingly.

city_name	total_new_passengers	city_category
Surat	11626	Bottom_3
Vadodara	10127	Bottom_3
Coimbatore	8514	Bottom_3
Jaipur	45856	Top_3
Kochi	26416	Top_3
Chandigarh	18908	Top_3

Top 3 cities with highest number of new passengers

Bottom 3 cities with lowest number of new passengers
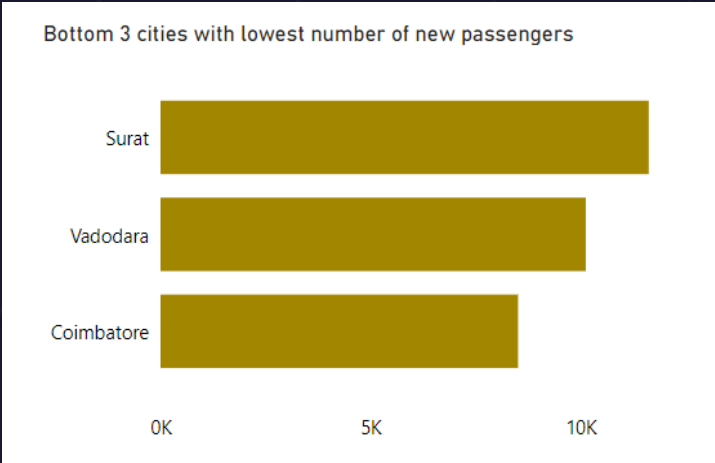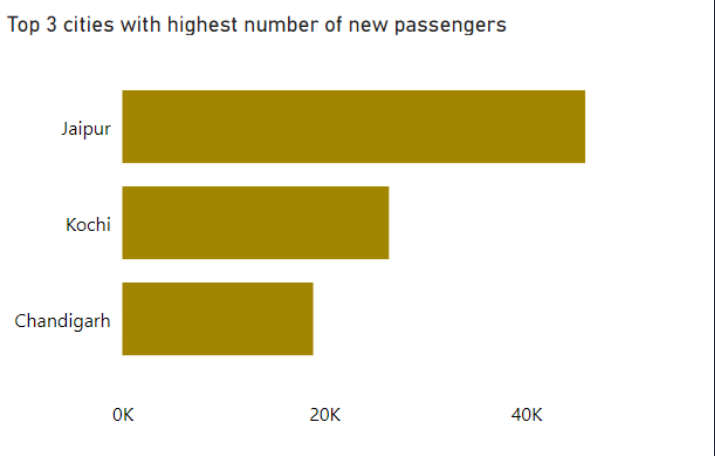
Business Request - 5: Identify Month with Highest Revenue for Each City

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.

city_name	highest_revenue_month	total_revenue	pct_contribution
Chandigarh	February	2108290	1.95
Chandigarh	January	1934293	1.79
Chandigarh	March	1863793	1.72
Chandigarh	May	1850777	1.71
Chandigarh	June	1717223	1.59
Chandigarh	April	1584025	1.46
Coimbatore	April	612431	0.57
Coimbatore	March	611956	0.57
Coimbatore	January	611533	0.57
Coimbatore	May	588318	0.54
Coimbatore	February	571052	0.53
Coimbatore	June	528702	0.49
Indore	May	1380996	1.28
Indore	April	1335105	1.23
Indore	February	1315118	1.22
Indore	March	1266082	1.17
Indore	January	1199196	1.11
Indore	June	1138731	1.05
Jaipur	February	7747202	7.16
Jaipur	January	7223310	6.68
Jaipur	March	6462092	5.97
Jaipur	May	5495976	5.08

city_name	highest_revenue_month	total_revenue	pct_contribution
Jaipur	May	5495976	5.08
Jaipur	April	5490146	5.07
Jaipur	June	4788771	4.43
Kochi	May	3333746	3.08
Kochi	April	3274496	3.03
Kochi	March	3178390	2.94
Kochi	February	2605593	2.41
Kochi	January	2465058	2.28
Kochi	June	2140313	1.98
Lucknow	February	1777269	1.64
Lucknow	March	1653746	1.53
Lucknow	January	1601672	1.48
Lucknow	June	1506134	1.39
Lucknow	April	1499160	1.39
Lucknow	May	1425570	1.32
Mysore	May	745170	0.69
Mysore	June	715605	0.66
Mysore	February	670035	0.62
Mysore	March	661840	0.61
Mysore	April	648555	0.60
Mysore	January	613540	0.57
Surat	April	1154909	1.07

Business Request - 6: Repeat Passenger Rate Analysis

Generate a report that calculates two metrics:
1. **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. **2. City-wide Repeat Passenger Rate:** Calculate the overall repeat passenger rate foreach city, considering all passengers across months. These metrics will provide insights into monthly repeat trends as well as the overall repeat behavior for each city.

city_name	month_name	total_passengers	repeat_passengers	monthly_repeat_passenger_rate	city_repeat_passenger_rate
Chandigarh	February	4957	853	17.21	102.28
Chandigarh	January	4640	720	15.52	109.27
Chandigarh	March	4100	872	21.27	123.66
Chandigarh	April	3285	789	24.02	154.34
Chandigarh	May	3699	969	26.20	137.06
Chandigarh	June	3297	867	26.30	153.78
Coimbatore	June	1628	402	24.69	156.70
Coimbatore	April	1722	480	27.87	148.14
Coimbatore	March	1965	427	21.73	129.82
Coimbatore	February	1993	346	17.36	128.00
Coimbatore	January	2214	392	17.71	115.22
Coimbatore	May	1543	504	32.66	165.33

Monthly Repeat Passenger Rate: This shows the percentage of repeat passengers in each city for every month. It helps identify trends, such as whether repeat passengers are increasing or decreasing over time in specific cities.
City-wide Repeat Passenger Rate: This gives an overall view of repeat passengers for each city across all months. It highlights which cities have stronger customer loyalty or retention rates.

INSIGHTS AND RECOMMENDATIONS

CODE BASICS

Top and Bottom Cities: Jaipur leads with the highest trips and Mysore records the lowest trips

Seasonal Patterns: February and May are peak months; January and June have lower demands.

Trip Demand Trends: Jaipur and Kochi see more weekend trips, while Lucknow has higher weekday demand.

Repeat Passenger Trends: Visakhapatnam excels in repeat trips, followed by Jaipur.

Ratings Analysis: Kochi and Jaipur score high in passenger ratings and Surat and Lucknow are rated lowest.

Target Tourism Events: Focus marketing efforts during peak months (May, June) for tourism-heavy cities like Mysore and Jaipur.

Partnership Opportunities: Collaborate with local hotels and malls in top-performing cities like Surat and Lucknow.

Adopt Green Mobility: Introduce electric vehicles for cost-efficiency and eco-conscious customers.

Increase Repeat Loyalty: Launch promotions in low-demand months like January to enhance customer retention.

Thank you