



ANALYZING GOODCABS: INSIGHTS FOR GROWTH & OPTIMIZATION

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Company Overview

- GoodCabs, a cab service company, was founded two years ago.
- Focuses on tier-2 cities in India to bridge transportation gaps.
- Supports local drivers, promoting sustainable livelihoods.
- Operates in 10 cities, ensuring quality passenger experiences.

Objectives for 2024

- 1.Increase Trips** – Grow the number of completed rides.
- 2.Enhance Satisfaction** – Improve service quality and ratings.
- 3.Boost Loyalty** – Increase repeat passenger rates.
- 4.Optimize Operations** – Ensure efficient trip distribution.
- 5.Balance Growth** – Acquire new passengers while retaining existing ones.

Q1. Top and Bottom Performing

Cities Identify the top 3 and bottom 3 cities by total trips over the entire analysis period

city_name	total_trips	city_category
Jaipur	76888	Top 3
Lucknow	64299	Top 3
Surat	54843	Top 3
Visakhapatnam	28366	Bottom 3
Coimbatore	21104	Bottom 3
Mysore	16238	Bottom 3

- Top 3 Cities:** Jaipur (76,888), Lucknow (64,299), and Surat (54,843) lead in total trips.
- Bottom 3 Cities:** Visakhapatnam (28,366), Coimbatore (21,104), and Mysore (16,238) have the lowest trip counts.
- Jaipur has nearly 5x the trips of Mysore**, highlighting a major gap.
- Growth strategies needed** for bottom 3 cities to improve trip volume

Q2. 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_rank	city_name	total_trips	total_fare_amount	average_fare_per_trip	avg_distance_travelled
1	Jaipur	76888	37207497	483.92	30.02
2	Kochi	50702	16997596	335.25	24.07
3	Chandigarh	38981	11058401	283.69	23.52
4	Visakhapatnam	28366	8018282	282.67	22.55
5	Mysore	16238	4054745	249.71	16.50
6	Indore	42456	7635228	179.84	16.50
7	Coimbatore	21104	3523992	166.98	14.98
8	Lucknow	64299	9463551	147.18	12.51
9	Vadodara	32026	3797200	118.57	11.52
10	Surat	54843	6431599	117.27	11.00

- Jaipur has the highest fare per trip and the longest average distance (30.02 km).
- Surat has the lowest fare per trip (₹117.27) and the shortest average distance (11 km).
- Fare per trip aligns with average distance, but some cities may need pricing adjustments for better revenue efficiency.

Q3. Average Ratings by City and Passenger Type

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	passenger_type	avg_passenger_rating	avg_driver_rating
Chandigarh	new	8.49	7.99
Chandigarh	repeated	7.49	7.47
Coimbatore	new	8.49	7.99
Coimbatore	repeated	7.48	7.48
Indore	new	8.49	7.97
Indore	repeated	7.47	7.48
Jaipur	new	8.99	8.99
Jaipur	repeated	7.99	8.98
Kochi	new	8.99	8.99
Kochi	repeated	8.00	8.99
Lucknow	new	7.98	6.99
Lucknow	repeated	5.99	6.49
Mysore	new	8.98	8.98
Mysore	repeated	7.98	8.97
Surat	new	7.98	6.99
Surat	repeated	6.00	6.48
Vadodara	new	7.98	7.00
Vadodara	repeated	5.98	6.48
Visakhapatnam	new	8.98	8.98
Visakhapatnam	repeated	7.99	8.99

- Highest Average Ratings:New Passengers: Kochi (8.99), Jaipur (8.99), Visakhapatnam (8.98).Repeated Passengers: Kochi (8.00), Visakhapatnam (7.99), Mysore (7.98).Driver Ratings: Kochi, Jaipur, and Mysore (8.99 - 8.97).
- Lowest Average Ratings:New Passengers: Surat (6.00), Lucknow (7.98), Vadodara (7.98).Repeated Passengers: Lucknow (5.99), Vadodara (5.98), Surat (6.00).Driver Ratings: Surat (6.40), Lucknow (6.49), Vadodara (6.48).
- New passengers generally rate higher than repeat passengers. Surat, Lucknow, and Vadodara have the lowest ratings, indicating possible service quality issues.

Q4. 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).

- Each city experiences fluctuations in demand across different months.
- Jaipur (15,872 in Feb) and Lucknow (12,060 in Feb) recorded the **highest peak demand**.
- Mysore (2,485 in Jan) and Coimbatore (3,158 in June) had the lowest demand periods.
- Peak demand months vary, but many cities see **higher demand in February, March, or April**.
- Low demand is often observed in **June and January**, indicating possible **seasonal trends**.

city_name	month_name	demand_type	total_demand
Chandigarh	February	peak_demand	7387
Chandigarh	April	low_demand	5566
Coimbatore	March	peak_demand	3680
Coimbatore	June	low_demand	3158
Indore	May	peak_demand	7787
Indore	June	low_demand	6288
Jaipur	February	peak_demand	15872
Jaipur	June	low_demand	9842
Kochi	May	peak_demand	10014
Kochi	June	low_demand	6399
Lucknow	February	peak_demand	12060
Lucknow	May	low_demand	9705
Mysore	May	peak_demand	3007
Mysore	January	low_demand	2485
Surat	April	peak_demand	9831
Surat	January	low_demand	8358
Vadodara	April	peak_demand	5941
Vadodara	June	low_demand	4685
Visakhapatnam	April	peak_demand	4938
Visakhapatnam	January	low_demand	4468

Q5. 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

Row Labels	Sum of weekday_trips	Sum of weekend_trips	Sum of total_trips_month
+ Chandigarh	19914	19067	38981
+ Coimbatore	12576	8528	21104
+ Indore	21198	21258	42456
+ Jaipur	32491	44397	76888
+ Kochi	22915	27787	50702
+ Lucknow	49617	14682	64299
+ Mysore	6424	9814	16238
+ Surat	37793	17050	54843
+ Vadodara	20310	11716	32026
+ Visakhapatnam	15100	13266	28366
Grand Total	238338	187565	425903

- Strong weekday preference:** Lucknow, Surat, Vadodara. Indicates the demand is based on work commute.
- Strong weekend preference:** Kochi and Jaipur. Indicate demand is driven by tourism.
- Cities with balanced demand:** Indore, Chandigarh, Visakhapatnam with a marginal difference.

Q6. Repeat Passenger Frequency and City Contribution Analysis

Analyze the frequency of trips taken by repeat passengers in each city. 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

city_name	2-trips	3-trips	4-trips	5-trips	6-trips	7-trips	8-trips	9-trips	10-trips
Visakhapatnam	2618	1275	510	278	163	101	71	45	47
Chandigarh	1638	976	798	619	376	278	176	118	91
Surat	843	1232	1430	1706	1594	1027	539	150	117
Vadodara	429	616	718	785	829	559	251	89	70
Mysore	720	361	188	86	60	26	21	8	7
Kochi	3635	1857	901	494	298	161	126	92	62
Indore	2478	1637	967	746	494	378	235	172	109
Jaipur	4855	2007	1173	609	400	244	184	116	94
Coimbatore	286	378	397	526	450	267	157	59	31
Lucknow	927	1417	1555	1768	1937	1087	617	183	106

- Jaipur, Kochi, Visakhapatnam, Mysore have a **high percentage of 2-trip repeat passengers**, indicating tourism-driven demand.
- Lucknow, Surat, Vadodara, Coimbatore have a **higher proportion of passengers taking 5+ trips**, suggesting frequent commuters.
- Tourism-focused cities (Jaipur, Kochi, Mysore) see shorter repeat usage, while business hubs (Lucknow, Surat, Coimbatore, Vadodara) have more frequent repeat users.

Q7. 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.

Cities	Sum of total_target_trips	Sum of total_actual_trips	Average of trip_target_diff_%	Sum of target_new_passengers	Sum of total_actual_new_passengers	Average of new_passenger_target_diff_%	Average of avg_passenger_ratings
⊞ Chandigarh	39000	38981	0.04	21000	18908	-10.58	7.97
⊞ Coimbatore	21000	21104	0.50	7500	8514	14.08	7.88
⊞ Indore	43500	42456	-2.33	14100	14863	5.58	7.83
⊞ Jaipur	67500	76888	14.03	54000	45856	-12.38	8.57
⊞ Kochi	49500	50702	2.98	27000	26416	-1.68	8.52
⊞ Lucknow	72000	64299	-10.54	15600	16260	3.77	6.48
⊞ Mysore	13500	16238	21.23	12000	11681	-2.66	8.71
⊞ Surat	57000	54843	-3.65	10500	11626	10.76	6.42
⊞ Vadodara	37500	32026	-14.55	9900	10127	1.41	6.62
⊞ Visakhapatnam	28500	28366	-0.21	13500	12747	-5.55	8.44

- Jaipur, Mysore, and Coimbatore exceeded total trip targets, while Vadodara, Lucknow, and Surat missed them significantly.
- Surat and Coimbatore surpassed new passenger targets, while Jaipur, Mysore, and Chandigarh fell short.
- Tourism-heavy cities (Mysore, Jaipur, Kochi, Visakhapatnam) had higher passenger ratings, while business hubs (Lucknow, Surat, Vadodara) had lower ratings.
- Business-focused cities struggled more with total trip targets, while tourism hubs performed better in passenger ratings but inconsistently in new passenger targets.

Q8. Highest and Lowest Repeat Passenger Rate (RPR%) by City and Month

Analyze the Repeat Passenger Rate (RPR%) for each city across the six- month period. Identify the top 2 and bottom 2 cities based on their RPR% to determine which locations have the strongest and weakest rates

city_rank	city_name	city_total_passengers	city_total_new_passengers	city_total_repeat_passengers	repeat_passenger_rate
1	Surat	20264	11626	8638	42.63
2	Lucknow	25857	16260	9597	37.12
3	Indore	22079	14863	7216	32.68
4	Vadodara	14473	10127	4346	30.03
5	Visakhapatnam	17855	12747	5108	28.61
6	Coimbatore	11065	8514	2551	23.05
7	Kochi	34042	26416	7626	22.4
8	Chandigarh	23978	18908	5070	21.14
9	Jaipur	55538	45856	9682	17.43
10	Mysore	13158	11681	1477	11.23

- Surat has the highest repeat passenger rate at 42.63%, followed by Lucknow at 37.12%, indicating strong passenger retention in these cities.
- On the other hand, Mysore has the lowest repeat passenger rate at 11.23%, with Jaipur slightly higher at 17.43%, suggesting weaker retention in these locations.

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

city_name	total_trips	avg_fare_per_km	avg_fare_per_trip	%_contribution_to_total_trips
Chandigarh	38981	12.18	283.69	9.15
Coimbatore	21104	11.3	166.98	4.96
Indore	42456	11.07	179.84	9.97
Jaipur	76888	16.25	483.92	18.05
Kochi	50702	14.13	335.25	11.9
Lucknow	64299	12.14	147.18	15.1
Mysore	16238	15.4	249.71	3.81
Surat	54843	10.92	117.27	12.88
Vadodara	32026	10.54	118.57	7.52
Visakhapatnam	28366	12.7	282.67	6.66

- Jaipur leads in trip volume with 76,888 trips (18.05%), while Mysore has the lowest (3.81%).
- Kochi has the highest average fare per trip (₹335.25), whereas Surat has the lowest (₹117.27).
- **Optimizing fare structures in lower-revenue cities can improve profitability.**

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 categorize 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

city_name	month_name	actual_trips	target_trips	performance_status	%_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	15.2
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
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	33.4
Kochi	February	7688	7500	Above Target	2.51
Indore	February	7210	7000	Above Target	3
Jaipur	February	15872	13000	Above Target	22.09
Coimbatore	February	3404	3500	Below Target	-2.74
Lucknow	February	12060	13000	Below Target	-7.23

city_name	month_name	actual_trips	target_trips	performance_status	%_difference
Visakhapatnam	March	4877	4500	Above Target	8.38
Chandigarh	March	6569	7000	Below Target	-6.16
Surat	March	9267	9000	Above Target	2.97
Vadodara	March	5598	6000	Below Target	-6.7
Mysore	March	2633	2000	Above Target	31.65
Kochi	March	9495	7500	Above Target	26.6
Indore	March	7019	7000	Above Target	0.27
Jaipur	March	13317	13000	Above Target	2.44
Coimbatore	March	3680	3500	Above Target	5.14
Lucknow	March	11224	13000	Below Target	-13.66

city_name	month_name	actual_trips	target_trips	performance_status	%_difference
Visakhapatnam	April	4938	5000	Below Target	-1.24
Chandigarh	April	5566	6000	Below Target	-7.23
Surat	April	9831	10000	Below Target	-1.69
Vadodara	April	5941	6500	Below Target	-8.6
Mysore	April	2603	2500	Above Target	4.12
Kochi	April	9762	9000	Above Target	8.47
Indore	April	7415	7500	Below Target	-1.13
Jaipur	April	11406	9500	Above Target	20.06
Coimbatore	April	3661	3500	Above Target	4.6
Lucknow	April	10212	11000	Below Target	-7.16

city_name	month_name	actual_trips	target_trips	performance_status	%_difference
Visakhapatnam	May	4812	5000	Below Target	-3.76
Chandigarh	May	6620	6000	Above Target	10.33
Surat	May	9774	10000	Below Target	-2.26
Vadodara	May	5799	6500	Below Target	-10.78
Mysore	May	3007	2500	Above Target	20.28
Kochi	May	10014	9000	Above Target	11.27
Indore	May	7787	7500	Above Target	3.83
Jaipur	May	11475	9500	Above Target	20.79
Coimbatore	May	3550	3500	Above Target	1.43
Lucknow	May	9705	11000	Below Target	-11.77

city_name	month_name	actual_trips	target_trips	performance_status	%_difference
Visakhapatnam	June	4478	5000	Below Target	-10.44
Chandigarh	June	6029	6000	Above Target	0.48
Surat	June	8544	10000	Below Target	-14.56
Vadodara	June	4685	6500	Below Target	-27.92
Mysore	June	2842	2500	Above Target	13.68
Kochi	June	6399	9000	Below Target	-28.9
Indore	June	6288	7500	Below Target	-16.16
Jaipur	June	9842	9500	Above Target	3.6
Coimbatore	June	3158	3500	Below Target	-9.77
Lucknow	June	10240	11000	Below Target	-6.91

- **Jaipur consistently exceeds targets**, with up to 22% above target, while **Vadodara and Kochi struggle**, often falling short by over 20%.
- Mysore shows the highest positive variance (33.4% in February), while **Kochi had the biggest shortfall** (-28.9% in June).
- March and May had the most cities surpassing targets, indicating **seasonal trends impacting trip demand**.

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.

city_name	2-trips	3-trips	4-trips	5-trips	6-trips	7-trips	8-trips	9-trips	10-trips
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	13.4	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	1.9	1.2	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	16.2	18.42	20.18	11.33	6.43	1.91	1.1

- **Visakhapatnam, Mysore, and Jaipur** have the highest proportion of 2-trip repeat passengers, indicating a high share of casual repeat users.
- **Surat, Vadodara, and Coimbatore** have more balanced distributions, with a larger share of passengers taking 4 to 6 trips, suggesting stronger customer loyalty.
- **Lucknow and Coimbatore** show the highest percentage of passengers taking 6+ trips, highlighting frequent usage patterns in these cities.

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_rank	city_name	total_new_passengers
1	Jaipur	45856
2	Kochi	26416
3	Chandigarh	18908
4	Lucknow	16260
5	Indore	14863
6	Visakhapatnam	12747
7	Mysore	11681
8	Surat	11626
9	Vadodara	10127
10	Coimbatore	8514

- Jaipur leads significantly**, with nearly twice the number of new passengers compared to the second-ranked city (Kochi).
- A sharp drop in numbers** is seen from Jaipur to the rest, indicating a dominant market presence.
- Bottom-ranked cities (Coimbatore, Vadodara, Surat)** have less than half the new passengers of mid-tier cities, suggesting lower demand or slower expansion.
- Kochi and Chandigarh show strong growth**, positioned well among the top cities but with a considerable gap from Jaipur.

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

- April, February, and May are the top months for most cities in terms of revenue.
- Kochi and Jaipur have the highest revenue in their best months.
- The highest revenue months contribute around 17% to 20% of each city's total revenue.

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.

City-wide Repeat Passenger Rate: Calculate the overall repeat passenger rate foreach city, considering all passengers across months.

city_name	month	total_passengers	monthly_repeat_passenger_rate	city_repeat_passenger_rate
Surat	January	3616	32.74	42.63
Surat	February	3567	36.81	42.63
Surat	March	3440	43.43	42.63
Surat	April	3394	45.70	42.63
Surat	May	3217	49.92	42.63
Surat	June	3030	49.17	42.63
Lucknow	January	4896	29.23	37.12
Lucknow	February	5188	31.98	37.12
Lucknow	March	4781	33.93	37.12
Lucknow	April	3807	39.30	37.12
Lucknow	May	3487	47.66	37.12
Lucknow	June	3698	46.70	37.12
Indore	January	3876	26.65	32.68
Indore	February	3981	27.71	32.68
Indore	March	3833	28.46	32.68
Indore	April	3646	35.52	32.68
Indore	May	3591	43.53	32.68
Indore	June	3152	35.88	32.68
Vadodara	January	2633	20.66	30.03
Vadodara	February	2756	22.13	30.03
Vadodara	March	2522	30.10	30.03
Vadodara	April	2499	34.49	30.03

- Cities show significant differences in both monthly and overall repeat passenger rates.
- Surat consistently demonstrates the highest repeat rates, indicating strong customer loyalty and effective retention strategies.
- Cities with lower repeat rates, like Kochi and Chandigarh, have opportunities to improve customer retention.
- Monthly fluctuations suggest potential seasonal impacts on travel behavior.
- Investigate factors driving repeat behavior, such as customer satisfaction, pricing, and competition, to develop targeted strategies for improvement.

THANK YOU