GOODCABS

Domain: Transportation & Mobility

Introduction

Goodcabs, a cab service company established two years ago, has carved a niche in the Indian market by focusing on tier-2 cities. The company prioritizes supporting local drivers while ensuring top-notch passenger service.

Objective

The Management team aims to assess the company's performance across key metrics, including trip volume, passenger satisfaction, repeat passenger rate, trip distribution, and the balance between new and repeat passengers.

Task

Analyze the datasets, design a clear dashboard with actionable insights, and generate SQL-based reports. Address key business questions and add any additional research to support recommendations.

Action

Utilized advanced SQL queries to conduct ad-hoc analysis, used Excel for data exploration and validation, used Power BI to build the report and address key questions, and PowerPoint to showcase the findings.

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Dataset Information

1. trips_db: provides the detailed information about each trip, demographics data, dates, passengers, passenger type etc.

2. targets_db: provides crucial target information like average_passenger_rating, new_passengers, total_trips etc.

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trips_db database

1. dim_city – demographics data for location-based analysis.

2. dim_date – date specific data for time-based analysis.

3. dim_repeat_trip_distribution – city-month based trip count data.

4. fact_passenger_summary – city-month based passengers data.

5. fact_trips – complete breakdown of each trip for deep analysis.

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targets_db database

1. city_target_passenger_rating– average passenger rating target set for each city

2. monthly_target_new_passengers – monthly new passengers target for each city.

3. monthly_target_trips – monthly trips target for each city.

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1. Business request 1 - City-Level Fare and Trip Summary Report

2. Business request 2 - Monthly City Level-Trips Target Performance Report

3. Business request 3 - City-Level Repeat Passenger Trips Frequency Report

4. Business request 4 - Identify Cities with Highest & Lowest Total New Passengers

5. Business request 5 - Identify Month with Highest Revenue For Each City

6. Business request 6- Repeat Passenger Rate Analysis

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City Name	total_trips	avg_fare_per_km	avg_fare_per_trip	% contribution to total trips
Chandigarh	38981	12.1	283.7	9.15%
Coimbatore	21104	11.1	167.0	4.96%
Indore	42456	10.9	179.8	9.97%
Jaipur	76888	16.1	483.9	18.05%
Kochi	50702	13.9	335.2	11.90%
Lucknow	64299	11.8	147.2	15.10%
Mysore	16238	15.1	249.7	3.81%
Surat	54843	10.7	117.3	12.88%
Vadodara	32026	10.3	118.6	7.52%
Visakhapatnam	28366	12.5	282.7	6.66%

1. Business request 1 - City-Level Fare and Trip Summary Report

Insights:

- Jaipur leads the chart across all key metrics.

- Despite being 2nd in total trips (64k), Lucknow has very low average fare per kilometer(Rs 11) and per trip(Rs 147).

- Despite having the lowest total trips (16k), Mysore is quite an expensive city due to its high average fare per kilometer (Rs 15) and per trip (Rs 249).

- Despite contributing to top 3 total trips (54k), Surat (a business city) has quite lower average fare per kilometer(Rs 10) and per trip (Rs 117).

- Being a Tourism city, Mysore & Vishakhapatnam only contributes 3.8% and 6.6% to total trips.

- Being a Business city, Coimbatore & Vadodara only contributes 4.9% and 7.5% to total trips.

Recommendations:

- Can partner-up with local hotels, tourism companies in Mysore, Vishakhapatnam like Tourism cities.

- Can offer better customer overall services in places like Surat, Lucknow to justify small price increase without having significant backslash.

- Can create tailored packages in Business city like (Coimbatore & Vadodara) for business professionals for pick-up & drops on airport or at business hubs and also provide discounts to regular customers.

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city_name	month	actual_trips	target_trips	performance_status	%_difference
Visakhapatnam	January	4468	4500	Below Target	-0.7
Chandigarh	January	6810	7000	Below Target	-2.7
Surat	January	8358	9000	Below Target	-7.1
Vadodara	January	4775	6000	Below Target	-20.4
Mysore	January	2485	2000	Above Target	24.3
Kochi	January	7344	7500	Below Target	-2.1
Indore	January	6737	7000	Below Target	-3.8
Jaipur	January	14976	13000	Above Target	15.2
Coimbatore	January	3651	3500	Above Target	4.3
Lucknow	January	10858	13000	Below Target	-16.5
Visakhapatnam	February	4793	4500	Above Target	6.5
Chandigarh	February	7387	7000	Above Target	5.5
Surat	February	9069	9000	Above Target	0.8
Vadodara	February	5228	6000	Below Target	-12.9
Mysore	February	2668	2000	Above Target	33.4
Kochi	February	7688	7500	Above Target	2.5
Indore	February	7210	7000	Above Target	3
Jaipur	February	15872	13000	Above Target	22.1
Coimbatore	February	3404	3500	Below Target	-2.7
Lucknow	February	12060	13000	Below Target	-7.2
Visakhapatnam	March	4877	4500	Above Target	8.4
Chandigarh	March	6569	7000	Below Target	-6.2
Surat	March	9267	9000	Above Target	3
Vadodara	March	5598	6000	Below Target	-6.7
Mysore	March	2633	2000	Above Target	31.7
Kochi	March	9495	7500	Above Target	26.6
Indore	March	7019	7000	Above Target	0.3
Jaipur	March	13317	13000	Above Target	2.4
Coimbatore	March	3680	3500	Above Target	5.1
Lucknow	March	11224	13000	Below Target	-13.7

city_name	month	actual_trips	target_trips	performance_status	%_difference
Visakhapatnam	April	4938	5000	Below Target	-1.2
Chandigarh	April	5566	6000	Below Target	-7.2
Surat	April	9831	10000	Below Target	-1.7
Vadodara	April	5941	6500	Below Target	-8.6
Mysore	April	2603	2500	Above Target	4.1
Kochi	April	9762	9000	Above Target	8.5
Indore	April	7415	7500	Below Target	-1.1
Jaipur	April	11406	9500	Above Target	20.1
Coimbatore	April	3661	3500	Above Target	4.6
Lucknow	April	10212	11000	Below Target	-7.2
Visakhapatnam	May	4812	5000	Below Target	-3.8
Chandigarh	May	6620	6000	Above Target	10.3
Surat	May	9774	10000	Below Target	-2.3
Vadodara	May	5799	6500	Below Target	-10.8
Mysore	May	3007	2500	Above Target	20.3
Kochi	May	10014	9000	Above Target	11.3
Indore	May	7787	7500	Above Target	3.8
Jaipur	May	11475	9500	Above Target	20.8
Coimbatore	May	3550	3500	Above Target	1.4
Lucknow	May	9705	11000	Below Target	-11.8
Visakhapatnam	June	4478	5000	Below Target	-10.4
Chandigarh	June	6029	6000	Above Target	0.5
Surat	June	8544	10000	Below Target	-14.6
Vadodara	June	4685	6500	Below Target	-27.9
Mysore	June	2842	2500	Above Target	13.7
Kochi	June	6399	9000	Below Target	-28.9
Indore	June	6288	7500	Below Target	-16.2
Jaipur	June	9842	9500	Above Target	3.6
Coimbatore	June	3158	3500	Below Target	-9.8
Lucknow	June	10240	11000	Below Target	-6.9

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Insights:

- Out of 60 rows, targets were missed 50% of the time

- Lucknow and Vadodara failed to achieve target trips in any month.

- . Jaipur and Mysore consistently met their target trips in every month.

- January and June saw only 3 cities meeting their target trips.

- Visakhapatnam, Vadodara, Kochi, Lucknow, Surat, and Indore missed their trip targets in both January and June

- Kochi in June missed its target by 29%, the highest among all cities.

- Vadodara missed its target by 28% in June and 20% in January.

Recommendations:

- Analyze the reasons for the underperformance in Jan & June months. Tailor marketing campaign around the holiday season, festivals & weather conditions.

- Cities like Lucknow, Vadodara, Kochi, and others missing target cities regularly need special attention. Focus on demand generation, service optimization, and pricing strategies.

- Can introduce promotions or discounts during low-demand months (January and June) in consistently underperforming cities.

- Despite contributing lowest to total trips, Mysore always achieved its target. So, increasing their target by 10-15% and keeping an eye on Mysore' data would be worth a shot.

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city_name	2-Trips	3-Trips	4-Trips	5-Trips	6-Trips	7-Trips	8-Trips	9-Trips	10-Trips
Visakhapatnam	51.30%	25.00%	10.00%	5.40%	3.20%	2.00%	1.40%	0.90%	0.90%
Chandigarh	32.30%	19.30%	15.70%	12.20%	7.40%	5.50%	3.50%	2.30%	1.80%
Surat	9.80%	14.30%	16.60%	19.70%	18.50%	11.90%	6.20%	1.70%	1.40%
Vadodara	9.90%	14.20%	16.50%	18.10%	19.10%	12.90%	5.80%	2.00%	1.60%
Mysore	48.70%	24.40%	12.70%	5.80%	4.10%	1.80%	1.40%	0.50%	0.50%
Kochi	47.70%	24.40%	11.80%	6.50%	3.90%	2.10%	1.70%	1.20%	0.80%
Indore	34.30%	22.70%	13.40%	10.30%	6.80%	5.20%	3.30%	2.40%	1.50%
Jaipur	50.10%	20.70%	12.10%	6.30%	4.10%	2.50%	1.90%	1.20%	1.00%
Coimbatore	11.20%	14.80%	15.60%	20.60%	17.60%	10.50%	6.20%	2.30%	1.20%
Lucknow	9.70%	14.80%	16.20%	18.40%	20.20%	11.30%	6.40%	1.90%	1.10%

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Insights:

- Surat, Vadodara, Coimbatore – 3 cities where passengers have more 3,4,5,6 and even 7 trip counts than 2 trip counts.

- Coimbatore is at 9th in total trips but almost 79% passengers still are using the services for more than twice.

- Vishakhapatnam, having the best 2 trip % (51%) but still can't convert them to their regular passengers as only 25% passengers come back for 25% for 3rd trip & 10% for 4th one.

- Lucknow, having the lowest 2nd trip% (9.7%) gets more passengers from 6th trips % (20%) which indicates that Lucknow has loyal passenger base.

- Jaipur having almost 50% 2nd Trip %, sees great decline continuously with 3rd trip % only 20% which gets lower and lower.

Recommendations:

- For Visakhapatnam and Jaipur, focus on converting passengers after their second trip by offering incentives such as discounts on the 3rd trip or loyalty points for repeat usage.

- For Lucknow, leverage the loyal customer base by introducing a referral program or exclusive benefits for frequent users, encouraging them to bring in new customers.

- Offer subscription plans in Lucknow, Surat, and Coimbatore to cater to regular passengers, ensuring cost savings for them and consistent revenue for the company.

- Regularly monitor conversion rates (2nd to 3rd trips) and retention metrics (3+ trips) in all cities to evaluate the effectiveness of implemented strategies and refine them accordingly.
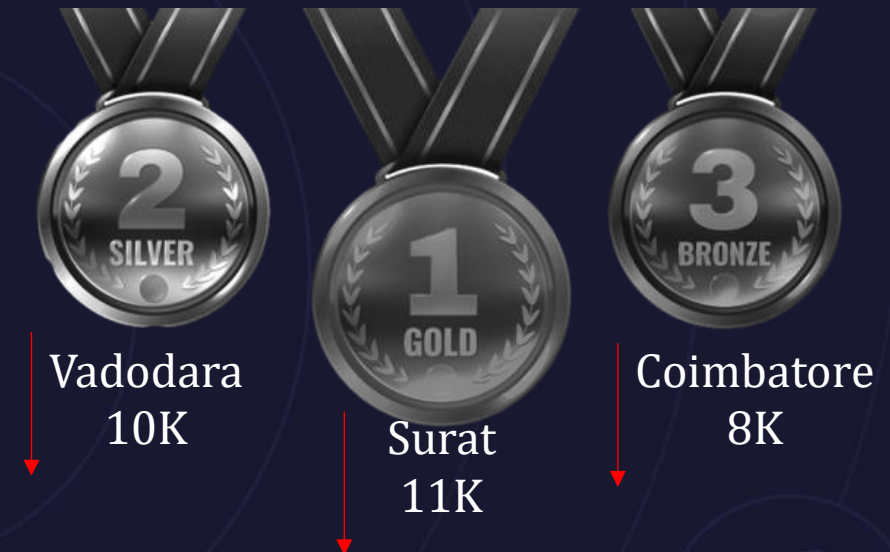
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Top 3 Cities gaining most new passengers

Bottom 3 Cities gaining most new passengers

Kochi
26K

Jaipur
45K

Chandigarh
19K

Vadodara
10K

Surat
11K

Coimbatore
8K

Insights:

- Jaipur remains on top in terms of gaining new passengers (45K) followed by Kochi (26K) and Chandigarh (19K) over 6 months period.

- Surat , Vadodara & Coimbatore are the bottom cities as they gained only 11K, 10K, 8K new passengers over 6 months period.

- Despite being on 3rd for total trips, Surat aren't able to attract new customers.

Recommendations:

- In Surat, the company can launch strategic marketing campaigns to attract new customers while offering referral discounts to regular passengers, incentivizing them to bring in new users and expand the customer base.

- In Vadodara and Coimbatore, the company should establish partnerships with prominent local businesses, offering exclusive discounts to their employees to encourage increased usage.

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city_name	most revenue generating month	revenue	percentage_contribution(%)
Chandigarh	February	2,108,290	19.07%
Coimbatore	April	612,431	17.38%
Indore	May	1,380,996	18.09%
Jaipur	February	7,747,202	20.82%
Kochi	May	3,333,746	19.61%
Lucknow	February	1,777,269	18.78%
Mysore	May	745,170	18.38%
Surat	April	1,154,909	17.96%
Vadodara	April	706,250	18.60%
Visakhapatnam	April	1,390,682	17.34%

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Insights:

- Jaipur had generated 20% of its revenue in Feb month of 77 lakhs (most among all city of highest revenue).

- Coimbatore had generated 17% of its revenue in April of 6 lakhs (least among all city of highest revenue)

- No city came close to half of revenue generated in Jaipur as the second best is Kochi, with 33 lakhs in May, followed by Chandigarh, with 21 lakh in Feb.

- All the cities generated almost 17-20 % of their revenue in their peak months, which is a good sign, as this confirms there is no outlier in our data.

Recommendations:

- The business can be expanded in Coimbatore, Mysore & Vadodara and eyes should be kept on the performance continuously & see if there is any room for marketing strategies or campaigns.

- Some amount or percentage of revenue generated by Jaipur (in overall) should be spent on Jaipur to make the customer experience services better so the new passenger rate can increase as well as the old passengers will also continue to use our services.

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city_name	month	total_passengers	repeat_passengers	monthly_repeat_passenger_rate(%)	city_repeat_passenger_rate
Visakhapatnam	January	3163	650	20.55%	28.61%
Visakhapatnam	February	3170	790	24.92%	28.61%
Visakhapatnam	March	3093	923	29.84%	28.61%
Visakhapatnam	April	2837	992	34.97%	28.61%
Visakhapatnam	May	2890	951	32.91%	28.61%
Visakhapatnam	June	2702	802	29.68%	28.61%
Chandigarh	January	4640	720	15.52%	21.14%
Chandigarh	February	4957	853	17.21%	21.14%
Chandigarh	March	4100	872	21.27%	21.14%
Chandigarh	April	3285	789	24.02%	21.14%
Chandigarh	May	3699	969	26.20%	21.14%
Chandigarh	June	3297	867	26.30%	21.14%
Surat	January	3616	1184	32.74%	42.63%
Surat	February	3567	1313	36.81%	42.63%
Surat	March	3440	1494	43.43%	42.63%
Surat	April	3394	1551	45.70%	42.63%
Surat	May	3217	1606	49.92%	42.63%
Surat	June	3030	1490	49.17%	42.63%
Vadodara	January	2633	544	20.66%	30.03%
Vadodara	February	2756	610	22.13%	30.03%
Vadodara	March	2522	759	30.10%	30.03%
Vadodara	April	2499	862	34.49%	30.03%
Vadodara	May	2256	868	38.48%	30.03%
Vadodara	June	1807	703	38.90%	30.03%
Mysore	January	2129	172	8.08%	11.23%
Mysore	February	2290	183	7.99%	11.23%
Mysore	March	2194	208	9.48%	11.23%

city_name	month	total_passengers	repeat_passengers	monthly_repeat_passenger_rate(%)	city_repeat_passenger_rate
Mysore	March	2194	208	9.48%	11.23%
Mysore	April	2072	236	11.39%	11.23%
Mysore	May	2270	349	15.37%	11.23%
Mysore	June	2203	329	14.93%	11.23%
Kochi	January	5660	795	14.05%	22.40%
Kochi	February	5372	1005	18.71%	22.40%
Kochi	March	6213	1348	21.70%	22.40%
Kochi	April	6515	1576	24.19%	22.40%
Kochi	May	6222	1853	29.78%	22.40%
Kochi	June	4060	1049	25.84%	22.40%
Indore	January	3876	1033	26.65%	32.68%
Indore	February	3981	1103	27.71%	32.68%
Indore	March	3833	1091	28.46%	32.68%
Indore	April	3646	1295	35.52%	32.68%
Indore	May	3591	1563	43.53%	32.68%
Indore	June	3152	1131	35.88%	32.68%
Jaipur	January	11845	1422	12.01%	17.43%
Jaipur	February	12450	1661	13.34%	17.43%
Jaipur	March	9257	1840	19.88%	17.43%
Jaipur	April	7856	1736	22.10%	17.43%
Jaipur	May	7174	1842	25.68%	17.43%
Jaipur	June	6956	1181	16.98%	17.43%
Coimbatore	January	2214	392	17.71%	23.05%
Coimbatore	February	1993	346	17.36%	23.05%
Coimbatore	March	1965	427	21.73%	23.05%
Coimbatore	April	1722	480	27.87%	23.05%
Coimbatore	May	1543	504	32.66%	23.05%
Coimbatore	June	1628	402	24.69%	23.05%
Lucknow	January	4896	1431	29.23%	37.12%
Lucknow	February	5188	1659	31.98%	37.12%
Lucknow	March	4781	1622	33.93%	37.12%
Lucknow	April	3807	1496	39.30%	37.12%
Lucknow	May	3487	1662	47.66%	37.12%
Lucknow	June	3698	1727	46.70%	37.12%

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Insights:

- Mysore, during 6 months had low repeat passenger rate month wise, especially during JFM, Mysore had below 10% repeat passenger rate.

- Jaipur too have 2nd lowest repeat passenger (17%) rate city-wise, Mysore remains on lowest with 11%only.

- Lucknow's repeat passenger rate (month wise) keep increasing as it increased from 29% to incredible 46%.

- Surat also grew from 32% to incredible 49% repeat passenger rate (month wise)

- Lucknow & Surat has the most loyal passengers as their repeat passenger rate (city wise) are 42% and 37% respectively.

Recommendations:

- Despite having the highest number of trips, Jaipur has the second-lowest repeat passenger rate. To improve this, the company should evaluate customer service, driver behavior, and punctuality to enhance the overall experience and boost repeat usage.

- Mysore is meeting its new passenger targets but struggling to retain old passengers. Offering discounts to loyal passengers could help maintain a strong customer base and encourage repeat usage in the city.

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To be Continued...

Stay tuned for the next update where I'll upload the pdf for the primary questions, the secondary questions as well as my Favorite part the Dashboard part.

Feedback & suggestions are always welcome.

Thank You for getting this Far.😇

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