Ad Hoc Business Requests

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Tools Used:

Problem Statement

GoodCabs, an Indian cab service operating in 10 tier-2 cities, aims to help local drivers earn a sustainable living while providing high-quality service to customers. The company is performing well and seeks to improve further by analyzing key metrics.

GoodCabs requires quick insights into key performance metrics to support ad-hoc decision-making and drive improvements in their service and operations.

Data Model

Cities of Operation

Visakhapatnam
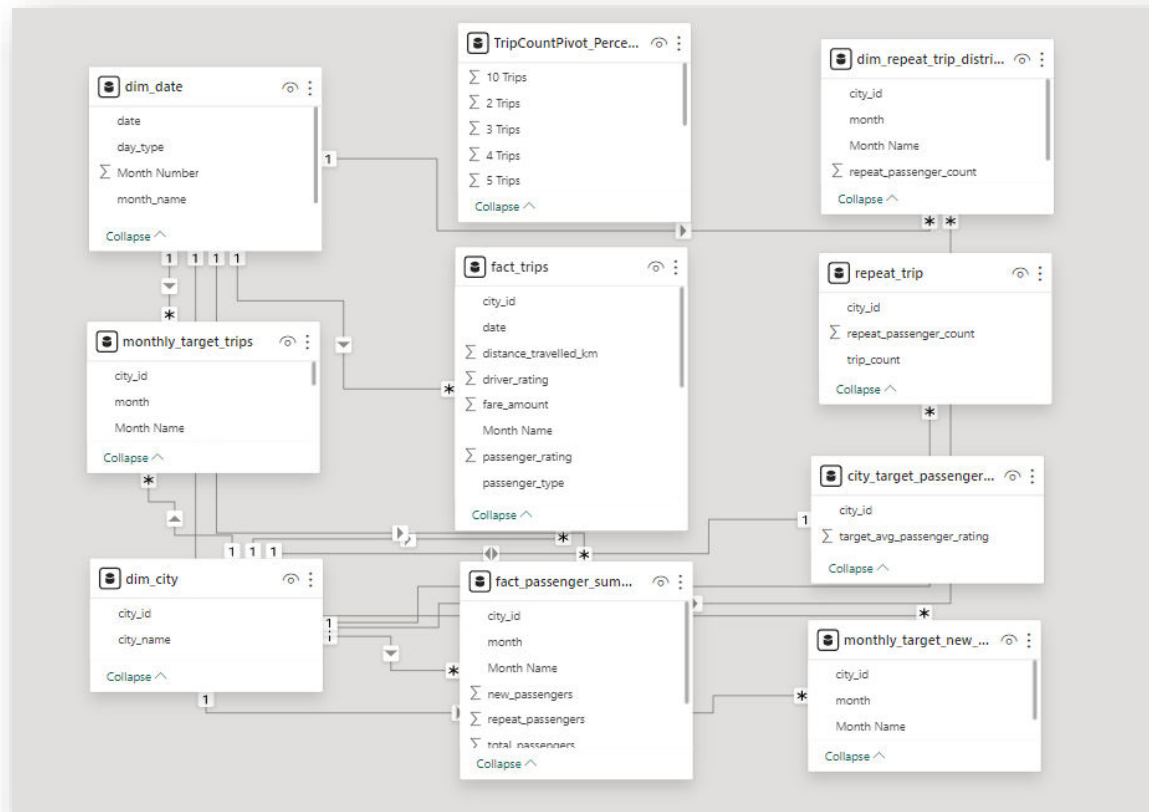
Chandigarh

Indore

Mysore

Surat

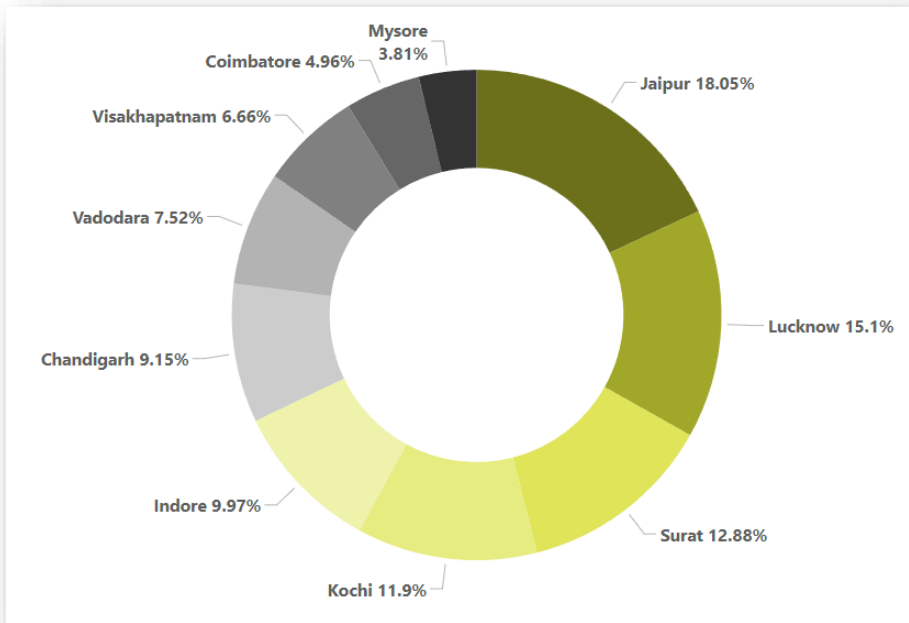**Jaipur**

Vadodara

Coimbatore

Kochi

Lucknow

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

Generate a report showing total trips, average fare per km, average fare per trip, and each city's percentage contribution to total trips, to evaluate trip volume, pricing efficiency, and city contributions.

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

1. **Jaipur** (18.05%) and **Lucknow** (15.10%) have the largest contributions to the total number of trips among all cities.

2. Mysore has a relatively high **fare per km (₹15.14)** and **average fare per trip (₹249.71)**, indicating premium pricing, but its low **trip volume** suggests potential for growth by increasing demand while maintaining its fare structure.

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

Create a report comparing actual vs target trips at the city and month level, categorize performance, and calculate the percentage difference with a summary label

| city_name	month_name	actual_trips	target_trips	performance_status	%_difference
Chandigarh	April	5566	6000	Below Target	-7.23
Chandigarh	February	7387	7000	Above Target	5.53
Chandigarh	January	6810	7000	Below Target	-2.71
Chandigarh	June	6029	6000	Above Target	0.48
Chandigarh	March	6569	7000	Below Target	-6.16
Chandigarh	May	6620	6000	Above Target	10.33
Coimbatore	April	3661	3500	Above Target	4.60
Coimbatore	February	3404	3500	Below Target	-2.74
Coimbatore	January	3651	3500	Above Target	4.31
Coimbatore	June	3158	3500	Below Target	-9.77
Coimbatore	March	3680	3500	Above Target	5.14
Coimbatore	May	3550	3500	Above Target	1.43
Indore	April	7415	7500	Below Target	-1.13
Indore	February	7210	7000	Above Target	3.00
Indore	January	6737	7000	Below Target	-3.76
Indore	June	6288	7500	Below Target	-16.16
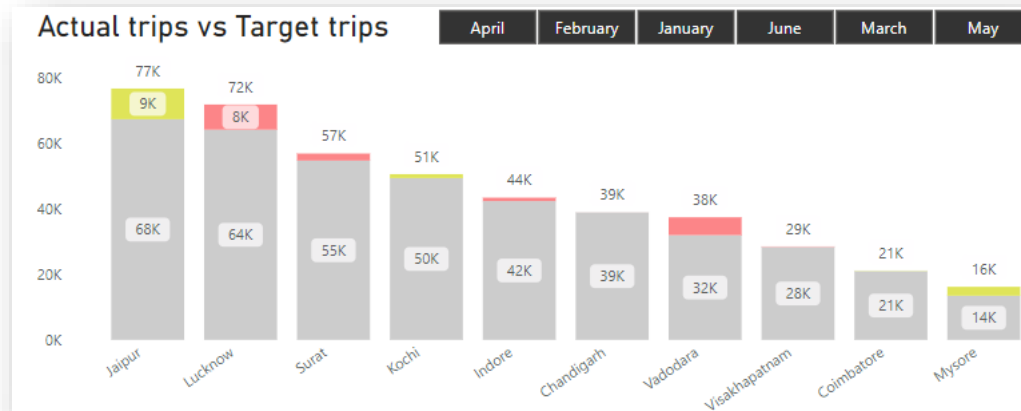
1. **Mysore** and **Jaipur** consistently exceeded targets, with **Mysore** reaching a high of **33.40%** in February and **Jaipur** at **22.09%** in February

2. **Lucknow**, **Kochi**, and **Vadodara** consistently underperformed, with **Lucknow** hitting a low of **-16.48%** in January, **Kochi** at **-28.90%** in June, and **Vadodara** at **-27.92%** in June.

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

Generate a report showing the percentage distribution of repeat passengers in each city by the number of trips taken (2 to 10 trips). This will provide insights into customer loyalty and usage patterns across cities.

| 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

Repeat Trip Distribution
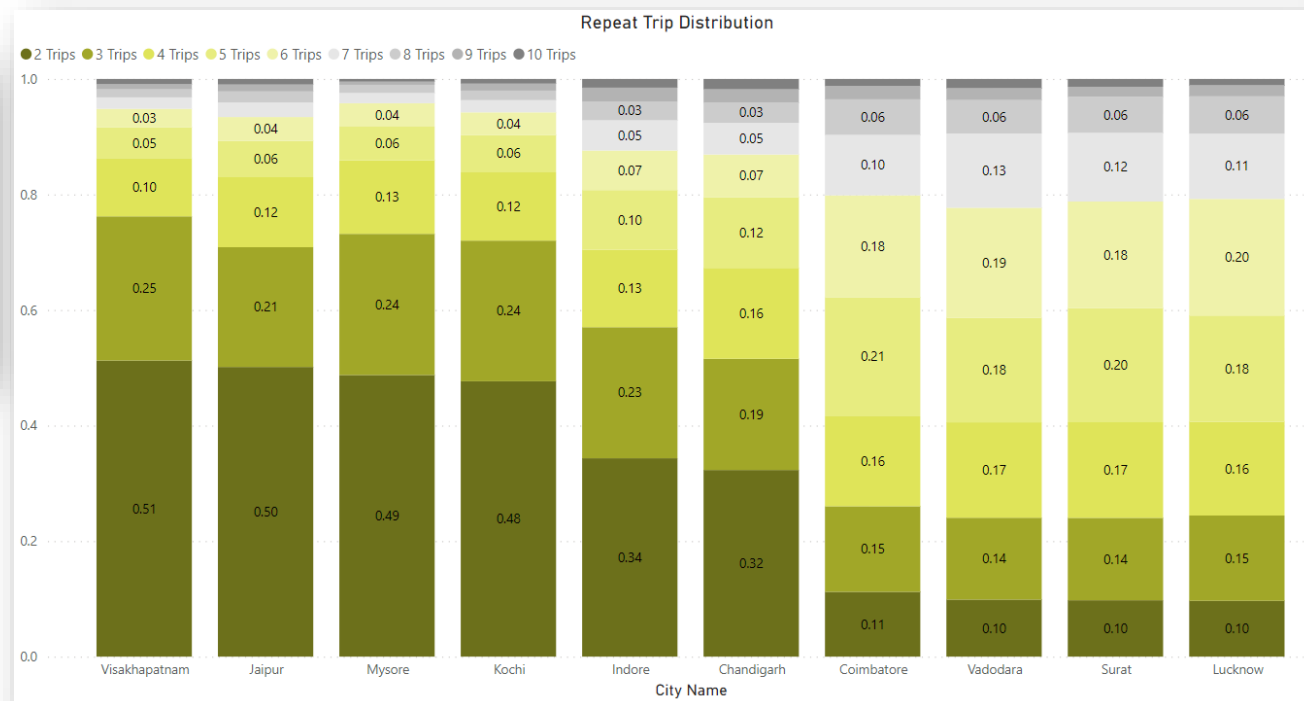
1. Cities like **Visakhapatnam, Jaipur, Mysore, and Kochi** show high percentages of customers taking only 2-3 repeat trips, indicating lower loyalty, suggesting the need for discounts or loyalty programs to boost customer retention.

2. Cities like **Coimbatore, Vadodara, Surat, and Lucknow** show strong loyalty with repeat trips up to 6, indicating satisfied customers; offering exclusive rewards or VIP programs can further strengthen retention.

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

Generate a report that ranks cities by total new passengers, highlighting the top 3 and bottom 3 cities.

| city_name	total_new_passengers	city_category
Jaipur	45856	Top 3
Kochi	26416	Top 3
Chandigarh	18908	Top 3
Lucknow	16260	Average
Indore	14863	Average
Visakhapatnam	12747	Average
Mysore	11681	Average
Surat	11626	Bottom 3
Vadodara	10127	Bottom 3
Coimbatore	8514	Bottom 3

Total New Passenger (City)
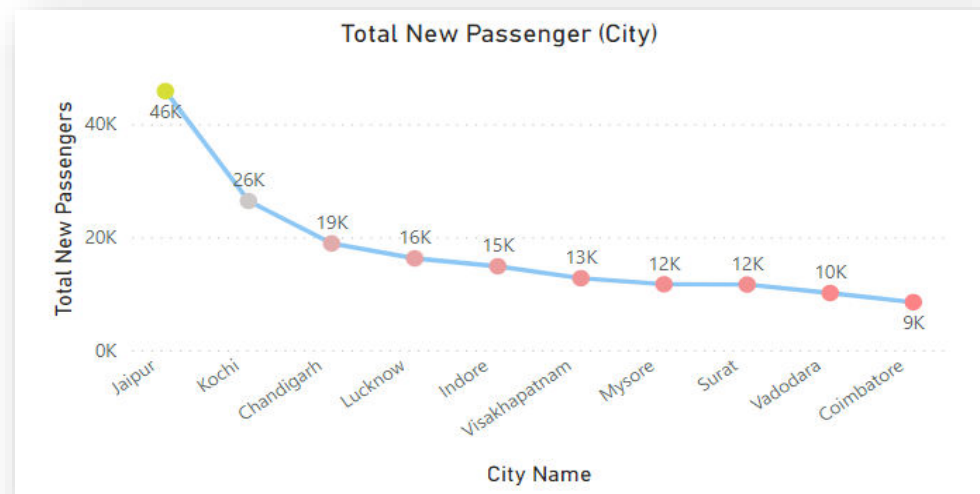
Insights

Surat: Despite a high total passenger count, most are repeat customers, indicating a need to attract more new passengers

Jaipur and Kochi: These cities show strong growth in new passengers, highlighting successful customer acquisition strategies.

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

Generate a report identifying the month with the highest revenue for each city, showing the month, revenue amount, and its percentage contribution to total revenue.

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

Revenue Contribution of Month with Highest Revenue
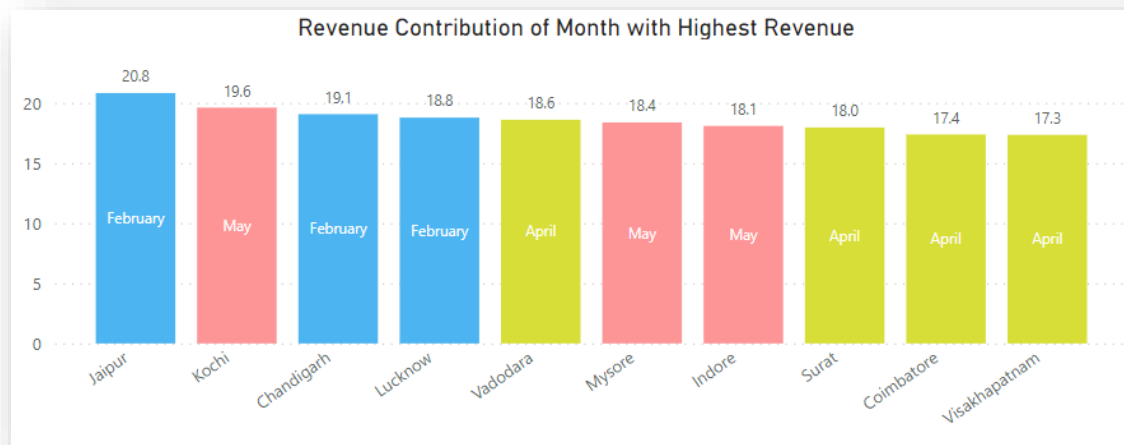
February, **April**, and **May** are key revenue-driving months for most cities, likely influenced by seasonal trends and events during these periods.

Business Request - 6: Repeat Passenger Rate Analysis

Calculate the **monthly repeat passenger rate** and **city-wide repeat passenger rate** for each city to analyze monthly trends and overall repeat passenger behavior

city_name	month_name	total_passengers	repeat_passengers	monthly_repeat_passenger_rate	city_repeat_passenger_rate
Jaipur	January	11845	1422	12.01	17.43
Coimbatore	January	2214	392	17.71	23.05
Lucknow	January	4896	1431	29.23	37.12
Visakhapatnam	June	2702	802	29.68	28.61
Chandigarh	June	3297	867	26.30	21.14
Surat	June	3030	1490	49.17	42.63
Vadodara	June	1807	703	38.90	30.03
Mysore	June	2203	329	14.93	11.23
Kochi	June	4060	1049	25.84	22.40
Indore	June	3152	1131	35.88	32.68
Jaipur	June	6956	1181	16.98	17.43
Coimbatore	June	1628	402	24.69	23.05
Lucknow	June	3698	1727	46.70	37.12
Visakhapatnam	March	3093	923	29.84	28.61
Chandigarh	March	4100	872	21.27	21.14
Surat	March	3440	1494	43.43	42.63
Vadodara	March	2522	759	30.10	30.03
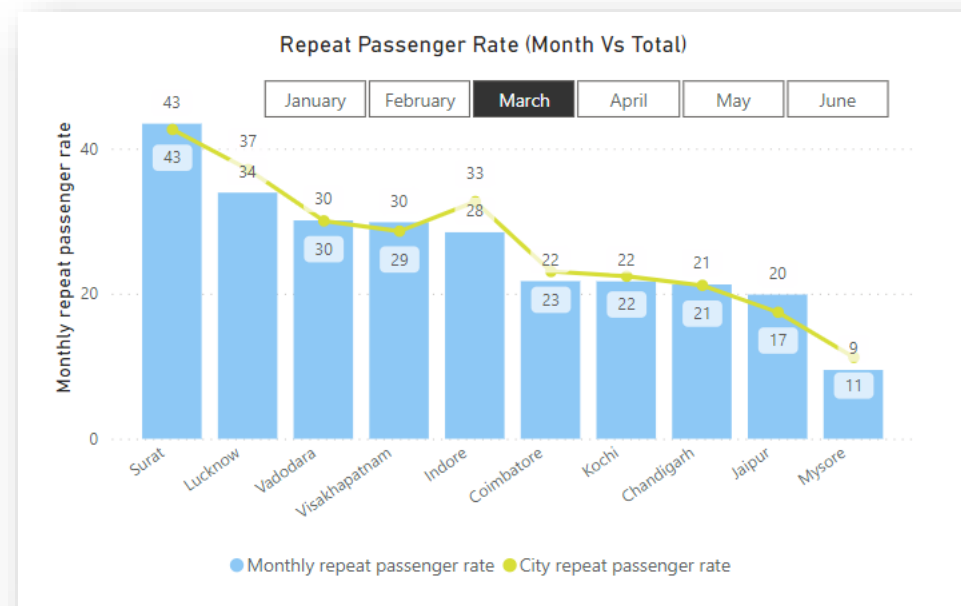
Cities like **Surat** and **Lucknow** show consistently high repeat passenger rates across months, indicating strong customer loyalty. In contrast, cities like **Mysore** and **Jaipur** exhibit lower repeat rates, suggesting potential opportunities for improving customer retention strategies.

Summary Insights

1. **Top Contributors**:
   - **Jaipur (18.05%)** and **Lucknow (15.10%)** lead in total trips, indicating strong city performance.

2. **2. Growth Potential in Mysore**:
   - High fare structure, but low trip volume presents an opportunity for growth.

3. **Underperformance (Actual Vs Target)**:
   - **Lucknow**, **Kochi**, and **Vadodara** showed consistent underperformance, needing improvement strategies.

4. **Repeat Trip Patterns**:
   - Cities like **Chandigarh**, **Jaipur**, and **Mysore** show lower customer loyalty, suggesting a need for loyalty programs.

5. **Revenue Months**:
   - **February**, **April**, and **May** are key revenue months, influenced by seasonal trends.

Good
Cabs