By Gajanand Vagile

GOOD CABS INSIGHTS

Agenda

1. Project Introduction
2. My Introduction
3. Primary analysis
4. adhoc analysis
5. Conclusions
6. Contact

Good Cabs

Goodcabs is a growing cab service company focused on tier-2 cities in India, providing reliable transport while empowering local drivers. In just two years, it has built a strong market presence with operations in 10 cities. Committed to passenger satisfaction and sustainable driver earnings, Goodcabs aims to enhance trip volume, customer retention, and service quality in 2024.

Hi there! I'm Gajanand

Introduction

"I'm a Data Analyst skilled in SQL, Python, Power BI, and Excel, with experience in EDA, data visualization, and ETL. Passionate about turning data into actionable insights to drive business decisions.

PRIMARY QUESTIONS

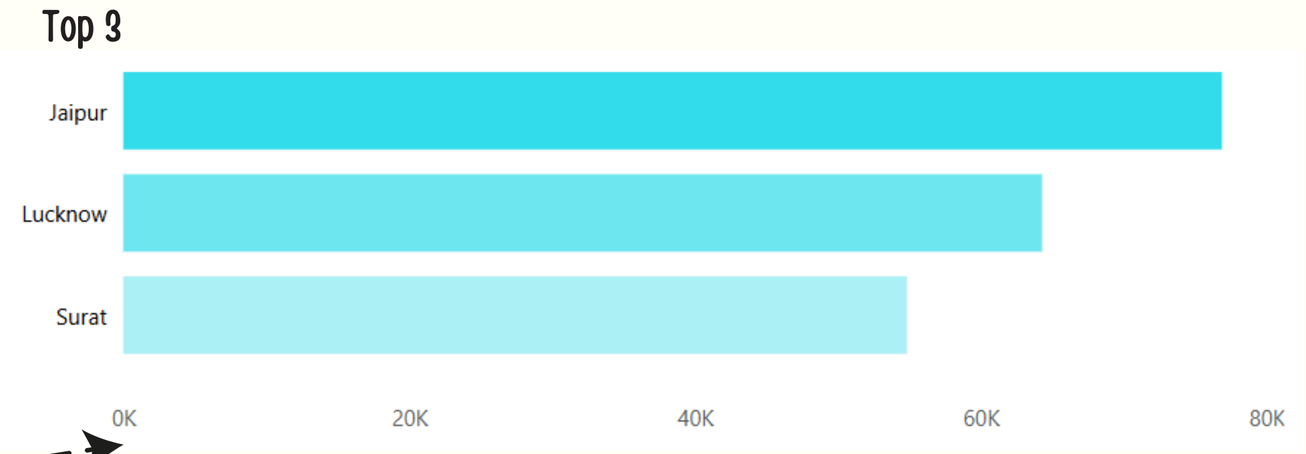
Let's solve business problems...

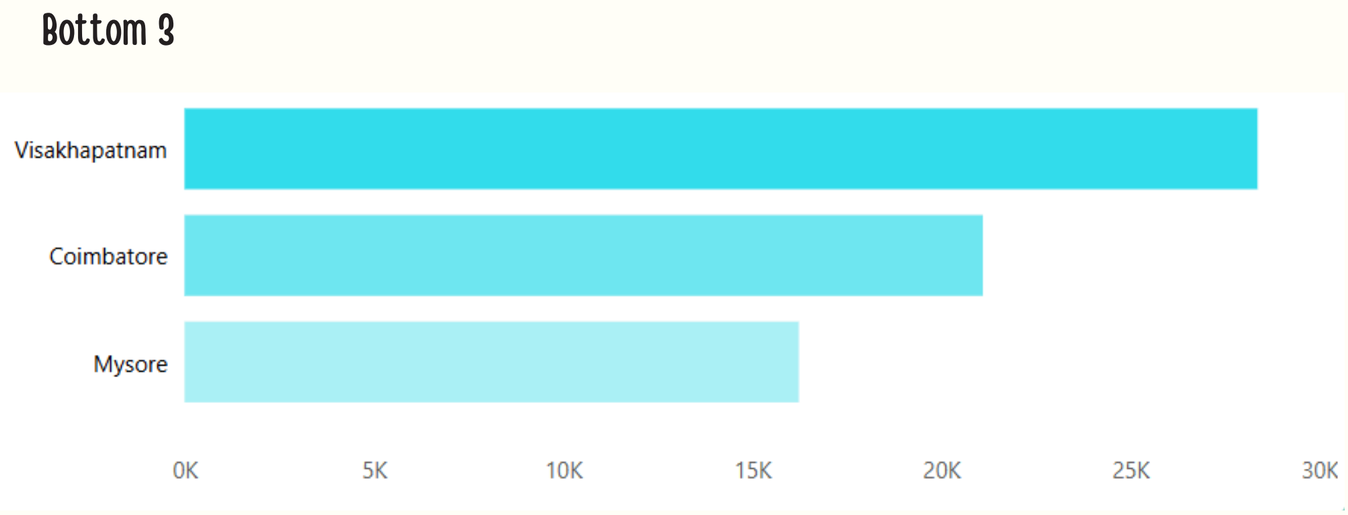
- 1 Top & Bottom Performing Cities
- 2 City-wise Fare Efficiency
- 3 City-wise Ratings by Passenger Type
- 4 Peak & Low-Demand Months by City
- 5 Weekday vs. Weekend Demand Patterns
- 6 Repeat Passenger Frequency & City Contribution
- 7 Monthly Performance vs. Targets

Primary Questions

1 Top & Bottom Performing Cities

- Which three cities have the highest and lowest total trip volume over the analysis period?





Primary Questions

2 City-wise Fare Efficiency

- What is the average fare per trip in each city?
- How does it compare to the average trip distance?
- Which cities have the highest and lowest fare per trip, and what does this indicate about pricing efficiency?

city_name	ATD KM	FP KM	AFPT
Jaipur	30.02	16.12	483.92
Kochi	24.07	13.93	335.25
Chandigarh	23.52	12.06	283.69
Visakhapatnam	22.55	12.53	282.67
Mysore	16.50	15.14	249.71
Indore	16.50	10.90	179.84
Coimbatore	14.98	11.15	166.98
Lucknow	12.51	11.76	147.18
Vadodara	11.52	10.29	118.57
Surat	11.00	10.66	117.27
Total	**19.13**	**13.28**	**254.02**

Primary Questions

3 City-wise Ratings by Passenger Type

- What are the average passenger and driver ratings for each city?
- How do ratings vary between new and repeat passengers?
- Which cities receive the highest and lowest ratings?

Passenger vs driver ratings

city_name	avg passenger rating	avg driver rating
Visakhapatnam	8.43	8.99
Vadodara	6.61	6.65
Surat	6.42	6.59
Mysore	8.70	8.98
Lucknow	6.49	6.62
Kochi	8.52	8.99
Jaipur	8.58	8.99
Indore	7.83	7.65
Coimbatore	7.88	7.69
Chandigarh	7.98	7.72

New vs repeated Passenger ratings

city_name	new	repeated
Chandigarh	8.49	7.49
Coimbatore	8.49	7.48
Indore	8.49	7.47
Jaipur	8.99	7.99
Kochi	8.99	8.00
Lucknow	7.98	5.99
Mysore	8.98	7.98
Surat	7.98	6.00
Vadodara	7.98	5.98
Visakhapatnam	8.98	7.99

Primary Questions

4 Peak & Low-Demand Months by City

- In each city, which month sees the highest number of trips (peak demand)?
- Which month has the lowest number of trips (low demand)?

High and low demand month for each City

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

Primary Questions

5 Weekday vs. Weekend Demand Patterns

- How do weekday and weekend trip volumes compare across cities?
- Are there cities where weekend demand is significantly higher or lower than weekdays?

Weekday vs Weekend trips distribution

city_name	Weekday	Weekend	Total
Jaipur	32491	44397	**76888**
Lucknow	49617	14682	**64299**
Surat	37793	17050	**54843**
Kochi	22915	27787	**50702**
Indore	21198	21258	**42456**
Chandigarh	19914	19067	**38981**
Vadodara	20310	11716	**32026**
Visakhapatnam	15100	13266	**28366**
Coimbatore	12576	8528	**21104**
Mysore	6424	9814	**16238**

Primary Questions

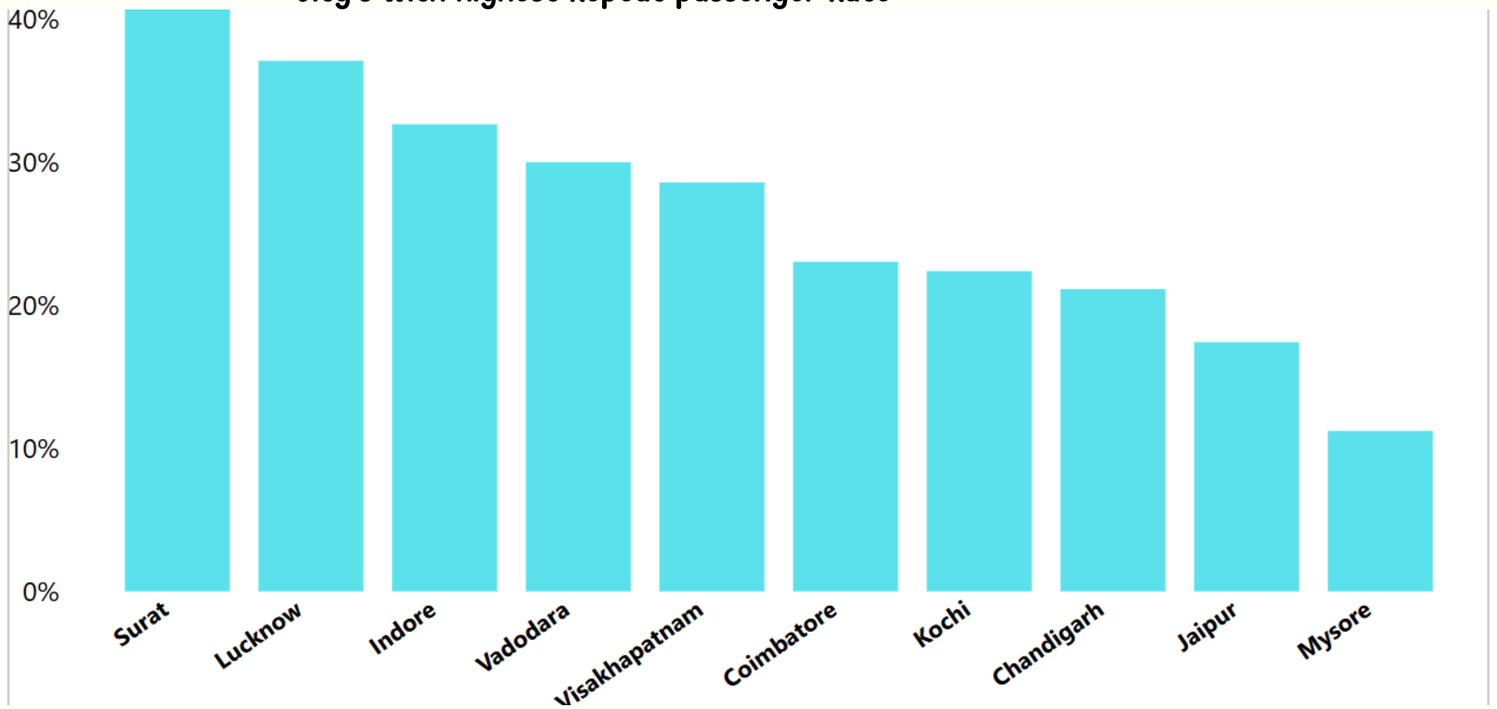
6 Repeat Passenger Frequency & City Contribution

- What percentage of repeat passengers take multiple trips (e.g., 2, 3, or more)?
- Which cities contribute the most to repeat trip frequencies?

Repeat passenger Frequency & City Contribution

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

City's with highest Repeat passenger Rate



Primary Questions

7 Monthly Performance vs. Targets

- How do cities perform against monthly targets for total trips, new passengers, and average passenger ratings?
- Which cities consistently meet, exceed, or miss targets?

Actuals vs. Targets for total trips

Target v/s Actual total trips

city_name	actual trips	target trips	% diff
Jaipur	76888	67500	13.91%
Mysore	16238	13500	20.28%
Kochi	50702	49500	2.43%
Coimbatore	21104	21000	0.50%
Chandigarh	38981	39000	-0.05%
Visakhapatnam	28366	28500	-0.47%
Indore	42456	43500	-2.40%
Surat	54843	57000	-3.78%
Vadodara	32026	37500	-14.60%
Lucknow	64299	72000	-10.70%
Total	**425903**	**429000**	**-3097** **-0.72%**

Actuals vs. Targets passengers ratings

city_name	Actual Rating	Target Rating
Mysore	8.70	8.50
Jaipur	8.58	8.25
Kochi	8.52	8.50
Visakhapatnam	8.43	8.50
Chandigarh	7.98	8.00
Coimbatore	7.88	8.25
Indore	7.83	8.00
Vadodara	6.61	7.50
Lucknow	6.49	7.25
Surat	6.42	7.00

new passengers Monthly Performance vs. Targets

Month	actual	target	target diff	target diff %
January	36329	36700		-0.01
February	36201	36700		-0.01
March	30814	36700		-0.16
April	26620	25000		0.06
May	24182	25000		-0.03
June	22852	25000		-0.09
Total	**176998**	**185100**	**-8102**	**-0.04**

AD-HOC PROBLEMS

Let's solve business problems...

1. City-Level Fare and Trip Summary
2. Monthly City-Level Trip Target Performance
3. Top and Bottom Cities by New Passengers
4. Highest Revenue Month for Each City
5. Repeat Passenger Rate Analysis

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

```sql
SELECT
dc.city_name,
count(ft.trip_id) as total_trips,
sum(ft.fare_amount) as total_fare,
sum(ft.distance_travelled_km) as total_distance_travelled,
round(count(ft.trip_id) *100.0/sum(count(trip_id)) over(),2) as cotribution_pct

FROM fact_trips ft
join dim_city dc
on ft.city_id = dc.city_id
group by dc.city_name;
```

city_name	total_trips	total_fare	total_distance_travelled	cotribution_pct
Visakhapatnam	28366	8018282	639765	6.66
Chandigarh	38981	11058401	916783	9.15
Surat	54843	6431599	603122	12.88
Vadodara	32026	3797200	368867	7.52
Mysore	16238	4054745	267877	3.81
Kochi	50702	16997596	1220167	11.90
Indore	42456	7635228	700629	9.97
Jaipur	76888	37207497	2308418	18.05
Coimbatore	21104	3523992	316121	4.96
Lucknow	64299	9463551	804571	15.10

business Request - 2:

Monthly City-Level Trips Target Performance Report
Objective:
Generate a report that evaluates the target performance for trips at the monthly and city level.
Requirements:
For each city and month, compare actual total trips with target trips and categorize performance as follows:

- "Above Target" → If actual trips > target trips
- "Below Target" → If actual trips ⩽ target trips

Additionally, calculate the percentage difference between actual and target trips to quantify the performance gap.
Fields in the Report:

- city_name
- month_name
- actual_trips
- target_trips
- performance_status (Above Target / Below Target)
- %_difference

```
    ALGORITHM = UNDEFINED
    DEFINER = `root`@`localhost`
    SQL SECURITY DEFINER
VIEW `actual_vs_trget_trips` AS
    SELECT
        `att`.`city_name` AS `city_name`,
        `att`.`month_name` AS `month_name`,
        `att`.`total_trips` AS `actual_trips`,
        `mtt`.`total_target_trips` AS `target_trips`,
        (`att`.`total_trips` - `mtt`.`total_target_trips`) AS `trips_difference`
    FROM
        (`city_and_monthly_total_trips` `att`
        JOIN `targets_db`.`monthly_target_trips` `mtt` ON (((`mtt`.`city_id` = `att`.`city_id`)
            AND (MONTHNAME(`mtt`.`month`) = `att`.`month_name`))))
```

```
SELECT *,
    case
    when actual_trips > target_trips then "Above target" else "Below target"
    end as performance_status,
    round(((trips_difference*100)/target_trips),2) as difference_pct
FROM trips_db.actual_vs_trget_trips;
```

city_name	month_name	actual_trips	target_trips	trips_difference	performance_status	difference_pct
Visakhapatnam	January	4468	4500	-32	Below target	-0.71
Chandigarh	January	6810	7000	-190	Below target	-2.71
Surat	January	8358	9000	-642	Below target	-7.13
Vadodara	January	4775	6000	-1225	Below target	-20.42
Mysore	January	2485	2000	485	Above target	24.25
Kochi	January	7344	7500	-156	Below target	-2.08
Indore	January	6737	7000	-263	Below target	-3.76
Jaipur	January	14976	13000	1976	Above target	15.20

Business Request - 3:

identify Cities with Highest and Lowest Total New Passengers
Objective:
Generate a report that calculates the total number of new passengers for each city.

- Rank the cities based on the number of new passengers.
- Identify the top 3 cities with the highest number of new passengers.
- Identify the bottom 3 cities with the lowest number of new passengers.
- Categorize them as "Top 3" or "Bottom 3" accordingly.

Fields in the Report:

- city_name
- total_new_passengers
- city_category (Top 3 / Bottom 3)
-

```sql
with city_rank as(
SELECT dc.city_name,sum(ps.new_passengers) as total_new_passengers,
rank() over(order by sum(ps.new_passengers) desc) as rank_high,
rank() over(order by sum(ps.new_passengers) asc) as rank_low
FROM trips_db.fact_passenger_summary ps
join dim_city dc
on dc.city_id = ps.city_id
group by dc.city_name
order by total_new_passengers
)
select city_name,total_new_passengers,
case
    when rank_high <=3 then "top 3"
    when rank_low <=3 then "bottom 3"
    else "others"
end as categoty
from city_rank
order by total_new_passengers desc
```

city_name	total_new_passengers	categoty
Jaipur	45856	top 3
Kochi	26416	top 3
Chandigarh	18908	top 3
Lucknow	16260	others
Indore	14863	others
Visakhapatnam	12747	others
Mysore	11681	others
Surat	11626	bottom 3
Vadodara	10127	bottom 3
Coimbatore	8514	bottom 3

Business Request - 4:

Identify Month with Highest Revenue for Each City
Objective:
Generate a report that determines the month with the highest revenue for each city.

- Display the month name, revenue amount, and percentage contribution of that month's revenue to the city's total revenue.

Fields in the Report:

- city_name
- highest_revenue_month
- revenue
- percentage_contribution (%)

```sql
with cte1 as (select dc.city_name,dd.month_name,sum(fc.fare_amount) as revenue
 from fact_trips fc
 join dim_city dc
 on fc.city_id = dc.city_id
 join dim_date dd
 on dd.date = fc.date
 group by city_name,month_name
 ),
 cte2 as (
 select *,
    rank() over(partition by city_name order by revenue desc) as top_month
 from cte1
 ),
cte3 as(
    select *,
      revenue*100/sum(revenue) over(partition by city_name) as contribution_pct
    from cte2
)
select city_name,month_name,revenue,contribution_pct from cte3
where top_month = 1
```

city_name	month_name	revenue	contribution_pct
Chandigarh	February	2108290	19.0651
Coimbatore	April	612431	17.3789
Indore	May	1380996	18.0872
Jaipur	February	7747202	20.8216
Kochi	May	3333746	19.6130
Lucknow	February	1777269	18.7801
Mysore	May	745170	18.3777
Surat	April	1154909	17.9568
Vadodara	April	706250	18.5992
Visakhapatnam	April	1390682	17.3439

Business Request - 5:

Repeat Passenger Rate Analysis

Objective:

Generate a report that calculates two key repeat passenger metrics:

1. Monthly Repeat Passenger Rate: The percentage of repeat passengers for each city and month.
2. City-wide Repeat Passenger Rate: The overall percentage of repeat passengers for each city across all months.

Fields in the Report:

- city_name
- month
- total_passengers
- repeat_passengers
- monthly_repeat_passenger_rate (%)
- city_repeat_passenger_rate (%)

```sql
WITH monthly_repeat_analysis AS (
    SELECT
        city_name,
        month,
        total_passengers AS total_passengers,
        repeat_passengers AS repeat_passengers
    FROM fact_passenger_summary s
    join dim_city c
    on s.city_id = c.city_id
    GROUP BY city_name,month
)

SELECT
    city_name,
    month,
    total_passengers,
    repeat_passengers,
    ROUND(100.0 * repeat_passengers / NULLIF(total_passengers, 0), 2) AS monthly_repeat_passenger_rate,
    ROUND(100.0 * SUM(repeat_passengers) OVER (PARTITION BY city_name) /
                NULLIF(SUM(total_passengers) OVER (PARTITION BY city_name), 0), 2)
                AS city_repeat_passenger_rate
FROM monthly_repeat_analysis
ORDER BY city_name, month;
```

city_name	month	total_passengers	repeat_passengers	monthly_repeat_passenger_rate	city_repeat_passenger_rate
Chandigarh	2024-01-01	4640	720	15.52	21.14
Chandigarh	2024-02-01	4957	853	17.21	21.14
Chandigarh	2024-03-01	4100	872	21.27	21.14
Chandigarh	2024-04-01	3285	789	24.02	21.14
Chandigarh	2024-05-01	3699	969	26.20	21.14
Chandigarh	2024-06-01	3297	867	26.30	21.14
Coimbatore	2024-01-01	2214	392	17.71	23.05
Coimbatore	2024-02-01	1993	346	17.36	23.05
Coimbatore	2024-03-01	1965	427	21.73	23.05
Coimbatore	2024-04-01	1722	480	27.87	23.05
Coimbatore	2024-05-01	1543	504	32.66	23.05
Coimbatore	2024-06-01	1628	402	24.69	23.05
Indore	2024-01-01	3876	1033	26.65	32.68
Indore	2024-02-01	3981	1103	27.71	32.68

KEY FINDINGS

1.Surat and Lucknow have the lowest fare per trip but high demand, indicating potential underpricing

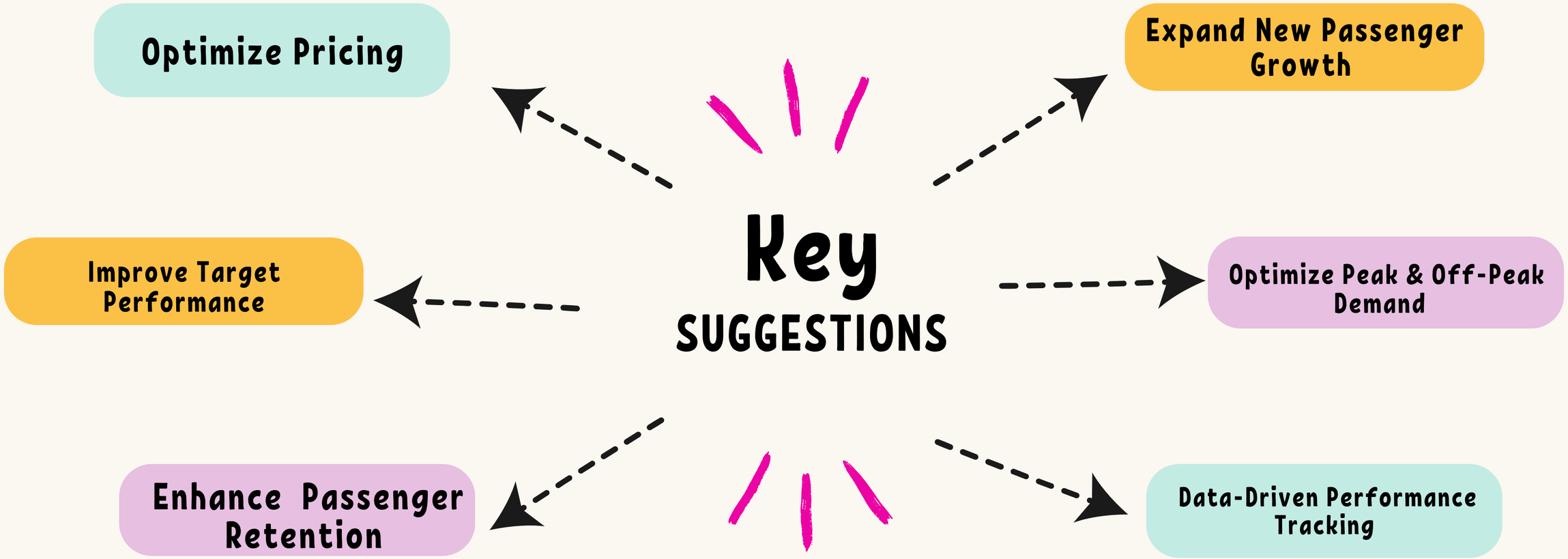
2.Mysore & Coimbatore have the lowest repeat passengers, indicating a lack of customer loyalty.

3.Lucknow: Despite high demand, it is missing trip targets, indicating possible supply constraints

4.Jaipur & Kochi excel in new passenger growth, while Coimbatore & Vadodara lag, indicating gaps in awareness or service reach.

STRATEGIC SUGGESTIONS:

1. Optimize Pricing in High-Demand Cities – Adjust fares in Surat & Lucknow to maximize revenue while maintaining affordability.
2. Improve Trip Target Performance – Expand driver availability in Lucknow to meet high demand; boost marketing in Vadodara to increase ridership.
3. Enhance Repeat Passenger Retention – Implement loyalty programs in low-retention cities like Mysore & Coimbatore to increase customer stickiness.
4. Boost New Passenger Growth – Strengthen outreach in Coimbatore & Vadodara with targeted marketing, discounts, and partnerships.
5. Optimize Supply & Demand Balance – Use demand heatmaps in Lucknow to allocate cabs efficiently; introduce surge pricing and fleet expansion if needed.
6. Increase Corporate & Institutional Tie-ups – Partner with businesses, universities, and IT hubs to drive consistent ride demand in underperforming cities.


Optimize Pricing
Expand New Passenger Growth
Key
SUGGESTIONS
Improve Target Performance
Optimize Peak & Off-Peak Demand
Enhance Passenger Retention
Data-Driven Performance Tracking

THANK YOU!