



Provide insights to Chief of Operations in Transportation Domain

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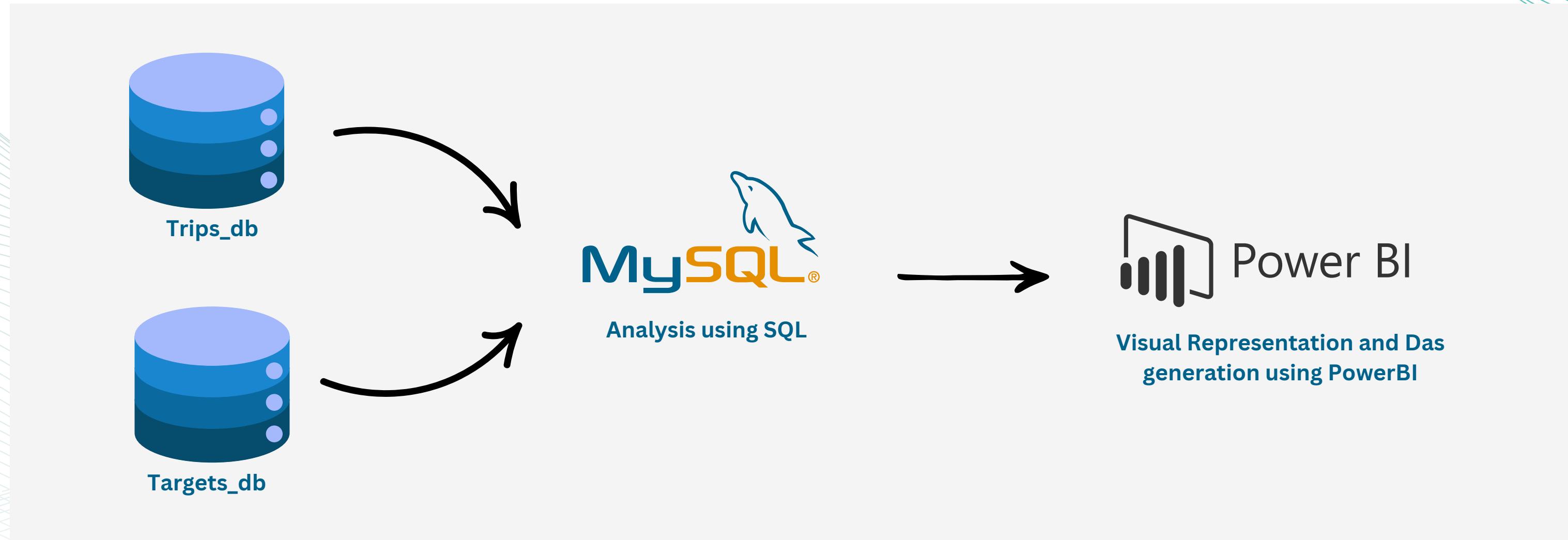


Problem Statement

- Goodcabs operates in tier-2 Indian cities, supporting local drivers and ensuring excellent passenger service.
- The Chief of Operations, needed immediate insights for strategic planning.
- The task was assigned to Me, who used provided notes to deliver actionable insights through structured analysis and clear reporting.
- Insights will guide strategies to enhance growth, customer satisfaction, and repeat passenger engagement.



Data Information



BUSINESS REQUEST 01 :

CITY-LEVEL FARE AND TRIP SUMMARY REPORT

Query:

```

with cte as (
  Select
    city_name,
    count(distinct trip_id) as total_trips,
    avg(fare_amount/distance_travelled_km) as average_fare_per_km,
    sum(fare_amount)/count(distinct trip_id) as average_fare_per_trip,
    (count(distinct trip_id)/sum(count(distinct trip_id)) over()) *100 as contribution_to_total_trips
  from dim_city c
  join fact_trips f
  on c.city_id=f.city_id
  group by city_name
)
select
  city_name,
  total_trips,
  round(average_fare_per_km,2) as average_fare_per_km,
  round(average_fare_per_trip,2) as average_fare_per_trip,
  round(contribution_to_total_trips,2) as contribution_to_total_trips
from cte
  
```

Output:

	city_name	total_trips	average_fare_per_km	average_fare_per_trip	contribution_to_total_trips
▶	Chandigarh	38981	12.18	283.69	9.15
	Coimbatore	21104	11.30	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	11.90
	Lucknow	64299	12.14	147.18	15.10
	Mysore	16238	15.40	249.71	3.81
	Surat	54843	10.92	117.27	12.88
	Vadodara	32026	10.54	118.57	7.52
	Visakhapatnam	28366	12.70	282.67	6.66

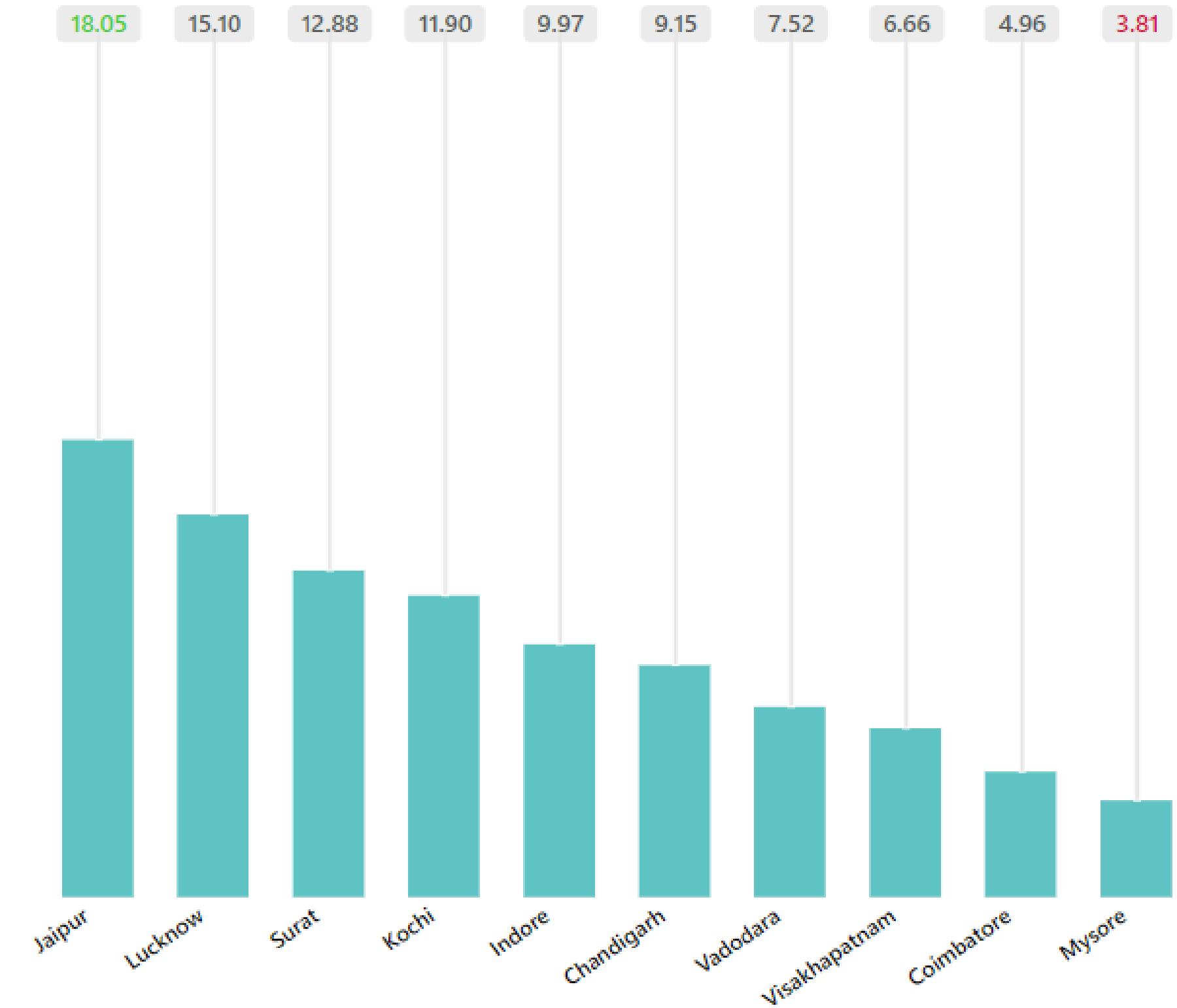


GOODCABS

Key Insights

Jaipur has the highest contribution at **18.05%**, while Coimbatore has the lowest at **4.96%**.

Contribution to Total Trips

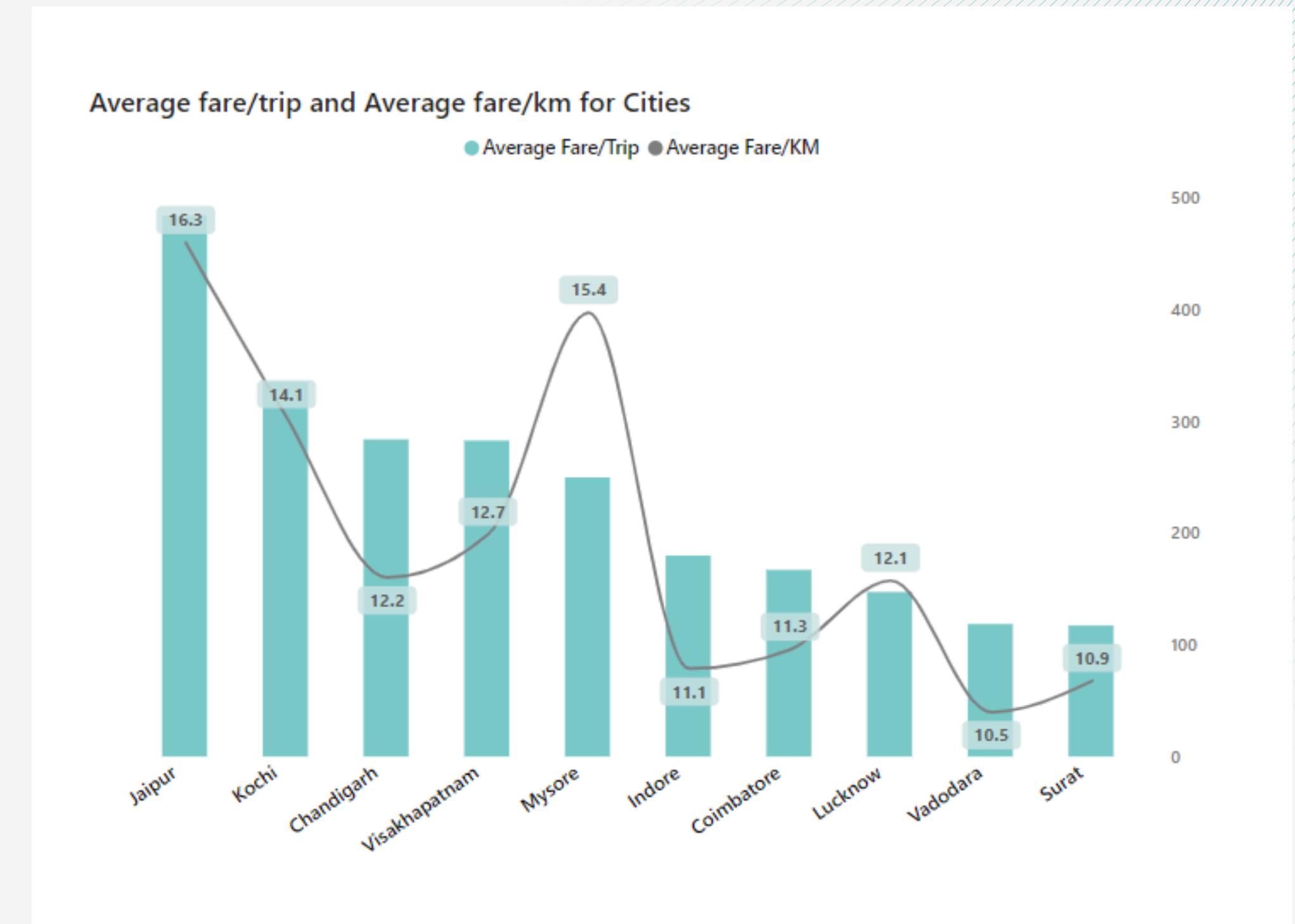




GOODCABS

Key Insights

- Jaipur has the highest average fare per kilometer (**16.25**), while Indore has the lowest (**11.07**).
- Jaipur also leads in fare per trip (**483.92**), with Coimbatore at the lowest (**166.98**).



BUSINESS REQUEST 02 :

MONTHLY CITY-LEVEL TRIPS TARGET PERFORMANCE REPORT



Query:

```

with cte as (
    select city_id,
        count(distinct trip_id) as actual_trips,
        DATE_FORMAT(date, '%Y-%m-01') AS month
    from fact_trips
    group by DATE_FORMAT(date, '%Y-%m-01'),city_id
)
Select
    city_name,
    actual_trips,
    c.month,
    total_target_trips,
    case when actual_trips > total_target_trips then 'Above Target' else 'Below Target' end as performance_status,
    round((actual_trips-total_target_trips)/total_target_trips*100,2)as difference
from cte c
join targets_db.monthly_target_trips t
on c.city_id =t.city_id and c.month=t.month
join dim_city d
on c.city_id=d.city_id

```

Output:

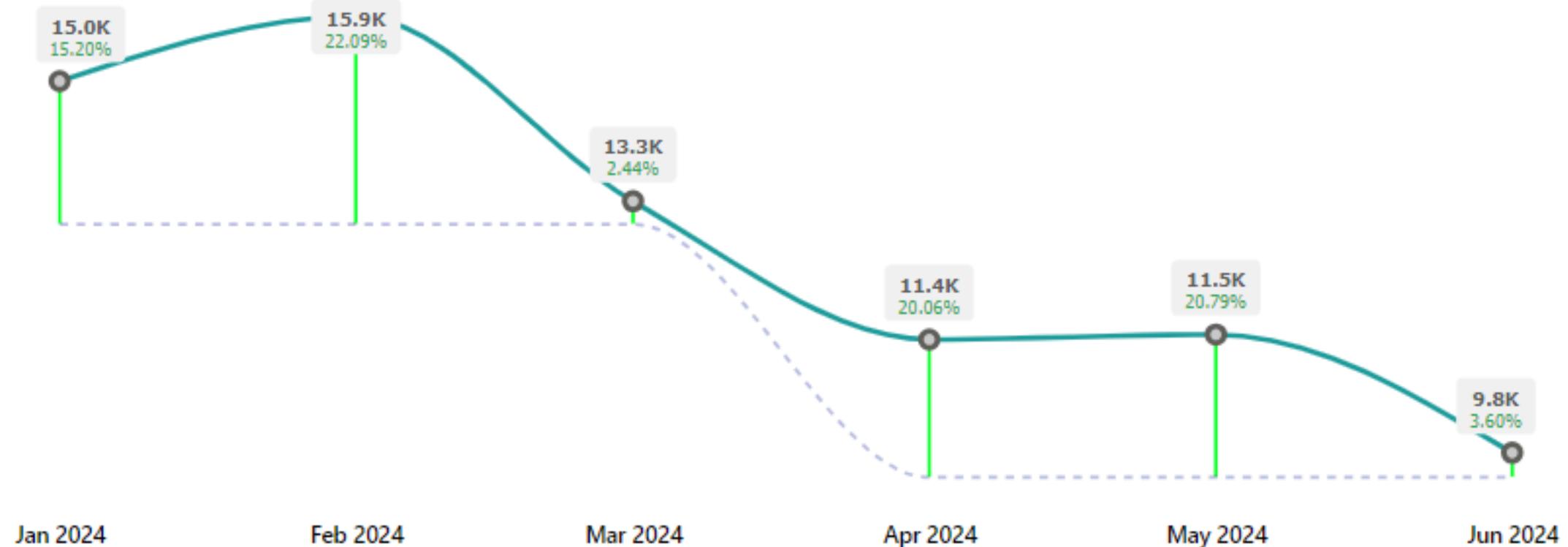
	city_name	actual_trips	month	total_target_trips	performance_status	difference
▶	Visakhapatnam	4468	2024-01-01	4500	Below Target	-0.71
	Chandigarh	6810	2024-01-01	7000	Below Target	-2.71
	Surat	8358	2024-01-01	9000	Below Target	-7.13
	Vadodara	4775	2024-01-01	6000	Below Target	-20.42
	Mysore	2485	2024-01-01	2000	Above Target	24.25
	Kochi	7344	2024-01-01	7500	Below Target	-2.08
	Indore	6737	2024-01-01	7000	Below Target	-3.76
	Jaipur	14976	2024-01-01	13000	Above Target	15.20
	Coimbatore	3651	2024-01-01	3500	Above Target	4.31
	Lucknow	10858	2024-01-01	13000	Below Target	-16.48
	Visakhapatnam	4793	2024-02-01	4500	Above Target	6.51
	Chandigarh	7387	2024-02-01	7000	Above Target	5.53
	Surat	9069	2024-02-01	9000	Above Target	0.77
	Vadodara	5228	2024-02-01	6000	Below Target	-12.87
	Mysore	2668	2024-02-01	2000	Above Target	33.40
	total	7600	2024-02-01	7500	Above Target	0.67



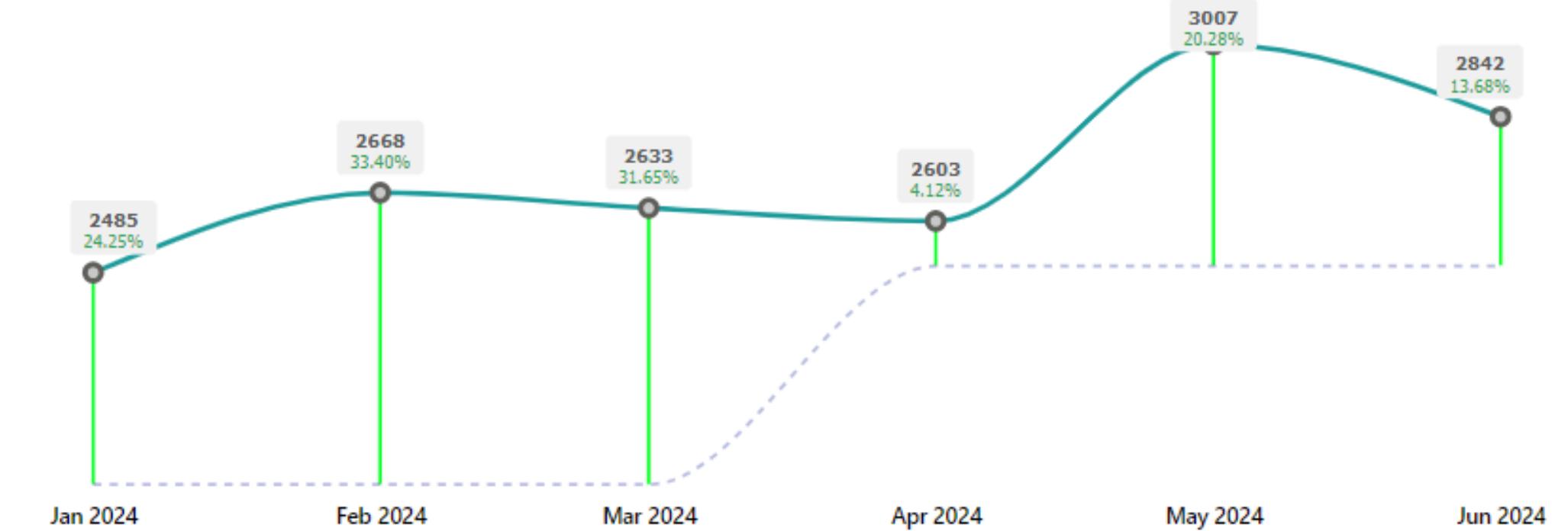
Key Insights

Jaipur and **Mysore** are the only two cities to have surpassed the Target in all 6 months.

Actual vs Target Trips over Time for Jaipur



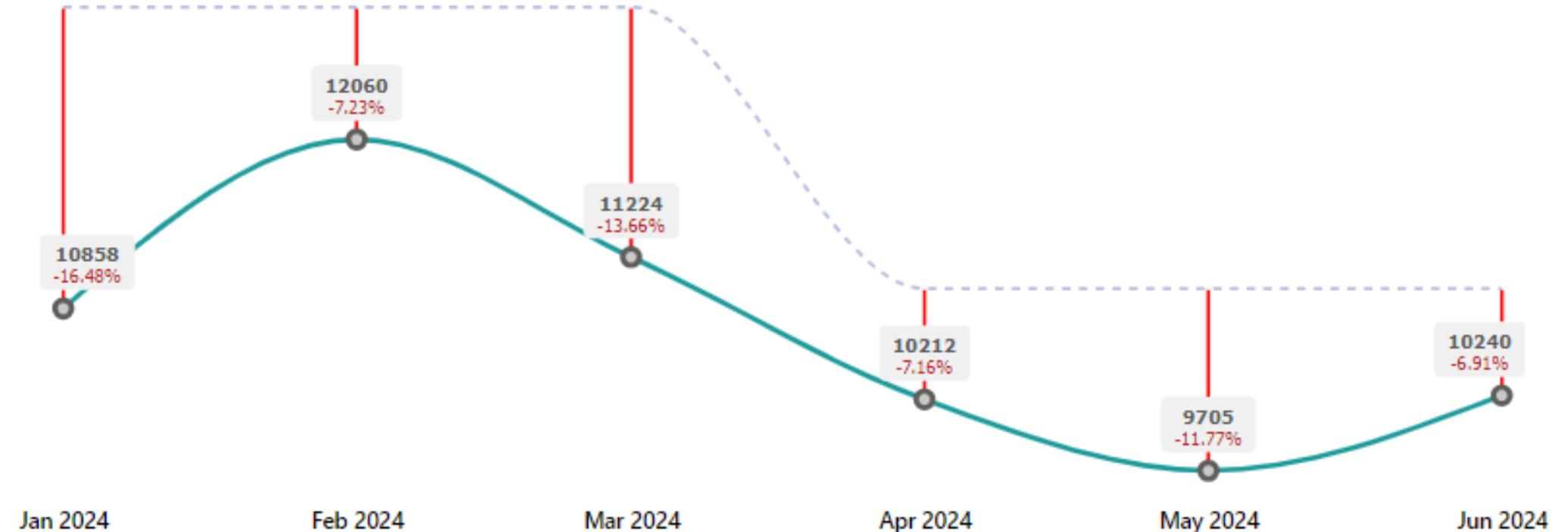
Actual vs Target Trips over Time for Mysore



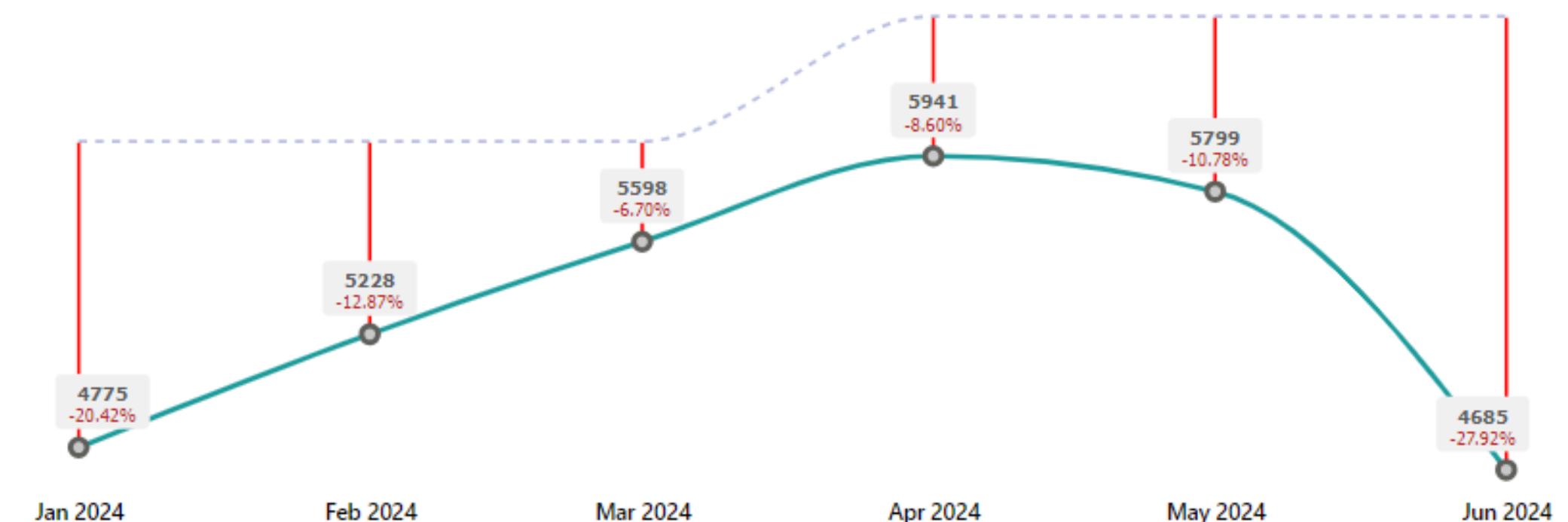
Key Insights

Lucknow and **Vadodara** are the only two cities to have remained short of the Target in all 6 months.

Actual vs Target Trips over Time for Lucknow



Actual vs Target Trips over Time for Vadodara



BUSINESS REQUEST 03 :

CITY-LEVEL REPEAT PASSENGER TRIP FREQUENCY REPORT

Query:

```

SELECT c.city_name,
       CONCAT(ROUND(SUM(CASE WHEN trip_count="2-Trips" THEN repeat_passenger_count ELSE 0 END)/SUM(repeat_passenger_count)*100,2),"") AS "2-Trips",
       CONCAT(ROUND(SUM(CASE WHEN trip_count="3-Trips" THEN repeat_passenger_count ELSE 0 END)/SUM(repeat_passenger_count)*100,2),"") AS "3-Trips",
       CONCAT(ROUND(SUM(CASE WHEN trip_count="4-Trips" THEN repeat_passenger_count ELSE 0 END)/SUM(repeat_passenger_count)*100,2),"") AS "4-Trips",
       CONCAT(ROUND(SUM(CASE WHEN trip_count="5-Trips" THEN repeat_passenger_count ELSE 0 END)/SUM(repeat_passenger_count)*100,2),"") AS "5-Trips",
       CONCAT(ROUND(SUM(CASE WHEN trip_count="6-Trips" THEN repeat_passenger_count ELSE 0 END)/SUM(repeat_passenger_count)*100,2),"") AS "6-Trips",
       CONCAT(ROUND(SUM(CASE WHEN trip_count="7-Trips" THEN repeat_passenger_count ELSE 0 END)/SUM(repeat_passenger_count)*100,2),"") AS "7-Trips",
       CONCAT(ROUND(SUM(CASE WHEN trip_count="8-Trips" THEN repeat_passenger_count ELSE 0 END)/SUM(repeat_passenger_count)*100,2),"") AS "8-Trips",
       CONCAT(ROUND(SUM(CASE WHEN trip_count="9-Trips" THEN repeat_passenger_count ELSE 0 END)/SUM(repeat_passenger_count)*100,2),"") AS "9-Trips",
       CONCAT(ROUND(SUM(CASE WHEN trip_count="10-Trips" THEN repeat_passenger_count ELSE 0 END)/SUM(repeat_passenger_count)*100,2),"") AS "10-Trips"
FROM dim_repeat_trip_distribution r
JOIN dim_city c ON c.city_id=r.city_id
GROUP BY c.city_id;
    
```

Output:

	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%	13.40%	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%

Key Insights

Visakhapatnam ,Mysore and Jaipur

exhibit higher percentages of low frequency trips i.e. less than 4 trips and shows comparatively lower percentages for high frequency trips.

Indore and **Chandigarh** showed uniform travel patterns over all frequencies.

Coimbatore ,Vadodara, Surat and **Lucknow** exhibit lower percentages of low frequency trips i.e. less than 4 trips and shows comparatively higher percentages for high frequency trips.

City	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%
Jaipur	50.14%	20.73%	12.12%	6.29%	4.13%	2.52%	1.90%	1.20%	0.97%
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%
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%
Vadodara	9.87%	14.17%	16.52%	18.06%	19.08%	12.86%	5.78%	2.05%	1.61%
Surat	9.76%	14.26%	16.55%	19.75%	18.45%	11.89%	6.24%	1.74%	1.35%
Lucknow	9.66%	14.77%	16.20%	18.42%	20.18%	11.33%	6.43%	1.91%	1.10%

BUSINESS REQUEST 04 :

IDENTIFY CITIES WITH HIGHEST AND LOWEST TOTAL NEW PASSENGERS



Query:

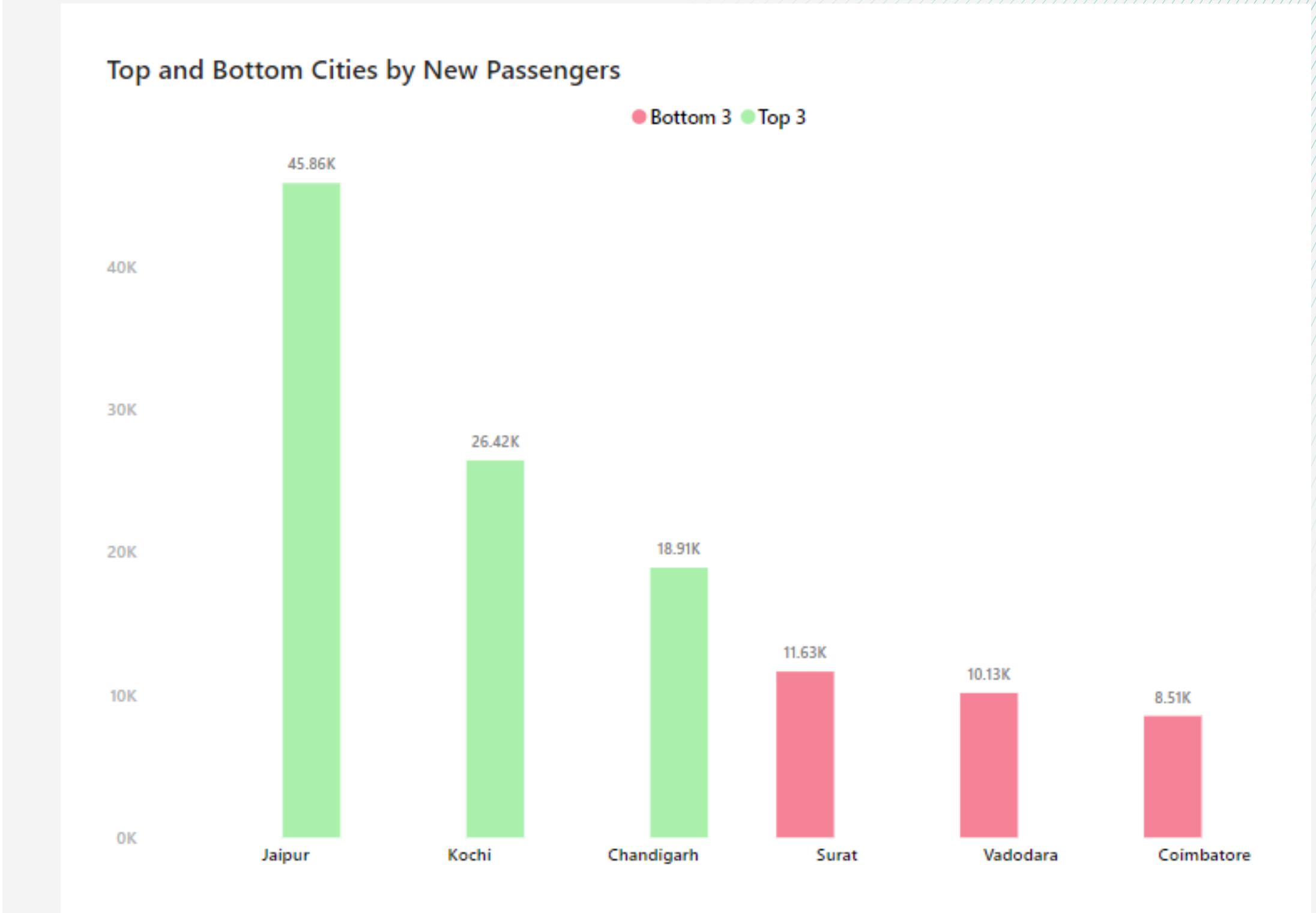
```
with cte as
(
  SELECT
    city_name,
    sum(new_passengers) as total_new_passengers
  FROM trips_db.fact_passenger_summary f
  JOIN dim_city c
  ON f.city_id=c.city_id
  GROUP BY f.city_id
)
,
cte2 as
(
  select *,dense_rank() over(order by total_new_passengers desc) as rnk from cte
)
,
cte3 as
(
  select *,dense_rank() over(order by total_new_passengers asc) as rnk from cte
)
select city_name,total_new_passengers,'Top 3' as city_category
from cte2
where rnk <=3
UNION
select city_name,total_new_passengers,'Bottom 3' as city_category
from cte3
where rnk <=3
```

Output:

	city_name	total_new_passengers	city_category
▶	Jaipur	45856	Top 3
	Kochi	26416	Top 3
	Chandigarh	18908	Top 3
	Coimbatore	8514	Bottom 3
	Vadodara	10127	Bottom 3
	Surat	11626	Bottom 3

Key Insights

- **Jaipur ,Kochi and Chandigarh** are the cities with highest new passenger count.
- **Surat, Vadodara and Coimbatore** are the top 3 cities with new passenger count.



IDENTIFY CITIES WITH HIGHEST AND LOWEST TOTAL NEW PASSENGERS

BUSINESS REQUEST 05 :

IDENTIFY MONTH WITH HIGHEST REVENUE FOR EACH CITY

Query:

```
with cte as(
  SELECT
    t.city_id,
    city_name,
    monthname(date) as month,
    sum(fare_amount) as Revenue,
    dense_rank() over(partition by city_name order by sum(fare_amount) desc) as rnk
  FROM trips_db.fact_trips t
  JOIN dim_city c
  ON t.city_id=c.city_id
  GROUP BY city_id,monthname(date)
),cte2 as (
  select *,revenue/sum(revenue) over (partition by city_name)*100 as contribution
  from cte )
select city_name,month,revenue,concat(round(contribution,2),' %') as contribution_to_revenue
from cte2
where rnk =1
```

Output:

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



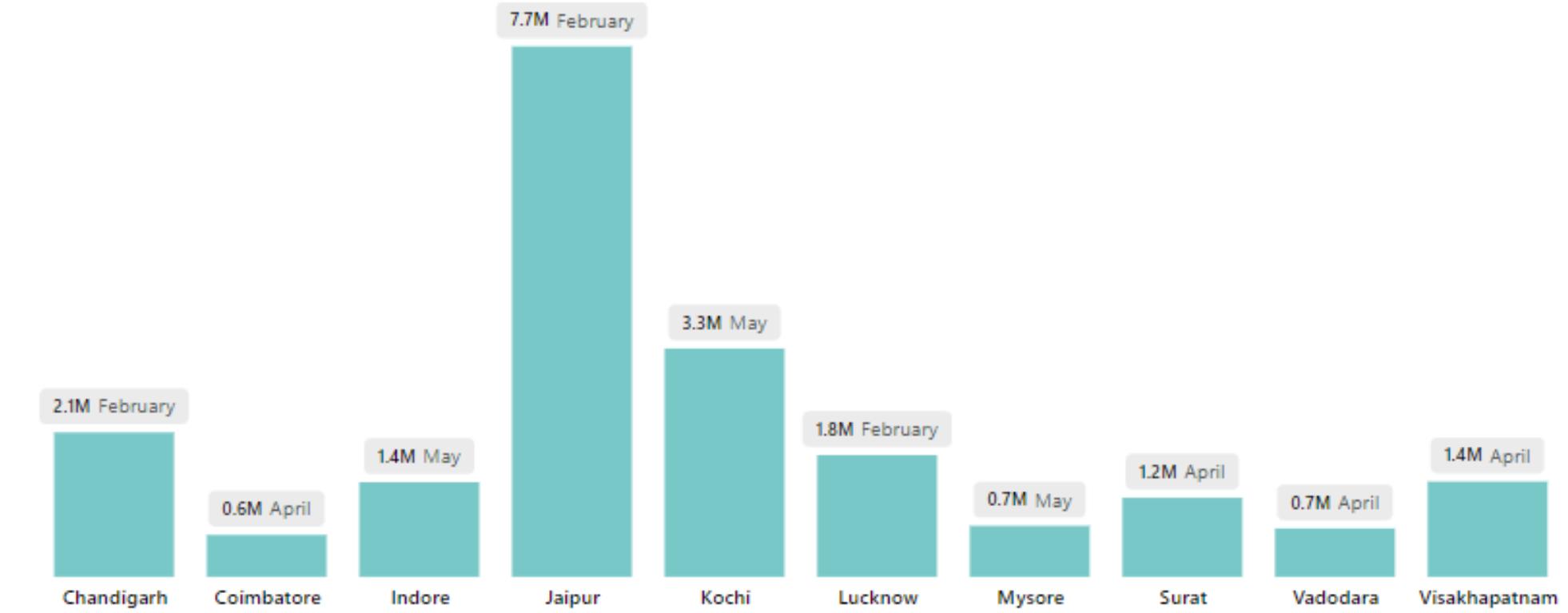
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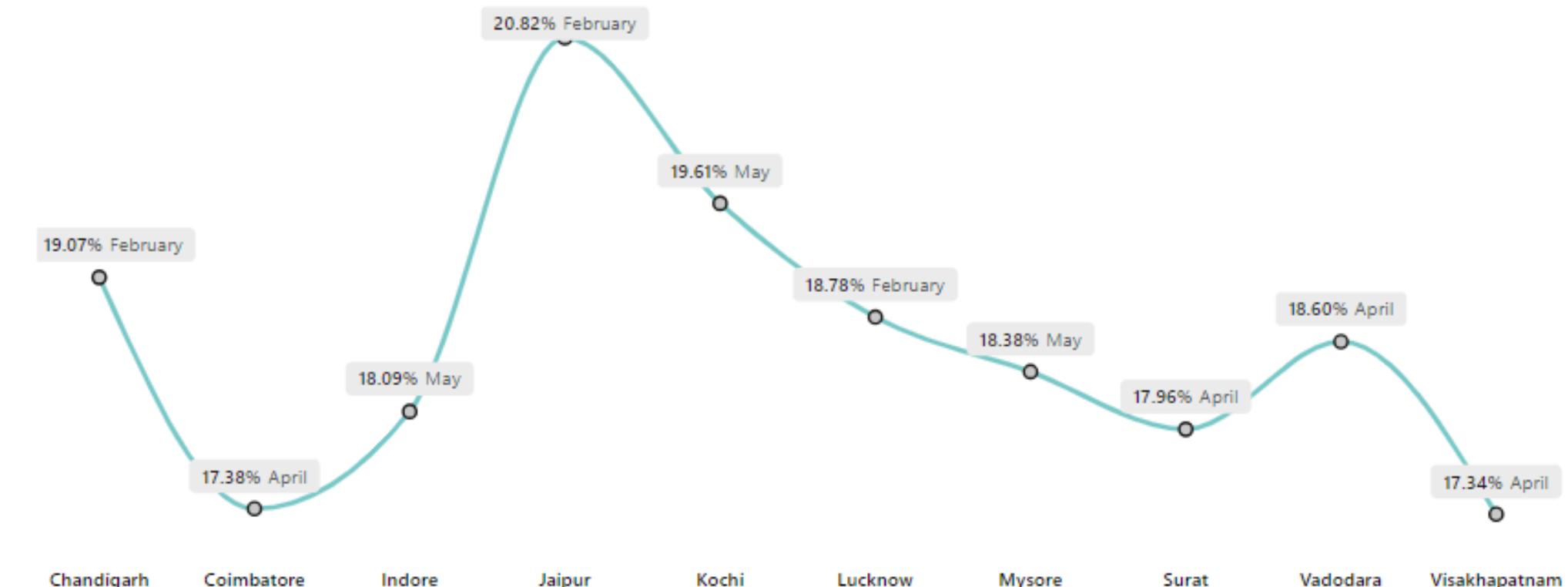
Key Insights

- 4 cities achieved peak sales in the month of **April**.
- 3 cities achieved peak sales in the month of May and February.

Highest Revenue Month by City



Contribution of Highest Revenue Month by City





BUSINESS REQUEST 06 : REPEAT PASSENGER RATE ANALYSIS

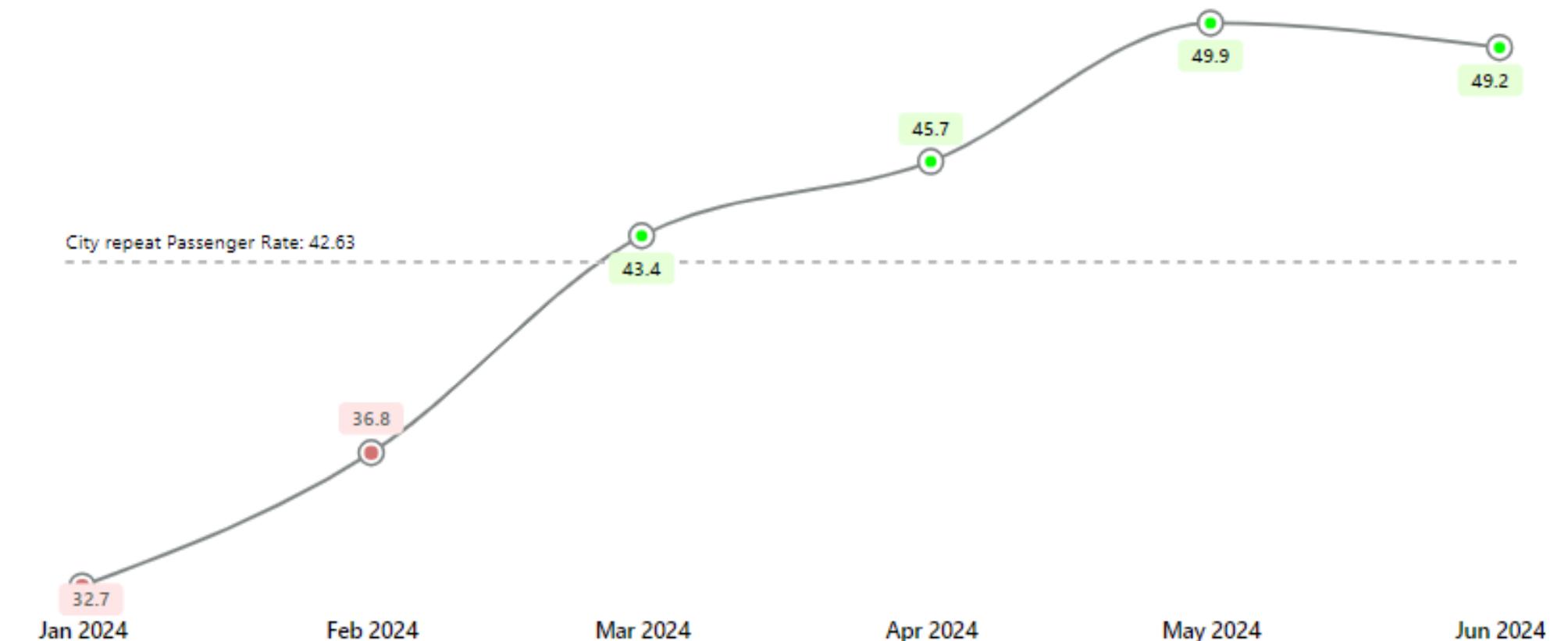
Key Insights

- **Surat** has the highest repeat passenger rate among all the cities.

Monthly repeat Passenger VS Total passenger for Surat



Monthly passenger rate VS City Repeat passenger rate over Time for Surat



IDENTIFY MONTH WITH HIGHEST REVENUE FOR EACH CITY

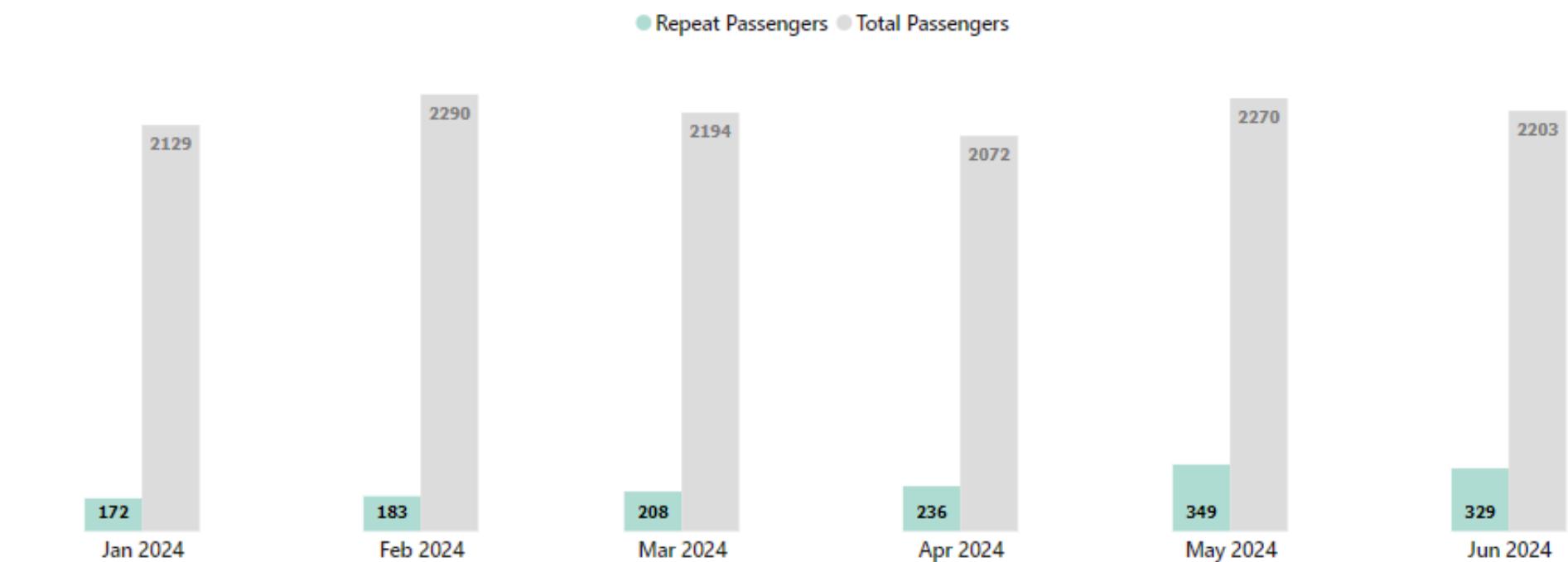
Key Insights

- **Mysore** has the lowest repeat passenger rate among all the cities.

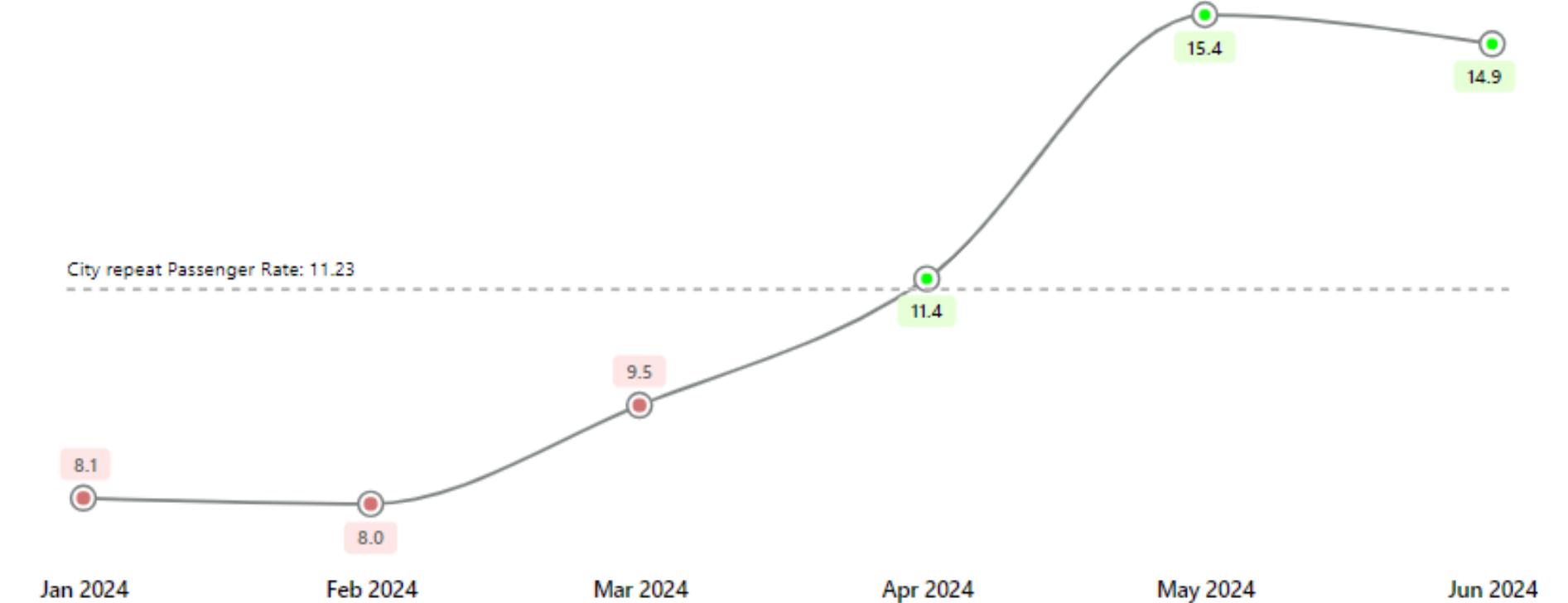
Observation :

- Almost all cities seem to show increase in repeat passenger rate in march,april and may.
- Some cities have shown a decline in repeat passenger in june..

Monthly repeat Passenger VS Total passenger for Mysore



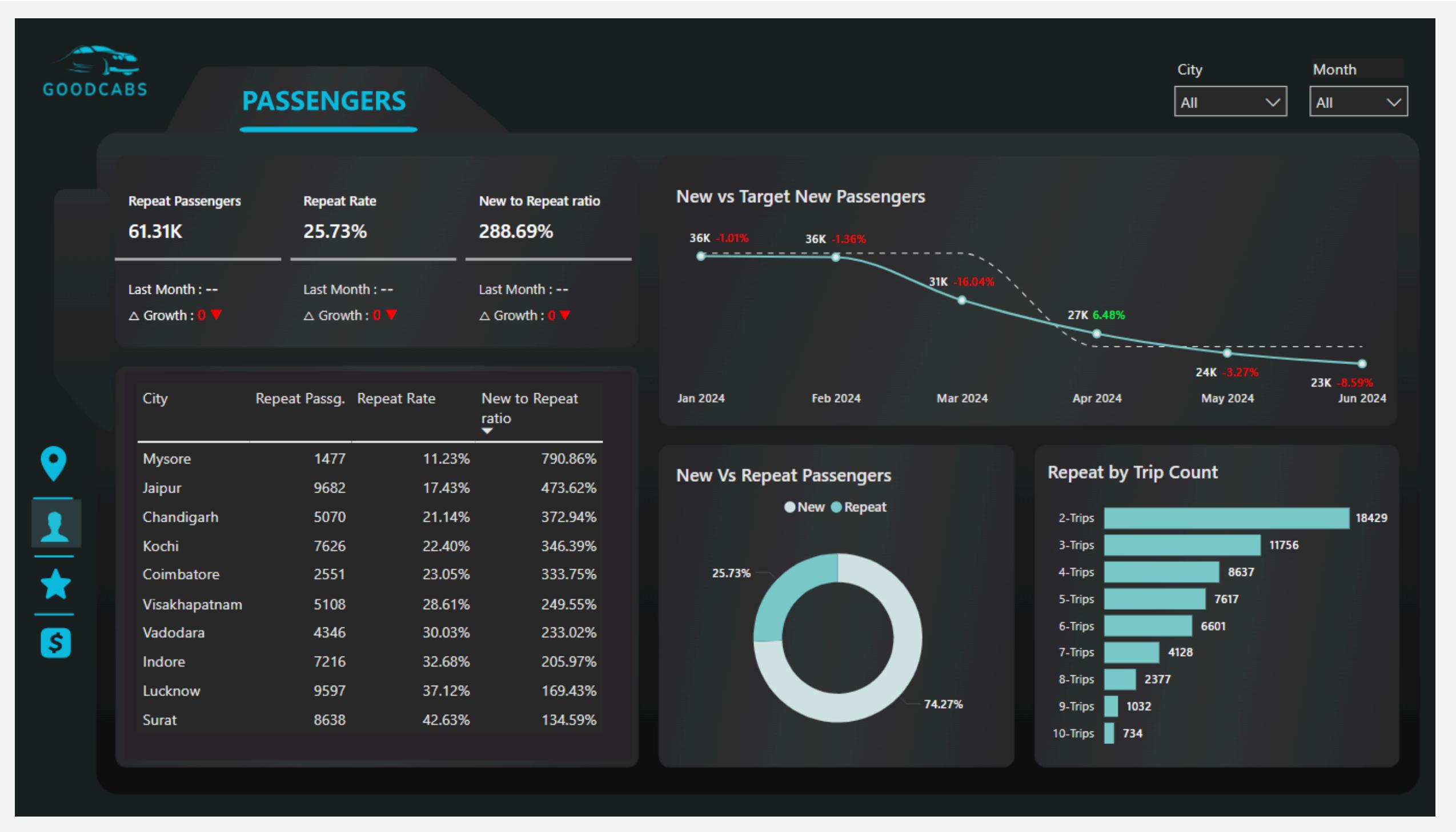
Monthly passenger rate VS City Repeat passenger rate over Time for Mysore



IDENTIFY MONTH WITH HIGHEST REVENUE FOR EACH CITY



Introduction to the Dashboard





Primary and Secondary Questions

TOP AND BOTTOM PERFORMING CITIES

- **Jaipur ,Lucknow** and **Surat** have the highest contribution to **45.01%** of total trip count.
- **Coimbatore, Vishakapatnam** and **Mysore** have the highest contribution of only **15.43%** of total trip count.



Primary and Secondary Questions

AVERAGE FARE PER TRIP BY CITY

- **Jaipur** and **Kochi** have the highest Average Fare/Trip of Rs **483.92** and Rs **335.25** respectively.
- **Surat** and **Vadodara** have the lowest Average Fare/Trip of Rs **117.27** and Rs **118.57** respectively.



Primary and Secondary Questions

AVERAGE RATING PER CITY

- Both Repeat and New passengers ,the Average Passengers and driver rating of **Vishakapatnam,Mysore,Jaipur** and **Kochi** was highest.
- Both Repeat and New passengers ,the Average Passengers and driver rating of **Lucknow, Surat** and **Vadodara** was Lowest.



Primary Questions

PEAK AND LOW DEMAND MONTHS

- **January** and **Jun** were lower Demand months.
- **February** and **March** were the High Demand months.



Primary Questions

WEEKDAYS VS WEEKEND COMPARISION

- **Surat,Lucknow and Vadodara** have more trip volume on Weekdays averaging **71.26 %** .
- **Mysore and Jaipur** have more trip volume on weekend averaging **58.21 %**.

Primary Questions

REPEAT PASSENGER FREQUENCY AND CITY CONTRIBUTION ANALYSIS

- **Visakhapatnam ,Mysore and Jaipur** exhibit higher percentages of low frequency trips i.e. less than 4 trips and shows comparatively lower percentages for high frequency trips.
- **Indore and Chandigarh** showed uniform travel patterns over all frequencies.
- **Coimbatore ,Vadodara, Surat and Lucknow** exhibit lower percentages of low frequency trips i.e. less than 4 trips and shows comparatively higher percentages for high frequency trips.



Primary Questions

MONTHLY TARGET ACHIEVEMENT FOR CITIES

- **Jaipur** and **Mysore** are the only two cities to have surpassed the Target in all 6 months.
- **Lucknow** and **Vadodara** are the only two cities to have remained short of the Target in all 6 months.



Primary Questions

HIGHEST AND LOWEST REPEAT PASSENGER RATE BY CITY

- **Surat** has the highest repeat passenger rate among all the cities.
- **Mysore** has the lowest repeat passenger rate among all the cities.

Secondary Questions

FACTORS INFLUENCING REPEAT PASSENGER RATE

- **Service Quality :** Passengers value clean, well-maintained vehicles and professional, courteous drivers who ensure a safe and comfortable ride.
- **Pricing and Promotions :** Competitive fares, transparent pricing, and incentives like discounts, loyalty programs, or special offers encourage customers to return.
- **Reliability and Availability :** Quick response times, on-time pickups, and ride availability during peak hours or in less-served areas build trust and repeat usage.
- **Customer Experience :** A seamless booking process, multiple payment options, and responsive customer support enhance satisfaction and loyalty.
- **Safety and Security :** Features like GPS tracking, emergency buttons, and adherence to health and safety protocols provide passengers with peace of mind.
- **Technology and Personalization :** Advanced app features, such as real-time tracking, ride-sharing options, and tailored offers, make the service more appealing and user-friendly.



Secondary Questions

FACTORS INFLUENCING REPEAT PASSENGER RATE

- **Tourism Demand**
 - **High Cab Usage:** Tourists often rely on cabs for airport transfers, sightseeing, and transportation to hotels or attractions, especially in unfamiliar cities.
 - **Seasonal Trends:** Tourist-heavy seasons lead to a surge in demand, influencing revenue and operational focus.
 - **Convenience Factor:** Tourists prefer cabs for their ease of booking and flexibility compared to navigating public transit.
- **Business Demand**
 - **Frequent Rides:** Business travelers often use cabs for meetings, conferences, and commuting between offices or hotels.
 - **Peak Time Demand:** High usage during weekdays and peak hours correlates with corporate schedules.
 - **Loyalty Opportunities:** Offering corporate accounts or subscriptions can secure repeat business from organizations.



Secondary Questions

EMERGING MOBILITY TRENDS AND GOODCABS ADAPTATION

- **Electric Vehicles (EVs)**
 - **Trend:** Shift toward sustainable, zero-emission transportation.
 - **Adaptation:** Introduce EVs into the fleet, emphasizing eco-friendly rides. Partner with EV manufacturers or leasing firms to reduce costs.
- **Ride-Sharing and Pooling**
 - **Trend:** Growing demand for cost-effective and eco-conscious shared rides.
 - **Adaptation:** Launch ride-sharing options, allowing passengers to split fares. Highlight reduced carbon footprints to attract eco-conscious customers.
- **Flexible Payment and Subscription Models**
 - **Trend:** Move toward subscription-based models and digital wallets.
 - **Adaptation:** Introduce subscription plans (e.g., monthly unlimited rides) and integrate multiple payment options, including digital wallets and cryptocurrencies.



Secondary Questions

PARTNERSHIP OPPURTUNITY WITH LOCAL BUSINESSES

- **Hotels & Hospitality:** Provide transportation services for guests with airport pickups and local travel.
- **Restaurants & Nightlife:** Offer safe rides for patrons, especially during late-night hours.
- **Corporate Partnerships:** Provide discounted rides and subscriptions for employee commutes.
- **Event Management:** Offer transportation solutions for conferences, weddings, and events.
- **Tourism & Travel Agencies:** Partner to offer sightseeing packages and transport for tourists.
- **Retail & Malls:** Provide ride discounts and branded pickup points at shopping centers.
- **Healthcare Facilities:** Partner for non-emergency medical transport and patient discounts.



Secondary Questions

DATA COLLECTION FOR ENHANCED DATA DRIVEN DECISIONS

- **Ride Data**
 - **Type :** Ride duration, pickup and drop-off locations, time of day and payment methods.
 - **Why:** Helps analyze peak hours, most popular routes, and revenue per ride, and optimize pricing strategies.
- **Customer Data**
 - **Type :** Customer demographics (age, gender, location), ride preferences .
 - **Why:** Enables personalized marketing, better service offerings, and loyalty program optimization.
- **Customer Data**
 - **Type :** Ride completion rates, working hours, and vehicle maintenance data.
 - **Why:** Enables personalized marketing, better service offerings, and loyalty program optimization.



Thank You

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