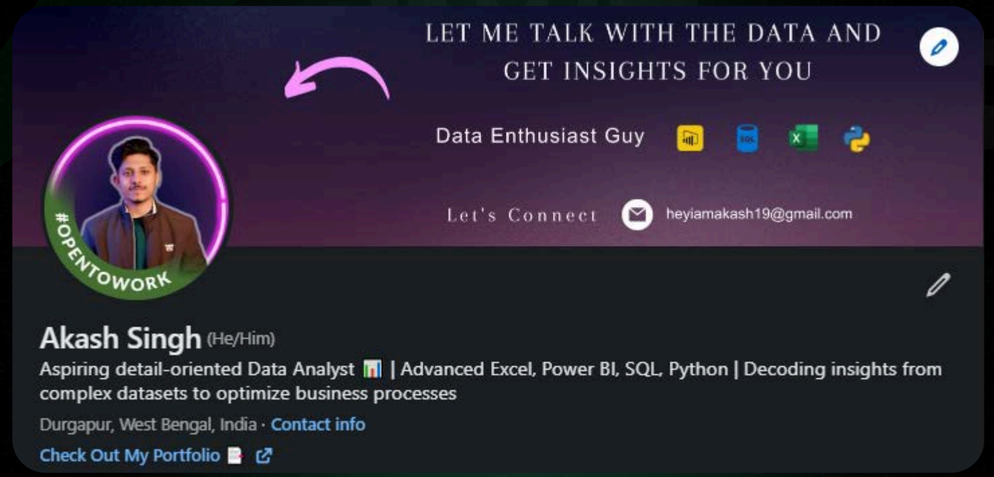
AtliQ Motors

A detailed market analysis of EV/Hybrid market in India

PRESENTED BY - **AKASH SINGH**



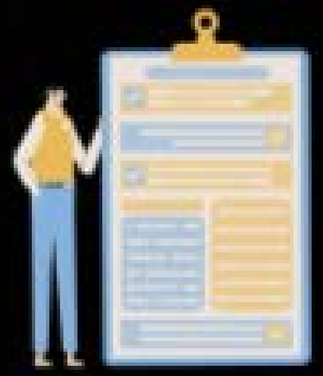
WORK FLOW

Problem Statement

Let’s First understand what is the main objective of this whole project or analysis

Dashboard

Let’s see the analytical dashboard to grab the insights



Questions and Answers

Let’s see some business questions for a detailed analysis

PROBLEM STATEMENT

AtliQ Motors is an automotive giant in the USA that specializes in electric vehicles (EVs). In the last 5 years, their market share rose to 25% in the electric and hybrid vehicles segment in North America.

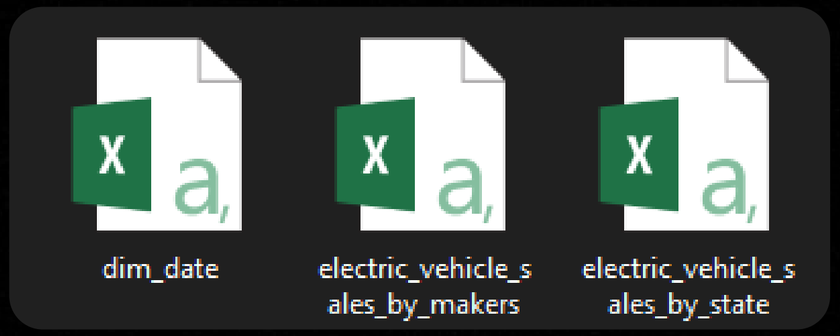
As a part of their expansion plans, they wanted to launch their bestselling models in India where their market share is less than 2%.

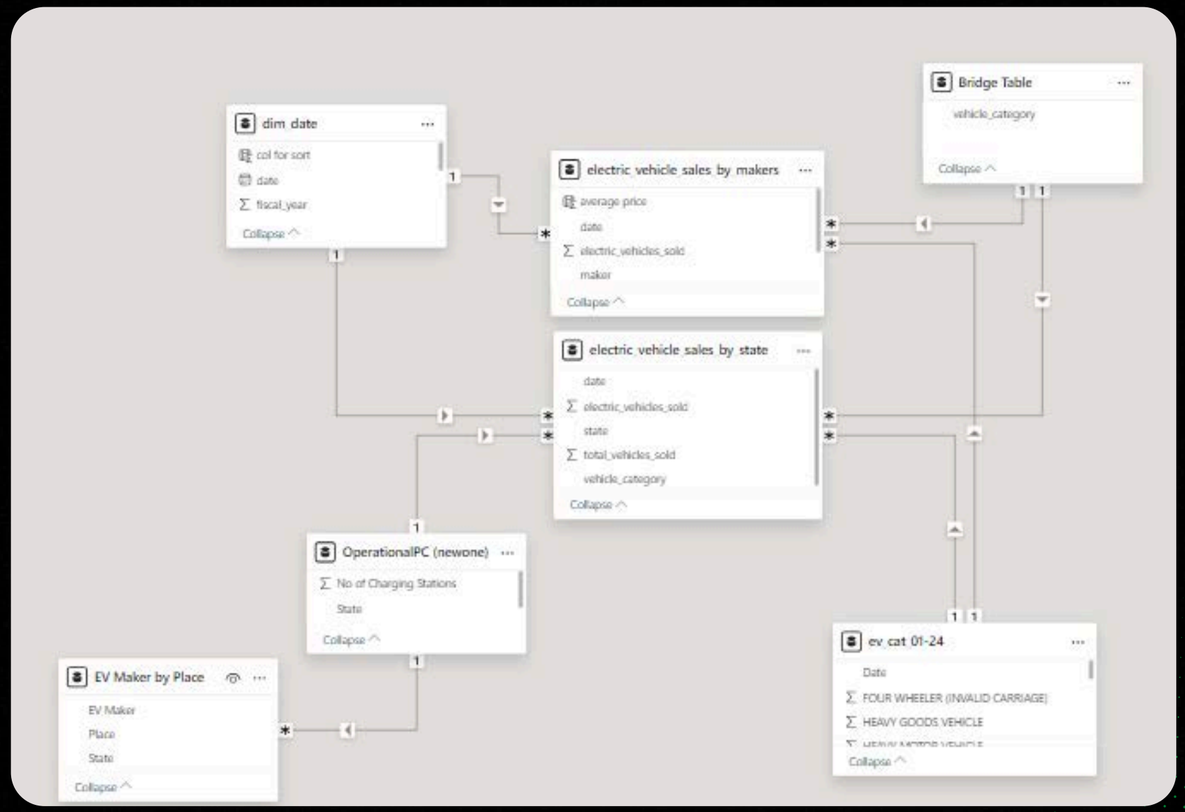
Bruce Haryali, the chief of AtliQ Motors India wanted to do a detailed market study of the existing EV/Hybrid market in India before proceeding further.

DATASETS AND DATA MODEL

I am Provided with 1 Dim table and 2 Fact Tables

- Dim_date
- EV_Sales_by_makers
- EV_Sales_by_States





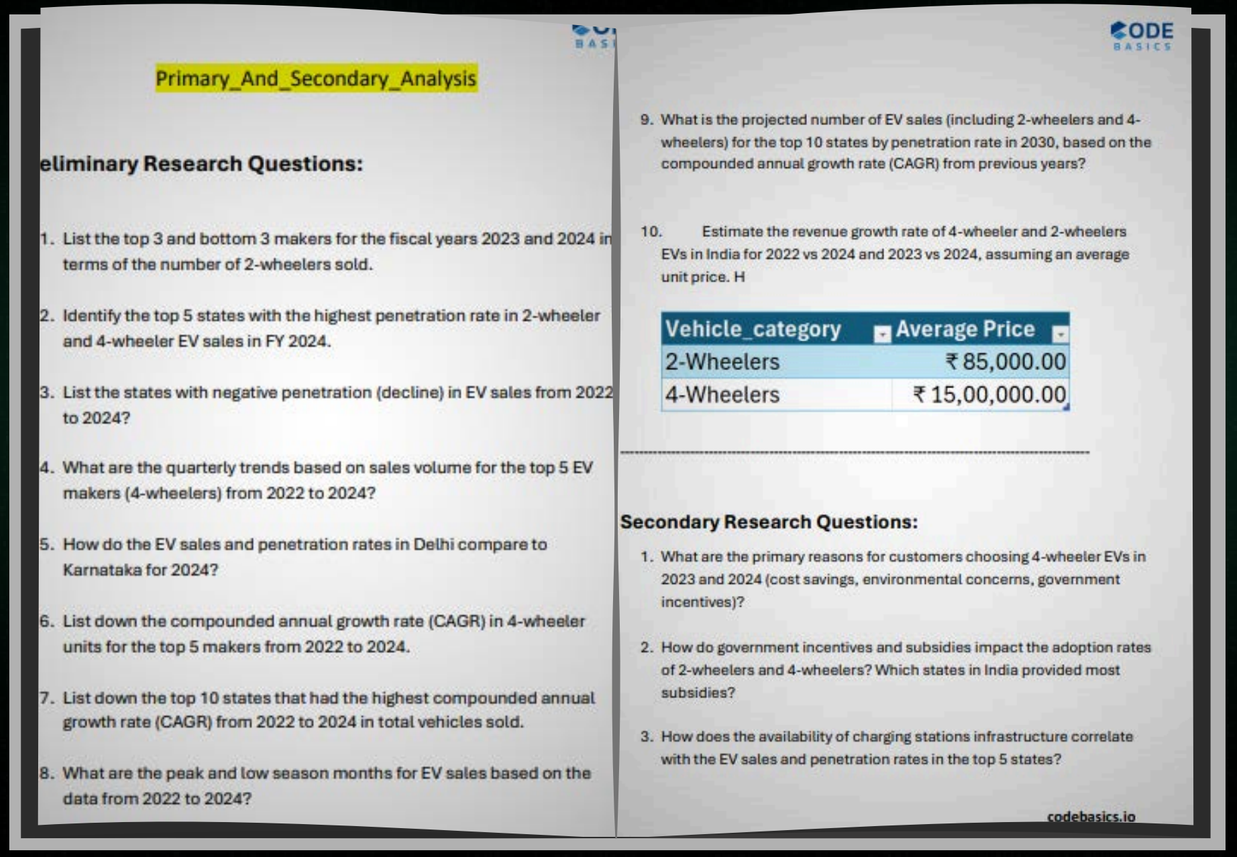
We have the data for 3 fiscal years (2022-2023) and the dataset is taken from the Vahan Sewa

LET’S HAVE A TOUR OF THE DASHBOAD

View Dashboard

LET'S SEE THE BUSINESS QUESTIONS

There are some Primary and Secondary questions that I have to answer for a detailed market analysis. Let's see those one by one



Primary_And_Secondary_Analysis

eliminary Research Questions:

1. List the top 3 and bottom 3 makers for the fiscal years 2023 and 2024 in terms of the number of 2-wheelers sold.
2. Identify the top 5 states with the highest penetration rate in 2-wheeler and 4-wheeler EV sales in FY 2024.
3. List the states with negative penetration (decline) in EV sales from 2022 to 2024?
4. What are the quarterly trends based on sales volume for the top 5 EV makers (4-wheelers) from 2022 to 2024?
5. How do the EV sales and penetration rates in Delhi compare to Karnataka for 2024?
6. List down the compounded annual growth rate (CAGR) in 4-wheeler units for the top 5 makers from 2022 to 2024.
7. List down the top 10 states that had the highest compounded annual growth rate (CAGR) from 2022 to 2024 in total vehicles sold.
8. What are the peak and low season months for EV sales based on the data from 2022 to 2024?
9. What is the projected number of EV sales (including 2-wheelers and 4-wheelers) for the top 10 states by penetration rate in 2030, based on the compounded annual growth rate (CAGR) from previous years?
10. Estimate the revenue growth rate of 4-wheeler and 2-wheelers EVs in India for 2022 vs 2024 and 2023 vs 2024, assuming an average unit price. H

Vehicle_category	Average Price
2-Wheelers	₹ 85,000.00
4-Wheelers	₹ 15,00,000.00

Secondary Research Questions:

1. What are the primary reasons for customers choosing 4-wheeler EVs in 2023 and 2024 (cost savings, environmental concerns, government incentives)?
2. How do government incentives and subsidies impact the adoption rates of 2-wheelers and 4-wheelers? Which states in India provided most subsidies?
3. How does the availability of charging stations infrastructure correlate with the EV sales and penetration rates in the top 5 states?

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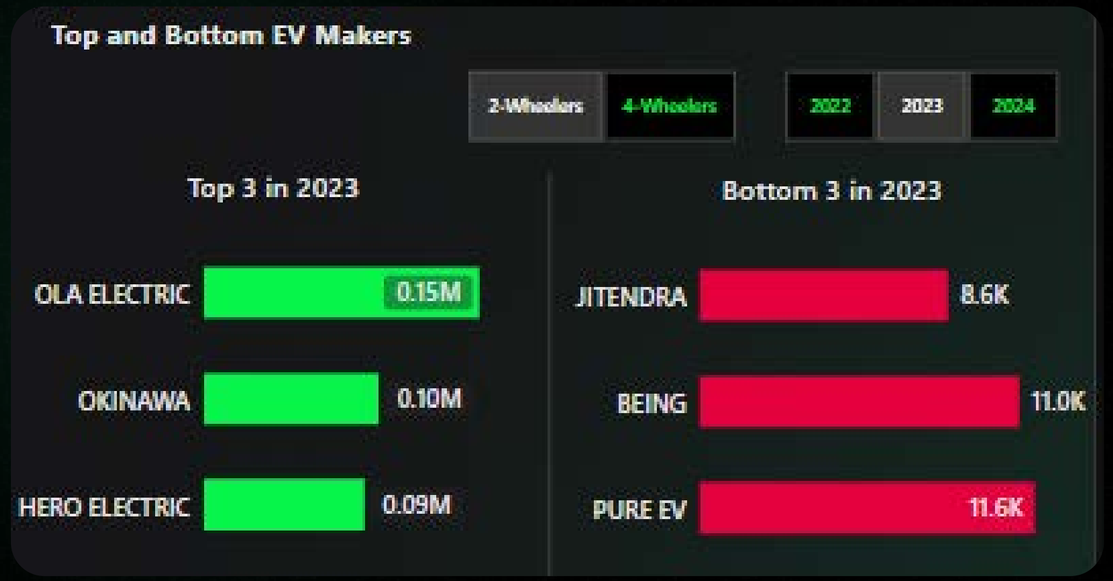
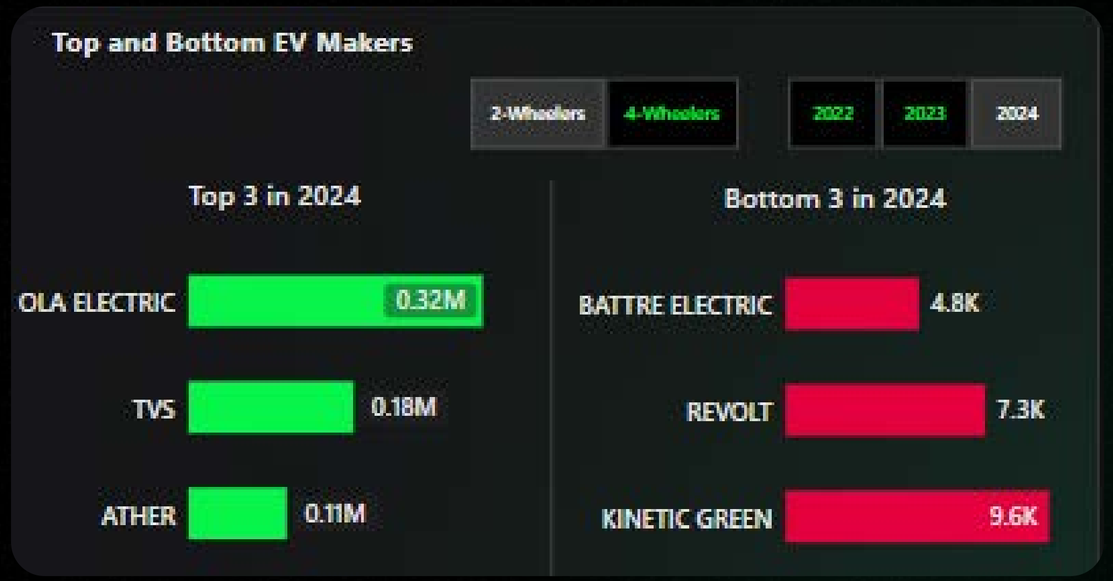
1. List the top 3 and bottom 3 makers for the fiscal years 2023 and 2024 in terms of the number of 2-wheelers sold.



2023

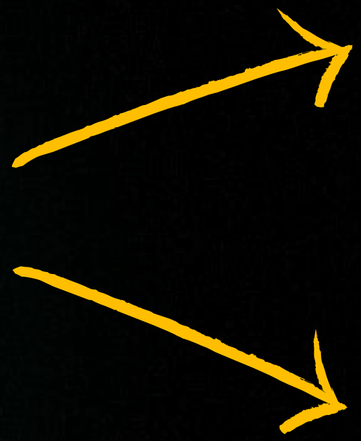


2024

2. Identify the top 5 states with the highest penetration rate in 2-wheeler and 4-wheeler EV sales in FY 2024.

Top 10 States by PR

State	2-Wheelers	4-Wheelers
Goa	17.99%	4.25%
Kerala	13.52%	5.76%
Karnataka	11.57%	4.26%
Maharashtra	10.07%	2.96%
Delhi	9.40%	4.29%
Chandigarh	8.25%	4.50%
Odisha	6.89%	2.08%
Chhattisgarh	6.05%	2.42%
Tamil Nadu	6.04%	2.57%
Pondicherry	6.48%	0.96%



For 2 Wheelers Top 5 States -

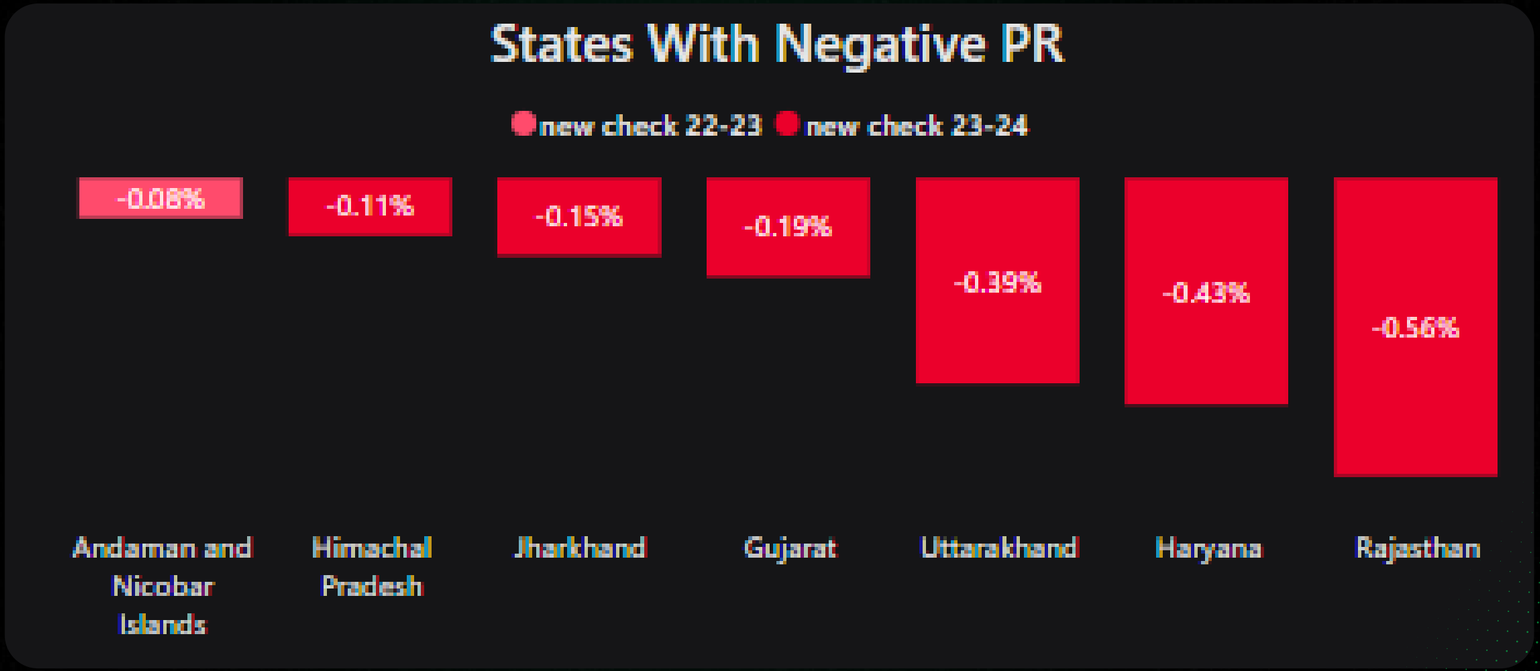
Goa
Kerala
Karnataka
Maharashtra
Delhi

For 4 Wheelers Top 5 States -

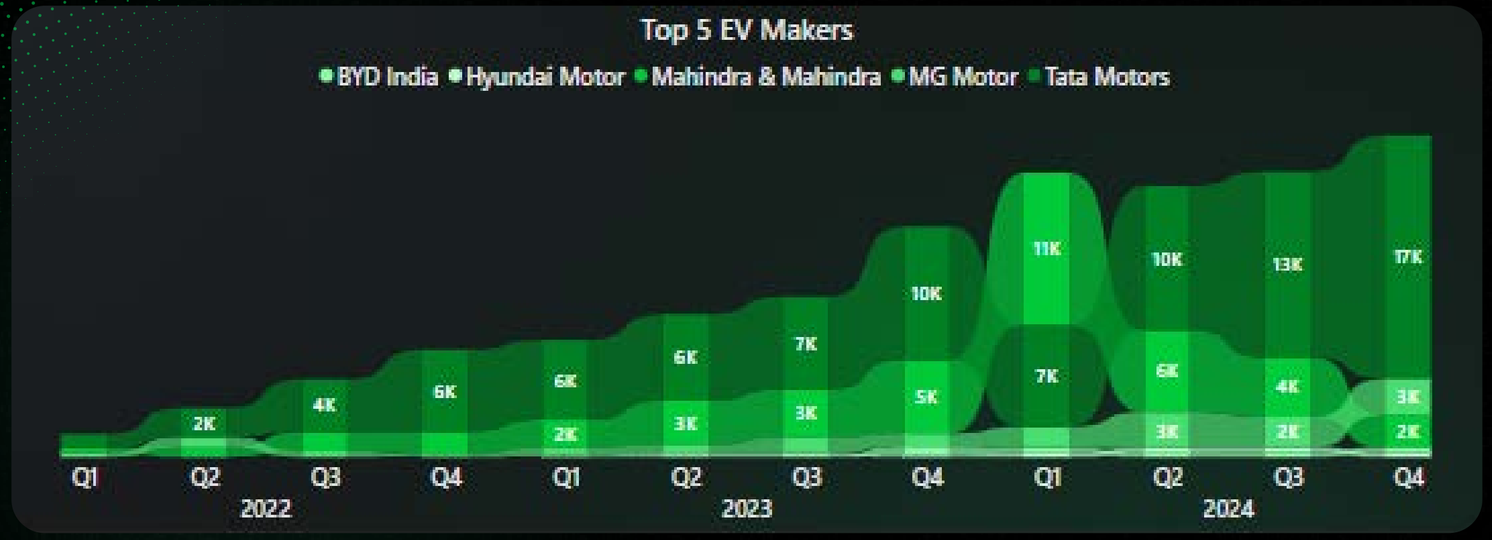
Kerala
Chandigarh
Delhi
Karnataka
Goa

3. List the states with negative penetration (decline) in EV sales from 2022 to 2024.

- Andaman and Nicobar
- Himachal Pradesh
- Jharkhand
- Gujarat
- Uttarakhand
- Haryana
- Rajasthan

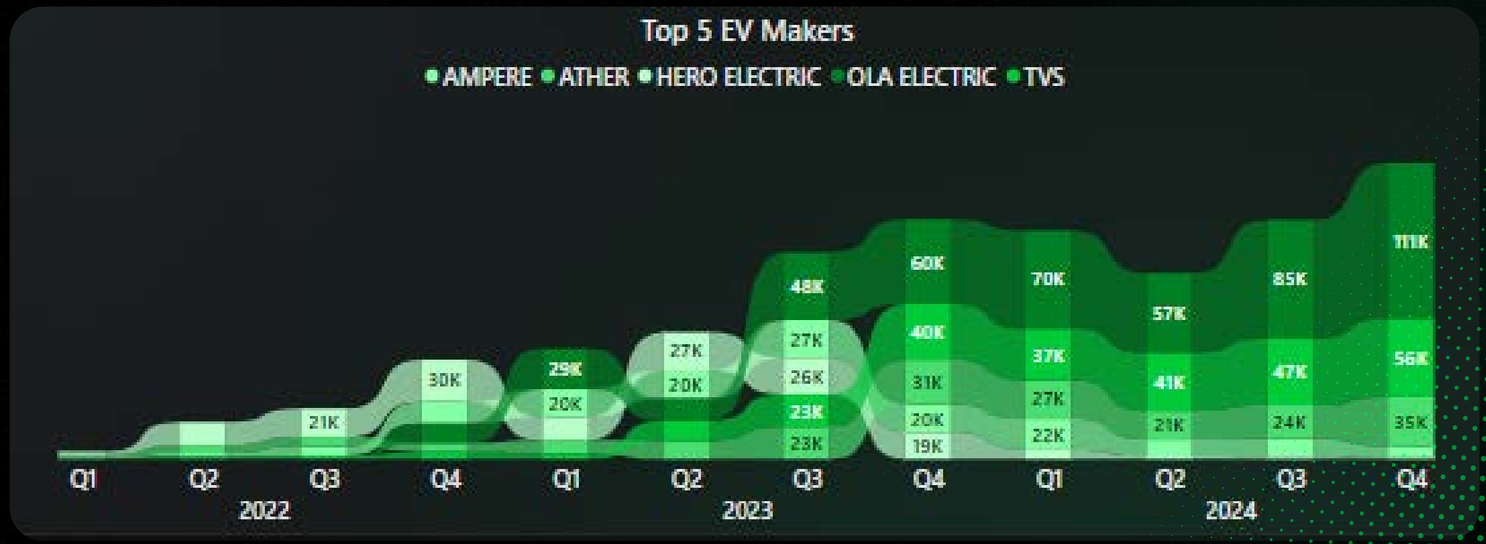


4. What are the quarterly trends based on sales volume for the top 5 EV makers (4-wheelers) from 2022 to 2024?



In the 4 wheeler category Tata Motors and Mahindra dominated the market from 202-2323, while in 2024, MG Motor showed good growth (at 2nd position)

In the 2-wheeler category, Ola Electric (1st position) and TVS (2nd position) dominated the market from 2023, whereas Ather in 2024 showed good growth (at 3rd position)



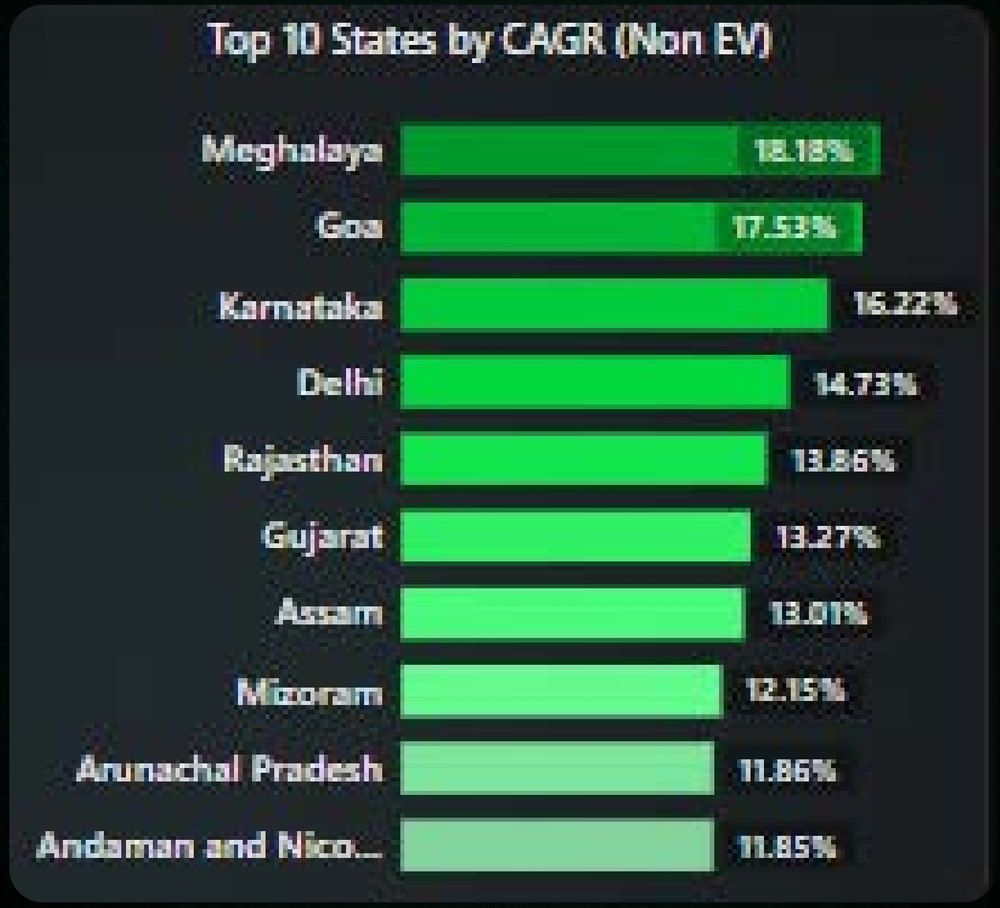
5. How do the EV sales and penetration rates in Delhi compare to Karnataka for 2024?

EV Sales and Penetration Rate in both the cases Karnataka performed better than Delhi for 2024

6. List down the compounded annual growth rate (CAGR) in 4-wheeler units for the top 5 makers from 2022 to 2024.

- BMW India (436.01%)
- Volvo Auto India (385.94%)
- BYD India (254.17%)
- Hyundai Motor (132.92%)
- Mercedes- Benz AG (123.69%)

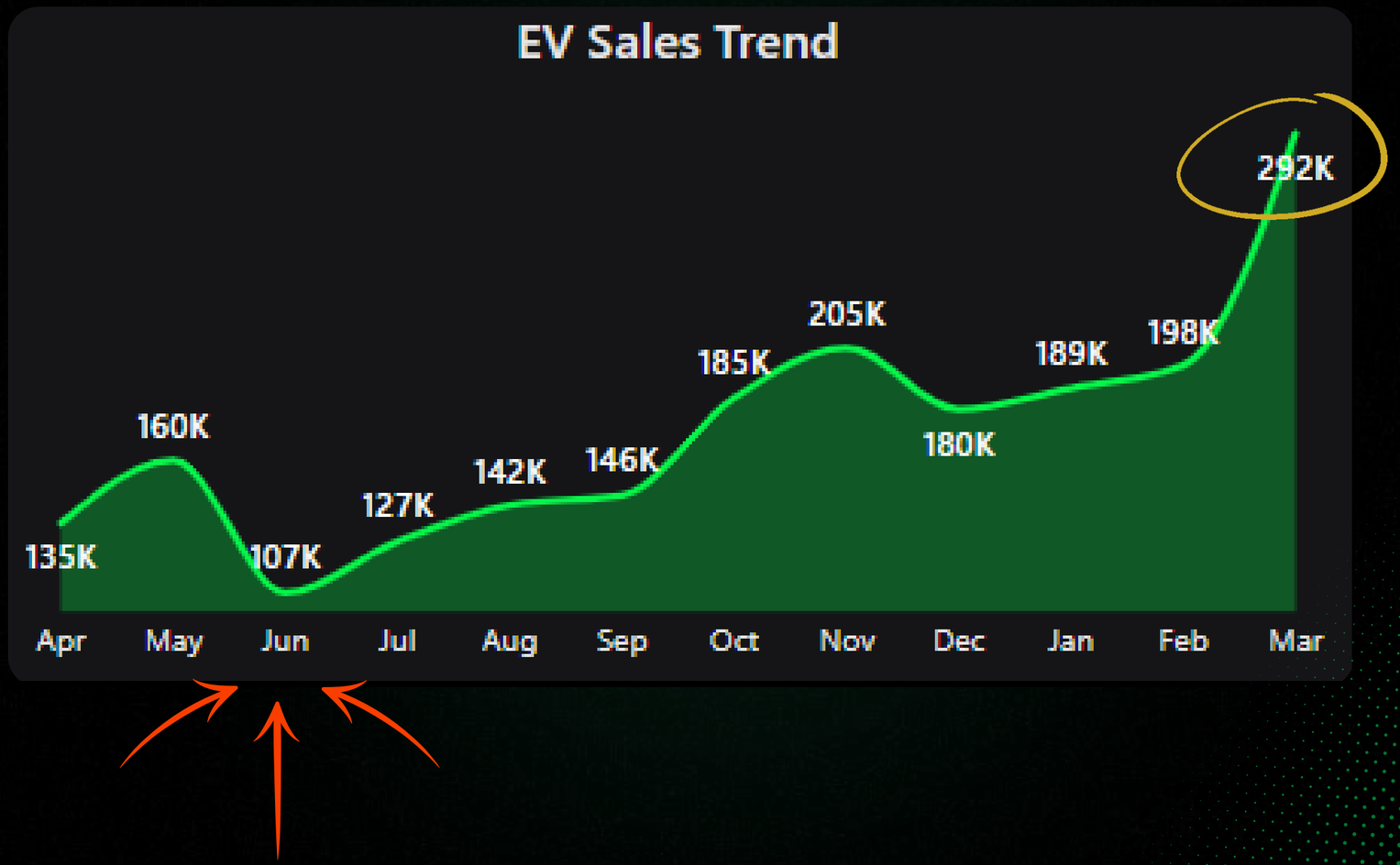
7. List down the top 10 states that had the highest compounded annual growth rate (CAGR) from 2022 to 2024 in total vehicles sold.



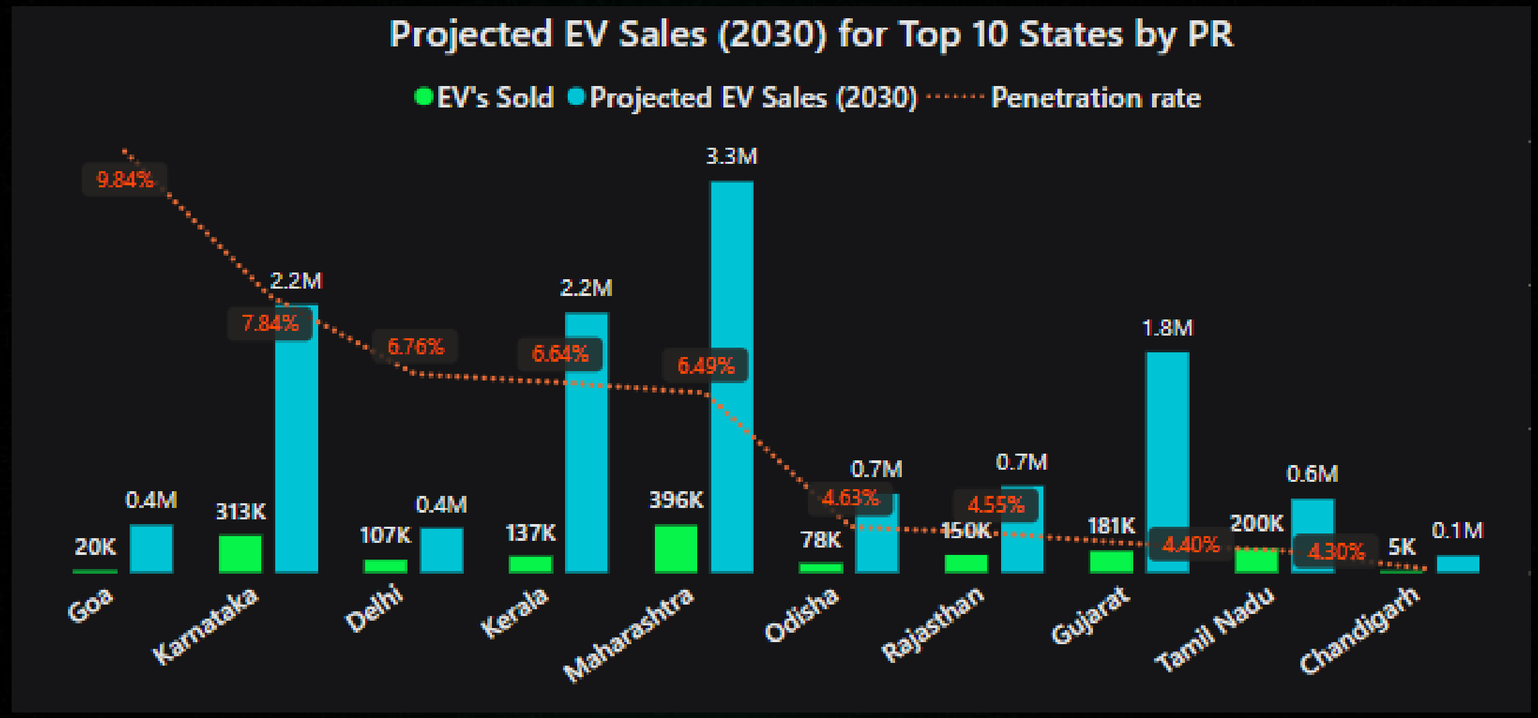
8. What are the peak and low season months for EV sales based on the data from 2022 to 2024?

On June there was a drop in sales because govt made some changes in the FAME II Scheme On June 2023

On March Month there is a significant increase in sales. The reason could be the budget and FAME-II scheme expiry.



9. What is the projected number of EV sales (including 2-wheelers and 4- wheelers) for the top 10 states by penetration rate in 2030, based on the compounded annual growth rate (CAGR) from previous years?



Projected EV sales higher for Maharashtra (3.3M) followed by Karnataka (2.2M) and Kerala (2.2M)

10. Estimate the revenue growth rate of 4-wheeler and 2-wheelers EVs in India for 2022 vs 2024 and 2023 vs 2024, assuming an average unit price for 2 Wheelers - 85000 and 4 wheelers - 1500000

2 Wheelers

21.47bn	61.87bn	79.28bn
Total Revenue 2022 2W	Total Revenue 2023 2W	Total Revenue 2024 2W

269.28%	28.13%
Growth Rate 2022-2024 2W	Growth Rate 2023-2024 2W

4 Wheelers

27.87bn	71.20bn	130.35bn
Total Revenue 2022 4W	Total Revenue 2023 4W	Total Revenue 2024 4W

367.79%	83.08%
Growth Rate 2022-2024 4W	Growth Rate 2023-2024 4W

SECONDARY QUESTIONS

1. **What are the primary reasons for customers choosing 4-wheeler EVs in 2023 and 2024 (cost savings, environmental concerns, government incentives)?**

Why EV?

Environmental Benefits: Limited fossil fuel availability and harmful emissions from petrol/diesel vehicles damage our planet and public health. Electric vehicles (EVs) have significantly lower emissions.

Lower Running Costs: EVs are cheaper to run, using electricity instead of costly fossil fuels. Their efficiency and lower energy costs make charging more affordable than refueling with petrol or diesel.

Low Maintenance: EVs require less maintenance due to fewer moving parts, resulting in lower servicing needs compared to traditional vehicles.

Why 4 Wheeler

Government Incentives: The government’s FAME scheme and additional incentives, including tax benefits, make 4-wheeler EVs more affordable and encourage wider adoption.

Corporate and Fleet Adoption: India's growing EV market presents a golden opportunity for corporate fleets. By adopting EVs, fleets can contribute to a cleaner environment, reduce operating costs, and enhance their brand image.

Versatility: 4-wheelers offer more space, comfort, and functionality, ideal for families, long trips, and carrying cargo.

Range and Performance: Modern 4-wheeler EVs have larger batteries and advanced tech, providing superior range and performance compared to smaller EVs.

Safety: Equipped with features like airbags, ADAS, and stability control, 4-wheeler EVs offer enhanced protection.

2. How do government incentives and subsidies impact the adoption rates of 2-wheelers and 4-wheelers? Which states in India provided the most subsidies?

The Faster Adoption and Manufacturing of Electric Vehicles (FAME) scheme promotes the use of electric and hybrid vehicles in India, aiming to reduce air pollution, lower dependence on fossil fuels, and support sustainable transportation.

FAME was first introduced in April 2015, with Phase II launched in April 2019. The government has extended the FAME 2 subsidy until 31st March 2024.

Benefits--
Purchase Incentives, Coupons, Interest Subventions, Road tax exemption, Registration fee exemption,
Income tax benefit, Scrapping incentives

National Electric Mobility Mission Plan (NEMMP)

Launched in 2013, the National Electric Mobility Mission Plan (NEMMP) is a strategic initiative to promote electric and hybrid vehicles in India, aiming to enhance energy security, reduce fossil fuel dependence, and lower vehicle emissions.

Production Linked Incentive (PLI) Scheme

The PLI scheme, introduced by the Indian government in 2020, aims to boost domestic manufacturing across various sectors, including automobiles and auto components, with a special focus on electric vehicles (EVs) and their parts.

Best states for subsidy-

1. **Maharashtra**
2. **Delhi**
3. **Gujarat**

3. How does the availability of charging stations infrastructure correlate with the EV sales and penetration rates in the top 5 states?

State	EV Sold	penetration rate	Charging Stations
Maharashtra	396K	6.49%	3079
Karnataka	313K	7.84%	1041
Tamil Nadu	200K	4.30%	643
Gujarat	181K	4.40%	476
Rajasthan	150K	4.55%	500

4. Who should be the brand ambassador if AtliQ Motors launches their EV/Hybrid vehicles in India and why

Involving in sports specifically in cricket will be more profitable.

Shubman Gill and Yashasvi Jaiswal

Shubman Gill

Yashasvi Jaiswal

5. Which state of India is ideal to start the manufacturing unit? (Based on subsidies provided, ease of doing business, stability in governance etc.)

Maharashtra, Karnataka, and Gujarat

Reasons -

1. Most EV sales in these 2 states

2. Most charging stations

3. Government support :

For Maharashtra -Maharashtra Industrial Development Corporation (MIDC).

For Karnataka - Karnataka Industrial Policy (KIP)

For Gujarat - Gujarat Industrial Policy (GIP)

MIDC, KIP, and GIP all three are dedicated to improving business conditions and fostering industrial growth

4. Provide good subsidies for EV Adoptions

5. Have established ports and business infrastructures as skilled workforce

RECOMMENDATIONS

1. Focus on High-Growth States with Strong EV Adoption

Target states with high EV adoption rates and robust government incentives for EVs, such as Maharashtra, Karnataka, and Gujarat. Focusing on regions with strong government support and consumer interest in EVs provides a solid foundation for market entry and growth. This approach also enhances brand visibility where demand is high.

2. Invest in Affordable 2-wheelers with Enhanced Features

The 2-wheeler segment is the most popular in India, especially among middle-income consumers. AtliQ Motors can capture a significant share of this segment and build brand loyalty by offering value-for-money products.

The company should also invest in R&D to develop EVs tailored to Indian conditions, such as extreme temperatures and rough roads, for both 2-wheelers and 4-wheelers.

RECOMMENDATIONS

3. Involvement in Sports

Cricket is the most popular sport in India, and involvement in cricket can significantly boost brand visibility. Sponsorships and partnerships in cricket can help AtliQ Motors connect with a broad audience.

4. Building an EV Ecosystem

Like Tata Motors, AtliQ Motors should focus on building its own EV ecosystem to reduce reliance on other companies. This could involve setting up a network of charging stations, developing software solutions, and offering integrated services that enhance the overall customer experience.