Q1) List the top 3 and bottom 3 makers for the fiscal years 2023 and 2024 in terms of the number of 2-wheelers sold.

|  |  |  |  |
| --- | --- | --- | --- |
| Top3 |  | Bottom 3 |  |
| ATHER | 184473 | BATTRE ELECTRIC | 4841 |
| OLA ELECTRIC | 475072 | JITENDRA | 8563 |
| TVS | 262836 | KINETIC GREEN | 9585 |
|  |  |  |  |

Q2) Identify the top 5 states with the highest penetration rate in 2-wheeler and 4-wheeler EV sales in FY 2024.

|  |  |  |
| --- | --- | --- |
| States (Top 5) | Sum of electric\_vehicles\_sold | Average of Penetration Rate |
| Gujarat | 84359 | 4.272664453 |
| Karnataka | 160989 | 7.894095232 |
| Kerala | 73938 | 27.95975517 |
| Maharashtra | 197169 | 6.580636568 |
| Tamil Nadu | 94314 | 4.356254978 |

Q3) List the states with negative penetration (decline) in EV sales from 2022 to 2024?

|  |  |
| --- | --- |
| Andaman & Nicobar Island | Ladakh |
| -0.055968381 | -0.624316834 |

Q4) What are the quarterly trends based on sales volume for the top 5 EV makers (4-wheelers) from 2022 to 2024?

Q5) How do the EV sales and penetration rates in Delhi compare to Karnataka for 2024?

|  |  |  |
| --- | --- | --- |
| States | Sum of electric\_vehicles\_sold | Average of Penetration Rate |
| Delhi | 46724 | 6.98180921 |
| Karnataka | 160989 | 7.894095232 |
| Grand Total | **207713** | **7.437952221** |

Q6) List down the compounded annual growth rate (CAGR) in 4-wheeler units for the top 5 makers from 2022 to 2024.

|  |  |  |  |
| --- | --- | --- | --- |
| 2022 | 2023 | 2024 | CAGR |
| 33 | 920 | 350 | 5.818462 |
| 110 | 576 | 370 | 5.382504 |
| 4042 | 13805 | 4264 | 5.055049 |
| 1647 | 3277 | 2190 | 7.158305 |
| 12708 | 28046 | 13236 | 7.08248 |

Q7) List down the top 10 states that had the highest compounded annual growth rate (CAGR) from 2022 to 2024 in total vehicles sold.

|  |  |
| --- | --- |
| Andaman & Nicobar | 0 |
| Arunachal Pradesh | -0.164486123 |
| Assam | -0.160946654 |
| Delhi | -0.155817085 |
| Goa | -0.147845855 |
| Gujarat | -0.160164025 |
| Karnataka | -0.151521056 |
| Meghalaya | -0.146060832 |
| Mizoram | -0.163570789 |
| Rajasthan | -0.158375642 |

Q8) What are the peak and low season months for EV sales based on the data from 2022 to 2024?

COMMON PEAK MONTHS ARE NOVEMBER,DECEMBER,FEBRUARY,MARCH

Q10) 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.

|  |  |
| --- | --- |
|  | Revenue Growth Rate |
| 2024 vs 2022 | 2-Wheeler |
| 72.91999931 |
| 4-Wheeler |
| 78.62280066 |
|  |  |
| 2024 vs 2023 | 2-Wheeler |
| 21.95676601 |
| 4-Wheeler |
| 45.38037537 |