Writeup for Dataset 1:

After analyzing dataset #1, we accounted for 17 million vehicles sold annually on average prior to Q1 2020. Volume sales decreased substantially after Q1 2020 to a low of 8 million vehicles sold, a decrease of 47%. Once this decrease in demand set in during covid, manufacturers were now unable to supply vehicles. This upset between supply and demand started to peak around the start of Q2 2021 with a percent change of 109% as comp­­ared to 2020.

Writeup for Dataset 2:

After analyzing dataset #2, we found that the mean CPI average for 2019 was 146.84 and the CPI average for 2023 was 178.­­­63. We then took the two samples from 2019 and 2023 and ran a two-sample independent t-test for significance. Our alternate hypothesis is that there was a significant increase in new vehicle CPI from 2019 (before covid) to 2023 (after covid). The null hypothesis would be that there was no significant increase in new vehicle CPI from 2019 to 2023. Our t-test yielded a result of 1.1334816356016832e-21, which is below .001 and thus statistically significant. We then rejected the null hypothesis in favor of the alternate hypothesis; we found a significant increase in CPI from 2019 to 2023.

Writeup for Dataset 3:­­ The biggest outcome from the percentage change in new car prices was the dramatic disparity of the percentage increase. In the past decade the prices increased less than 3% annually until COVID-19 hit. Then it spiked to 17.2% after; that is more than five times the percentage rise annually before COVID-19

Writeup for Dataset 4: Summing up our journey through dataset 4, ive uncovered some seriously intriguing insights into the fast-paced world of the automotive industry between 2019 and 2023. Our awesome bar graph is like a time machine, showing us how different manufacturers have been cranking out vehicles during these years. What's really cool is that some brands have been pretty consistent, while others are like roller coasters – up, down, and all around. Those wild fluctuations might be a sign of hot new rides hitting the market, wicked design strategies, or just a big shake-up in what people want to cruise in.

Conclusion

Covid definitely had an impact on vehicles prices and the inflation that ran through the market.

Especially for Toyota as a brand and manufacturer.

Demand and supply have been polar opposites since Q1 2020 and peaking during Q2 2021.

Our findings show a calculated Pvalue of ~1.1334816356016832e-21.

Because our Pvalue was much smaller than .001, we can conclude that there is very significant evidence against the null hypothesis and thus reject it in favor of the alternate hypothesis.