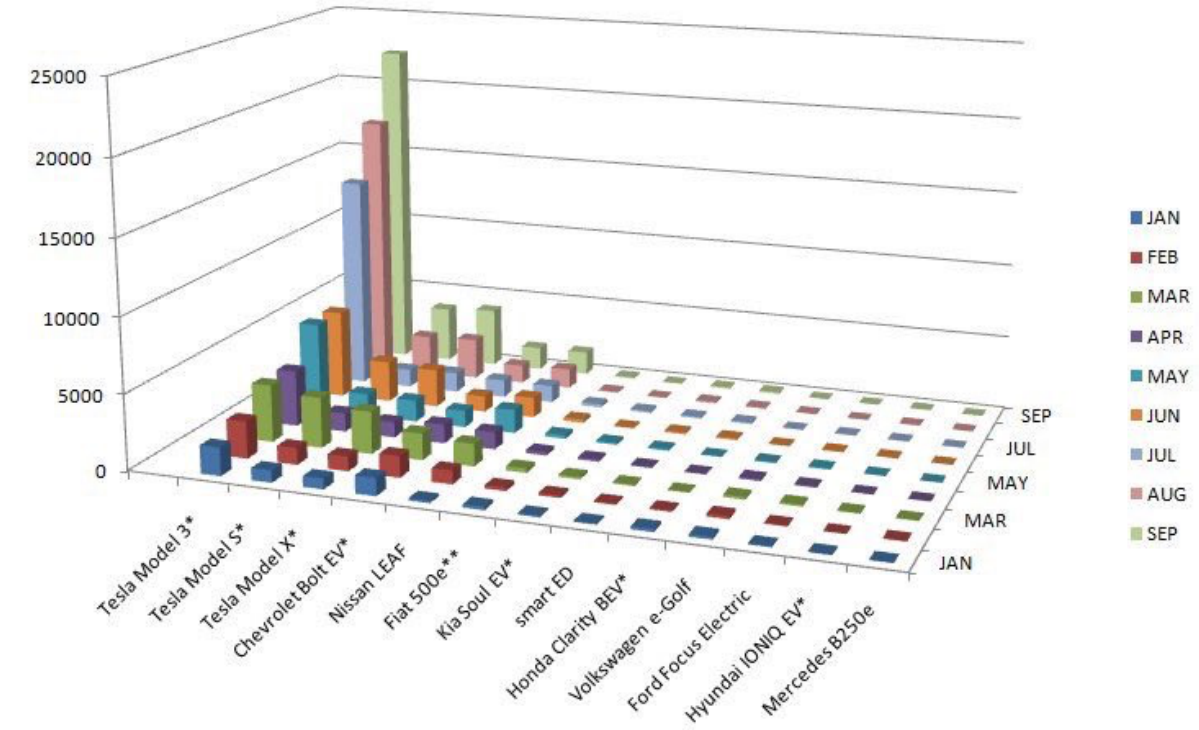


Source: https://twitter.com/Austen/status/1054094811542708225

1. Gestalt principles & visual structure:

   Unnecessary 3D bars and the wrong graphic type. They could have easily showed the data with a line graph, instead of a 3D bar graphic.

2. Keep it simple: Decoding & Operations:

   Unnecessary 3D bars in the 3D background and many colors are making the graph hard to understand. Grid lines are helping to read only a few taller bars in the graph.

3. Less is more: Chartjunk & data-ink ratio:

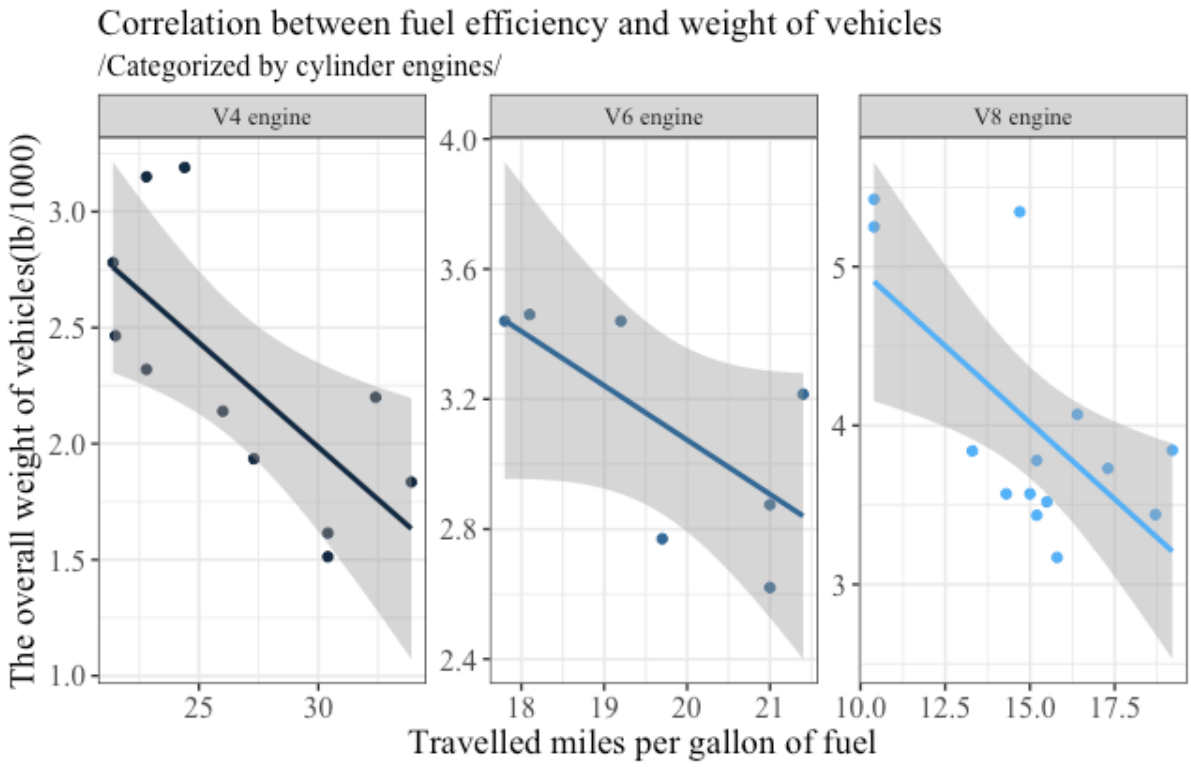
   Half of the 3D bars/car models are in same size and there is no clear difference between them. If these car models were placed under a single variable such as "Other", the reader would immediately notice the type of car they wanted to highlight.

4. Graphical data integrity & lie factor:

   Scale on the vertical axis is fine, but what the numbers are telling is unclear. On the 3rd-dimensional axis, months are messy. It is not clear why even months were skipped. Again, a lot of “flat squares” look like having 0 values on the vertical axis in the graph.

5. Annotation & stand-alone readability:

   Months on the 3rd-dimensional axis and legend that shows which color is representing which month are overlapped. There is no title. Readers only can assume that graph is telling about cars. What the numbers on the vertical axis are telling is unclear. It might be the number of cars has been sold in these months or the total sales of different models of cars. Who knows. On the horizontal axis, what the single and double stars after the cars' names telling is also unclear. And there is no information about the data from which year. Readers can assume the year only from the source, which is tweeted year on Twitter, not from the graph itself.


Correlation between fuel efficiency and weight of vehicles
/Categorized by cylinder engines/
V4 engine
V6 engine
V8 engine
The overall weight of vehicles(lb/1000)
Travelled miles per gallon of fuel
1.0
1.5
2.0
2.5
3.0
2.4
2.8
3.2
3.6
4.0
3
4
5
25
30
18
19
20
21
10.0
12.5
15.0
17.5

The graph is showing the correlation between fuel efficiency and the overall weight of cars by the number of cylinder engines. There are 3 different types of cylinder engines which are V4, V6, and V8. The trend line or regression line is showing that if the overall weight of cars is lower traveled miles per gallon of fuel increases. This trend is the same across the different numbers of cylinder engines of cars. However, from the deviation of the line, we can tell that correlation between fuel efficiency and the overall weight of cars is less within the vehicles that have 6-cylinder engines.

I used geom_smooth to show the trend line and geom_point to show each represented car. I have tried not using scale = "free" to show the exact deviation of the trend line, but it was making the graph ugly. Thankfully, using scale = "free" did not really affect showing deviation of the trend line within the types of cylinder engines. Since I used scale = "free", I wanted to keep the squared grids on the background to make it easy to see the values of both axes.