

Netflix Stock Visualizations

Data Visualization Capstone Project

Michelle Caler

July 20, 2020

 Pro Capstone project

Visualizations List

1. Distribution of Netflix stock prices for 2017, by quarter
2. Netflix stock earnings per share for 2017, by quarter
3. Netflix revenue and earnings for 2017, by quarter
4. Netflix stock compared to the Dow Jones Industrial Average, for 2017

My Role

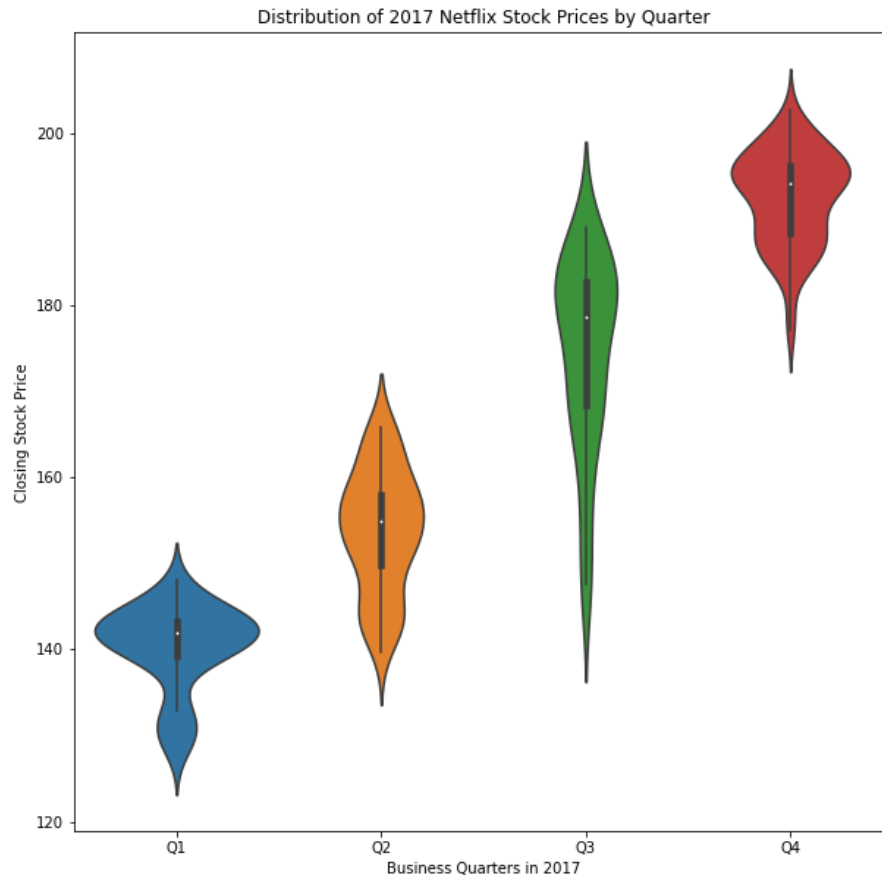
My role in this project was primarily to create the requested visualizations. I will indicate where I have performed calculations with the provided data; otherwise, I used the data provided to me by Codecademy as-is.

I assume that all data provided by Codecademy for this project is accurate*.

* In the .csv files provided, the columns "close" and "adj close" are identical, even though the project indicates that they should be different. I suspect, but cannot prove, that this is an error in the data provided by Codecademy.

Distribution of Netflix Stock Prices

- Broadly speaking, the Q1 and Q4 data are largely bimodal with one prominent peak and one weaker peak.
- The Q2 data is somewhat bimodal, though the peaks are similar in broadness and peak height.
- The Q3 data is by far the most interesting shape; it is unimodal, with a very, very long tail toward smaller closing prices.
- The Q1 data has the "tightest" distribution and the smallest interquartile range, whereas the Q3 data naturally has the broadest overall distribution and the widest interquartile range

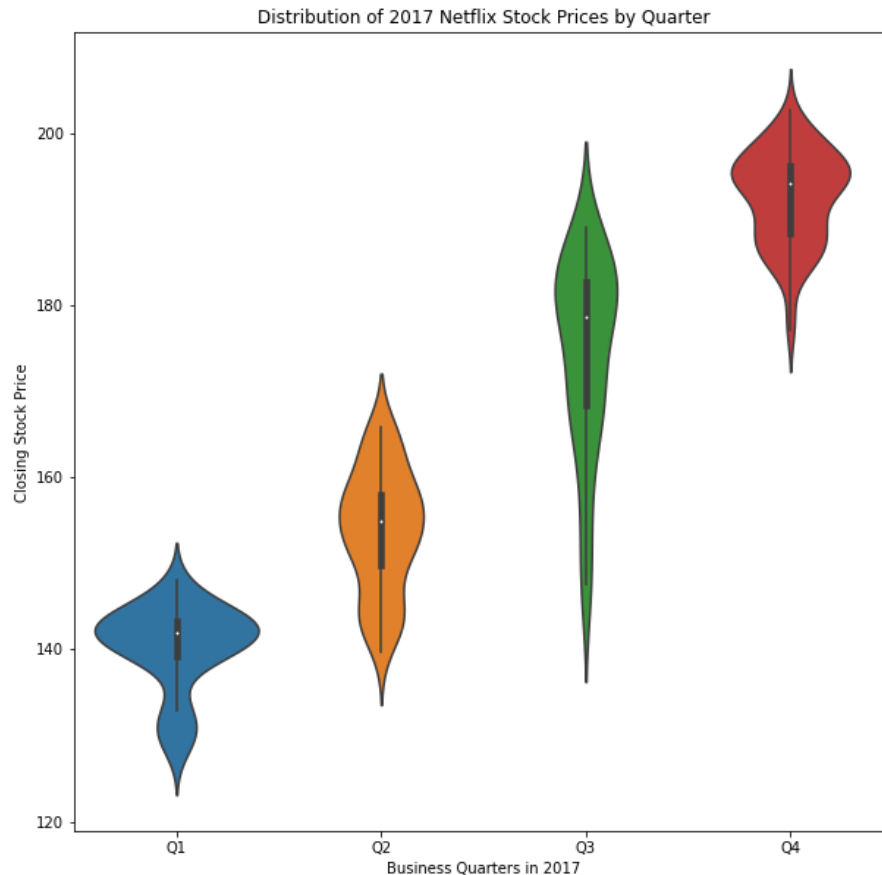


Distribution of Netflix Stock Prices

Very broadly speaking, the range of the entire dataset is about \$120 to \$210.

Looking more specifically at each quarter ...

- The range of Q1 closing prices is roughly \$120 - \$150.
- The range of Q2 closing prices is roughly \$130 - \$170.
- The range of Q3 closing prices is roughly \$130 - \$200.
- The range of Q4 closing prices is roughly \$170 - \$210.

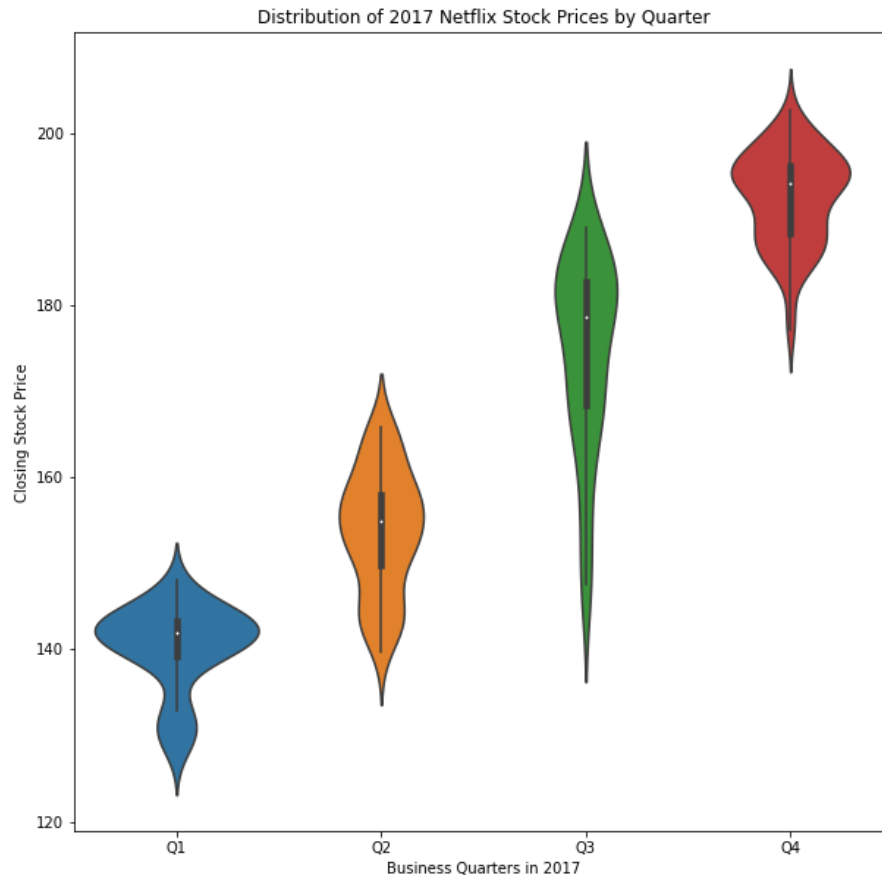


Distribution of Netflix Stock Prices

The highest average price was in Q4 at roughly \$194. The lowest average price was in Q1 at roughly \$142.

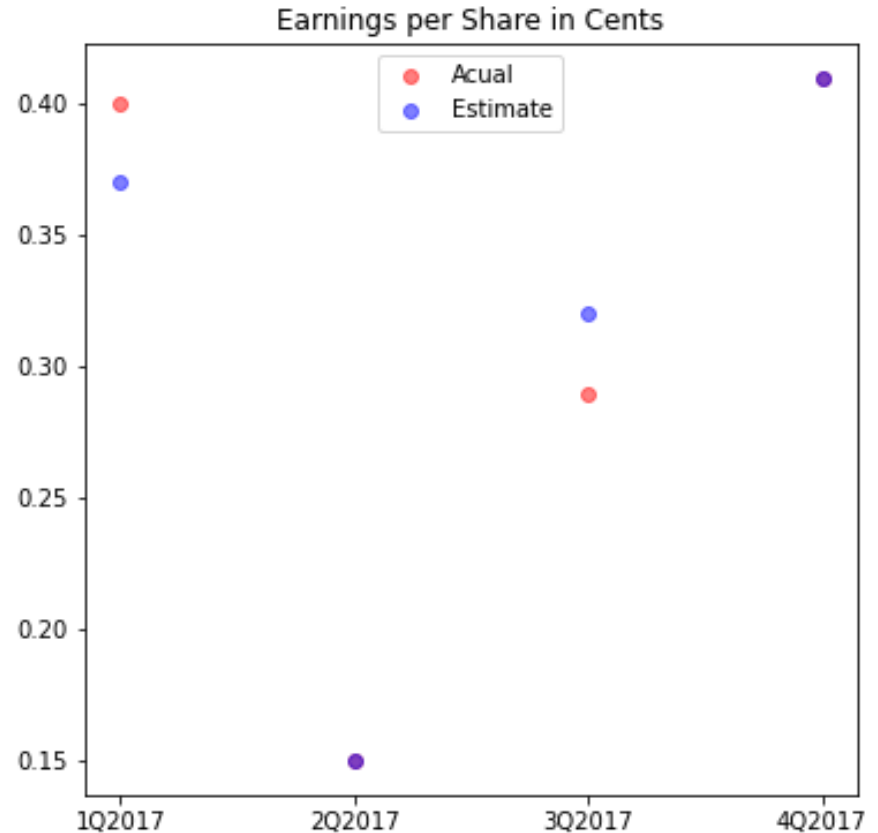
Looking more specifically at each quarter ...

- For Q1, the minimum price was about \$124, the maximum was about \$154, and the average was about \$142.
- For Q2, the minimum price was about \$132, the maximum was about \$174, and the average was about \$154.
- For Q3, the minimum price was about \$134, the maximum was about \$200, and the average was about \$178.
- For Q4, the minimum price was about \$170, the maximum price was about \$206, and the average was about \$194.



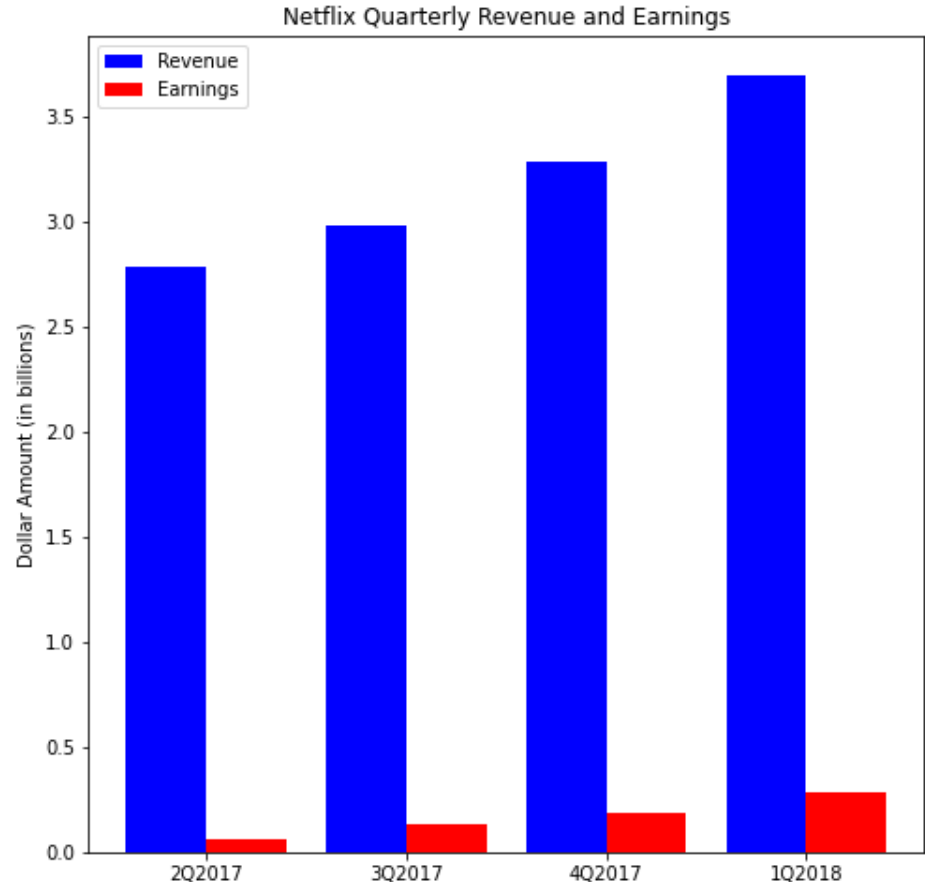
Netflix Stock Earnings per Share

- In Q2 and Q4, the actual earnings per share for Netflix stock exactly matched the estimated earnings per share.
- In Q1, the actual earnings per share outperformed the estimate
- In Q3, the actual earnings per share fell short of the estimate.



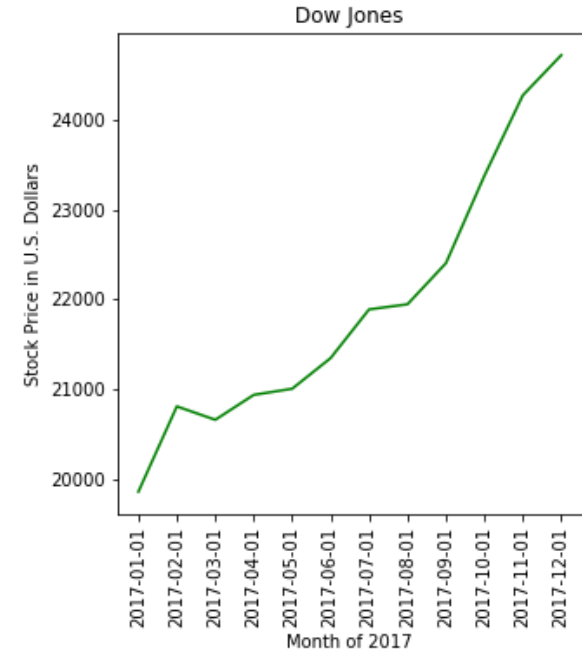
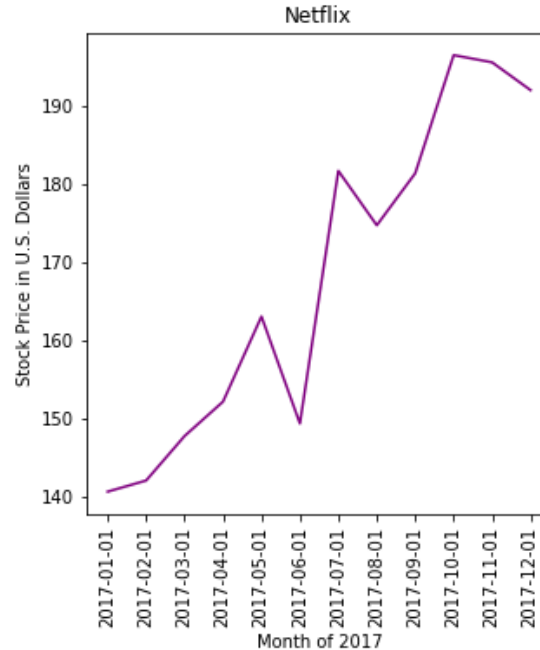
Netflix Stock Quarterly Revenue and Earnings

- Revenue went up each quarter. It is impossible to tell using this bar graph whether the rate of growth was linear, exponential, or something else.
- Likewise, earnings went up each quarter.
- Given the provided data, the ratio of earnings per quarter to revenue per quarter was taken; I performed this calculation. Using the output of the above calculation, the average percentage of revenue which constitutes earnings was estimated to be roughly 5%.



Comparing Netflix Stock to the Dow Jones Industrial Average

- Both Netflix stock prices and the Dow Industrial Average trended upward during 2017.
- Broadly speaking, both curves ended the 2017 calendar year at a peak, although there are indications that the Netflix curve had peaked and was on its way back down.



Comparing Netflix Stock to the Dow Jones Industrial Average

- Clearly, Netflix stock prices in 2017 were more volatile than the Dow Jones Industrial Average.
- If one visually smooths over the peaks in the Netflix curve, the slope of the curve seems broadly similar to the slope of the curve of the Dow Jones data.

