# How much do we rate (or hate) dogs?

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## Summary

*WeRateDogs* is a very popular Twitter profile with over 7 million followers and 8 thousand tweets ([link](#)). It is so famous and appealing, because there people can rate dogs by using a very unconventional rating system. Ratings are mainly based on pictures of cute (or not!) dogs (see the example a cute one below). Here, I show you a small insight into how people actually rate dogs.

*Fig. 1: Tweet example: "This is Stuart. He's sporting his favorite fanny pack. Secretly filled with bones only. 13/10 puppared puppo #BarkWeek"*

*(source: https://twitter.com/dog_rates/status/889531135344209921)*

## Choosing rating scores

WeRateDogs is known for rating dogs, based on dog pictures. Ratings of dogs found there do not follow a fixed standard. Instead, the ratings in WeRateDogs are meant to be fun. This is very clear in the [Fig. 2](#) on the right. Sometimes, we find ratings with a very large denominator (meaning how much a dog could be rated), but also numerators too (meaning the actual rating received by the dog).
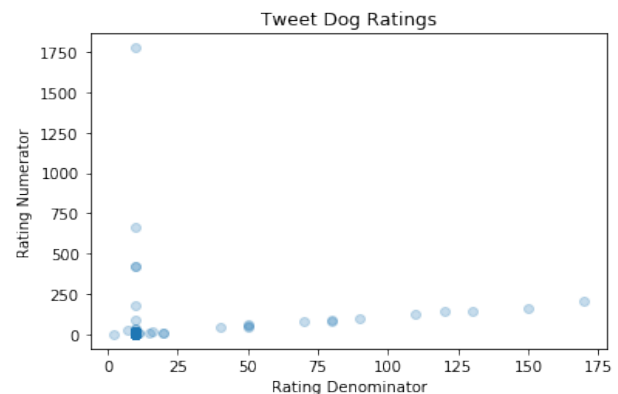


*Fig. 2: Range of Tweet dog ratings.*

Actually, dogs should only be rated between 0 and 10, as the premise of a "normal" dog rating which the maximum score should not be over 10. This is indeed what we find in the bulk of the data, nevertheless ([Fig. 3](#), below).
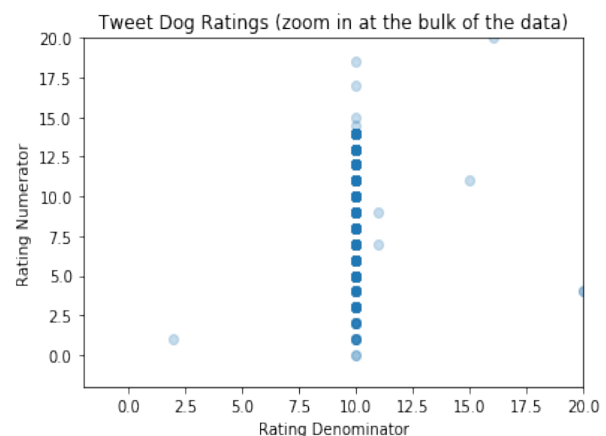


*Fig. 3: Most common dog ratings.*

There are cases, however, where we find extreme outliers, that is, when people overate dogs, by choosing values that are strangely large. Perhaps, users think that dogs should receive a very large rating, and this should by the fun part of rating itself. Usually, though, the higher the rating denominator, also the higher is the numerator, so we find here a pattern in rating dogs actually ([Fig. 4](#)).
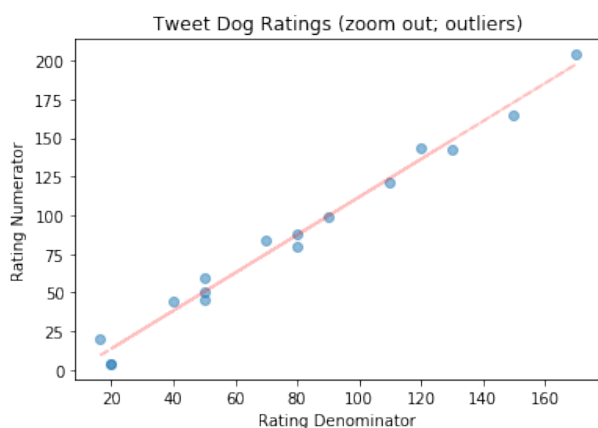
*Fig. 4: Dog rating extremes. The more people think a dog deserves to be rated, the larger are the scores chosen for the dogs rate.*

Moreover, the higher is the rating given to a dog the higher is also the number of likes that a particular dog profile receives. This trend seems to behave exponentially as seen in Fig. 5. So, it is kind of a vicious cycle, where the larger the rates, the larger are the likes, which perhaps really indicates which dogs are more admired or loved by the users.
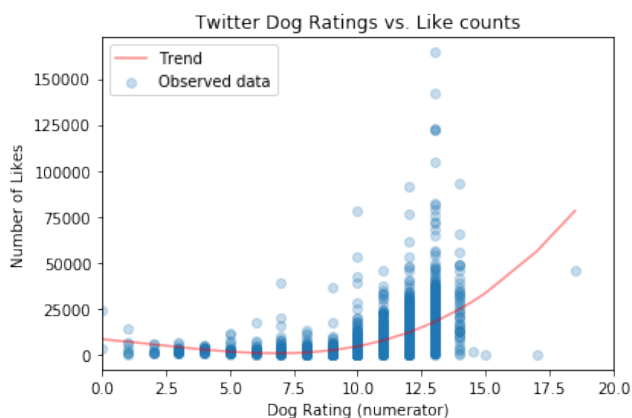


*Fig. 5: Relationship between dog ratings and number of likes received.*

**Predictions of dog breeds from dog images**
Some pictures and ratings in WeRateDogs, however, are not done on dogs, but instead in other things or animals. Moved by this issue, David Venturi, an instructor at Udacity developed an algorithm to detect whether images of tweets really represented dogs. When I analyzed the dataset of these predictions, I noticed that the most shown dogs on the tweets were Golden Retrievers, or at least, David's predictions point mostly to them. We also find though many other dog breeds and the top ten predicted dogs can be seen below on Fig. 6.
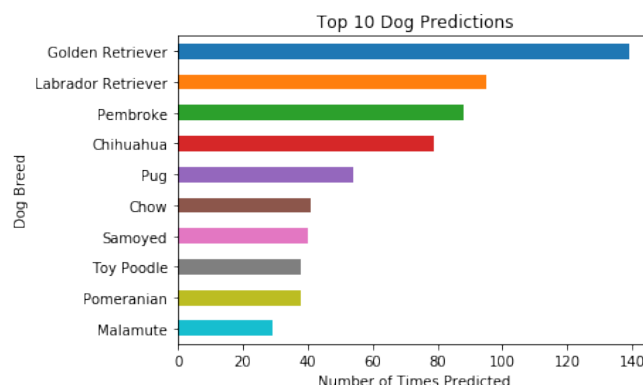


*Fig. 6: Frequency of dog breeds first predicted.*

Predictions, however, are not entirely reliable, and usually they come up with some drawbacks. For example, they can be inaccurate and might make us take wrong conclusions about our data. For example, David's first prediction set was much more reliable (about 60%) than the second and third predictions, which were both below 20% confidence (Fig. 7).
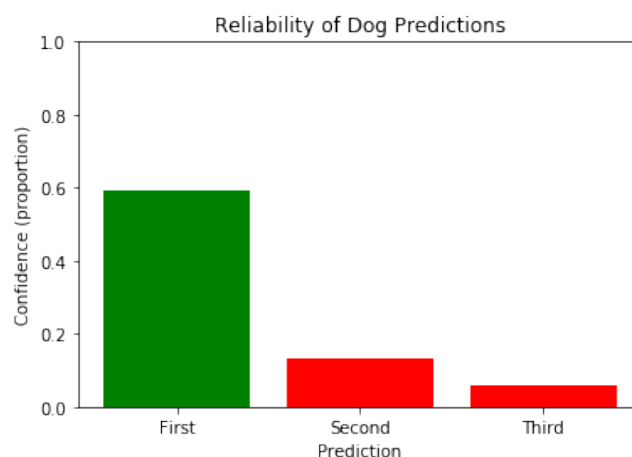


*Fig. 7: Reliability of dog predictions.*

**Personal impression**

I found this project very interesting, because the idea of wrangling data is not usually associated with a precise or systematic workflow. At least not to me, as I originally thought. When I carried out this project, however, I tried to understand the whole process of data wrangling in a much more structured way. For example, setting defined goals, making notes and sketching an organized activity board to handle the data in a way that the final product could be much more understandable than as it originally was. As an aspiring data analyst or scientist, I think this project was a really good exercise of those skills everyone needs to correctly manage the noisy, messy and or chaotic data we find in our everyday lives.

**Conclusion**

Rating dogs might be an easy task, when we just judge dogs by their images. However, when we rate dogs, we might be implicitly having some prejudgment of the dog. For example, if we hate a dog by their ugly picture, we will be inclined to badly rate that dog.

Thus, we clearly show this trend by giving dogs a large rating score, and by doing so we exaggerate ratings not only to be fun, but also to prove our point that dogs are better rated than others. Since rating cannot be negative, we extrapolate our ratings towards larger values for better-rated dogs. This analysis showed some trends present in ratings for the WeRateDogs profile. It also included a small section on predicting dogs for the same tweet dataset. Perhaps, those trends also apply in different aspects of our life too. Who knows?