

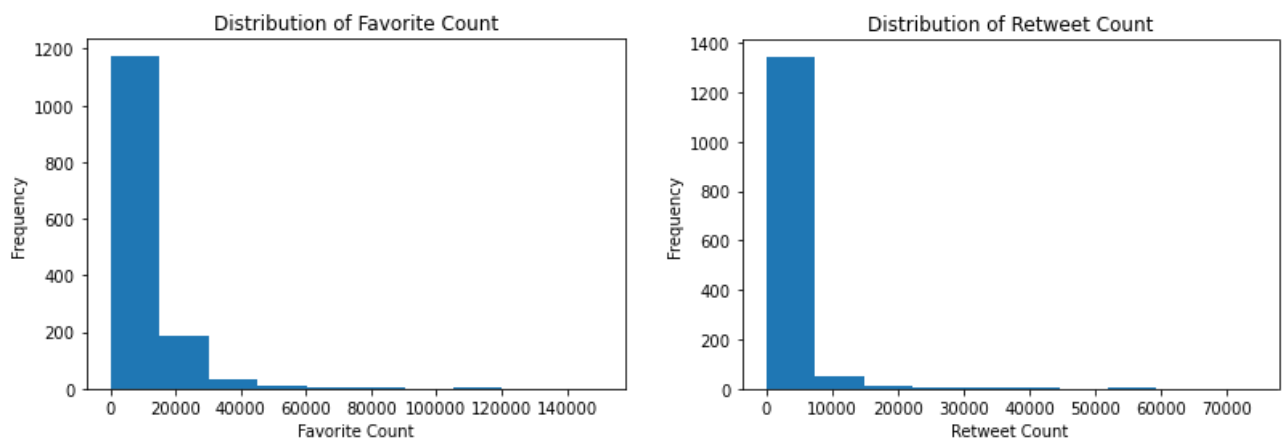
For the analysis, I took a hypothetical scenario:

Woofelicious is a dog food company. They want to feature a dog in their twitter account as a part of their online marketing strategy. They would like to know the dog characteristics that would boost their popularity. They would also like to know the metrics that they should use to assess the success of their marketing efforts. Finally, they intend to submit a picture of their dog to WeRateDogs in order to get it rated. They need to know how does the given rating influence the popularity.

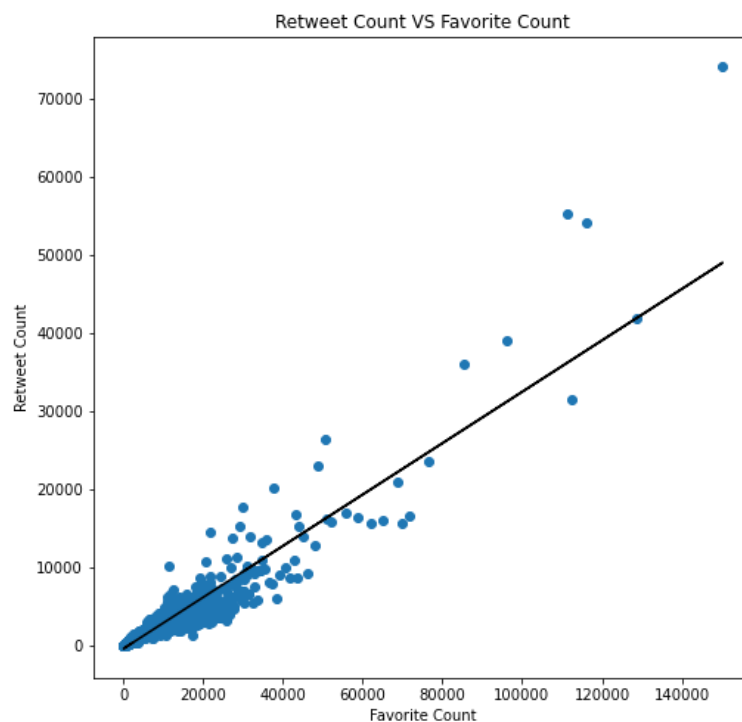
The Metrics:

The metrics that we studied for popularity are favorite count and retweet count.

Both distributions were right skewed. This is not very surprising since only few tweets go viral.



We also discovered that there was a very strong positive linear relationship ($r = 0.93$) between favorite count and retweet count. This means that we can use one of them to make inferences about the other.



The dog characteristics:

Our data had information only about the dog's breed and the dog's stage.

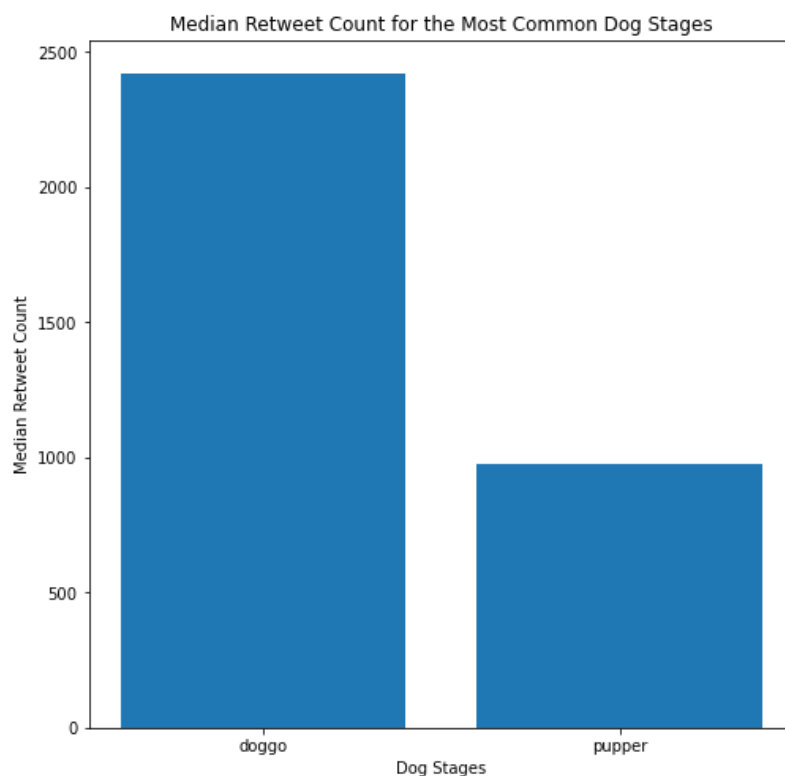
Dog breed:

We tested the 4 most common dog breeds in our dataset: Golden retriever, Labrador retriever, Pembroke and Chihuahua. Visually, there seemed to be a difference in the median retweet count between the breeds. However, after including them in a linear regression model, none of the breeds reached significance with a confidence interval of 95%.

Dog stage:

We tested for the two most common dog stages in our dataset: 'doggo' and 'pupper'.

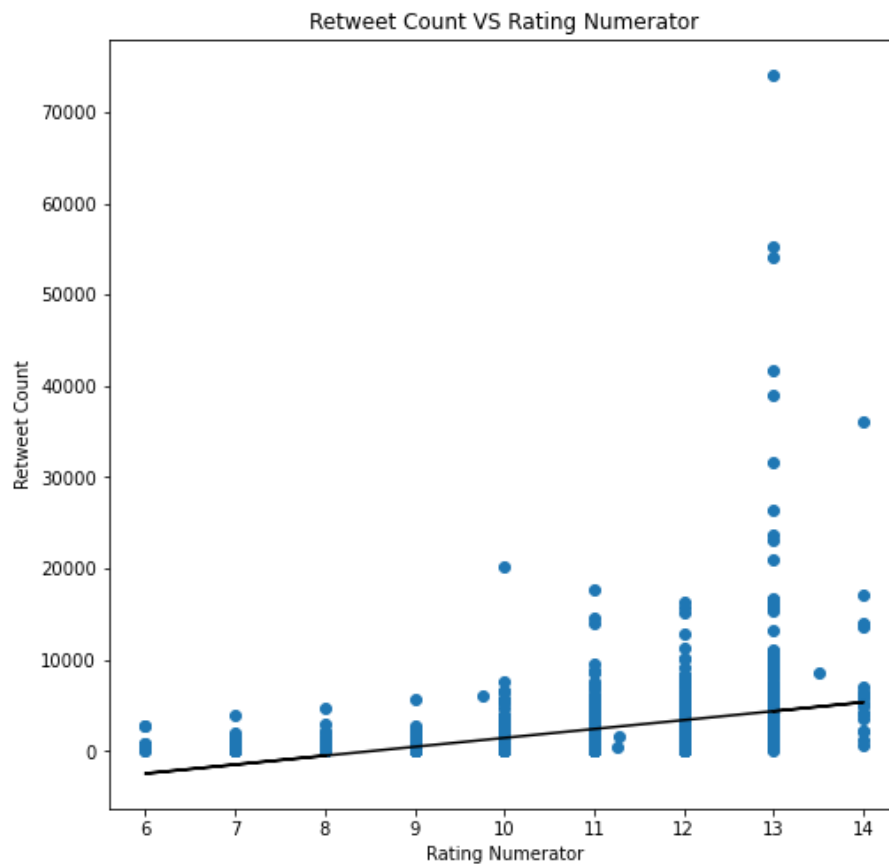
The tweets where the word 'doggo' was mentioned had a higher median retweet count than the tweets where the word 'pupper' appeared.



After including 'doggo' and 'pupper' in a regression model to predict the retweet count, the difference was indeed significant with a confidence interval of 95%. Mentioning that a dog was a doggo in a tweet of WeRateDogs increased the retweet count on average by 4360 retweets. Considering that WeRateDogs also has a high number of followers, it is not sure whether this result can be generalized to other twitter accounts.

Submitting a dog picture to WeRateDogs:

The rating doesn't seem to affect the retweet count. There is a weak positive linear relationship between rating numerator and retweet count ($r = 0.34$).



Summary:

To assess their marketing campaign, Woofelicious should use either retweet count or favorite count as they give the same information. They should not worry about the dog's breed but mentioning that the dog is a 'doggo' in their tweets may increase the popularity. If their dog gets featured on WeRateDogs, they do not need to worry about the given rating but they should make sure that the tweet mentions the word 'doggo' in order to maximize the retweet count.