

## Project 7: Wrangle and analyze Data

### Introduction:

In this project, after dealing with the data wrangling part, I analyzed the resulting datasets in order to answer the following questions:

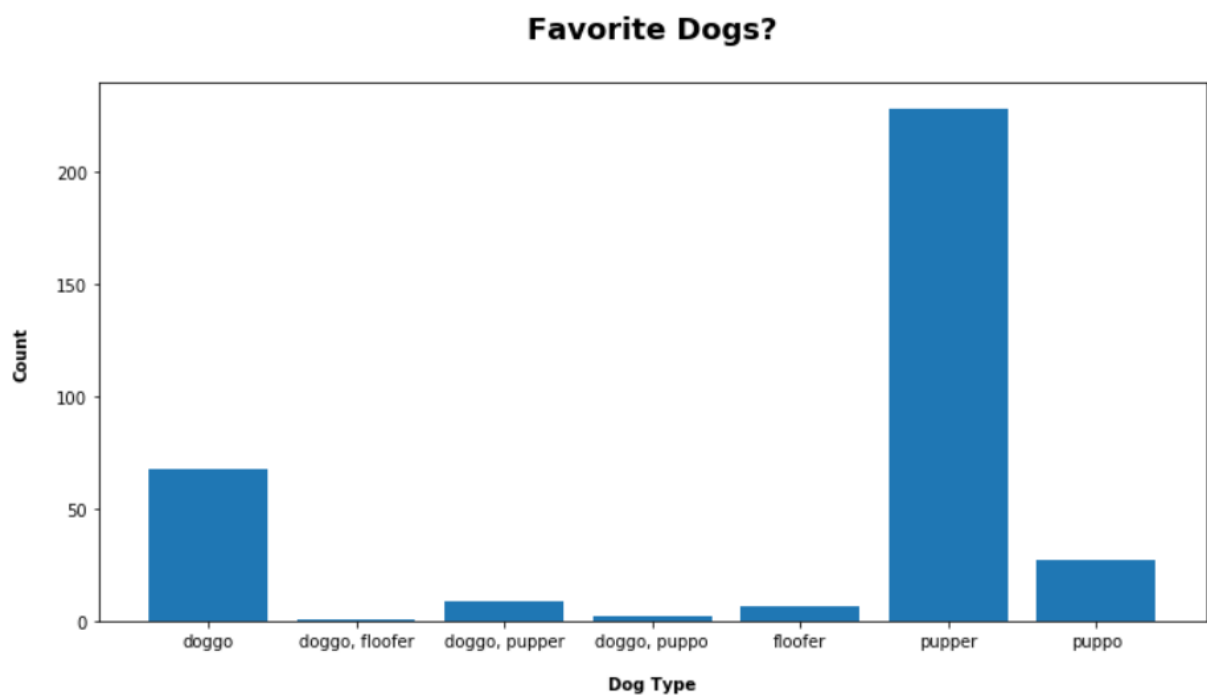
- What dog type do the users prefer?
- Does the given rating influence user interaction (retweets and favorites)?
- How does user interaction change over time?
- What breed of dogs do the users prefer?

### 1. What dog type do the users prefer?

In this context, user preference of dogs can be looked at in 4 angles:

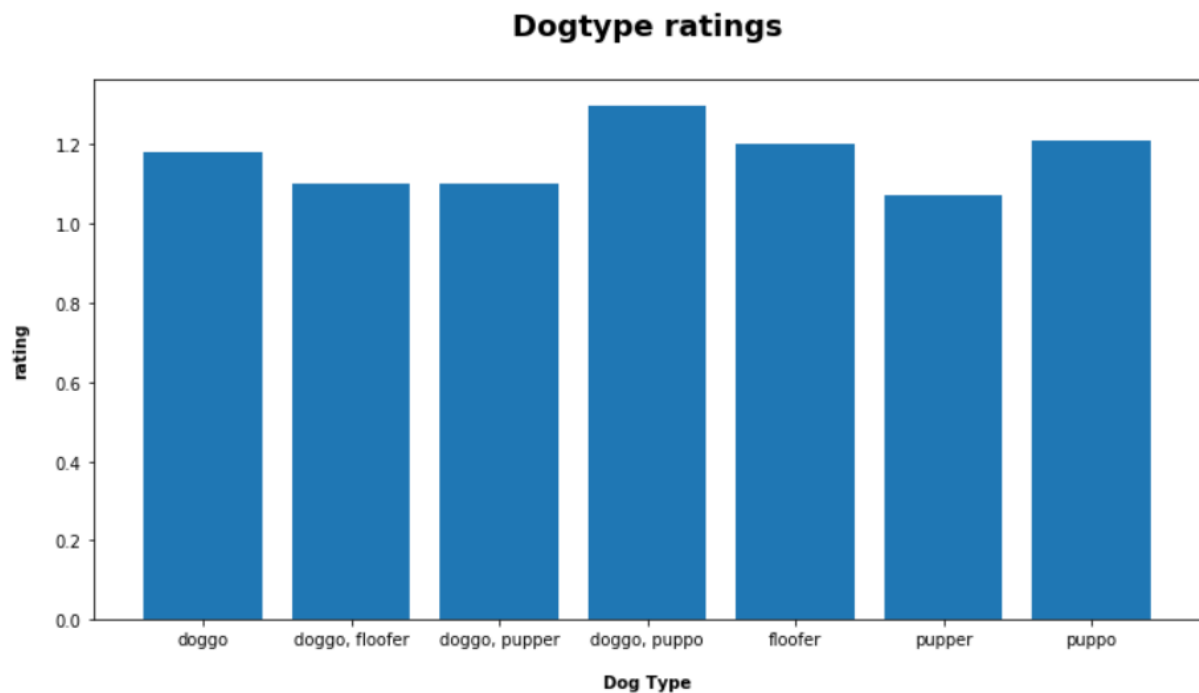
- Count of tweets for each dog type
- Mean rating of each dog type
- Mean number of retweets
- Mean number of favorites

#### 1.1 Tweet count:



It can clearly be seen that puppers are the most tweeted type of dogs, followed by doggos. This indicates that puppers and doggos are the most popular types, but are they the most favorited ones?

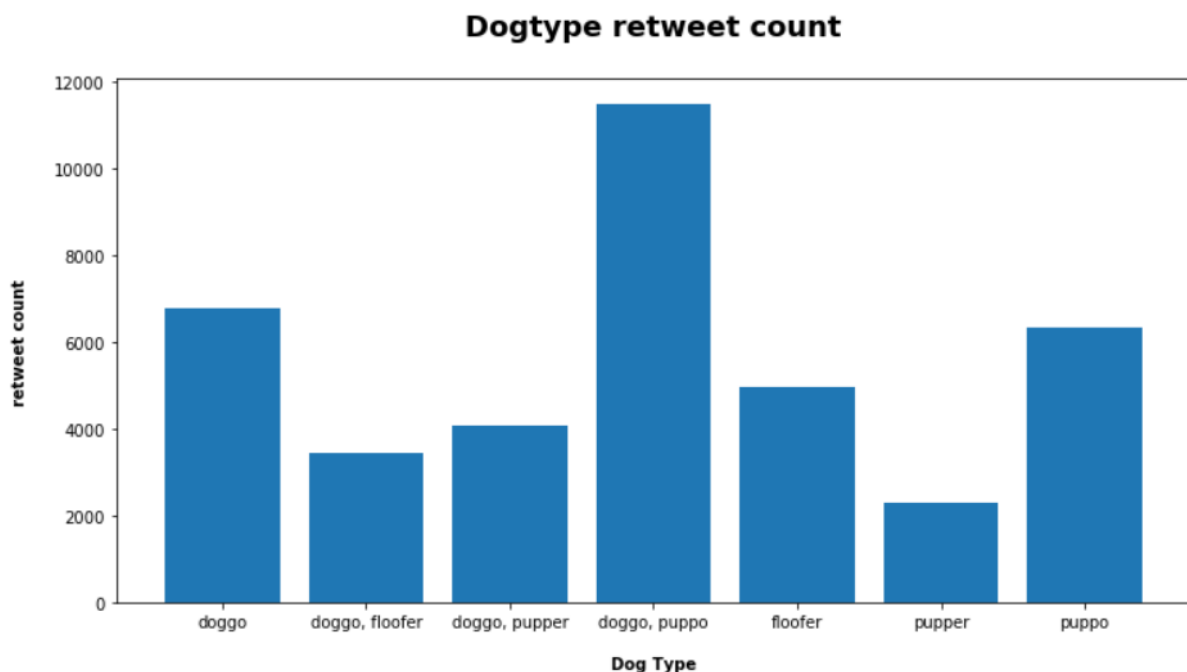
## 1.2 Dog Rating:



There are mainly 3 things to notice in this bar plot:

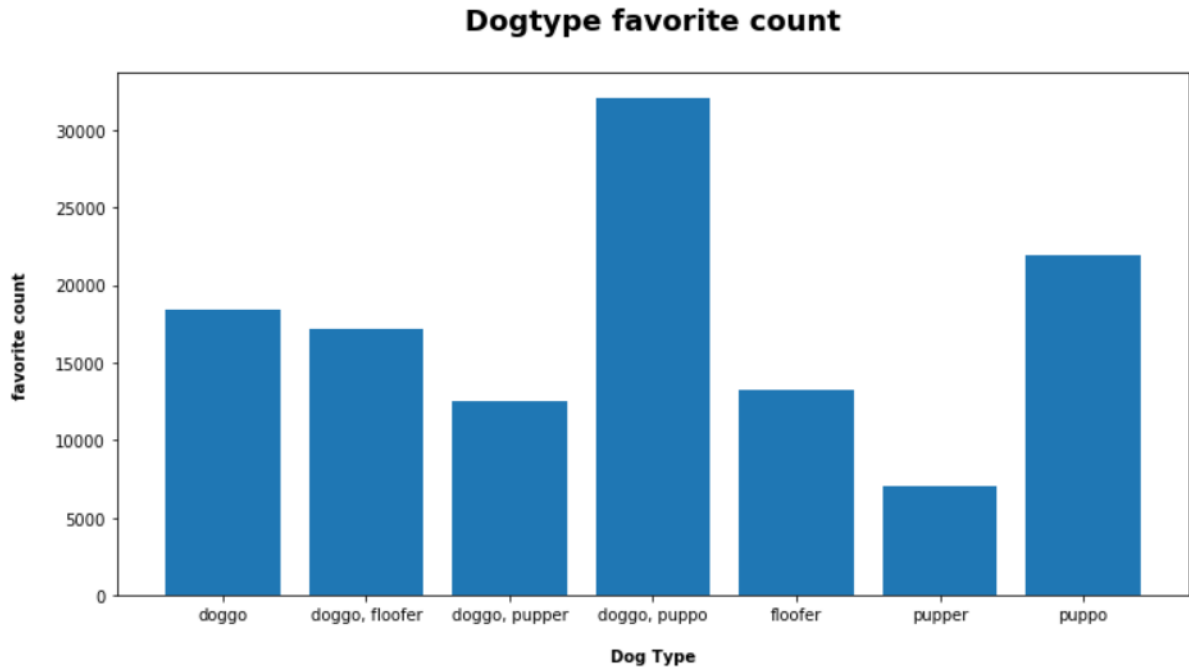
- Dog ratings are all between 1.0 and 1.3, with puppers being the least rated ones (most popular but least rated)
- Some dogs belong to 2 types at ones, the best example is the combination doggo/puppo which appears to be the best rated
- This order is based on the mean ratings of each dog type, so it is true considering only the data we have, but it might not be consistent enough, knowing that there are only 2 dogs of type (doggo/puppo)

## 1.3 Retweet count:



Once again, doggo/puppo is the most retweeted type of dogs, this time though, doggo and puppo which are the 2<sup>nd</sup> and 3<sup>rd</sup> respectively are consistent enough to say that they are actually more retweeted in general than puppers (which are the most popular).

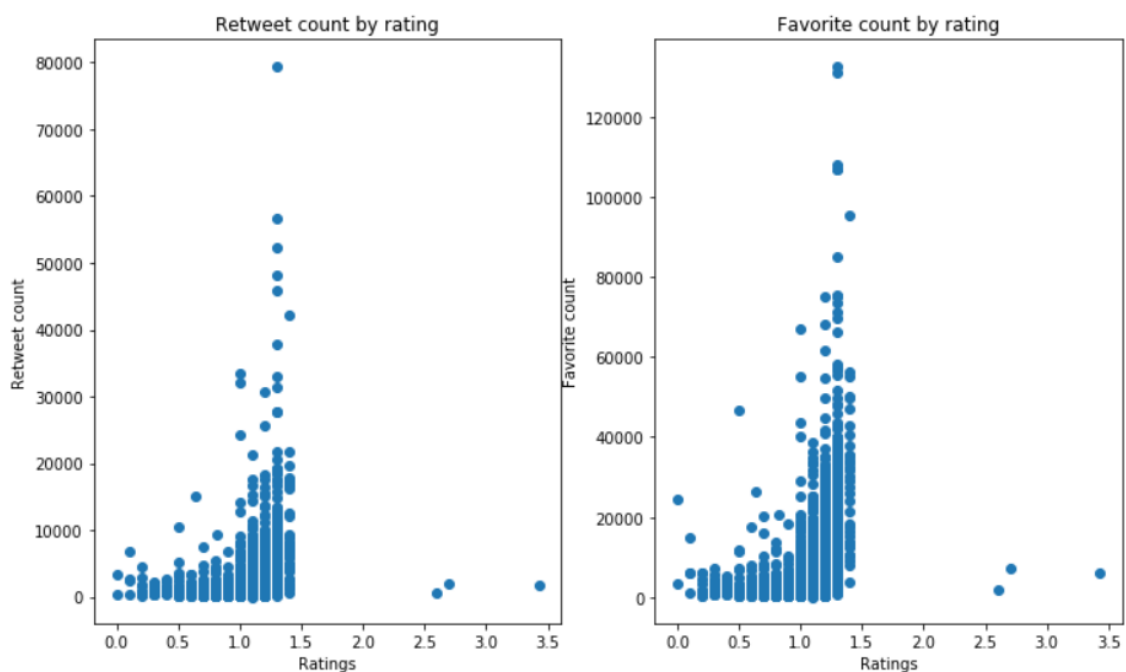
#### 1.4 Favorite count:



The results are quite similar to retweets only puppo are 2<sup>nd</sup> and doggo are 3<sup>rd</sup>

**Answer 1:** When it comes to popularity pupper are the most common type of dogs, but when it comes to user preferences, doggo and puppo are the most favored and retweeted type of dogs.

#### 2. Does the given rating influence user interaction (retweets and favorites)?

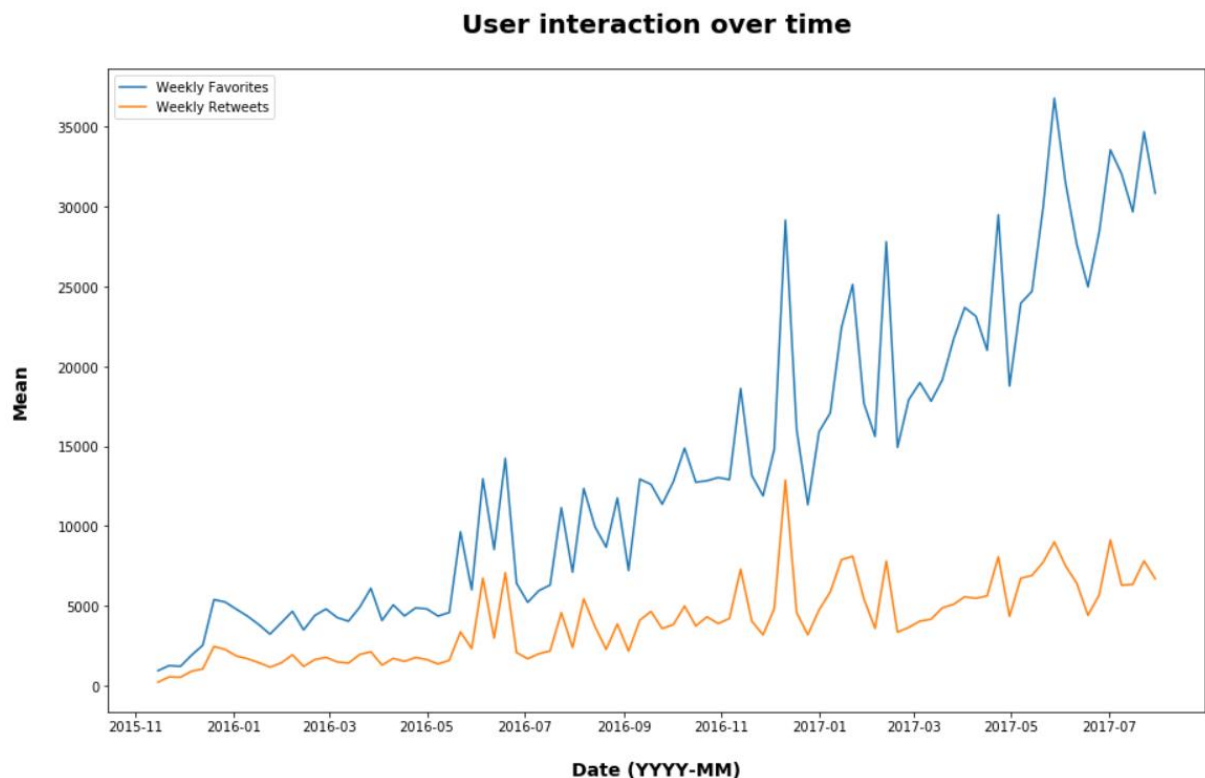


We can notice how the retweet count and favorite count increases with ratings increase, which might be interpreted in 2 ways:

- Users are influenced into retweeting and favoriting the highly rated tweets.
- Users just agree with the given rating, so they retweet and favorite them (which also means they are somehow influenced to do so).

**Answer:** Yes, the rating given to the dogs has some influence over the number of retweets and favorites.

### 3. How does user interaction change over time?

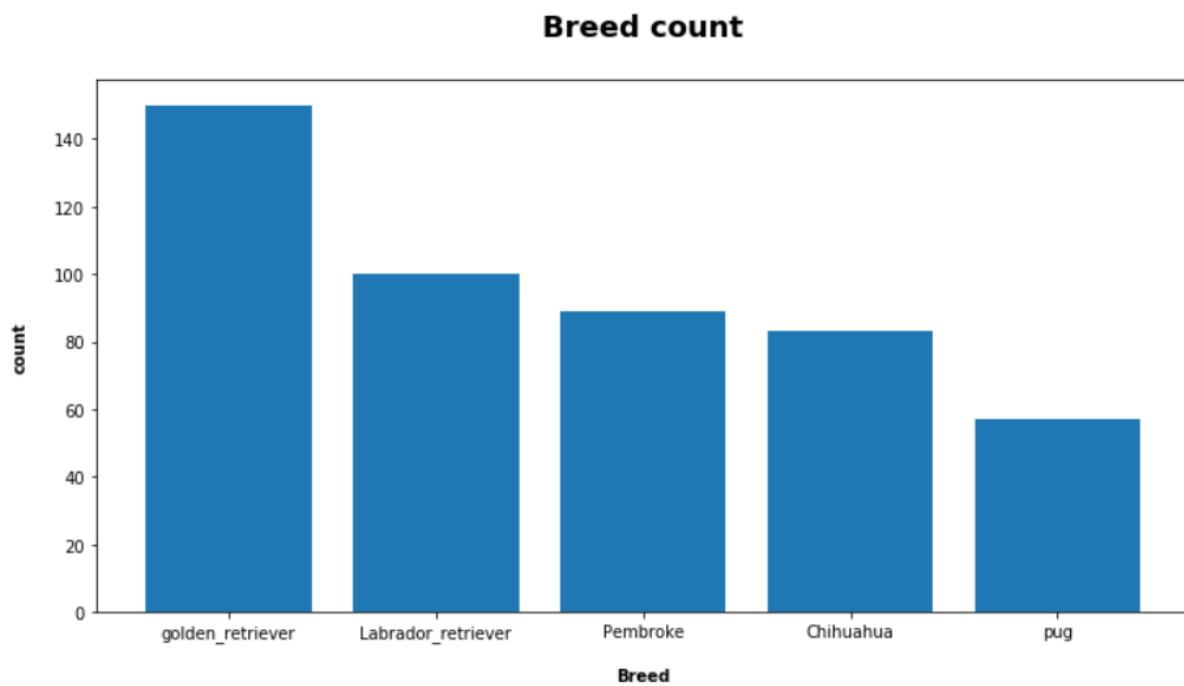


According to this plot, we clearly see how the mean number of favorites by week increased from 1000 approximately in 2015-11 to over 30000 in 2017-07, which is not the case when looking at the numbers of retweets which did not grow so much this period.

**Answer:** User interaction has grown especially in terms of favorite count.

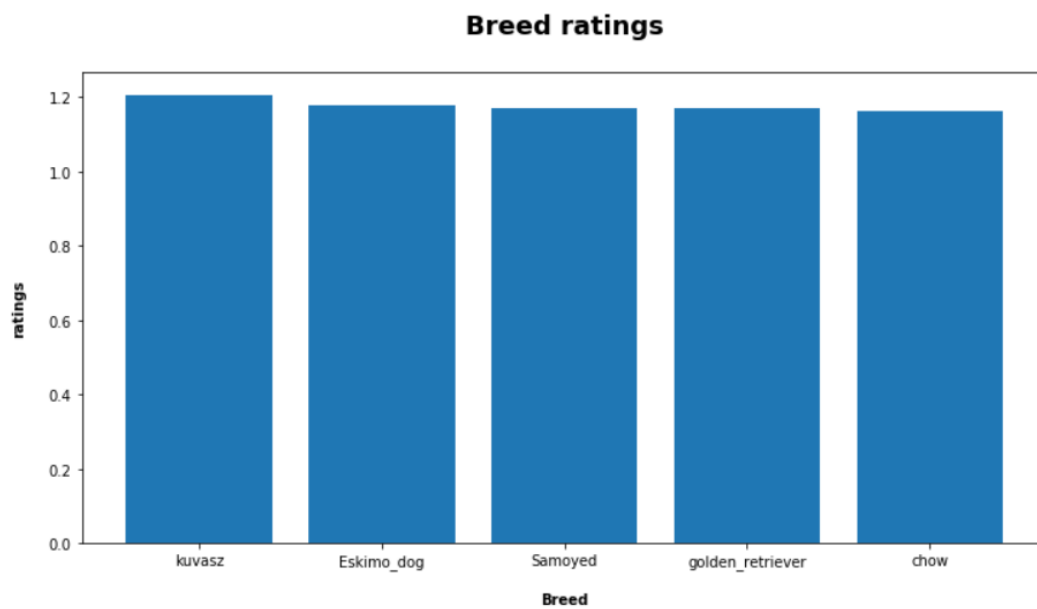
### 4. What breed of dogs do the users prefer?

#### 4.1 Tweet count:



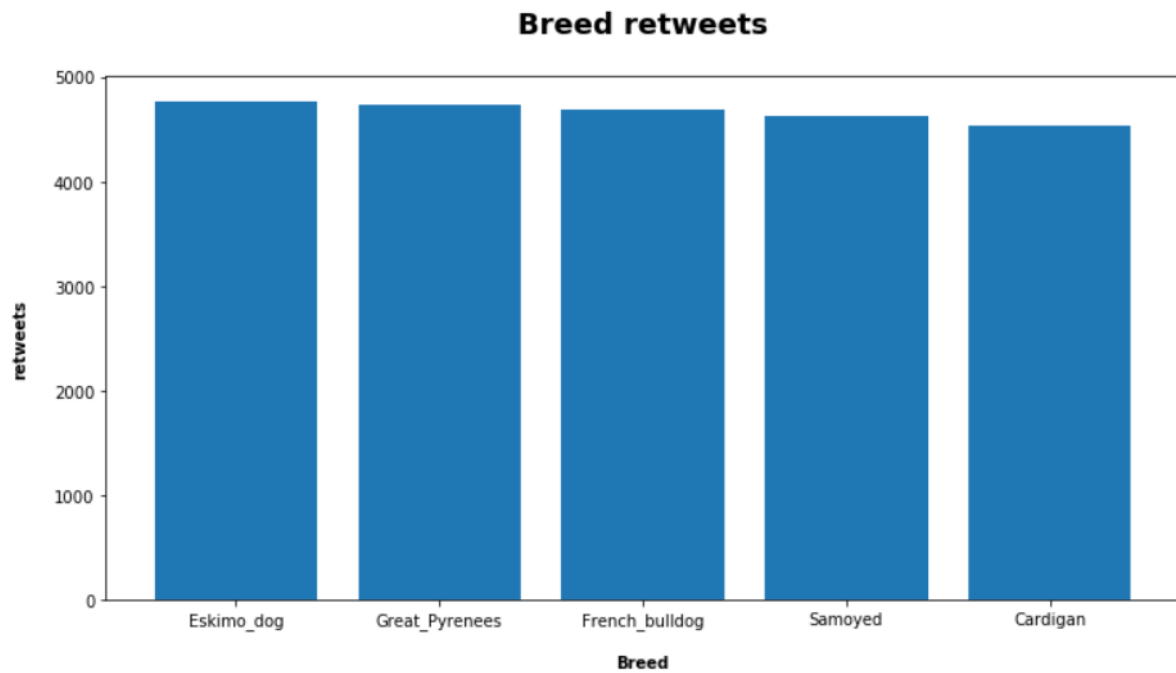
By observing this bar plot, which shows the top 5 most popular breeds.

#### 4.2 Dog rating:



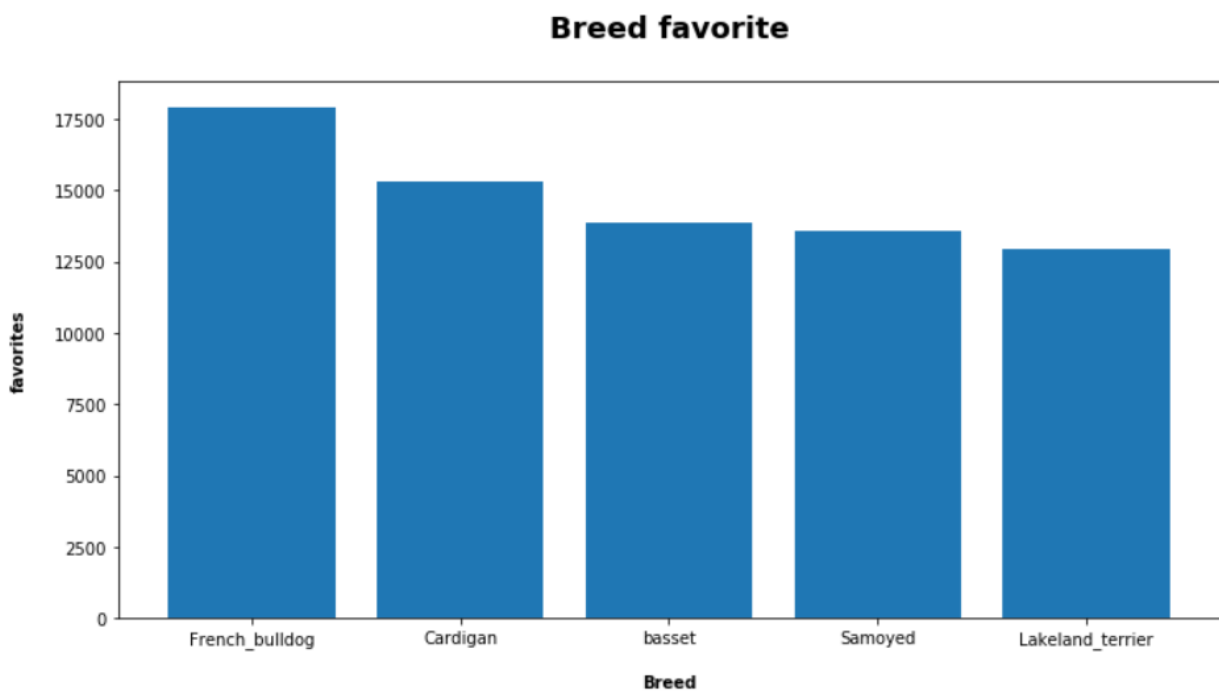
When it comes to rating the top 5 almost totally changes from the first one, we notice that their average ratings are very close one to the other.

#### 4.3 Retweet count:



Once again, the difference is quite insignificant between the breeds of this top 5.

#### 4.4 Favorite count:



This time, the difference in average favorite count is noticeable and this top 5 is close enough from the retweet count top 5 with 3 elements in common.

**Answer:** So, the 4 'metrics' showed 4 different top 5s, which are:

Count:

- Golden retriever
- Labrador retriever
- Pembroke
- Chihuahua
- Pug

Rating:

- Kuvasz
- Eskimo dog
- Samoyed
- Golden retriever
- Chow

Retweet count:

- Eskimo dog
- Great Pyrenees
- French bulldog
- Samoyed
- Cardigan

Favorite count:

- French bulldog
- Cardigan
- Basset
- Samoyed
- Lakeland terrier

Now here is my own top 5, according to the last 4:

- Samoyed (3 appearances in the 4 top 5s)
- French bulldog (2)
- Cardigan (2)
- Eskimo dog (2)
- Golden retriever (2)

### Summary:

To sum up, here are the answers I found to each question:

**Question 1:** What dog type do the users prefer?

**Answer 1:** When it comes to popularity pupper are the most common type of dogs, but when it comes to user preferences, doggo and puppo are the most favored and retweeted type of dogs.

**Question 3:** How does user interaction change over time?

**Answer 3:** User interaction has grown especially in terms of favorite count.

**Question 2:** Does the given rating influence user interaction (retweets and favorites)?

**Answer 2:** Yes, the rating given to the dogs has some influence over the number of retweets and favorites.

**Question 4:** What breed of dogs do the users prefer?

**Answer 4:**

- Samoyed
- French bulldog
- Cardigan
- Eskimo dog
- Golden retriever

