

Top dog analysis

Blog post by Meenakshi Srinivasan

August 24, 2019

The bond between man and dog has grown over tens of thousands of years. A dog provides a special sort of companionship that's hard to have with people. They can be unconditionally loyal and loving. A good dog will be there to lick your wounds even when everyone else in your life leaves you. You can talk to your dog about your problems and he'll just sit and listen without interrupting or judging you. When you have a rough day at work, you can always count on your dog to be waiting for you at the door anxious to get outside and brighten your day. A hunting dog will sit with you in a cold and wet duck blind for hours without whining. Some men even take their dog on a canoe trip.

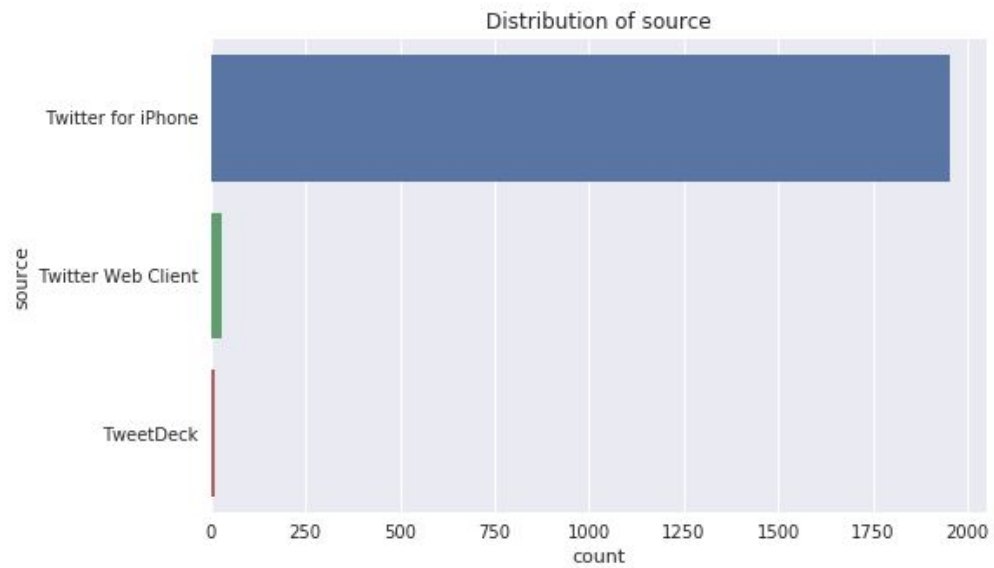
Moreover, some dogs can provide protection to you and your family. Ever loyal, dogs are even willing to sacrifice their lives for yours. Dogs are truly man's best friend. But how do you pick your friend?

That's when I came across WeRateDogs twitter page. It has approximately 5 million followers. The data, which was made available to me, by Udacity has tweets till August 1, 2017. The data is filtered to remove retweets, missing images and tweets dog breed missing.

1. Distribution of source

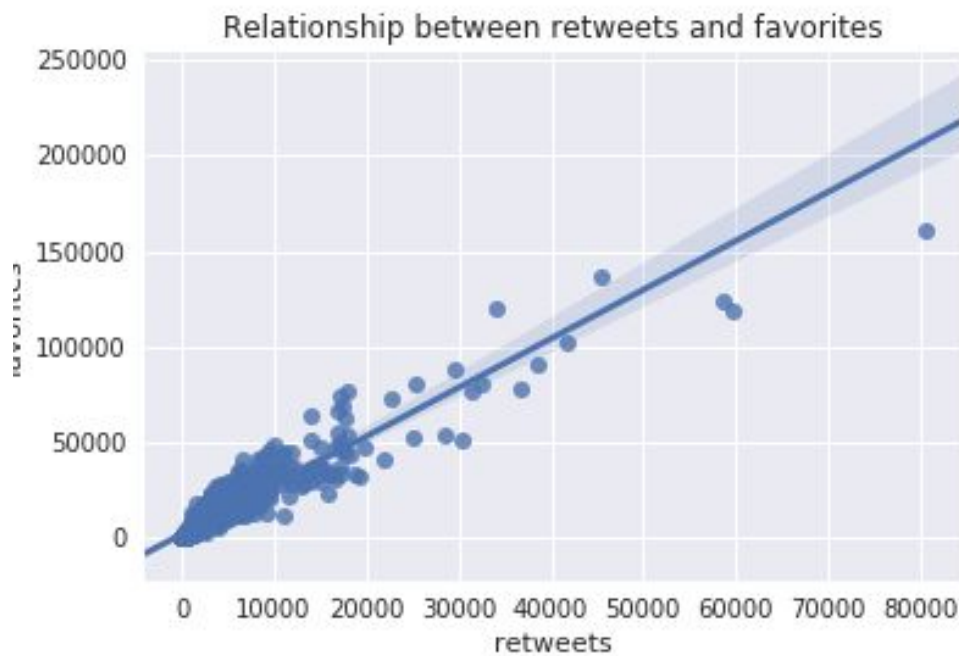
We can see that the dominant source of tweets is from iPhone twitter app, which is 94% in total. That means the twitter app is the main channel for people using to tweet, retweet, post, and others, while the TweetDesk is pretty rare (less than 1%)

```
Twitter for iPhone    1953
Twitter Web Client    28
TweetDeck             11
Name: source, dtype: int64
```



2. Relationship between retweets and favorites

The scatter plot shows a strong positive relationship between 'retweet_count' and 'favorite_count'.



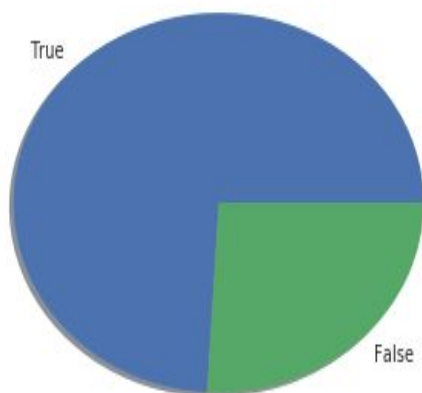
3. Analysis of dog results generated by first algorithm

From the visualization of first algorithm prediction, it is evident that,

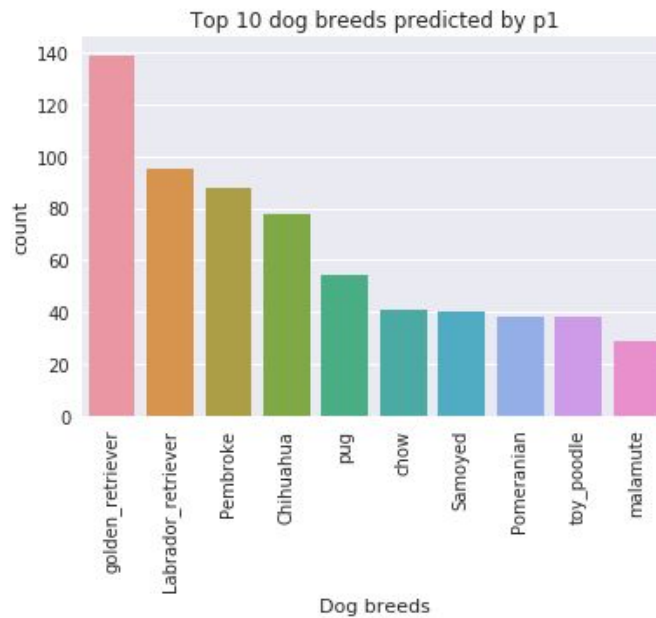
- First algorithm has predicted around 75% of the dog breeds accurately.

```
True      1476
False     516
Name: p1_dog, dtype: int64
```

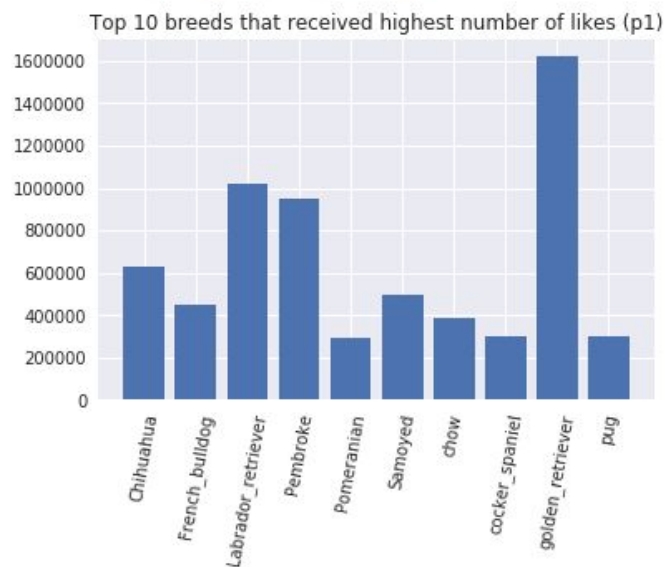
P1 success rate



- 'Golden retriever', 'Labrador retriever' and 'Pembroke' are the top 3 dog breeds analyzed by first algorithm.

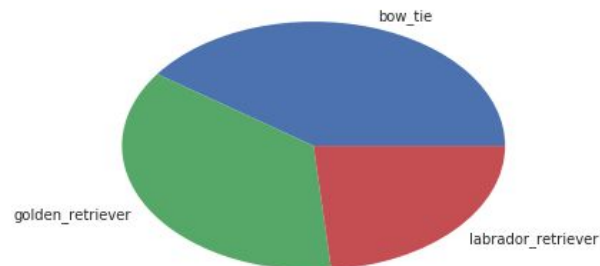


- 'Chihuahua', 'French bulldog' and 'labrador retriever' are the top 3 breeds that received highest number of likes.



- 'Bow tie', 'Golden retriever' and 'Labrador retriever' are the dog breeds that received highest scores.

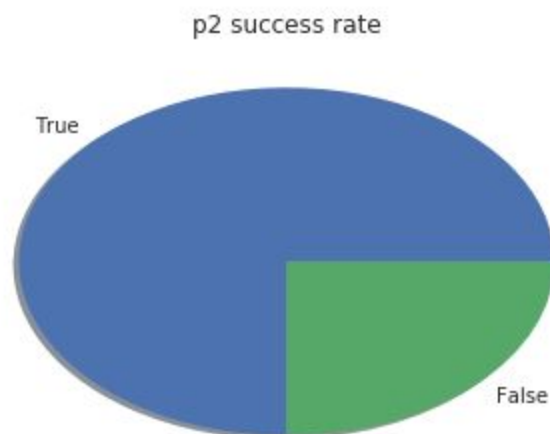
```
p1
bow_tie          180.600000
golden_retriever 163.128571
Labrador_retriever 105.700000
Name: score, dtype: float64
```



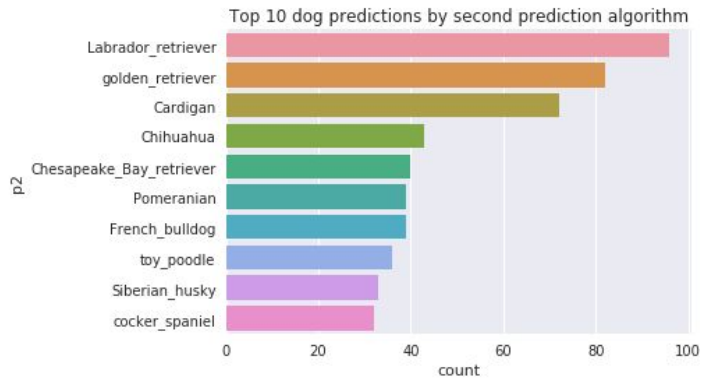
4. Analysis of dog results generated by second algorithm

From the visualization of second algorithm prediction, it is evident that,

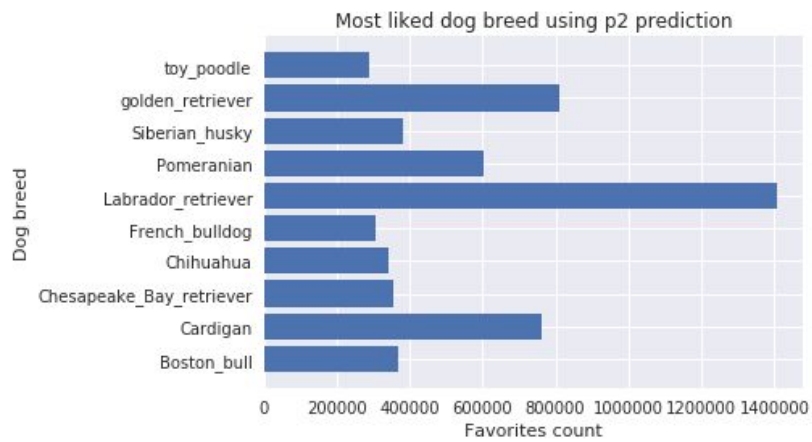
- Second algorithm has predicted around 75% of the dog breeds accurately.



- 'Labrador retriever', 'Golden retriever' and 'Cardigan' are the top 3 dog breeds analyzed by second algorithm.

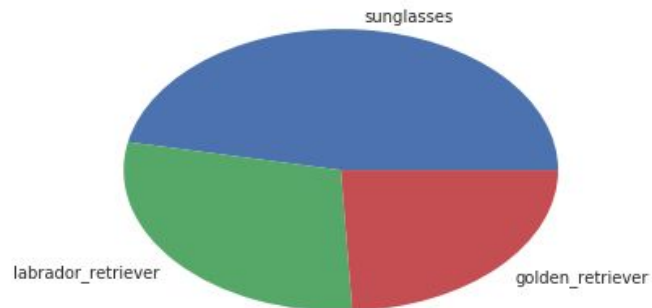


- 'Golden retriever', 'Labrador retriever' and 'Pembroke' are the top 3 breeds that received highest number of likes.

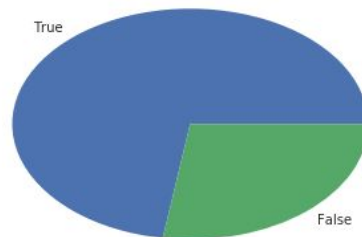


- 'Sunglasses', 'Labrador retriever' and 'Golden retriever' are the dog breeds that received highest scores.

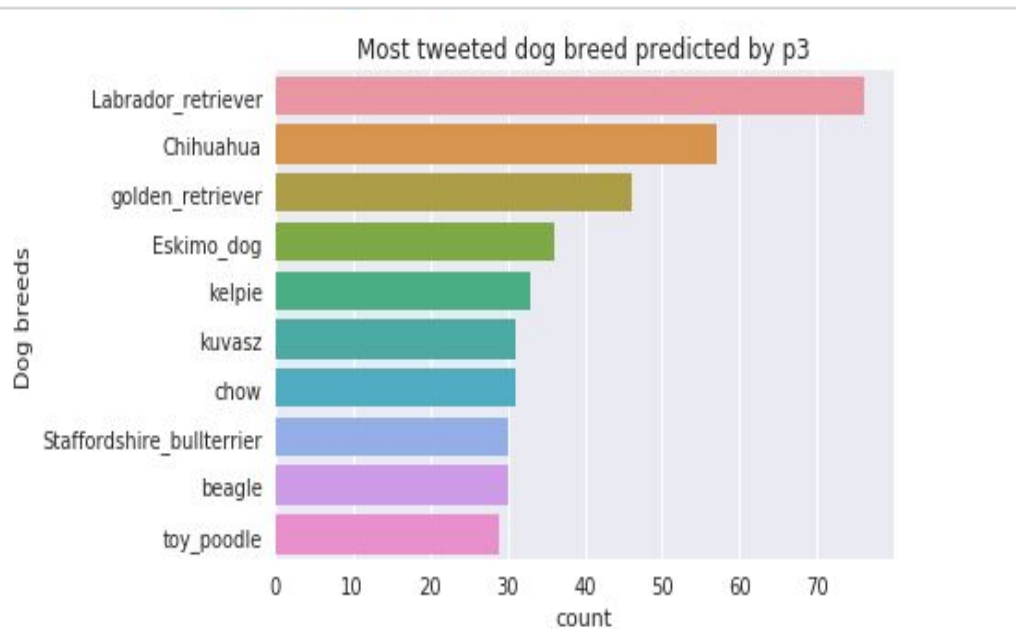
```
p2
sunglasses      180.2
Labrador_retriever  111.8
golden_retriever   93.0
Name: score, dtype: float64
```



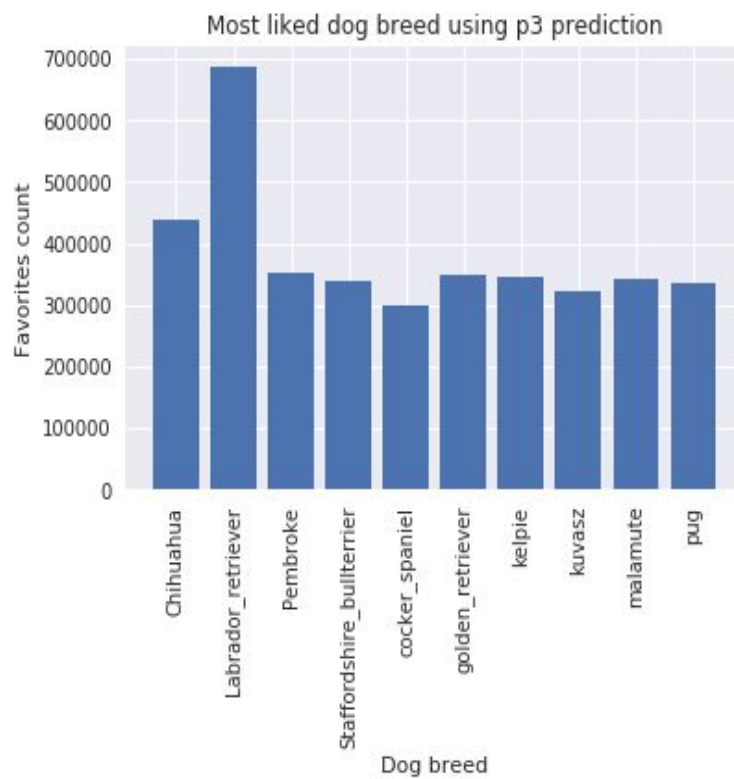
5. From the visualization of third algorithm prediction, it is evident that,
- Third algorithm has predicted around 75% of the dog breeds accurately.



- 'Labrador retriever', 'Chihuahua' and 'Golden retriever' are the top 3 dog breeds analyzed by third algorithm.



- 'Labrador retriever' , 'Chihuahua' and 'Pembroke' are the top 3 breeds that received highest number of likes.



- 'Sunglasses', 'Labrador retriever' and 'Chihuahua' are the dog breeds that received highest scores.


```
p3
sunglass      177.600000
Labrador_retriever  87.528571
Chihuahua     60.800000
Name: score, dtype: float64
```

