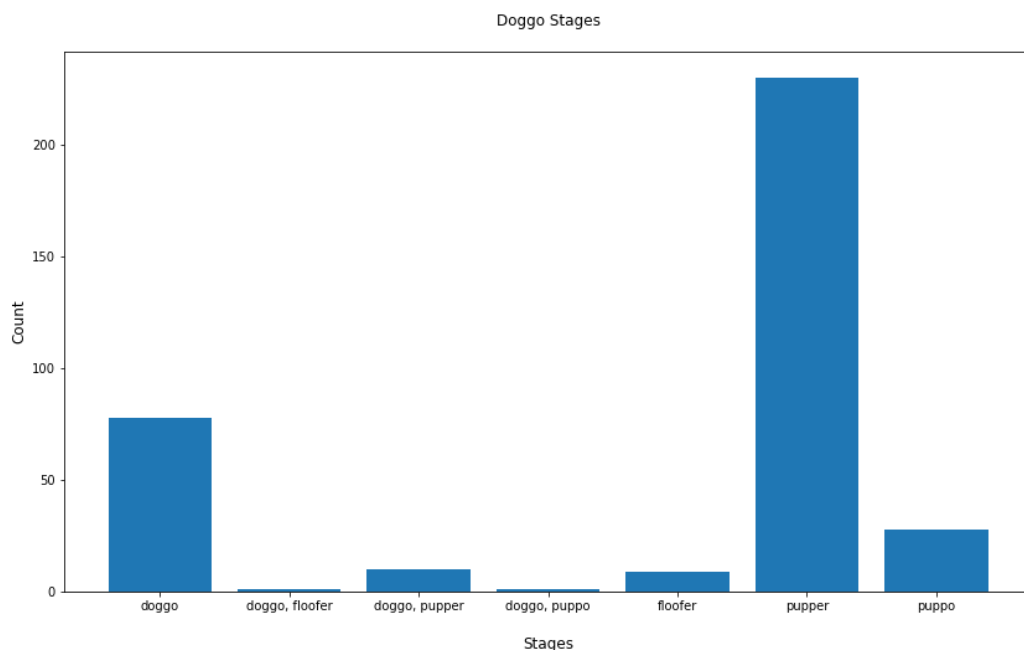# Insights and Visualisations

Total count of dogs' stages. Overall, there are only 357 records with stages out of 2186 tweets. It is a relatively small fraction, but it is good to analyse.

Numeric values:

Stages

stage	
pupper	230
doggo	78
puppo	28
doggo, pupper	10
floofer	9
doggo, floofer	1
doggo, puppo	1

Name: name, dtype: int64

This plot was produced:

Pupper is the best represented stage. It is a stage when a puppy is still small, but not just born. Usually, it is a period of time when a dog is the most playful and tends to get into funny situations. We can assume the owners take pictures when such situations occur, thus we have so many adorable records.

Doggo is the second in total count. This stage characterises the most mature dogs. It means dogs keep 'posing' even after passing a few maturity stages, what is great for the fans of WeRateDogs.

Favorite Count		*Retweet Count*	
stage		stage	
pupper	1504194	pupper	658144
doggo	1277463	doggo	616316
puppo	497319	puppo	178059
doggo, pupper	110429	doggo, pupper	53813
floofer	99580	floofer	37403
doggo, puppo	47844	doggo, puppo	19196
doggo, floofer	17169	doggo, floofer	3433
Name: favorite_count, dtype: int64		Name: retweet_count, dtype: int64	

Even though pupper is the best represented stage in both metrics, doggos also received a large portion of favorite and retweet counts. We can derive that doggos were rather popular.

To check the distribution, the following boxplot was produced:
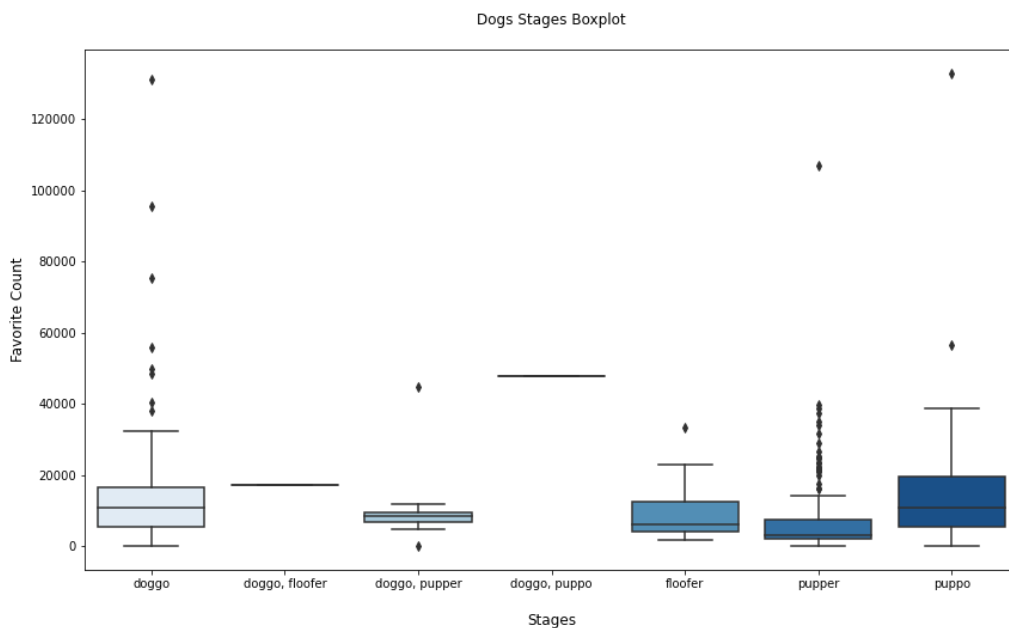
All stages have a median of around 10.000 favorite counts, which proves the popularity of WeRateDogs account. Doggo stage has the highest mean among all stages and some exceptional outliers of more than 40.000 likes. In contrast, pupper has the highest total count, but a relatively low mean.

Next, we looked into top records by favorite and retweet count.

Top favorite:

Here's a super supportive puppo participating in the Toronto #WomensMarch today. 13/10 https://t.co/nTz3FtorBc
LAKELAND TERRIER with 0.20 confidence

Along with finding the image's url, we retrieved a dog's breed with prediction confidence that we stored at df_images_master data frame. It was easy to find the record on key tweet_id.
The most liked dog is a puppo, presumably a Lakeland Terrier with 0.2 confidence participating at womens' march in Toronto. We can assume it was a big event, thus the picture went viral, especially considering it was tweeted with a hashtag to cover more users.

Here's a doggo realizing you can stand in a pool. 13/10 enlightened af (vid by Tina Conrad) https://t.co/7wE9LTEXC4
LABRADOR RETRIEVER with 0.83 confidence

Using the same function as before, we found information on the most retweeted record. It's a Labrador Retriever (with 0.83 confidence wow that's much higher than above) standing in a pool. It also says 'vid by Tina Conrad', very likely it's actually a video (considering the orientation of the picture and poor quality) taken by a phone a few years ago.

How about the 'least' favorite dogs?

Bottom favorite:

RT @dog_rates: This is Lilly. She just parallel barked. Kindly requests a reward now. 13/10 would pet so well https://t.co/SATN4If5H5
LABRADOR RETRIEVER with 0.91 confidence

Just like the most tweeted dog, it is also a labrador retriever (0.91 confident). Despite being the same breed, this adorable puppy received 0 favorite likes. It is possible, because no hashtag was used in the tweet, less people had a chance to share their opinion. This poses questions about the activity of the users over time. Let's have a closer look.

The following plot (below) was produced. It shows some sudden spikes and looks too dense to see any trend. Therefore, we 'zoomed' into the monthly sum of retweets.

Retweets over time

Zooming In

Retweets month-by-month
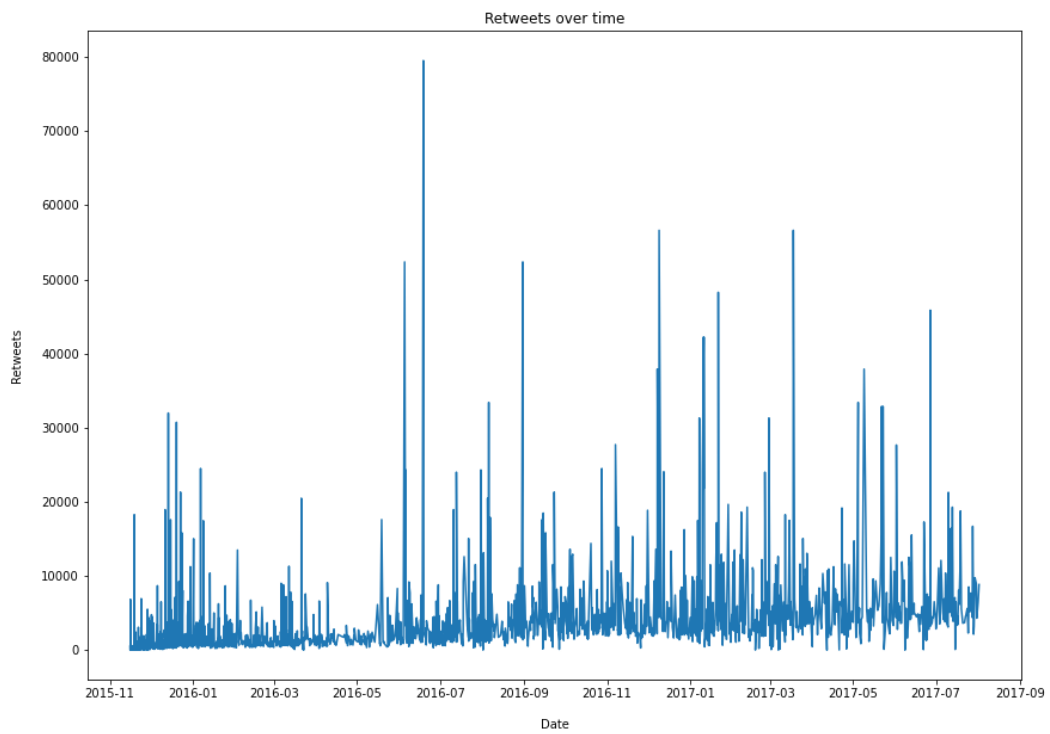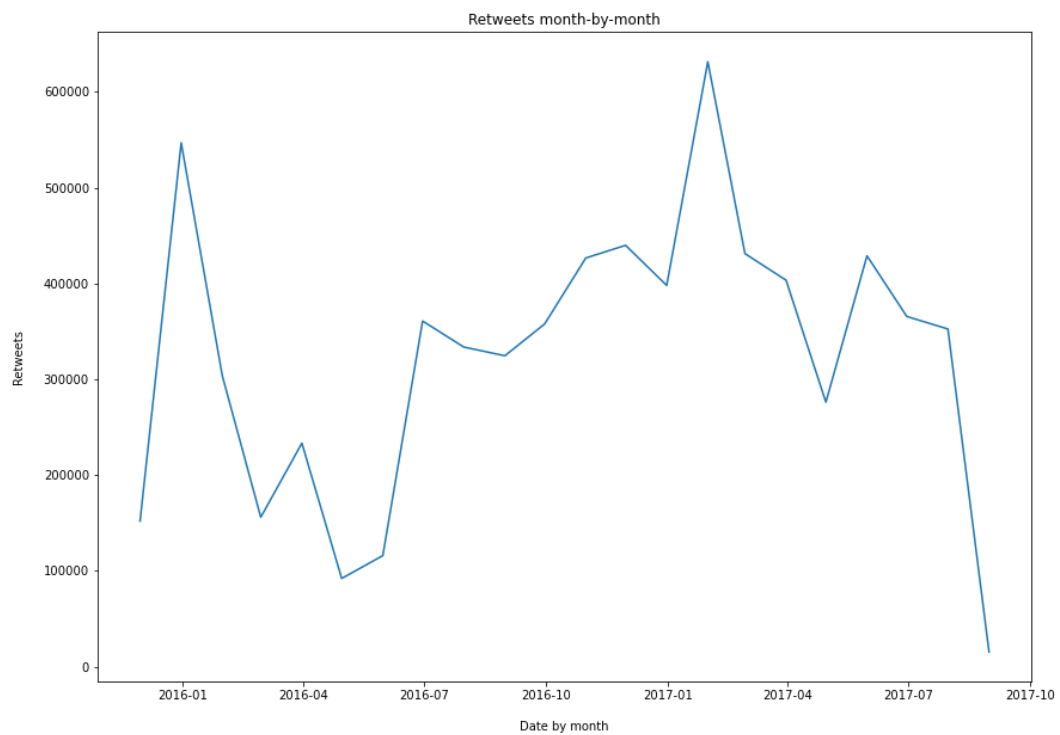
After grouping by month, we could see a more clear trend. Indeed, there were 2 spikes in activity in January 2016 and March 2017, and drops in May 2016. The data stopped its record around August 2017.

The top months had more than half a million total retweets! WeRateDogs was super popular and many people shared their love for dogs via Twitter!