act_report

March 3, 2020

Act Report

0.1 Ananlyzing and Visulaizing the cleaned data

```
In [1]: import numpy as np
        import pandas as pd
        import requests
        import re
        import json
        import matplotlib.pyplot as plt
        from skimage import io
        print("imported needed libraries")
```

```
imported needed libraries
```

```
In [2]: # reading data from the file we saved
        df = pd.read_csv("twitter_archive_master.csv", index_col=0)
```

```
In [3]: # converting timstamp column to the proper data type
        df.timestamp = pd.to_datetime(df.timestamp)
```

```
In [4]: # setting the timestamp as the index in order to make the index meaningful
        df.set_index("timestamp", inplace=True)
```

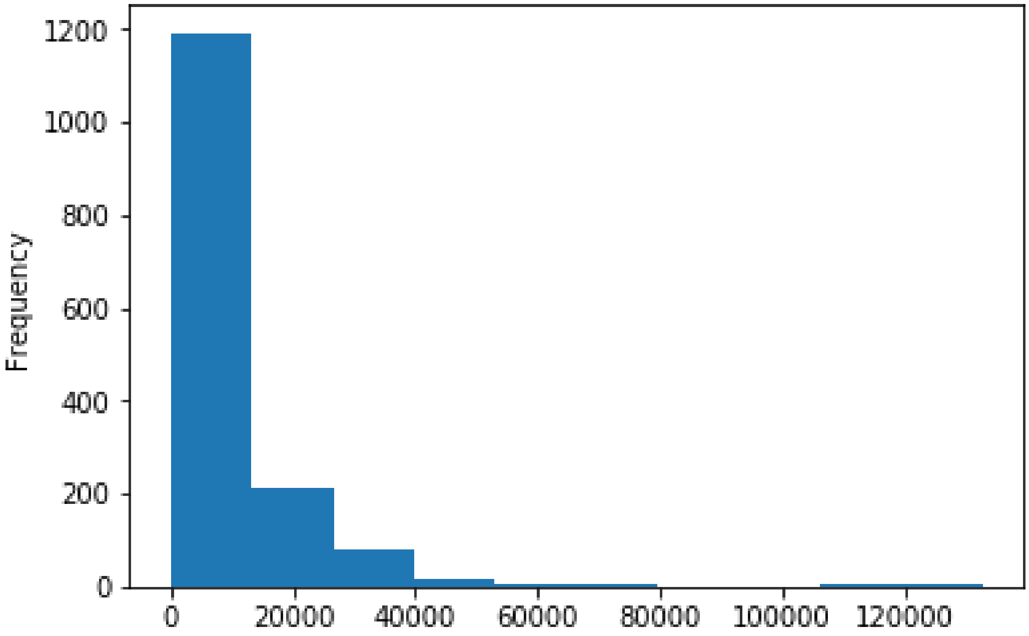
```
In [5]: # showing basic statistics of the numerical columns
        df.describe()
```

```
Out[5]:             tweet_id  rating_numerator  rating_denominator  \
        count  1.516000e+03       1516.000000              1516.0
        mean   7.430682e+17         11.019129                10.0
        std    6.871954e+16          2.421636                 0.0
        min    6.660209e+17          2.000000                10.0
        25%    6.787723e+17         10.000000                10.0
        50%    7.204025e+17         11.000000                10.0
        75%    7.989278e+17         12.000000                10.0
        max    8.921774e+17         75.000000                10.0
```

```
       prediction_accuracy  likes_counter  retweet_counter
count          1516.000000    1516.000000      1516.000000
mean              0.613284    8999.184697      3006.067942
std               0.259728   12532.608750      5138.287926
min               0.044333       0.000000        16.000000
25%               0.389419    1878.750000       678.750000
50%               0.612080    4227.500000      1510.500000
75%               0.848809   11412.250000      3520.000000
max               0.999956  132810.000000     79515.000000
```

In [6]:
```
# showing the likes distribution
df.likes_counter.plot(kind="hist")
```

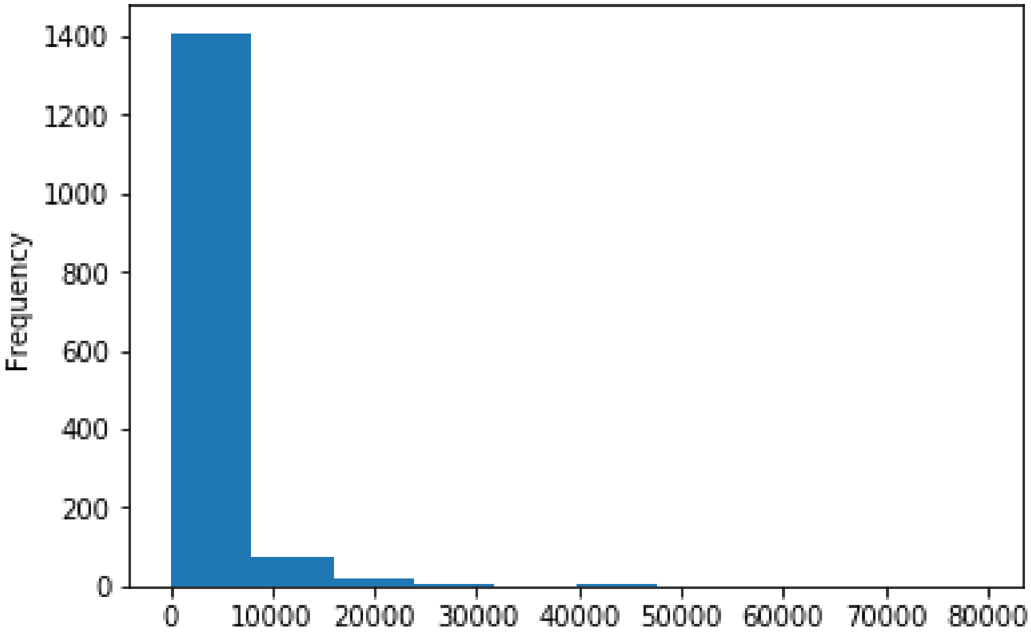
Out[6]:
```
<matplotlib.axes._subplots.AxesSubplot at 0x7f1823bd6048>
```



We can see that most likes ranges between 0 and 20000

In [7]:
```
# showing the retweets number distribution
df.retweet_counter.plot(kind="hist")
```

Out[7]:
```
<matplotlib.axes._subplots.AxesSubplot at 0x7f1823bef6a0>
```



We can see that most retweets ranges between 0 and 10000

```
In [8]: # getting the dog that got the highest likes
        most_liked_dog = df[df.likes_counter==df.likes_counter.max()]
        print("Tweet: ",most_liked_dog.values[0][1])
        print("Page rating: ",str(most_liked_dog.values[0][3]) + "/10")
        print("Name: ",most_liked_dog.values[0][5])
        print("Breed: ",most_liked_dog.values[0][7])
        print("Likes: ",most_liked_dog.values[0][9])
        print("Retweets: ",most_liked_dog.values[0][10])
```

```
Tweet:  Here's a super supportive puppo participating in the Toronto  #WomensMarch today. 13/10
Page rating:  13/10
Name:  nan
Breed:  Lakeland_terrier
Likes:  132810
Retweets:  48265
```

```
In [9]: # showing the picture of the most liked dog
        image = io.imread(most_liked_dog.values[0][6])
        plt.imshow(image)
        plt.title("The most liked dog")
```

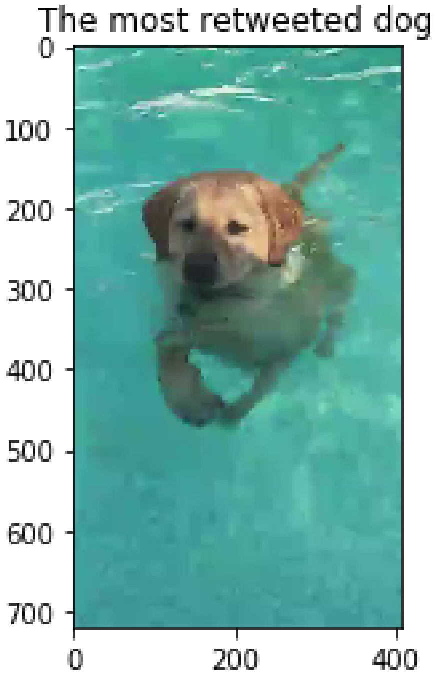
```
Out[9]: Text(0.5,1,'The most liked dog')
```

The most liked dog was Lakeland_terrier breed with around 132810 likes with no name mentioned.

```
In [10]: # getting the dog that got the highest retweets
         most_retweeted_dog = df[df.retweet_counter==df.retweet_counter.max()]
         print("Tweet: ",most_retweeted_dog.values[0][1])
         print("Page rating: ",str(most_retweeted_dog.values[0][3]) + "/10")
         print("Name: ",most_retweeted_dog.values[0][5])
         print("Breed: ",most_retweeted_dog.values[0][7])
         print("Likes: ",most_retweeted_dog.values[0][9])
         print("Retweets: ",most_retweeted_dog.values[0][10])
```

```
Tweet:  Here's a doggo realizing you can stand in a pool. 13/10 enlightened af (vid by Tina Conr
Page rating:  13/10
Name:  nan
Breed:  Labrador_retriever
Likes:  131075
Retweets:  79515
```

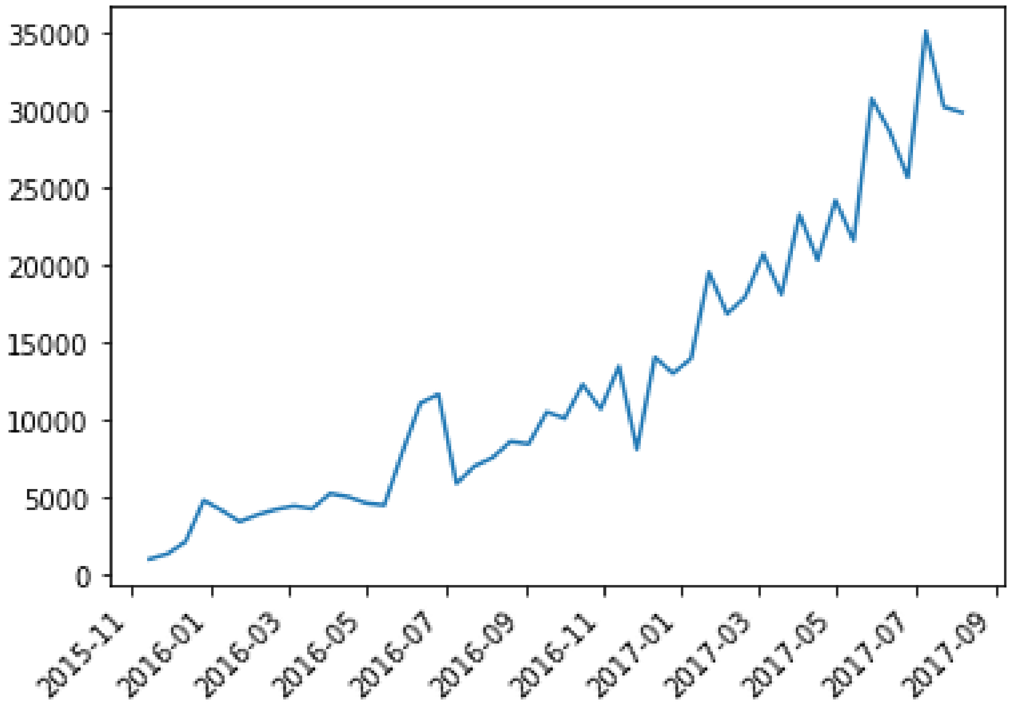
```
In [11]: # showing the picture of the most retweeted dog
         image = io.imread(most_retweeted_dog.values[0][6])
         plt.imshow(image)
         plt.title("The most retweeted dog")

Out[11]: Text(0.5,1,'The most retweeted dog')
```



The most retweeted dog was Labrador_retriever breed with around 79515 retweets and also the name is missing.

```
In [12]: # showing the average likes rate of every two weeks over time
         plt.plot(df.likes_counter.resample("2W").mean())
         plt.xticks(rotation=45, ha='right')
```

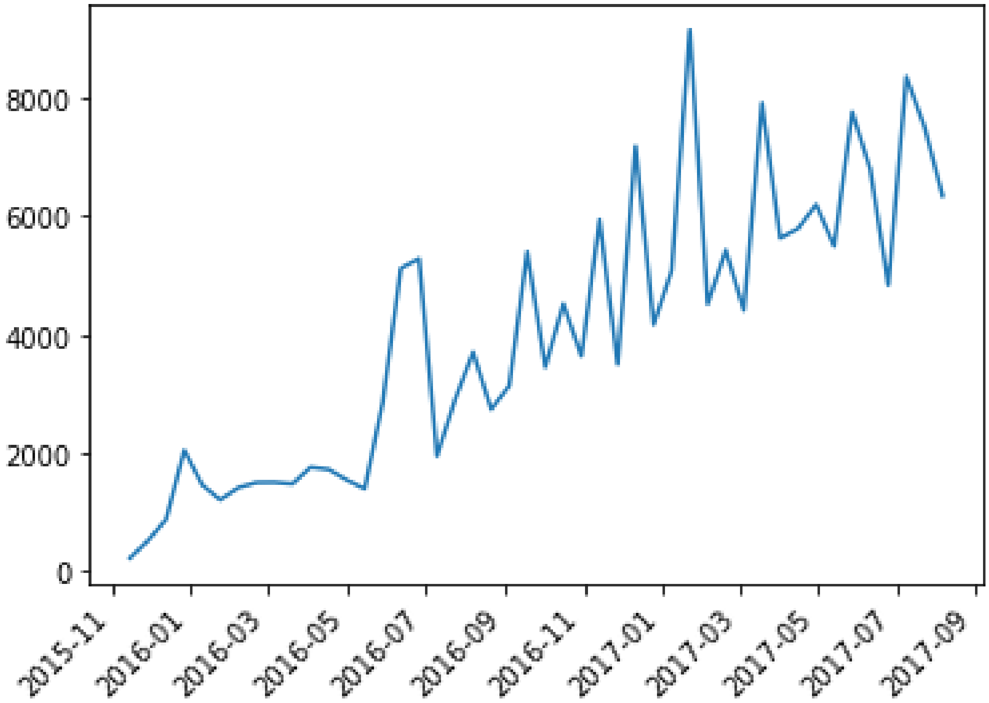
```
Out[12]: (array([ 735903.,  735964.,  736024.,  736085.,  736146.,  736208.,
                  736269.,  736330.,  736389.,  736450.,  736511.,  736573.]),
          <a list of 12 Text xticklabel objects>)
```



We resampled our data for each two weeks and we measured the average of likes, we find that the number of likes is increasing over the time, which may indicate a growth in page followers or an increase in the activity of the page followers.

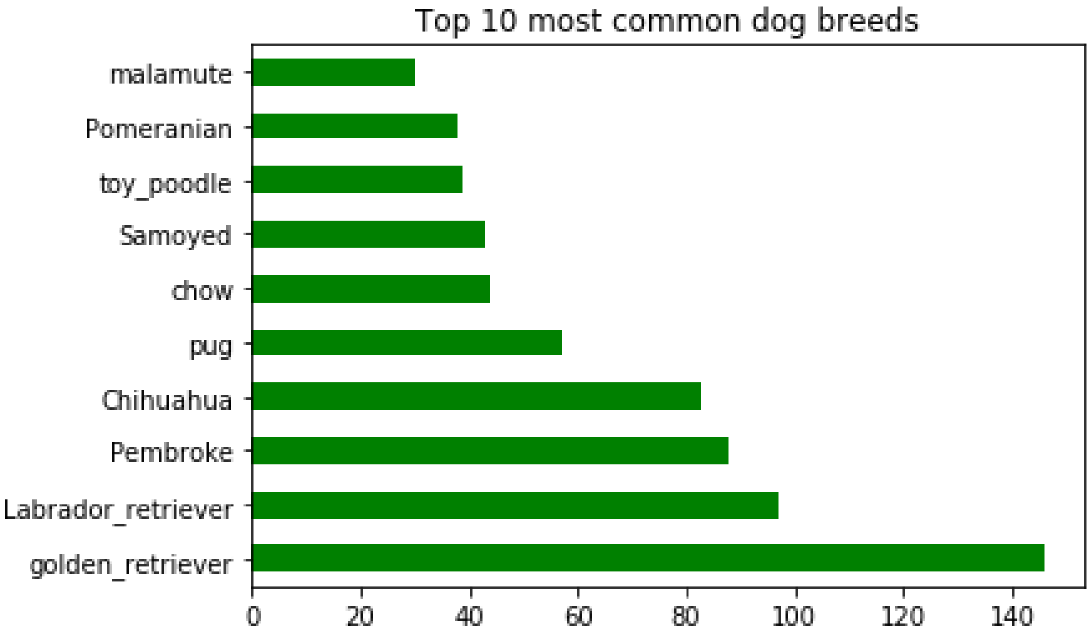
```
In [13]: # showing the average retweet rate of every two weeks over time
         plt.plot(df.retweet_counter.resample("2w").mean())
         plt.xticks(rotation=45, ha='right')
```

```
Out[13]: (array([ 735903.,  735964.,  736024.,  736085.,  736146.,  736208.,
                  736269.,  736330.,  736389.,  736450.,  736511.,  736573.]),
          <a list of 12 Text xticklabel objects>)
```



We also resampled our data for each two weeks and we measured the average of retweet rate. We find that the number of retweets is increasing over the time, which may indicate a growth in page followers or an increase in the activity of the page followers.

```
In [14]: # showing the most common breeds in dogs
         df["dog_prediction"].value_counts()[:10].plot(kind="barh", color='g')
         plt.title("Top 10 most common dog breeds")

Out[14]: Text(0.5,1,'Top 10 most common dog breeds')
```



We also investigated the top 10 common breeds in dogs and we can notice that the most common breed is “Golden retriever” and the lowest is “Malamute”.

```
In [15]: # showing the highest rated dog
         highest_dog_page_rate= df[df["rating_numerator"]==df["rating_numerator"].max()]
         print("Tweet: ",highest_dog_page_rate.values[0][1])
         print("Page rating: ",str(highest_dog_page_rate.values[0][3]) + "/10")
         print("Name: ",highest_dog_page_rate.values[0][5])
         print("Breed: ",highest_dog_page_rate.values[0][7])
         print("Likes: ",highest_dog_page_rate.values[0][9])
         print("Retweets: ",highest_dog_page_rate.values[0][10])
```

```
Tweet:  This is Logan, the Chow who lived. He solemnly swears he's up to lots of good. H*ckin ma
Page rating:  75/10
Name:  Logan
Breed:  Pomeranian
Likes:  20296
Retweets:  7069
```

We also investigate the highly rated dogs by the page using numerator as they have the same denominator, so we can use the numerator only, we can see that “Pomeranian” dog breed is the highest and the dog name is Logan.

```
In [16]: # showing the lowest rated dog
         lowest_dog_page_rate = df[df["rating_numerator"]==df["rating_numerator"].min()]
         print("Tweet: ",lowest_dog_page_rate.values[0][1])
```

```
        print("Page rating: ",str(lowest_dog_page_rate.values[0][3]) + "/10")
        print("Name: ",lowest_dog_page_rate.values[0][5])
        print("breed: ",lowest_dog_page_rate.values[0][7])
        print("Likes: ",lowest_dog_page_rate.values[0][9])
        print("Retweets: ",lowest_dog_page_rate.values[0][10])
```

```
Tweet:  This is Crystal. She's a shitty fireman. No sense of urgency. People could be dying Crys
Page rating:  2/10
Name:  Crystal
breed:  Maltese_dog
Likes:  5916
Retweets:  2880
```

We also investigate the lowest rated dogs by the page using numerator as they have the same denominator, so we can use the numerator only, we can see that “Maltese dog” breed is the lowest and the dog name is Crystal.

0.2 Conclusion:

0.2.1 Having looked at these insights, it may gives you an idea if you like dogs or recommendation about the most liked dogs. In addition, it may help you to know what are the common dogs in the market and it may be a simple advice, if you are looking for a dog to buy and want your dog to be cute.