act_report

April 13, 2018

0.1 Analyzing, and Visualizing Data

WeRateDogs dateset after wrangling... By Prasad Kintali

```
In [1]: import matplotlib
        import matplotlib.pyplot as plt
        import pandas as pd
        import datetime as dt
        import seaborn as sns; sns.set(style="ticks", color_codes=True)
        import numpy as np

        %matplotlib inline
```

```
In [2]: WeRateDogs_master = pd.read_csv('twitter_archive_master.csv')
```

```
In [3]: WeRateDogs_master.info()
```

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 2174 entries, 0 to 2173
Data columns (total 15 columns):
tweet_id              2174 non-null int64
tweet_time            2174 non-null object
tweet_source          2174 non-null object
tweet_text            2174 non-null object
tweet_url             2174 non-null object
rating_numerator      2174 non-null float64
rating_denominator    2174 non-null int64
dog_name              2174 non-null object
jpg_url               1994 non-null object
tweet_retweet         1420 non-null float64
tweet_favorite        1420 non-null float64
dog_type              367 non-null object
dog_gender            901 non-null object
predictions           1686 non-null object
confidence            2174 non-null float64
dtypes: float64(4), int64(2), object(9)
memory usage: 254.8+ KB
```

```
In [4]: ### Change the datatypes of some of the columns
        WeRateDogs_master['tweet_time'] = pd.to_datetime(WeRateDogs_master['tweet_time'])
        WeRateDogs_master['dog_gender'] = WeRateDogs_master['dog_gender'].astype('category')
```

```
In [5]: WeRateDogs_master.info()
```

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 2174 entries, 0 to 2173
Data columns (total 15 columns):
tweet_id              2174 non-null int64
tweet_time            2174 non-null datetime64[ns]
tweet_source          2174 non-null object
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tweet_url             2174 non-null object
rating_numerator      2174 non-null float64
rating_denominator    2174 non-null int64
dog_name              2174 non-null object
jpg_url               1994 non-null object
tweet_retweet         1420 non-null float64
tweet_favorite        1420 non-null float64
dog_type              367 non-null object
dog_gender            901 non-null category
predictions           1686 non-null object
confidence            2174 non-null float64
dtypes: category(1), datetime64[ns](1), float64(4), int64(2), object(7)
memory usage: 240.1+ KB
```
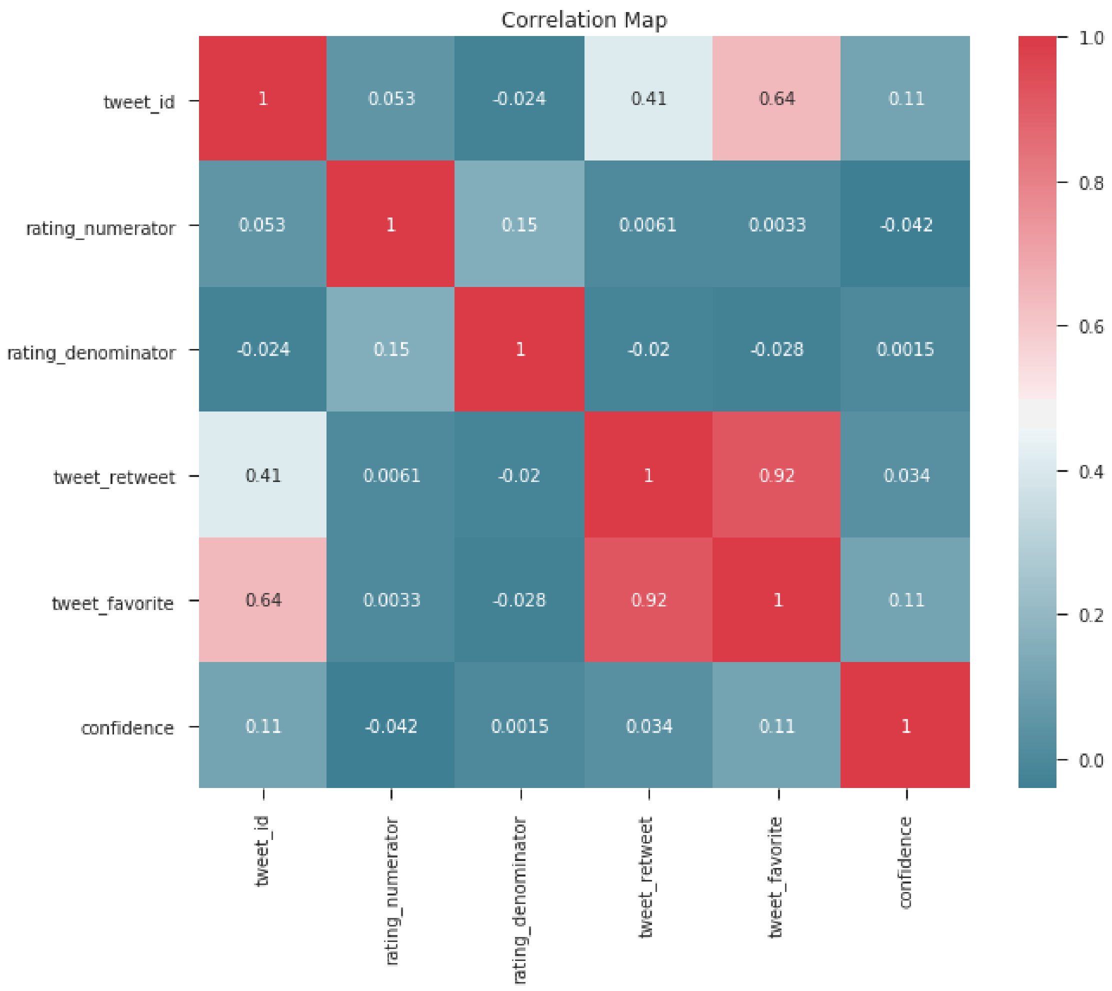

0.1.1 Plot correlation between some of the variable in the dataset

```
In [6]: f, ax = plt.subplots(figsize=(10, 8))
        corr = WeRateDogs_master.corr()
        sns.heatmap(corr, mask=np.zeros_like(corr, dtype=np.bool), cmap=sns.diverging_palette(22
                    annot=True)
        plt.title('Correlation Map')
```

```
Out[6]: Text(0.5,1,'Correlation Map')
```



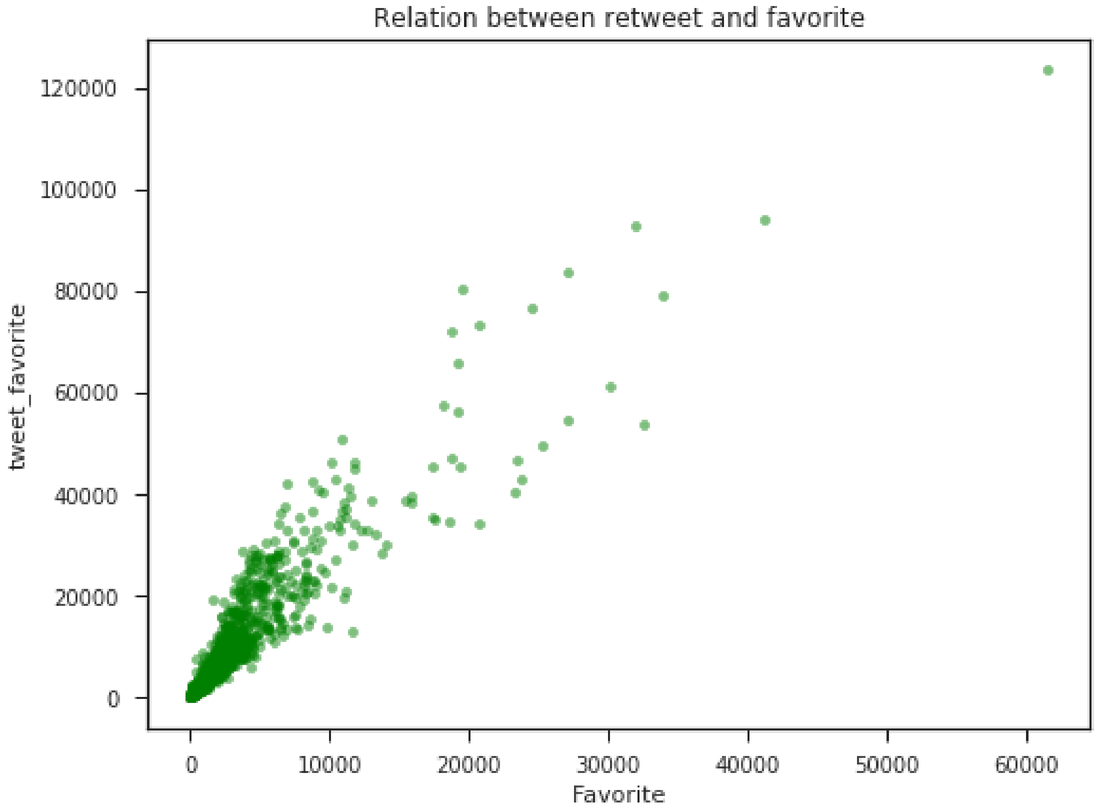
- The only strong correlation we see here is between tweet_favorites and tweet_retweet, this is normal (more favorites mean more retweets)
- Ignore the correlation 1, bacause it is the correlation between the same field

Let dig more into the relation between tweet_favorites and tweet_retweet

0.1.2 Retweet and Favorites

```
In [7]: WeRateDogs_master.plot(x= 'tweet_retweet', y = 'tweet_favorite', kind = 'scatter', alpha
        plt.xlabel('Retweet')
        plt.xlabel('Favorite')
        plt.title('Relation between retweet and favorite')
```

```
Out[7]: Text(0.5,1,'Relation between retweet and favorite')
```



As the correlation map shows if the count of retweet is high the count of favorites go high

Also I would like to show here the tweet with maximimum retweet and favorite counts

```
In [8]: print("The maximum retweeted tweet is {} with {} retweets". format(WeRateDogs_master.ilo
                                                                      WeRateDogs_master.ilo
```

```
The maximum retweeted tweet is https://twitter.com/dog_rates/status/807106840509214720/video/1 w
```

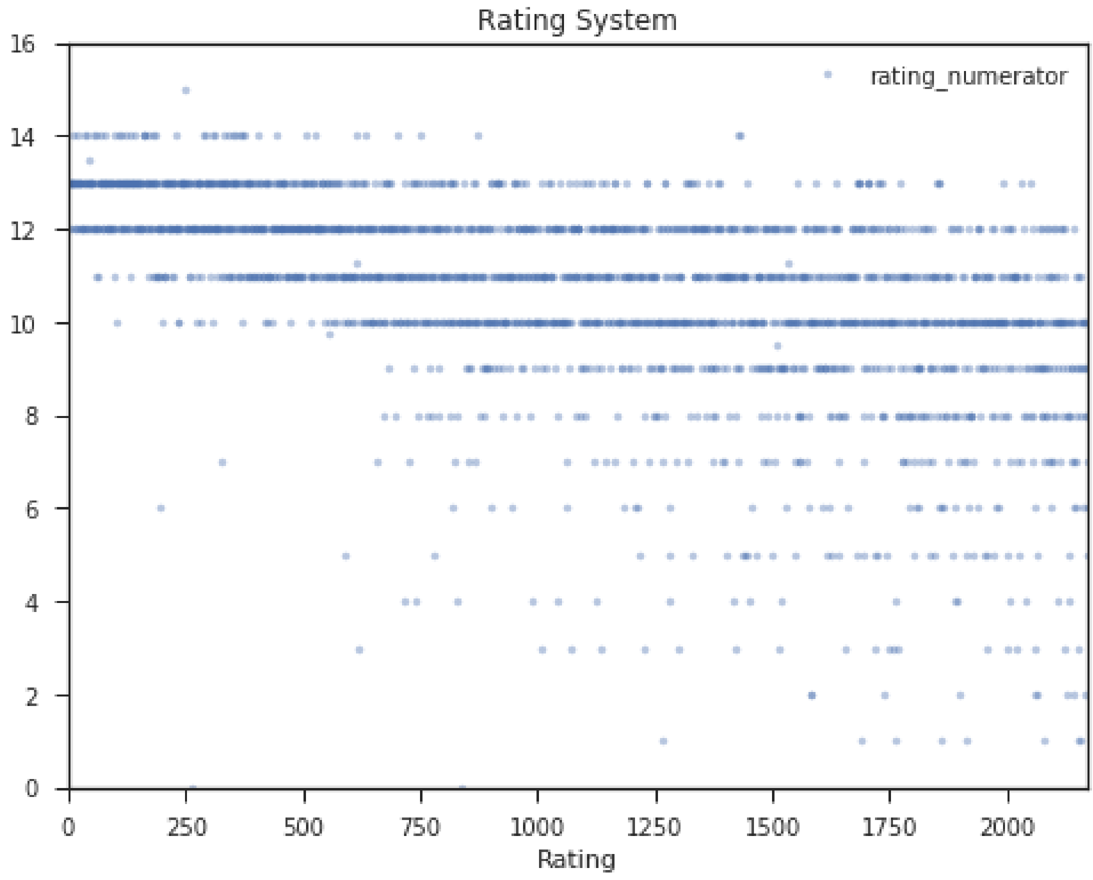
```
In [9]: print("The favorite tweet is {} with {} number of likes". format(WeRateDogs_master.iloc[
                                                                      WeRateDogs_master.ilo
```

```
The favorite tweet is https://twitter.com/dog_rates/status/807106840509214720/video/1 with 12345
```

0.1.3 Rating

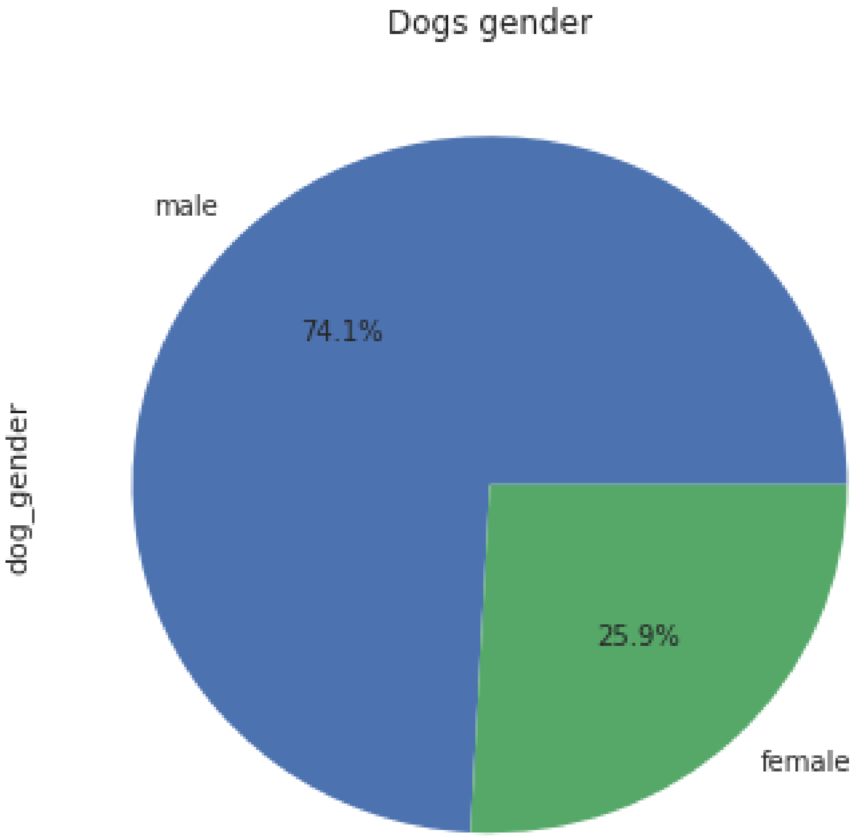
```
In [10]: WeRateDogs_master.plot(y= 'rating_numerator', ylim=[0,16], style = '.', alpha = .4,  fi
         plt.xlabel('Retweet')
         plt.xlabel('Rating')
         plt.title('Rating System')
```

```
Out[10]: Text(0.5,1,'Rating System')
```



0.1.4 Dog Genders

```
In [11]: WeRateDogs_master.dog_gender.value_counts().plot(kind = 'pie', autopct='%1.1f%%', figsi
         plt.title('Dogs gender')

Out[11]: Text(0.5,1,'Dogs gender')
```



```
In [12]: # Which gender had high ratings
         WeRateDogs_master.groupby('dog_gender').rating_numerator.mean()
```

```
Out[12]: dog_gender
         female    11.830472
         male      10.739895
         Name: rating_numerator, dtype: float64
```

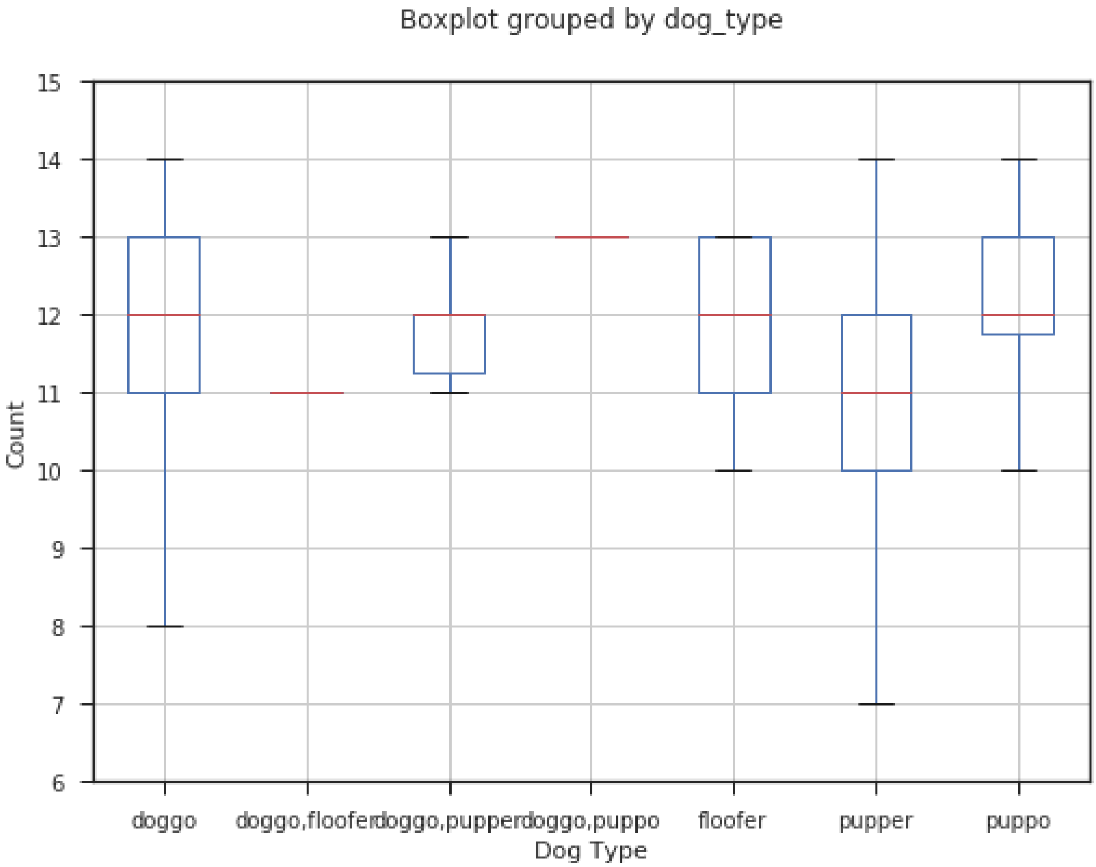
According the above anlysis, we have 74% male dogs, where as we have only 26% of female dogs. But the average rating for the female dogs are above than the male dogs.

0.1.5 Famous dog Stages

```
In [13]: WeRateDogs_master.boxplot(column = ['rating_numerator'], by = ['dog_type'], figsize=(8,
         plt.title('')
         plt.ylim(6,15)
         plt.xlabel('Dog Type')
         plt.ylabel('Count')
```

```
/opt/conda/lib/python3.6/site-packages/numpy/core/fromnumeric.py:57: FutureWarning: reshape is d
  return getattr(obj, method)(*args, **kwds)
```

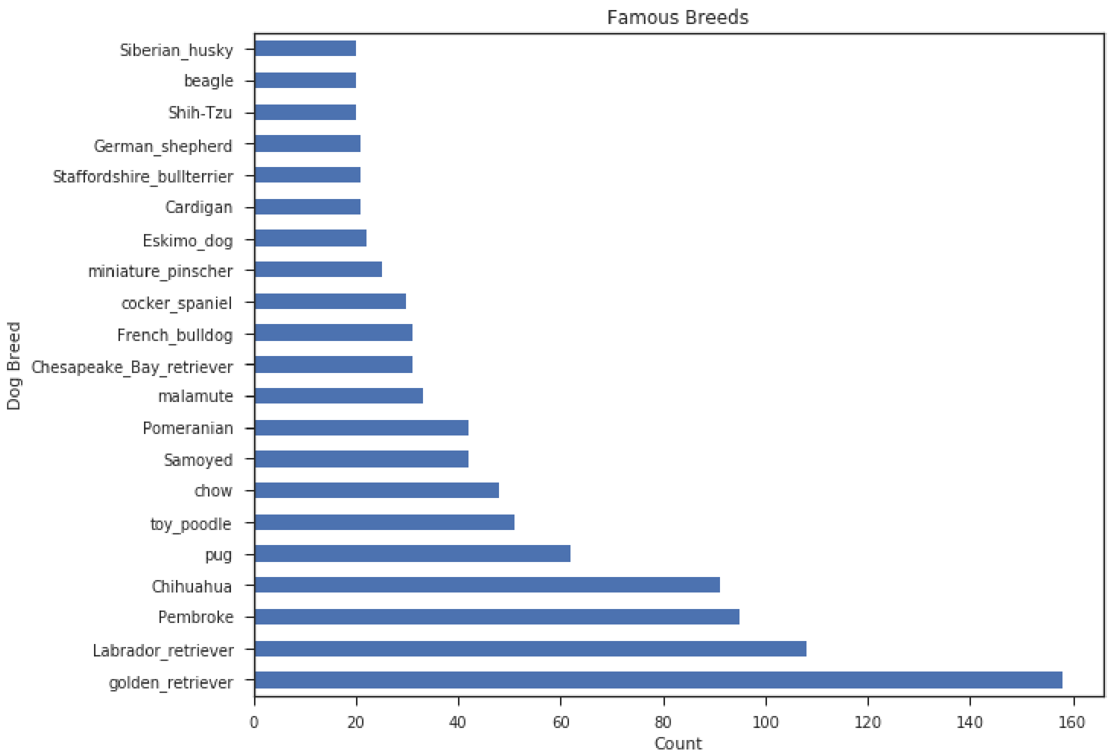
```
Out[13]: Text(0,0.5,'Count')
```



0.1.6 Famous Breeds

```
In [14]: WeRateDogs_by_breed = WeRateDogs_master.groupby('predictions').filter(lambda x: len(x)

         WeRateDogs_by_breed.predictions.value_counts().plot(kind = 'barh', figsize=(10,8))
         plt.ylabel('Dog Breed')
         plt.xlabel('Count')
         plt.title('Famous Breeds')
```

```
Out[14]: Text(0.5,1,'Famous Breeds')
```



- Top two famous breeds are : Golden_retriver and Labrador_retriver according to a meural network that can classify breeds of dogs

0.2 Conclusion

The Twitter account WeRateDogs (@dog_rates) is devoted to humorously reviewing pictures of dogs doing adorable poses. Dogs are rated on a scale of one to ten, but are invariably given ratings in excess of the maximum, such as “13/10”. It has acquired over 4.50 million followers since its debut.

If you are thinking of adopting a dog, get a floof(er) - far away from being pupper at least still in the stage of puppo yet not a doggo to live more togother - take pictures, send it to @dog_rates and get funny cute comments with high rates :)