Udacity Data Engineer Nanodegree – Twitter We Rate Dogs Dataset – Act Report – Data Visualization & Insights

My name is Aseem Narula, I am currently working as a Data Engineer at NatWest Group. I have undertaken the Data Engineer Nanodegree.

In this report, I will write down my effort on the “Wrangle and Analyze Data” module in Twitter We Rate Dogs Dataset – Act Report – Data Visualization & Insights.

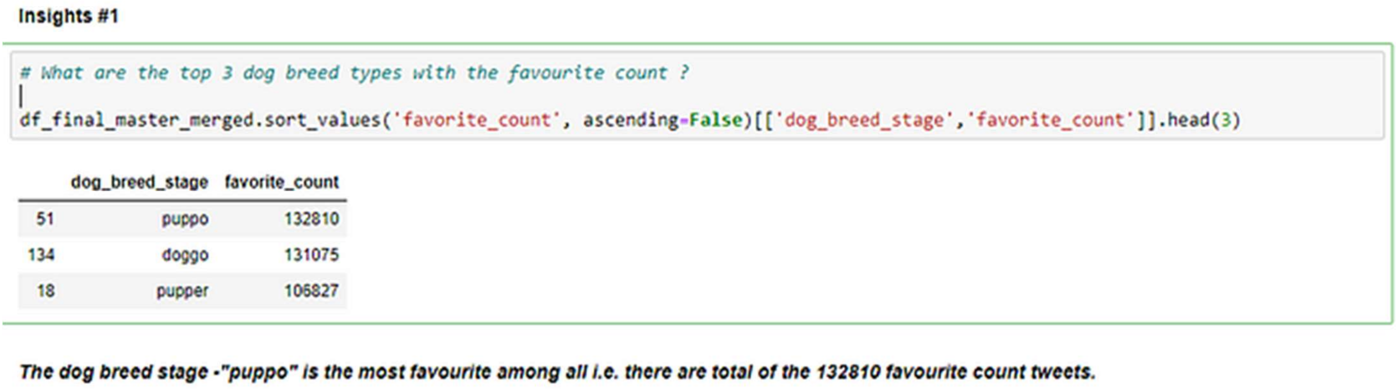
Data Visualization & Insights on Wrangled Data

Once tidy master dataset “**df_final_master_merged“** gathered, assessed, and cleaned master dataset(s) to a CSV file with the name - **"twitter_archive_master.csv".**

Now it’s time to present the insights on the cleaned wrangled data.

Now, our data is ready for the data visualization and lets find some interesting insights, I will try to answer the following questions through this.

Insights #1 — What are the top 3 dog breed types with the favourite count?



Insights #1

```
# What are the top 3 dog breed types with the favourite count ?

df_final_master_merged.sort_values('favorite_count', ascending=False)[['dog_breed_stage','favorite_count']].head(3)
```

	dog_breed_stage	favorite_count
51	puppo	132810
134	doggo	131075
18	pupper	106827

The dog breed stage -"puppo" is the most favourite among all i.e. there are total of the 132810 favourite count tweets.

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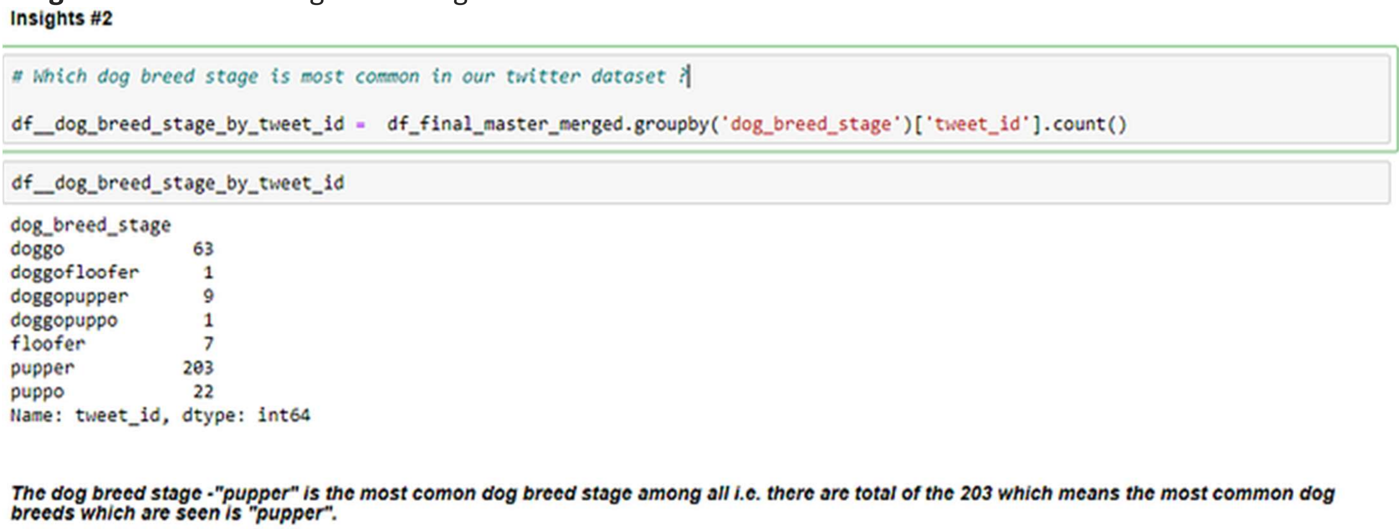
Insights #2 — Which dog breed stage is most common in our twitter dataset?



Insights #2

```
# Which dog breed stage is most common in our twitter dataset ?

df__dog_breed_stage_by_tweet_id =  df_final_master_merged.groupby('dog_breed_stage')['tweet_id'].count()
```

```
df__dog_breed_stage_by_tweet_id
```

```
dog_breed_stage
doggo           63
doggofloofer     1
doggopupper      9
doggopuppo       1
floofer          7
pupper         203
puppo           22
Name: tweet_id, dtype: int64
```

The dog breed stage -"pupper" is the most comon dog breed stage among all i.e. there are total of the 203 which means the most common dog breeds which are seen is "pupper".

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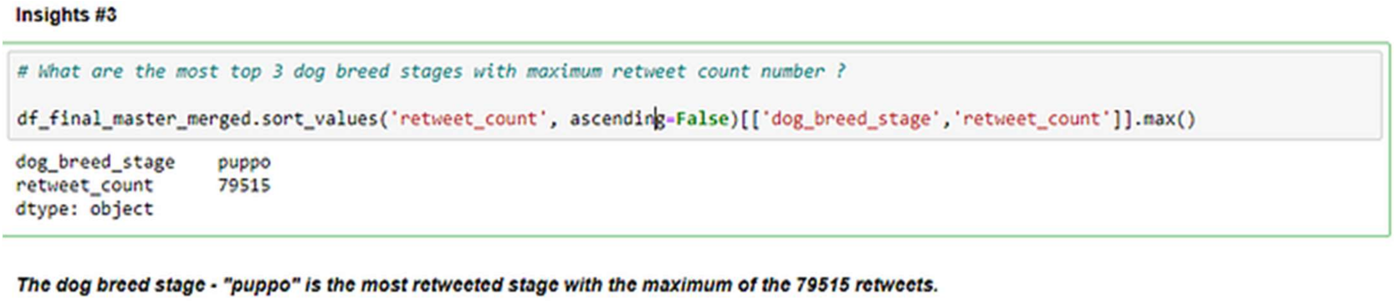
Insights #3 — What are the most top 3 dog breed stages with maximum retweet count number ?



Insights #3

```
# What are the most top 3 dog breed stages with maximum retweet count number ?

df_final_master_merged.sort_values('retweet_count', ascending=False)[['dog_breed_stage','retweet_count']].max()
```

```
dog_breed_stage    puppo
retweet_count      79515
dtype: object
```

The dog breed stage - "puppo" is the most retweeted stage with the maximum of the 79515 retweets.

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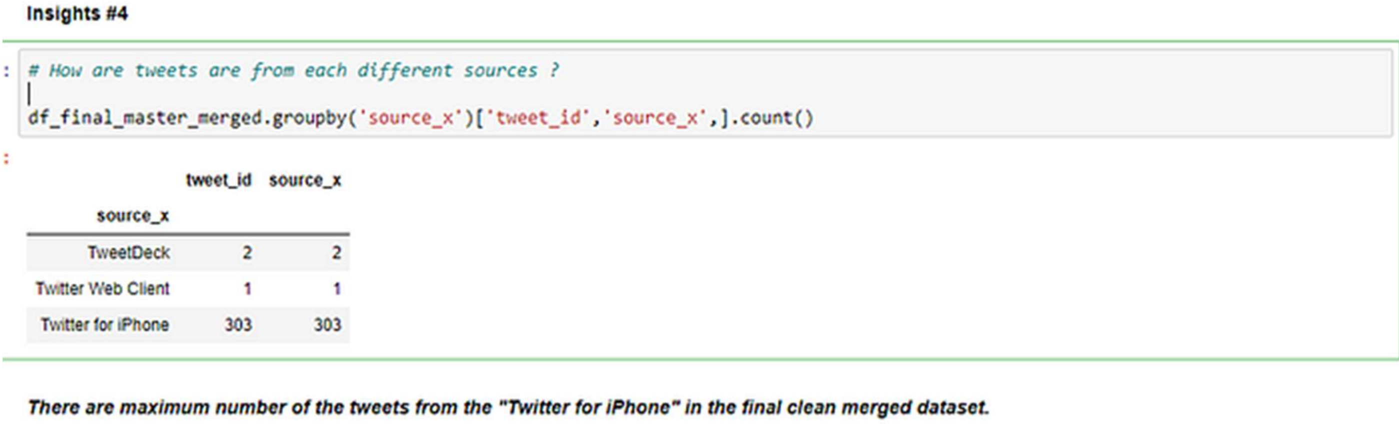
Insights #4 — How are tweets are from each different sources ?



Insights #4

```
# How are tweets are from each different sources ?

df_final_master_merged.groupby('source_x')['tweet_id','source_x',].count()
```

	tweet_id	source_x
source_x		
TweetDeck	2	2
Twitter Web Client	1	1
Twitter for iPhone	303	303

There are maximum number of the tweets from the "Twitter for iPhone" in the final clean merged dataset.

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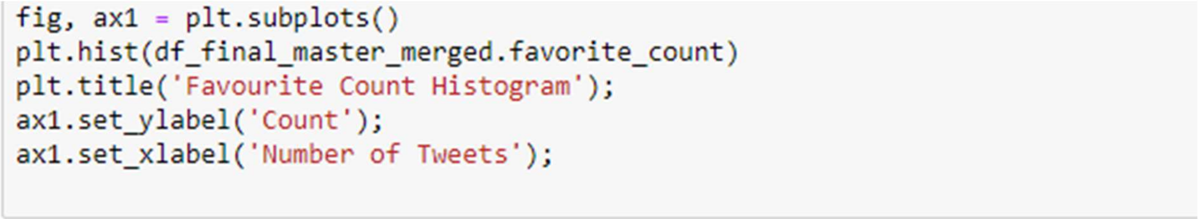
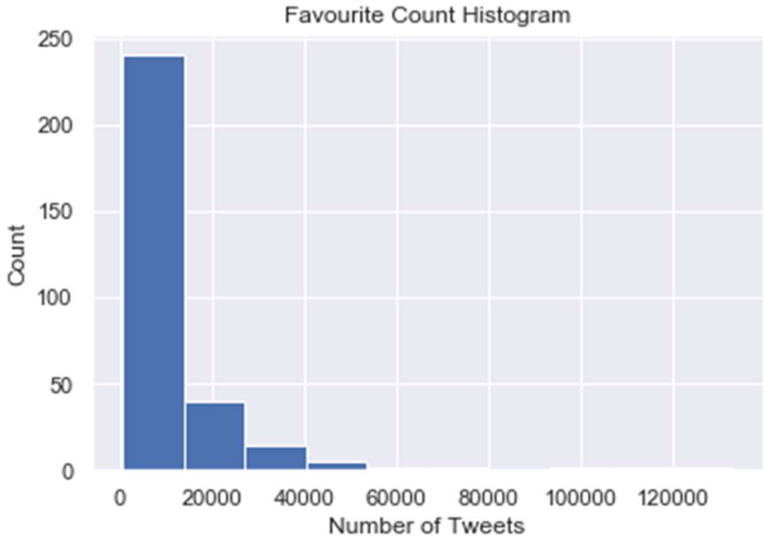
Data Visualization

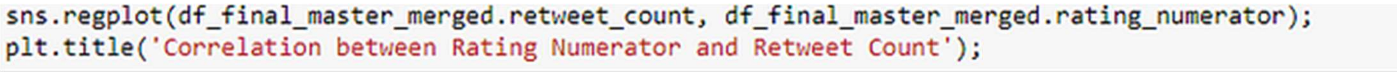
Plotting histogram for the favourite count column variable- The number of tweets which are marked as "favourite tweets" are maximized in the range of the 200–250 where are least favourite tweets are in the range of the 40000–60000.



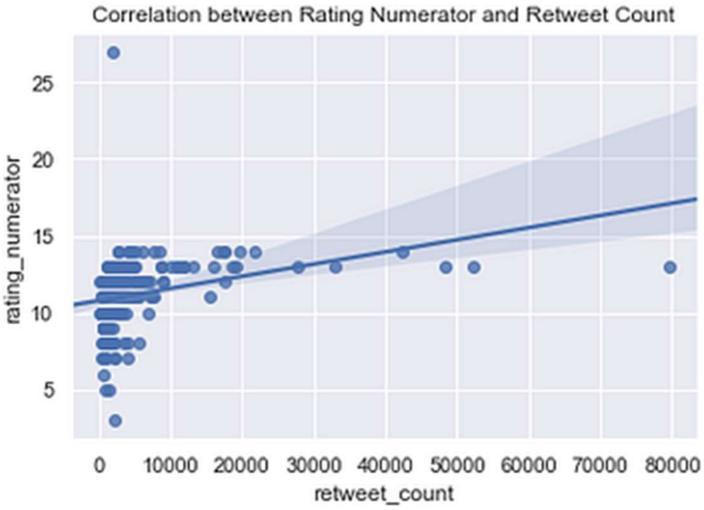
```
fig, ax1 = plt.subplots()
plt.hist(df_final_master_merged.favorite_count)
plt.title('Favourite Count Histogram');
ax1.set_ylabel('Count');
ax1.set_xlabel('Number of Tweets');
```



Checking the correlation between the Rating Numerator and the Retweet Count,
We can see that there is direct correlation between the rating numerator and retweet count, the tweet/post which are having higher rating numerator are mostly retweet in the range starting from the 60000 to 80000.



```
sns.regplot(df_final_master_merged.retweet_count, df_final_master_merged.rating_numerator);
plt.title('Correlation between Rating Numerator and Retweet Count');
```


Correlation between Rating Numerator and Retweet Count
rating_numerator
retweet_count