D398 Data Wrangling Project

**Introduction:** The purose of this project is to gather data from three different sources, remediate issues of tidiness and quality, then combine all 3 into one data frame and then validate this file by reporting insightsm

- **Process**
- Gather data, the data sources will be:
    - twitter_archive_enhanced.csv
    - image_predictions.tsv
    - tweet_json.txt
- Import data and create DataFrames.
- Inspect data, report findings for quality and tidiness deficiencies.
- perform remediations on items reported above.
- Merge the 3 DataFrames into 1.
- Report insights on this DataFrame.

Thoughts, insights and findings:
Thoughts:

I found this to be a valuable exercise as it gave me the opportunity to work with the following items / concepts:

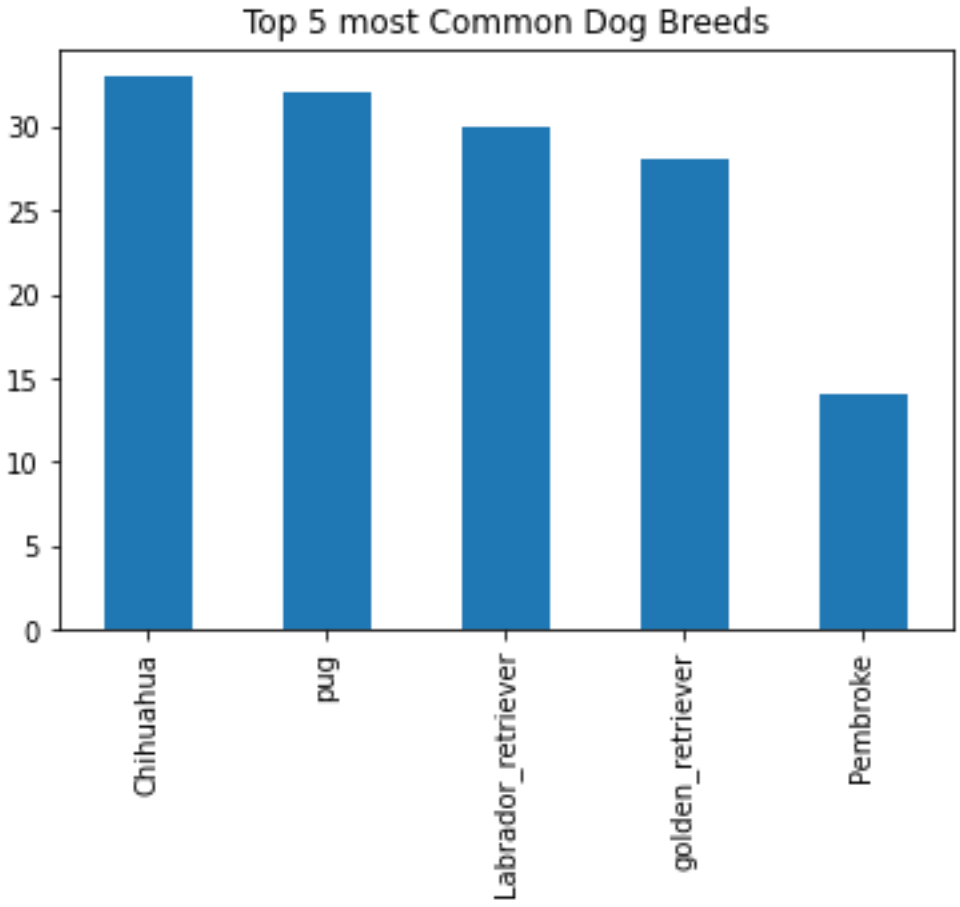
- Merging data frames. As I was familiar with joins from SQL this was not a new idea for me; however, I could easily see the value for future work in Python / Pandas.
- Pandas pivot table functions! Highly informative, the, pivot tables are a valuable tool for aggregating data. Doing visualizations for this project gave me a good introduction to using pivot tables with dataFrames. This an excellent method to associate aggregate data
- I am not certain the value of the twitter data, maybe it is because I am not much of a Twitter user but I was unable to see the value this brought to the project.
- Some off the data presented seemed pointless such as img_num in the image predictions file – was this the number of images or the image sequence number, regardless of answer this seemed pointless.

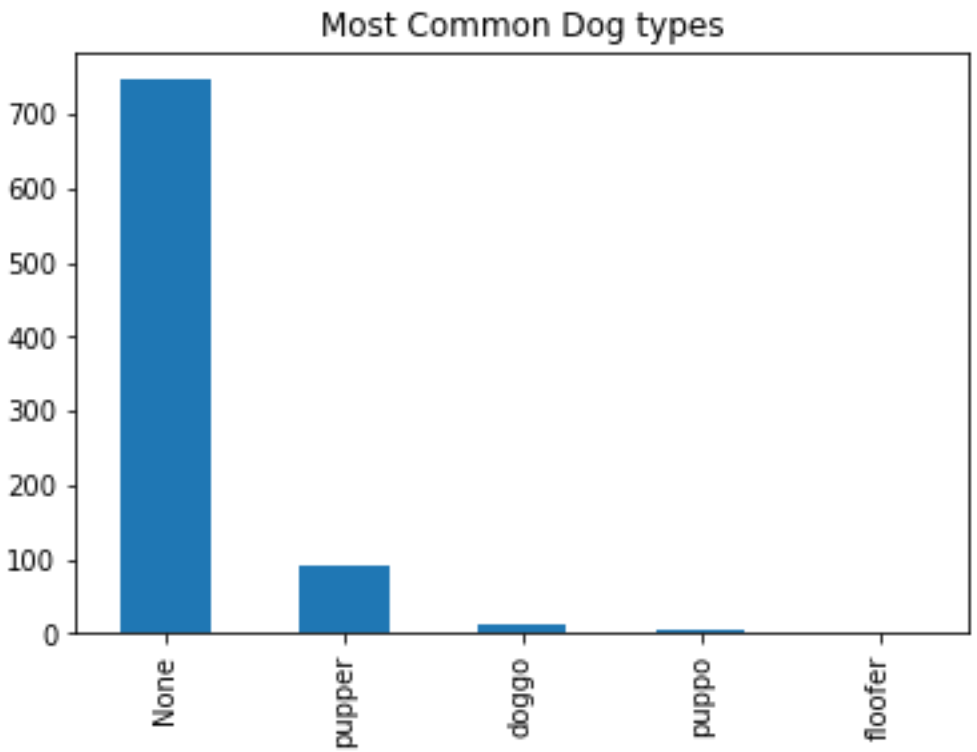
Insights and findings:

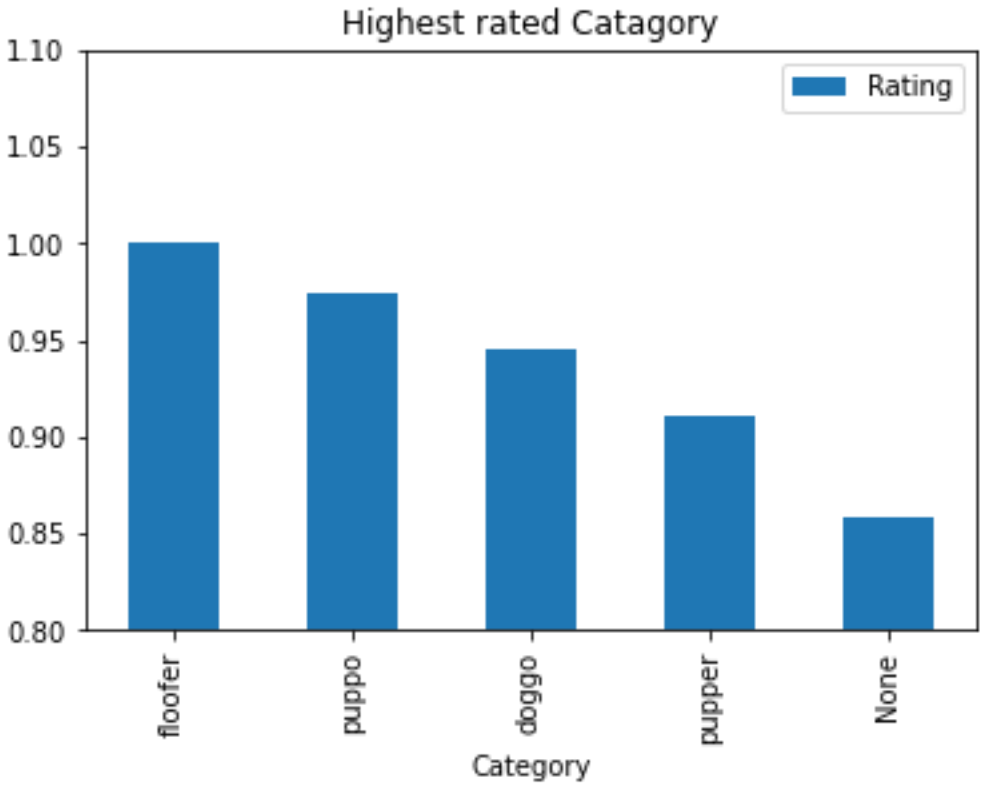
From the merged DataFrame I was able to determine 3 things from the provided data (see visualizations below):

- 5 most common dog breeds.
- Most common category by count
- Category ratings ( I was able to use the pivot table function to relate an aggregate to a category)

**Visualizations for findings**




Most Common Dog types
700
600
500
400
300
200
100
0
None
pupper
doggo
puppo
floofer


Highest rated Catagory
Rating
1.10
1.05
1.00
0.95
0.90
0.85
0.80
floofer
puppo
doggo
pupper
None
Category