WeRateDogs – Insights into the @dog_rates Twitter page

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Udacity – Data Analyst Nanodegree

Somasekhar Goud Addakula
Project- 4 (Wrangle and Analyse Data)

Introduction :

Real-world data rarely comes clean. The dataset wrangled for this project is the tweet archive of Twitter user @dog_rates, also known as WeRateDogs. WeRateDogs is a Twitter account that rates people's dogs with a humorous comment about the dog. Here's an example:

This project works through the data wrangling process, focusing on the gathering, assessing, and cleaning of data. There are visualizations and observations from the analysis provided as well.

Gather:

This project involved gathering data from three different sources:

1. The WeRateDogs Twitter archive. The twitter_archive_enhanced.csv file was provided to Udacity students which can be downloaded directly.

   This archive contains basic tweet data (tweet ID, timestamp, text, etc.) for all 5000+ of their tweets as they stood on August 1, 2017.

2. The tweet image predictions, i.e., what breed of dog (or other object, animal, etc.) is present in each tweet according to a neural network. This file (image_predictions.tsv) is hosted on Udacity's servers and should be downloaded programmatically using the Requests library and the following URL: https://d17h27t6h515a5.cloudfront.net/topher/2017/August/599fd2ad_image-predictions/image-predictions.tsv

3. Using Twitter API (which is authorised) and extracting the contents from twitter API such as tweet_id , retweet count and favorites count using python tweepy library and storing it in tweet_json.txt file.

Assess:

Assess data involves the evaluation and assessment of the dataset to get to know the quality and tidiness issues of the dataset.

Quality Issues : The four main data quality dimensions are:

Completeness: missing data
Validity: does the data make sense?
Accuracy: inaccurate data? (wrong data can still show up as valid)
Consistency: standardization?

Tidiness Issues : Three requirements for tidiness:

Each variable forms a column
Each observation forms a row
Each type of observational unit forms a table

Clean:

Cleaning data is tedious, and often iterative. Just when an analyst believes they have found all quality and tidiness issues, there are often additional issues that arise. The cleaning process involves three steps:

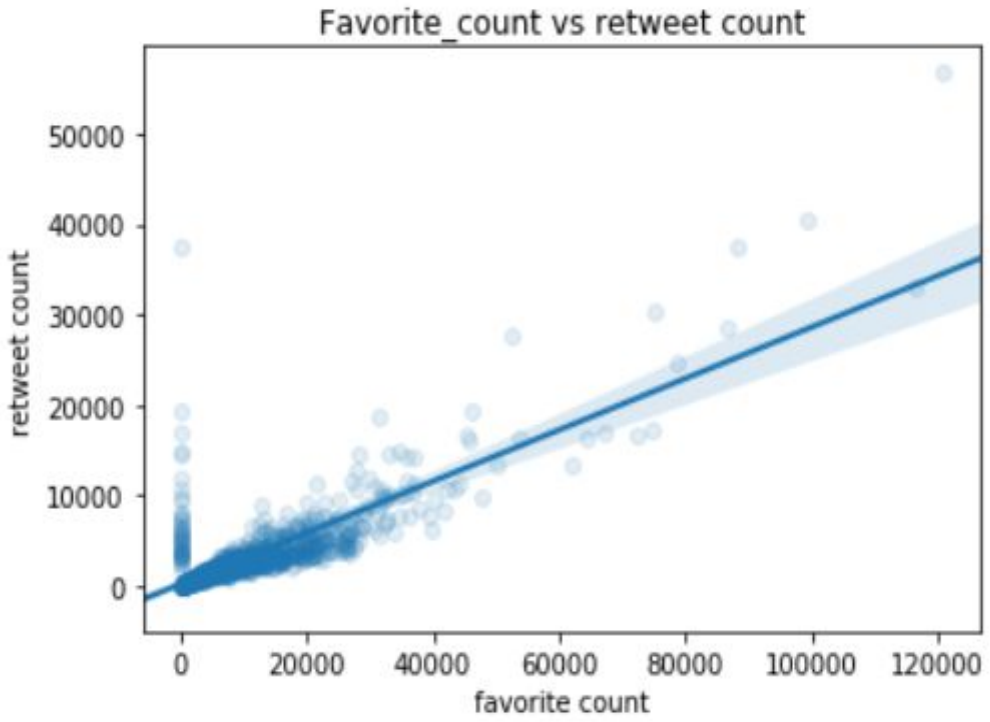
1. Define: determine exactly what needs to be cleaned, and how
2. Code: programmatically clean the code
3. Test: evaluate the code to ensure the data set was cleaned properly

Storing , Analysis and Visualization:

After the dataset is cleaned properly, it is stored in a csv file named twitter_archive_master.csv

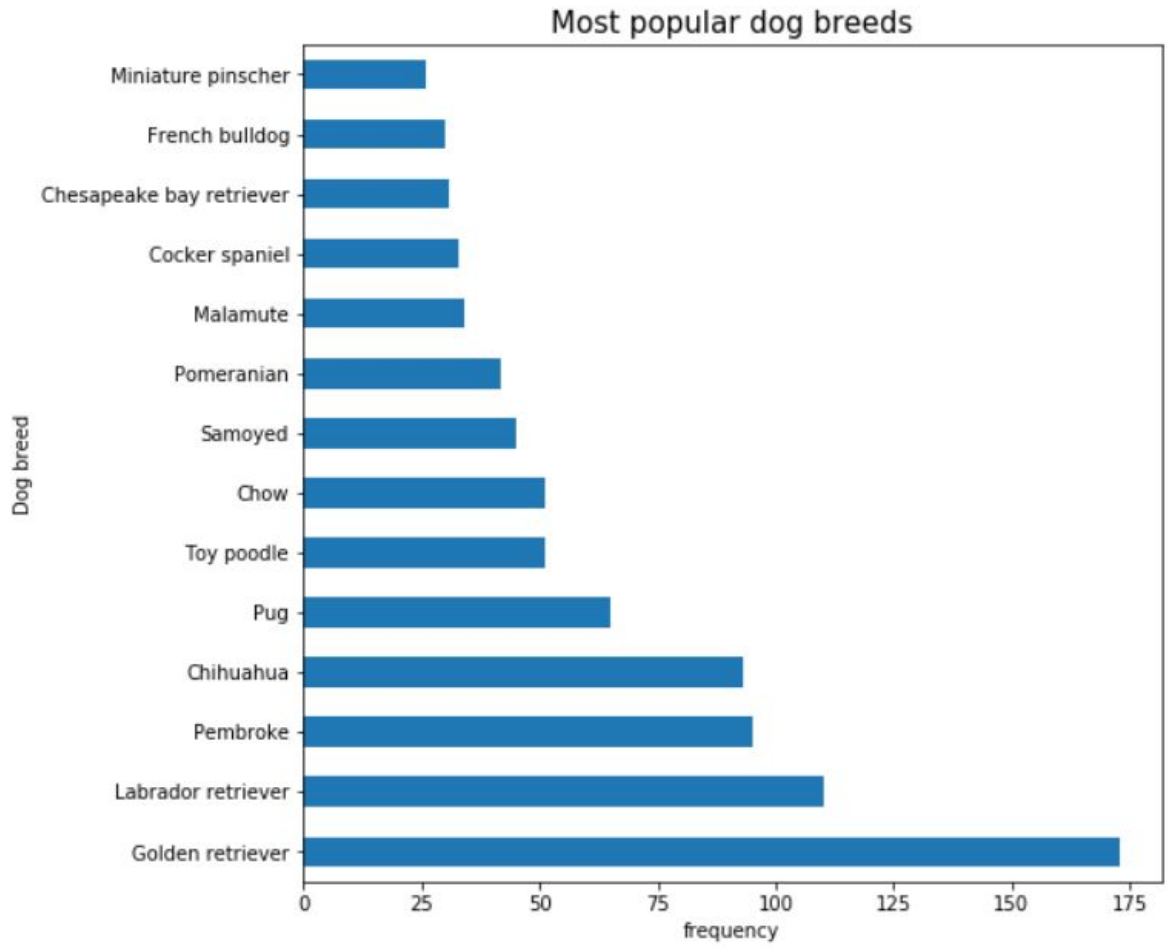
I have analysed the following five insights on this data:

Relationship between favorites and retweets:



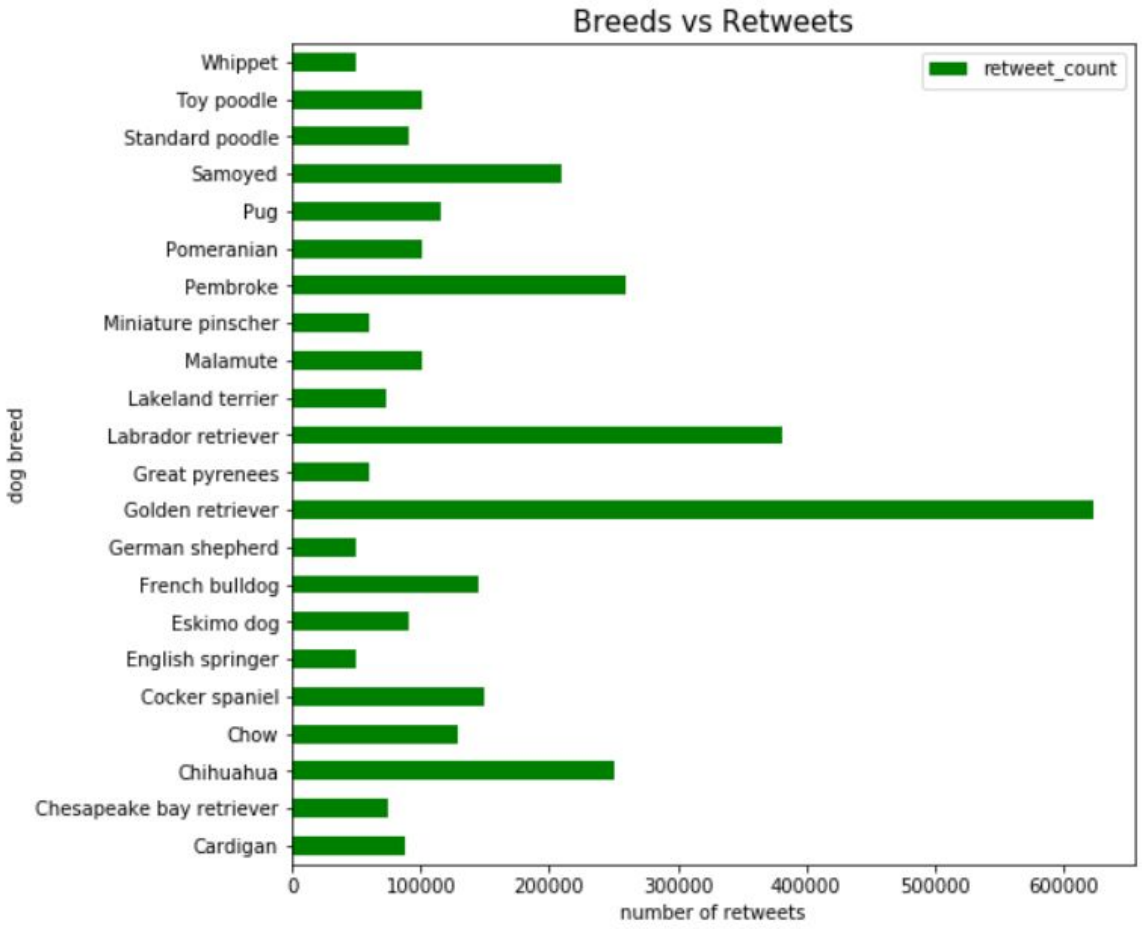
There is a positive relationship between favorite count and retweets count with a correlation coefficient of 0.86 which means a strong positive correlation exists. This insight could be used by the owners and data analysts to popular posts.

Which is the most popular dog breed



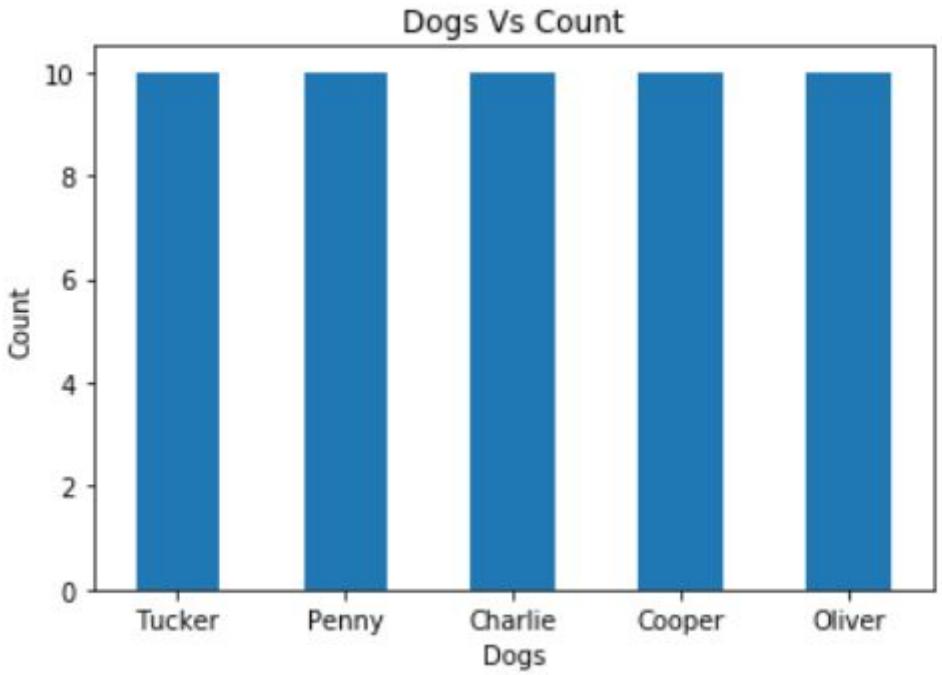
Golden retriever is the most popular dog breed.Followed by the rest of the dogs

Which dog breeds have most number of retweets



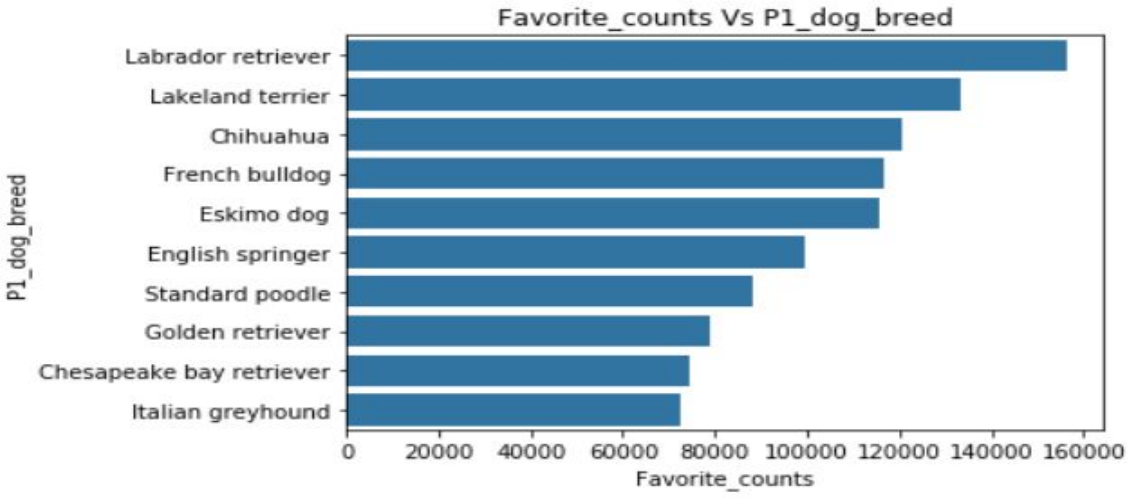
The most retweeted dog breed is Golden retriever, with Labrador retriever the next most and pembroke later

What are the most popular dog names



The most popular dog names are Charlie,Tucker,Cooper,Penny,Oliver with count of 10

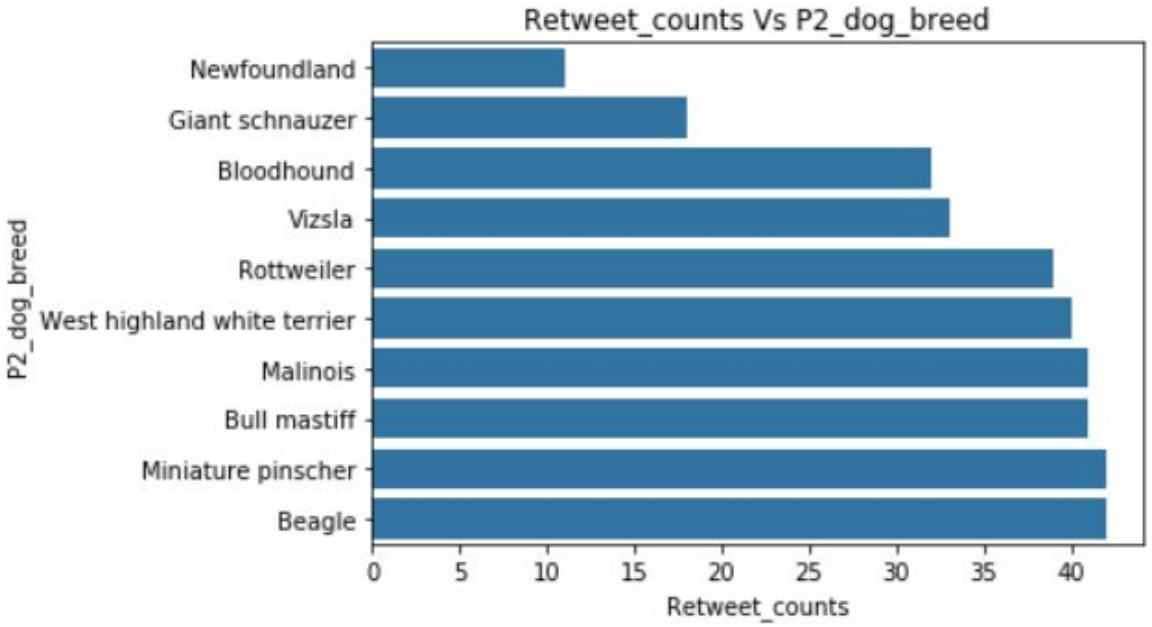
what is the breed of dog belonging to p1 and having most number of favorite_count:



Labrador retriever is the breed of dog in p1 which has the most favorite_count followed by the rest nine dog_breeds

what is the breed of dog belonging to p2 and having least number of retweet_count:

Newfoundland is the dog breed of p2 with least retweet count and followed by the rest nine dog_breeds



Conclusions:

This write up provides a straight forward look for the data wrangling process essentials and data analysis and visualisation insights. There are so many more insights that can be assessed and analysed from this dataset, I highly encourage to deep dive into this data set to get what else we can find from it!