

# Wrangle Report

Data Wrangling Steps: Gather, Assess,  
and Clean

By:

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## Wrangle Report:

The dataset wrangle in the 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 humorous comment about the dog.

### The WeRateDogs Twitter project goals included:

- Wrangling the twitter data through the following processes:
  - ✦ Gathering Data
  - ✦ Assessing Data
  - ✦ Cleaning Data
- Storing, analyzing and visualizing your wrangled data
- Reporting on the data wrangling efforts and data analyze and visualization

### Gathering Data:

My wrangling efforts for the WeRateDogs Twitter project included gathering data from the following sources:

- The WeRateDogs Twitter archive. The twitter\_archive\_enhanced.csv file was provided to Udacity students ("like me"). This archive contains basic tweet data (tweet ID, timestamp, text, etc.) for all 5000+ of their tweets as they stood on August 1, 2017.
- The tweet image predictions, i.e., what breed of dog (or another object, animal, etc.) is present in each tweet according to a neural network. This file was provided to Udacity students ("Like me").
- Twitter API and Python's Tweepy library to gather each tweet's retweet count and favorite ("like") count at minimum, and any additional data I find interesting.

### Assessing Data:

Once the data was gathered, It was assessed the data on both quality and tidiness issues.

#### Quality Issue:

##### 'twitter-archive-enhanced-2.csv':

- Completeness:
  - ✦ missing data in the following columns: in\_reply\_to\_status\_id, in\_reply\_to\_user\_id, retweeted\_status\_id, retweeted\_status\_user\_id, retweeted\_status\_timestamp, expanded\_urls.

- ✦ tweet\_id is an int (applies to all tables)
- Validity:
  - ✦ dog names: some dogs have 'None' as a name, or 'a', or 'an.'
  - ✦ This data-set includes retweets, which means there is duplicated data (as a result, these columns will be empty: retweeted\_status\_id, retweeted\_status\_user\_id and retweeted\_status\_timestamp).
- Accuracy:
  - ✦ retweeted\_status\_timestamp is also an object (the other retweeted statuses are floats) ✦ Time-stamp is an object
- Consistency:
  - ✦ The Source column still has the HTML tags
  - ✦ rating\_denominator should be a standard 10, but there are a multitude of other values

#### **'image\_predictions.tsv':**

- Validity:
  - ✦ p1, p2 and p3 columns have invalid data...why would the algorithm labelled a dog photo as a starfish, boathouse, or mailbox.
- Consistency:
  - ✦ p1, p2 and p3 columns aren't consistent when it comes to capitalization: sometimes the dog breed listed is all lowercase, sometimes it is written in Sentence Case.
  - ✦ In p1, p2 and p3 columns there is an underscore for multi-word dog breeds.

#### **'tweet\_json':**

- Completeness:
  - ✦ Missing Some Data

### **Tidiness Issue:**

#### **'twitter-archive-enhanced-2.csv':**

- The last four columns all relate to the same variable (dogoo, floofer, pupper, puppo).

#### **'image\_predictions.tsv':**

- This data set is part of the same observational unit as the data in the 'twitterarchive-enhanced-2.csv' - one table with all basic information about the dog ratings.

#### **'tweet\_json':**

- This data set is also part of the same observational unit - one table with all basic information about the dog ratings.



## Cleaning Data:

After the assessment, I cleaned the data through the following means:

### **Define, Code and Test:**

- Merge the clean versions of archive, images, and twitter\_counts\_df data frames Correct the dog types.
- Create one column for the various dog types: doggo, floofer, pupper, puppo  
Remove columns no longer needed: in\_reply\_to\_status\_id, in\_reply\_to\_user\_id, retweeted\_status\_id, retweeted\_status\_user\_id, and retweeted\_status\_timestamp.
- Delete retweets.
- Remove columns no longer needed.
- Change tweet\_id from an integer to a string.
- Change the timestamp to correct date time format.
- Correct naming issues and Standardize dog ratings.
- Creating a new dog\_breed column using the image prediction data.