

# wrangle\_act

December 13, 2019

## 0.1 Gathering and Extracting Data:

in this section we will collect data of WeRateDogs from Twitter using Tweepy API and tweets ids provided in twitter-archive-enhanced.csv file

```
In [1]: #importing all needed libraries

import tweepy
import requests as req
import pandas as pd
import numpy as np
import matplotlib.pyplot as plt
import json
from io import BytesIO
import seaborn as sns

%matplotlib inline
```

### Tweepy API authorization

```
In [2]: #providing all authorization keys to connect with Tweepy API

consumer_key = 'Hidden'
consumer_secret = 'Hidden'
access_token = 'Hidden'
access_secret = 'Hidden'

auth = tweepy.OAuthHandler(consumer_key, consumer_secret)
auth.set_access_token(access_token, access_secret)

api = tweepy.API(auth)
```

## 1 testing Api connection and extracting one tweet

```
tweet = api.get_status('1198860382976106496', tweet_mode='extended')
print(tweet.retweet_count) print(tweet.favorite_count) print(tweet.full_text)
```

```
In [3]: #reading twitter-archive-enhanced.csv in pandas
        twitter_archive_df = pd.read_csv('twitter-archive-enhanced.csv')
```

```
In [4]: twitter_archive_df
```

```
Out[4]:
```

	tweet_id	in_reply_to_status_id	in_reply_to_user_id	\
0	892420643555336193	NaN	NaN	
1	892177421306343426	NaN	NaN	
2	891815181378084864	NaN	NaN	
3	891689557279858688	NaN	NaN	
4	891327558926688256	NaN	NaN	
5	891087950875897856	NaN	NaN	
6	890971913173991426	NaN	NaN	
7	890729181411237888	NaN	NaN	
8	890609185150312448	NaN	NaN	
9	890240255349198849	NaN	NaN	
10	890006608113172480	NaN	NaN	
11	889880896479866881	NaN	NaN	
12	889665388333682689	NaN	NaN	
13	889638837579907072	NaN	NaN	
14	889531135344209921	NaN	NaN	
15	889278841981685760	NaN	NaN	
16	888917238123831296	NaN	NaN	
17	888804989199671297	NaN	NaN	
18	888554962724278272	NaN	NaN	
19	888202515573088257	NaN	NaN	
20	888078434458587136	NaN	NaN	
21	887705289381826560	NaN	NaN	
22	887517139158093824	NaN	NaN	
23	887473957103951883	NaN	NaN	
24	887343217045368832	NaN	NaN	
25	887101392804085760	NaN	NaN	
26	886983233522544640	NaN	NaN	
27	886736880519319552	NaN	NaN	
28	886680336477933568	NaN	NaN	
29	886366144734445568	NaN	NaN	
...	...	...	...	
2326	666411507551481857	NaN	NaN	
2327	666407126856765440	NaN	NaN	
2328	666396247373291520	NaN	NaN	
2329	666373753744588802	NaN	NaN	
2330	666362758909284353	NaN	NaN	
2331	666353288456101888	NaN	NaN	
2332	666345417576210432	NaN	NaN	
2333	666337882303524864	NaN	NaN	
2334	666293911632134144	NaN	NaN	
2335	666287406224695296	NaN	NaN	
2336	666273097616637952	NaN	NaN	

2337	666268910803644416	NaN	NaN
2338	666104133288665088	NaN	NaN
2339	666102155909144576	NaN	NaN
2340	666099513787052032	NaN	NaN
2341	666094000022159362	NaN	NaN
2342	666082916733198337	NaN	NaN
2343	666073100786774016	NaN	NaN
2344	666071193221509120	NaN	NaN
2345	666063827256086533	NaN	NaN
2346	666058600524156928	NaN	NaN
2347	666057090499244032	NaN	NaN
2348	666055525042405380	NaN	NaN
2349	666051853826850816	NaN	NaN
2350	666050758794694657	NaN	NaN
2351	666049248165822465	NaN	NaN
2352	666044226329800704	NaN	NaN
2353	666033412701032449	NaN	NaN
2354	666029285002620928	NaN	NaN
2355	666020888022790149	NaN	NaN

	timestamp \
0	2017-08-01 16:23:56 +0000
1	2017-08-01 00:17:27 +0000
2	2017-07-31 00:18:03 +0000
3	2017-07-30 15:58:51 +0000
4	2017-07-29 16:00:24 +0000
5	2017-07-29 00:08:17 +0000
6	2017-07-28 16:27:12 +0000
7	2017-07-28 00:22:40 +0000
8	2017-07-27 16:25:51 +0000
9	2017-07-26 15:59:51 +0000
10	2017-07-26 00:31:25 +0000
11	2017-07-25 16:11:53 +0000
12	2017-07-25 01:55:32 +0000
13	2017-07-25 00:10:02 +0000
14	2017-07-24 17:02:04 +0000
15	2017-07-24 00:19:32 +0000
16	2017-07-23 00:22:39 +0000
17	2017-07-22 16:56:37 +0000
18	2017-07-22 00:23:06 +0000
19	2017-07-21 01:02:36 +0000
20	2017-07-20 16:49:33 +0000
21	2017-07-19 16:06:48 +0000
22	2017-07-19 03:39:09 +0000
23	2017-07-19 00:47:34 +0000
24	2017-07-18 16:08:03 +0000
25	2017-07-18 00:07:08 +0000
26	2017-07-17 16:17:36 +0000

```

27    2017-07-16 23:58:41 +0000
28    2017-07-16 20:14:00 +0000
29    2017-07-15 23:25:31 +0000
...
2326  2015-11-17 00:24:19 +0000
2327  2015-11-17 00:06:54 +0000
2328  2015-11-16 23:23:41 +0000
2329  2015-11-16 21:54:18 +0000
2330  2015-11-16 21:10:36 +0000
2331  2015-11-16 20:32:58 +0000
2332  2015-11-16 20:01:42 +0000
2333  2015-11-16 19:31:45 +0000
2334  2015-11-16 16:37:02 +0000
2335  2015-11-16 16:11:11 +0000
2336  2015-11-16 15:14:19 +0000
2337  2015-11-16 14:57:41 +0000
2338  2015-11-16 04:02:55 +0000
2339  2015-11-16 03:55:04 +0000
2340  2015-11-16 03:44:34 +0000
2341  2015-11-16 03:22:39 +0000
2342  2015-11-16 02:38:37 +0000
2343  2015-11-16 01:59:36 +0000
2344  2015-11-16 01:52:02 +0000
2345  2015-11-16 01:22:45 +0000
2346  2015-11-16 01:01:59 +0000
2347  2015-11-16 00:55:59 +0000
2348  2015-11-16 00:49:46 +0000
2349  2015-11-16 00:35:11 +0000
2350  2015-11-16 00:30:50 +0000
2351  2015-11-16 00:24:50 +0000
2352  2015-11-16 00:04:52 +0000
2353  2015-11-15 23:21:54 +0000
2354  2015-11-15 23:05:30 +0000
2355  2015-11-15 22:32:08 +0000

```

```

                                source \
0    <a href="http://twitter.com/download/iphone" r...
1    <a href="http://twitter.com/download/iphone" r...
2    <a href="http://twitter.com/download/iphone" r...
3    <a href="http://twitter.com/download/iphone" r...
4    <a href="http://twitter.com/download/iphone" r...
5    <a href="http://twitter.com/download/iphone" r...
6    <a href="http://twitter.com/download/iphone" r...
7    <a href="http://twitter.com/download/iphone" r...
8    <a href="http://twitter.com/download/iphone" r...
9    <a href="http://twitter.com/download/iphone" r...
10   <a href="http://twitter.com/download/iphone" r...
11   <a href="http://twitter.com/download/iphone" r...

```

[illegible]

2355 <a href="http://twitter.com/download/iphone" r...

	text	retweeted_status_id \
0	This is Phineas. He's a mystical boy. Only eve...	NaN
1	This is Tilly. She's just checking pup on you...	NaN
2	This is Archie. He is a rare Norwegian Pouncin...	NaN
3	This is Darla. She commenced a snooze mid meal...	NaN
4	This is Franklin. He would like you to stop ca...	NaN
5	Here we have a majestic great white breaching ...	NaN
6	Meet Jax. He enjoys ice cream so much he gets ...	NaN
7	When you watch your owner call another dog a g...	NaN
8	This is Zoey. She doesn't want to be one of th...	NaN
9	This is Cassie. She is a college pup. Studying...	NaN
10	This is Koda. He is a South Australian decksha...	NaN
11	This is Bruno. He is a service shark. Only get...	NaN
12	Here's a puppo that seems to be on the fence a...	NaN
13	This is Ted. He does his best. Sometimes that'...	NaN
14	This is Stuart. He's sporting his favorite fan...	NaN
15	This is Oliver. You're witnessing one of his m...	NaN
16	This is Jim. He found a fren. Taught him how t...	NaN
17	This is Zeke. He has a new stick. Very proud o...	NaN
18	This is Ralphus. He's powering up. Attempting ...	NaN
19	RT @dog_rates: This is Canela. She attempted s...	8.874740e+17
20	This is Gerald. He was just told he didn't get...	NaN
21	This is Jeffrey. He has a monopoly on the pool...	NaN
22	I've yet to rate a Venezuelan Hover Wiener. Th...	NaN
23	This is Canela. She attempted some fancy porch...	NaN
24	You may not have known you needed to see this ...	NaN
25	This... is a Jubilant Antarctic House Bear. We...	NaN
26	This is Maya. She's very shy. Rarely leaves he...	NaN
27	This is Mingus. He's a wonderful father to his...	NaN
28	This is Derek. He's late for a dog meeting. 13...	NaN
29	This is Roscoe. Another pupper fallen victim t...	NaN
...	...	...
2326	This is quite the dog. Gets really excited whe...	NaN
2327	This is a southern Vesuvius bumblegruff. Can d...	NaN
2328	Oh goodness. A super rare northeast Qdoba kang...	NaN
2329	Those are sunglasses and a jean jacket. 11/10 ...	NaN
2330	Unique dog here. Very small. Lives in containe...	NaN
2331	Here we have a mixed Asiago from the Galápagos...	NaN
2332	Look at this jokester thinking seat belt laws ...	NaN
2333	This is an extremely rare horned Parthenon. No...	NaN
2334	This is a funny dog. Weird toes. Won't come do...	NaN
2335	This is an Albanian 3 1/2 legged Episcopalian...	NaN
2336	Can take selfies 11/10 https://t.co/ws2AMaWpW	NaN
2337	Very concerned about fellow dog trapped in com...	NaN
2338	Not familiar with this breed. No tail (weird)...	NaN
2339	Oh my. Here you are seeing an Adobe Setter giv...	NaN

2340	Can stand on stump for what seems like a while...	NaN
2341	This appears to be a Mongolian Presbyterian mi...	NaN
2342	Here we have a well-established sunblockerspan...	NaN
2343	Let's hope this flight isn't Malaysian (lol). ...	NaN
2344	Here we have a northern speckled Rhododendron...	NaN
2345	This is the happiest dog you will ever see. Ve...	NaN
2346	Here is the Rand Paul of retrievers folks! He'...	NaN
2347	My oh my. This is a rare blond Canadian terrie...	NaN
2348	Here is a Siberian heavily armored polar bear ...	NaN
2349	This is an odd dog. Hard on the outside but lo...	NaN
2350	This is a truly beautiful English Wilson Staff...	NaN
2351	Here we have a 1949 1st generation vulpix. Enj...	NaN
2352	This is a purebred Piers Morgan. Loves to Netf...	NaN
2353	Here is a very happy pup. Big fan of well-main...	NaN
2354	This is a western brown Mitsubishi terrier. Up...	NaN
2355	Here we have a Japanese Irish Setter. Lost eye...	NaN

	retweeted_status_user_id	retweeted_status_timestamp	\
0	NaN	NaN	
1	NaN	NaN	
2	NaN	NaN	
3	NaN	NaN	
4	NaN	NaN	
5	NaN	NaN	
6	NaN	NaN	
7	NaN	NaN	
8	NaN	NaN	
9	NaN	NaN	
10	NaN	NaN	
11	NaN	NaN	
12	NaN	NaN	
13	NaN	NaN	
14	NaN	NaN	
15	NaN	NaN	
16	NaN	NaN	
17	NaN	NaN	
18	NaN	NaN	
19	4.196984e+09	2017-07-19 00:47:34	+0000
20	NaN	NaN	
21	NaN	NaN	
22	NaN	NaN	
23	NaN	NaN	
24	NaN	NaN	
25	NaN	NaN	
26	NaN	NaN	
27	NaN	NaN	
28	NaN	NaN	
29	NaN	NaN	

...	...	...
2326	NaN	NaN
2327	NaN	NaN
2328	NaN	NaN
2329	NaN	NaN
2330	NaN	NaN
2331	NaN	NaN
2332	NaN	NaN
2333	NaN	NaN
2334	NaN	NaN
2335	NaN	NaN
2336	NaN	NaN
2337	NaN	NaN
2338	NaN	NaN
2339	NaN	NaN
2340	NaN	NaN
2341	NaN	NaN
2342	NaN	NaN
2343	NaN	NaN
2344	NaN	NaN
2345	NaN	NaN
2346	NaN	NaN
2347	NaN	NaN
2348	NaN	NaN
2349	NaN	NaN
2350	NaN	NaN
2351	NaN	NaN
2352	NaN	NaN
2353	NaN	NaN
2354	NaN	NaN
2355	NaN	NaN

	expanded_urls	rating_numerator \
0	https://twitter.com/dog_rates/status/892420643...	13
1	https://twitter.com/dog_rates/status/892177421...	13
2	https://twitter.com/dog_rates/status/891815181...	12
3	https://twitter.com/dog_rates/status/891689557...	13
4	https://twitter.com/dog_rates/status/891327558...	12
5	https://twitter.com/dog_rates/status/891087950...	13
6	https://gofundme.com/ydvmve-surgery-for-jax,ht...	13
7	https://twitter.com/dog_rates/status/890729181...	13
8	https://twitter.com/dog_rates/status/890609185...	13
9	https://twitter.com/dog_rates/status/890240255...	14
10	https://twitter.com/dog_rates/status/890006608...	13
11	https://twitter.com/dog_rates/status/889880896...	13
12	https://twitter.com/dog_rates/status/889665388...	13
13	https://twitter.com/dog_rates/status/889638837...	12
14	https://twitter.com/dog_rates/status/889531135...	13



15	<a href="https://twitter.com/dog_rates/status/889278841...">https://twitter.com/dog_rates/status/889278841...</a>	13
16	<a href="https://twitter.com/dog_rates/status/888917238...">https://twitter.com/dog_rates/status/888917238...</a>	12
17	<a href="https://twitter.com/dog_rates/status/888804989...">https://twitter.com/dog_rates/status/888804989...</a>	13
18	<a href="https://twitter.com/dog_rates/status/888554962...">https://twitter.com/dog_rates/status/888554962...</a>	13
19	<a href="https://twitter.com/dog_rates/status/887473957...">https://twitter.com/dog_rates/status/887473957...</a>	13
20	<a href="https://twitter.com/dog_rates/status/888078434...">https://twitter.com/dog_rates/status/888078434...</a>	12
21	<a href="https://twitter.com/dog_rates/status/887705289...">https://twitter.com/dog_rates/status/887705289...</a>	13
22	<a href="https://twitter.com/dog_rates/status/887517139...">https://twitter.com/dog_rates/status/887517139...</a>	14
23	<a href="https://twitter.com/dog_rates/status/887473957...">https://twitter.com/dog_rates/status/887473957...</a>	13
24	<a href="https://twitter.com/dog_rates/status/887343217...">https://twitter.com/dog_rates/status/887343217...</a>	13
25	<a href="https://twitter.com/dog_rates/status/887101392...">https://twitter.com/dog_rates/status/887101392...</a>	12
26	<a href="https://twitter.com/dog_rates/status/886983233...">https://twitter.com/dog_rates/status/886983233...</a>	13
27	<a href="https://www.gofundme.com/mingusneedsus">https://www.gofundme.com/mingusneedsus</a> , <a href="https://...">https://...</a>	13
28	<a href="https://twitter.com/dog_rates/status/886680336...">https://twitter.com/dog_rates/status/886680336...</a>	13
29	<a href="https://twitter.com/dog_rates/status/886366144...">https://twitter.com/dog_rates/status/886366144...</a>	12
...	...	...
2326	<a href="https://twitter.com/dog_rates/status/666411507...">https://twitter.com/dog_rates/status/666411507...</a>	2
2327	<a href="https://twitter.com/dog_rates/status/666407126...">https://twitter.com/dog_rates/status/666407126...</a>	7
2328	<a href="https://twitter.com/dog_rates/status/666396247...">https://twitter.com/dog_rates/status/666396247...</a>	9
2329	<a href="https://twitter.com/dog_rates/status/666373753...">https://twitter.com/dog_rates/status/666373753...</a>	11
2330	<a href="https://twitter.com/dog_rates/status/666362758...">https://twitter.com/dog_rates/status/666362758...</a>	6
2331	<a href="https://twitter.com/dog_rates/status/666353288...">https://twitter.com/dog_rates/status/666353288...</a>	8
2332	<a href="https://twitter.com/dog_rates/status/666345417...">https://twitter.com/dog_rates/status/666345417...</a>	10
2333	<a href="https://twitter.com/dog_rates/status/666337882...">https://twitter.com/dog_rates/status/666337882...</a>	9
2334	<a href="https://twitter.com/dog_rates/status/666293911...">https://twitter.com/dog_rates/status/666293911...</a>	3
2335	<a href="https://twitter.com/dog_rates/status/666287406...">https://twitter.com/dog_rates/status/666287406...</a>	1
2336	<a href="https://twitter.com/dog_rates/status/666273097...">https://twitter.com/dog_rates/status/666273097...</a>	11
2337	<a href="https://twitter.com/dog_rates/status/666268910...">https://twitter.com/dog_rates/status/666268910...</a>	10
2338	<a href="https://twitter.com/dog_rates/status/666104133...">https://twitter.com/dog_rates/status/666104133...</a>	1
2339	<a href="https://twitter.com/dog_rates/status/666102155...">https://twitter.com/dog_rates/status/666102155...</a>	11
2340	<a href="https://twitter.com/dog_rates/status/666099513...">https://twitter.com/dog_rates/status/666099513...</a>	8
2341	<a href="https://twitter.com/dog_rates/status/666094000...">https://twitter.com/dog_rates/status/666094000...</a>	9
2342	<a href="https://twitter.com/dog_rates/status/666082916...">https://twitter.com/dog_rates/status/666082916...</a>	6
2343	<a href="https://twitter.com/dog_rates/status/666073100...">https://twitter.com/dog_rates/status/666073100...</a>	10
2344	<a href="https://twitter.com/dog_rates/status/666071193...">https://twitter.com/dog_rates/status/666071193...</a>	9
2345	<a href="https://twitter.com/dog_rates/status/666063827...">https://twitter.com/dog_rates/status/666063827...</a>	10
2346	<a href="https://twitter.com/dog_rates/status/666058600...">https://twitter.com/dog_rates/status/666058600...</a>	8
2347	<a href="https://twitter.com/dog_rates/status/666057090...">https://twitter.com/dog_rates/status/666057090...</a>	9
2348	<a href="https://twitter.com/dog_rates/status/666055525...">https://twitter.com/dog_rates/status/666055525...</a>	10
2349	<a href="https://twitter.com/dog_rates/status/666051853...">https://twitter.com/dog_rates/status/666051853...</a>	2
2350	<a href="https://twitter.com/dog_rates/status/666050758...">https://twitter.com/dog_rates/status/666050758...</a>	10
2351	<a href="https://twitter.com/dog_rates/status/666049248...">https://twitter.com/dog_rates/status/666049248...</a>	5
2352	<a href="https://twitter.com/dog_rates/status/666044226...">https://twitter.com/dog_rates/status/666044226...</a>	6
2353	<a href="https://twitter.com/dog_rates/status/666033412...">https://twitter.com/dog_rates/status/666033412...</a>	9
2354	<a href="https://twitter.com/dog_rates/status/666029285...">https://twitter.com/dog_rates/status/666029285...</a>	7
2355	<a href="https://twitter.com/dog_rates/status/666020888...">https://twitter.com/dog_rates/status/666020888...</a>	8

rating\_denominator      name   doggo   floofer   pupper   puppo

0	10	Phineas	None	None	None	None
1	10	Tilly	None	None	None	None
2	10	Archie	None	None	None	None
3	10	Darla	None	None	None	None
4	10	Franklin	None	None	None	None
5	10	None	None	None	None	None
6	10	Jax	None	None	None	None
7	10	None	None	None	None	None
8	10	Zoey	None	None	None	None
9	10	Cassie	doggo	None	None	None
10	10	Koda	None	None	None	None
11	10	Bruno	None	None	None	None
12	10	None	None	None	None	puppo
13	10	Ted	None	None	None	None
14	10	Stuart	None	None	None	puppo
15	10	Oliver	None	None	None	None
16	10	Jim	None	None	None	None
17	10	Zeke	None	None	None	None
18	10	Ralphus	None	None	None	None
19	10	Canela	None	None	None	None
20	10	Gerald	None	None	None	None
21	10	Jeffrey	None	None	None	None
22	10	such	None	None	None	None
23	10	Canela	None	None	None	None
24	10	None	None	None	None	None
25	10	None	None	None	None	None
26	10	Maya	None	None	None	None
27	10	Mingus	None	None	None	None
28	10	Derek	None	None	None	None
29	10	Roscoe	None	None	pupper	None
...	...	...	...	...	...	...
2326	10	quite	None	None	None	None
2327	10	a	None	None	None	None
2328	10	None	None	None	None	None
2329	10	None	None	None	None	None
2330	10	None	None	None	None	None
2331	10	None	None	None	None	None
2332	10	None	None	None	None	None
2333	10	an	None	None	None	None
2334	10	a	None	None	None	None
2335	2	an	None	None	None	None
2336	10	None	None	None	None	None
2337	10	None	None	None	None	None
2338	10	None	None	None	None	None
2339	10	None	None	None	None	None
2340	10	None	None	None	None	None
2341	10	None	None	None	None	None
2342	10	None	None	None	None	None