REPORT

ON

Wrangle 'WeRateDogs' Twitter Data Project

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Data Wrangling Steps :

1. Gathering
2. Accessing
3. Cleaning

Project Details

Our tasks in this project are as follows:

- Data wrangling, which consists of:
    - Gathering data .
    - Assessing data
    - Cleaning data
- Storing, analyzing, and visualizing our wrangled data
- Reporting on 1) our data wrangling efforts and 2) our data analyses and visualizations

Gathering Data for this Project

1. The WeRateDogs Twitter archive is given this file to us. I Downloaded this file manually by clicking the following link: `twitter_archive_enhanced.csv`

2. The tweet image predictions, i.e., what breed of dog (or other object, animal, etc.) is presented 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. Each tweet's retweet count and favorite ("like") count at minimum. Using the tweet IDs in the WeRateDogs Twitter archive, I query the Twitter API for each tweet's JSON data using Python's Tweepy library and stored each tweet's entire set of JSON data in a file called `tweet_json.txt` file.

Assessing Data for this Project

These are the following Quality and Tidiness Issues what I found .

Quality Issue

- remove doggo, floofer, pupper, puppo .
- Wrong Datatype img_num Column should be in string
- Wrong Datatype Name Column should be in string
- Change tweet_id from an integer to a string .
- Timestamp is not of datetime format .
- Correct column contain some invalid name .
- some tweets contain more than 2 rating .
- Delete retweets .

Tidiness Issue

- remove columns with too many missing values.
    - retweeted_status_user_id

    - retweeted_status_id
    - retweeted_status_timestamp
    - in_reply_to_user_id
    - in_reply_to_status_id
- Merge the dataframe twitter_archive, dataframe image_predictions, and tweet_json dataframes .
- doggo, floofer, pupper, puppo these 4 variables should be combined into one categorical variable Dog Type.

Cleaning Data for this Project

Tidiness Issue

1. Merge the dataframe twitter_archive, dataframe image_predictions, and tweet_json dataframes .

Define

- using pyhton command CONCAT we can merge out datasets

Test

- all the three dataset have been merged .

2. remove columns with too many missing values.

Define

- we an delete the column using Command DROP , for column Axis =1

Code

Test

- for testing we can display our dataset using .HEAD() method

3. doggo, floofer, pupper, puppo these 4 variables shoule be combined into one categorical variable Dog Type.

Define

- we can extract the data of the column using .EXTRACT() method

Code

Test

- we can check the values of our newly created column

Quality Issue

4. remove doggo, floofer, pupper, puppo

Define

- we can delete any column using .DROP() Method

Code

Test

- check it by diplaying the dataset

5. Wrong Datatype img_num Column should be in string

Define

- we can convert the dataype using .ASTYPE() method

Code

Test

- we can check the datatype using type method

6. Change tweet_id from an integer to a string .

Define

- we can convert the dataype using .ASTYPE() method

Code

Test

- we can check the datatype using type method

7. Wrong Datatype Source Column should be in Category

Define

- we can convert the dataype using .ASTYPE() method

Code

Test

- we can check the datatype using type method

8. Timestamp is not of datetime format .

Define

- for datetime format
- %b Month name, short version Dec

- %B Month name, full version December
- %m Month as a number 01-12 12
- %Y Year, full version
- %d Day of month 01-31

Code

Test

- we can display some dataset for the testing purpose

9. Correct name Column it contain some invalid name

Define

- we can replace incorrect names with None using .REPLACE() Method

Code

Test

- we can check if any row with name equals to these is present or not

10. Delete retweets .

Define

- we can delete any column using .DROP() method

Code

Test

- we can check if any column named retweeted_status_id is present or not

11. Checking for duplicate values and deleting them

Define

- we can check duplicate value using .DUPLICATED method

Code

Test

- if any value present

Storing Data for this Project

Storing our Cleaned data into CSV File
df2.to_csv('twitter_archive_master.csv', encoding='utf-8')