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Wrangle and Analyze Data

REVIEW

CODE REVIEW

HISTORY

Meets Specifications

Congratulations on completing the project! You've worked on the comments from earlier review... well done! It's true that data wrangling is seen as a somewhat tedious task, but I hope you have found this project engaging, interesting, and fun. Thank you

Here's some useful points on Data quality vs Data tidyness

QUALITY

Completeness. i.e: Do we have **all of** the records that we should? Do we have missing records **or not**? Are there specific **rows, columns, or** cells missing?

Validity. i.e: Do they conform **with real-world constraints**? (e.g. negative retweets, favorites, etc.)

Accuracy issues. i.e: Incorrect **data like** denominator ratings greater than **10 for** example

Consistency. i.e: Make sure the **columns all** have a standard **format. in** your **case** details about dog tweets **and** metrics

TIDINESS

Making sure every **column is** a variable

Making sure every **row is** an observation

Making sure every cell **is** a single **value**

Code Functionality and Readability

All project code is contained in a Jupyter Notebook named wrangle_act.ipynb and runs without errors.

All code in the jupyter notebook is running properly

The Jupyter Notebook has an intuitive, easy-to-follow logical structure. The code uses comments effectively and is interspersed with Jupyter Notebook Markdown cells. The steps of the data wrangling process (i.e. gather, assess, and clean) are clearly identified with comments or Markdown cells, as well.

Gathering Data

Data is successfully gathered:

- From at least the three (3) different sources on the Step 1: Gathering Data page.
- In at least the three (3) different file formats on the Step 1: Gathering Data page.

Each piece of data is imported into a separate pandas DataFrame at first.

Assessing Data

Two types of assessment are used:

- Visual assessment: each piece of gathered data is displayed in the Jupyter Notebook for visual assessment purposes. Once displayed, data can additionally be assessed in an external application (e.g. Excel, text editor).
- Programmatic assessment: pandas' functions and/or methods are used to assess the data.

At least eight (8) data quality issues and two (2) tidiness issues are detected, and include the issues to clean to satisfy the Project Motivation. Each issue is documented in one to a few sentences each.

Cleaning Data

The define, code, and test steps of the cleaning process are clearly documented.

Copies of the original pieces of data are made prior to cleaning.

All issues identified in the assess phase are successfully cleaned (if possible) using Python and pandas, and include the cleaning tasks required to satisfy the Project Motivation.

A tidy master dataset (or datasets, if appropriate) with all pieces of gathered data is created.

Storing and Acting on Wrangled Data

Students will save their gathered, assessed, and cleaned master dataset(s) to a CSV file or a SQLite database.

The master dataset is analyzed using pandas or SQL in the Jupyter Notebook and at least three (3) separate insights are produced.

At least one (1) labeled visualization is produced in the Jupyter Notebook using Python's plotting libraries or in Tableau.

Students must make it clear in their wrangling work that they assessed and cleaned (if necessary) the data upon which the analyses and visualizations are based.

Report

The student's wrangling efforts are briefly described. This document (wrangle_report.pdf or wrangle_report.html) is concise and approximately 300-600 words in length.

The three (3) or more insights the student found are communicated. At least one (1) visualization is included.

This document (act_report.pdf or act_report.html) is at least 250 words in length.

Excellent work sharing insights and corresponding visualisations

Project Files

The following files (with identical filenames) are included:

- wrangle_act.ipynb

- wrangle_report.pdf or wrangle_report.html
- act_report.pdf or act_report.html

All dataset files are included, including the stored master dataset(s), with filenames and extensions as specified on the Project Submission page.

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