Sentiment Analysis of Product Reviews

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Project Overview

Coding Task: Sentiment Analysis of Product Reviews

This project involves performing sentiment analysis on product reviews using natural language processing (NLP) techniques. The primary goal is to preprocess the text data by cleaning and removing stop words, and then compute the sentiment polarity and subjectivity of each review using TextBlob. Sentiment analysis is essential as it helps businesses understand customer opinions and feedback, which can be crucial for product improvements and customer satisfaction.

Installation

To run this code locally, you need to have Python installed along with the required libraries. You can install the necessary packages using `pip`.

1. **Install Python:** Make sure you have Python installed. You can download it from the official Python website.
2. **Install required libraries:** Open your terminal or command prompt and run the following command:

```
pip install pandas spacy textblob
```

3. **Download spaCy Model:** You also need to download the spaCy language model. Run the following command:

```
python -m spacy download en_core_web_sm
```

Usage

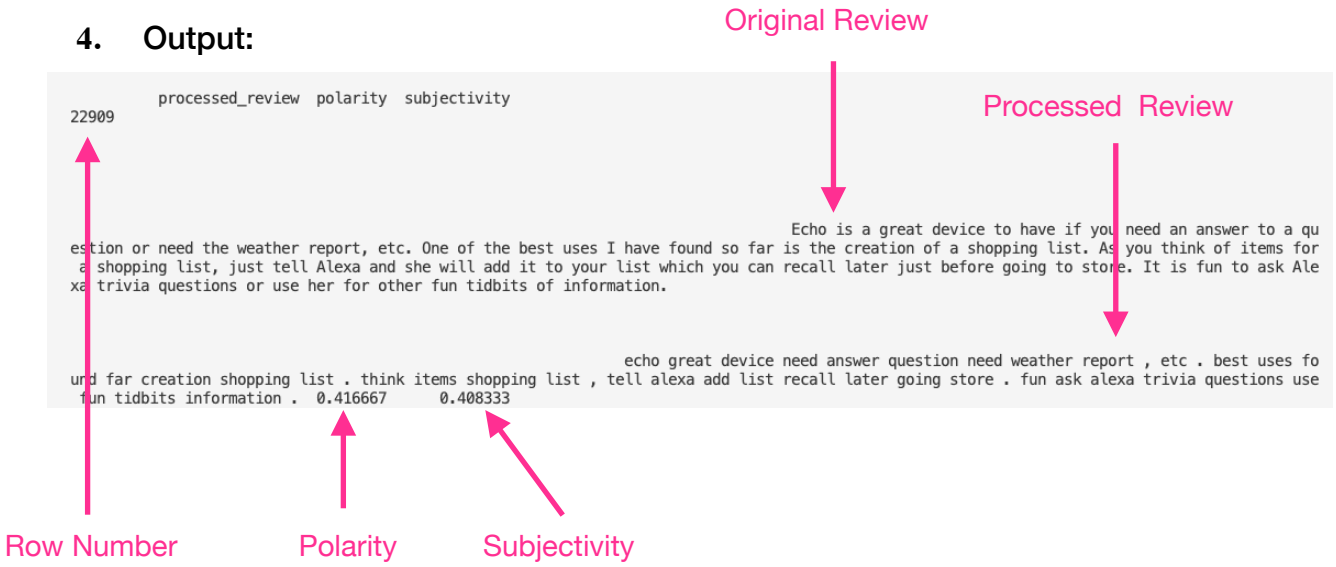
After installing the necessary packages, you can use the code to perform sentiment analysis on product reviews. Here's how to do it:

1. **Prepare your CSV file:** Ensure your CSV file has a column named `reviews.text` containing the text of the reviews.

2. **Run the Script**

3. **Check the Output:** The script will print a subset of the reviews along with their processed text, polarity, and subjectivity scores. This helps you to quickly understand the sentiment of a sample of your reviews.

4. **Output:**



5. **Interpretation:**

1. **Polarity** refers to the measure of how positive or negative a piece of text is. It is a value that ranges from -1 (very negative) to 0 (neutral) to 1 (very positive).

2. **Subjectivity** measures how subjective or objective a piece of text is. It is a value that ranges from 0 (very objective - factual) to 1 (very subjective - feelings).

Credits

This code was developed by Darryl Johnson.