Sentiment Analysis Using VADER - Documentation

1. Use Case

This program performs sentiment analysis on a dataset of product reviews using VADER (Valence Aware Dictionary and sEntiment Reasoner), a rule-based sentiment analysis tool in NLTK. It classifies each review as Positive, Neutral, or Negative based on the compound polarity score.

Use Case:

- Businesses can use this to automatically assess customer feedback.
- Analysts can identify sentiment trends.
- Useful for building basic sentiment classifiers without deep learning models.

2. Requirements

Required Libraries:

- pandas
- matplotlib
- seaborn
- nltk

Ensure these are installed via pip:

pip install pandas matplotlib seaborn nltk

Also download VADER lexicon:

import nltk

nltk.download('vader_lexicon')

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3. Setup & Execution

Setup & Execution:

1. Place your CSV dataset (e.g., reviews.csv) in the project directory.

2. Ensure the file has a 'review' column.

3. Run the script to generate compound sentiment scores and visualize them.

The output will include a printed sentiment distribution and a bar plot visualizing the sentiment spread.