LBSA -Lexicon-Based Sentiment Analysis
User Manual

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1 Introduction

Sentiment analysis (also known as opinion mining or emotion AI) refers to the use of natural language processing, text analysis, computational linguistics, and biometrics to systematically identify, extract, quantify, and study affective states and subjective information. Sentiment analysis is widely applied to voice of the customer materials such as reviews and survey responses, online and social media, and healthcare materials for applications that range from marketing to customer service to clinical medicine.[1]

2 Description

Sentiment Analysis is a lexicon-rule based software for sentiment analysis that provides statistical data about the sentiment distribution within a document.

3 Setup

To run the programme download and unzip the full master branch zip file from https://github.com/celinaczy/Sentiment-Analysis-Tool/ and open the python file using terminal, Python Shell or PyCharm.

Requirements:

To run the programme successfully you need to have the following python libraries:

- collections
- matplotlib.pyplot
- string
- get_stop_words
- operator
- re

4 Analysing a File

When you start the programme you will be asked to provide a file directory for the file you want to analyse. make sure to include the full file directory or use a file that is located in the same folder as the python file you are running. You can use the test data provided in the repository.

```
Provide a file directorytext1.txt
```

[1] https://en.wikipedia.org/wiki/Sentiment_analysis

Press enter and the menu will be displayed. To choose an option, press the corresponding number and press enter to execute.

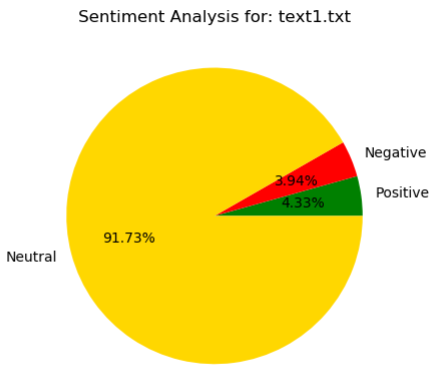
```
Provide a file directorytext1.txt
What do you want to do?
1 - show sentiment distribution in a text
2 - show a pie chart of sentiment distribution
3 - show a list of all positive words
4 - show a list of all negative words
5 - show a chart with top positive words
6 - show a chart with top negative words
7 - show sentiment distribution for text without redundant words
8 - show a pie chart of sentiment distribution for text without redundant words
9 - show sentiment distribution for sentences with provided keyword
10 - quit
Press the number:
```

Press 1 to display the statistical analysis of the sentiment in the text, in three categories:

- Positive
- Negative
- Neutral - words not included in the positive or negative list

```
Press the number:1
Sentiment distribution for text1.txt
Positive: 4.33% Negative: 3.94% Neutral:91.73%
```

Press 2 to display a pie chart of the statistical analysis from the first option



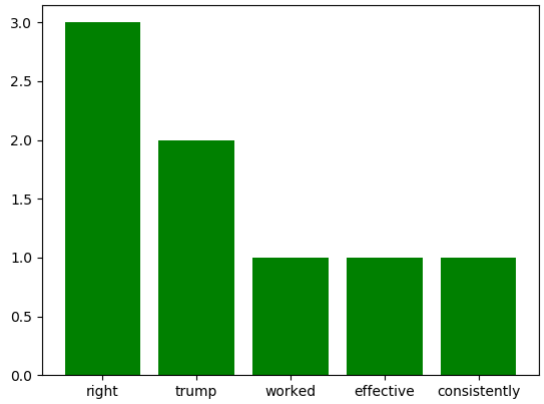
Press 3 to display a list of all positive words in the text with their counts.

```
Press the number:3
right---------- 3
trump---------- 2
worked--------- 1
effective------ 1
consistently--- 1
gain----------- 1
respect-------- 1
modern--------- 1
```

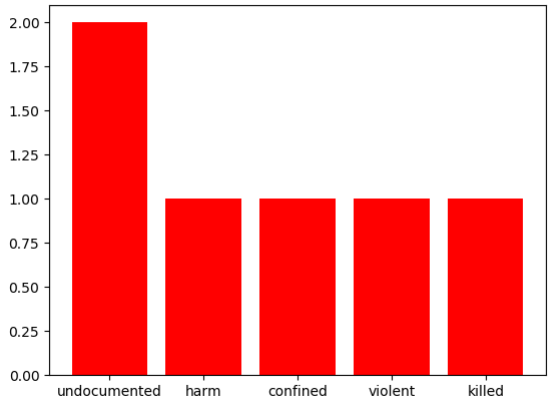
Press 4 to display a list of all negative words in the text with their counts.

```
Press the number:4
undocumented--- 2
harm----------- 1
confined------- 1
violent-------- 1
killed--------- 1
crime---------- 1
illegal-------- 1
wildly--------- 1
drunk---------- 1
```

Press 5 to display a bar chart of most frequent positive words in the text.



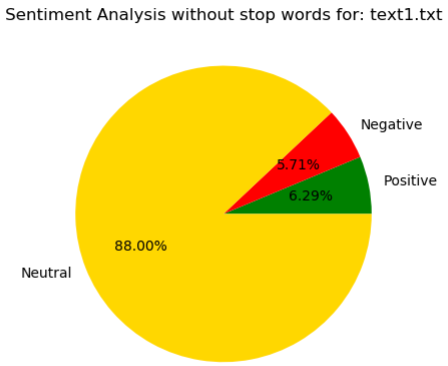
Press 6 to display a bar chart of most frequent negative words in the text.



Press 7 to display the statistical analysis of the sentiment in the text without redundant words (included in the stop_words list)

```
Press the number:7
Sentiment distribution for text1.txt without stop words
Positive: 6.29% Negative: 5.71% Neutral:88.00%
```

Press 8 to display a pie chart of the analysis from option 7.



Press 9 to display he statistical analysis of the sentiment in the text for a given keyword.
When you press that option you will be asked to provide a keyword. Type it and press enter.

```
Press the number:9
Provide a keyword:Espinoza
Sentiment distribution for text1.txt for sentences with key word
Positive: 3.80% Negative: 3.16% Neutral:93.04%
```

Press 10 to quit