**ASSIGNMENT 6**

**AIM**

To write a program to recognize a document is positive or negative based on polarity words using suitable classification method.

**THEORY**

Sentiment analysis (or opinion mining) is a [natural language processing (NLP)](https://monkeylearn.com/natural-language-processing/) technique used to determine whether data is positive, negative or neutral. Sentiment analysis is often performed on textual data to help businesses monitor brand and product sentiment in [customer feedback](https://monkeylearn.com/customer-feedback/), and understand customer needs.

Types of Sentiment Analysis

Sentiment analysis focuses on the polarity of a text (*positive, negative, neutral*) but it also goes beyond polarity to detect specific feelings and emotions (*angry, happy, sad*, etc), urgency (*urgent, not urgent*) and even [intentions](https://monkeylearn.com/blog/intent-classification/) (*interested v. not interested*).

Depending on how you want to interpret customer feedback and queries, you can define and tailor your categories to meet your sentiment analysis needs. In the meantime, here are some of the most popular types of sentiment analysis:

Graded Sentiment Analysis

If polarity precision is important to your business, you might consider expanding your polarity categories to include different levels of positive and negative:

* Very positive
* Positive
* Neutral
* Negative
* Very negative

This is usually referred to as graded or fine-grained sentiment analysis, and could be used to interpret 5-star ratings in a review

#### Emotion detection

Emotion detection sentiment analysis allows you to go beyond polarity to detect emotions, like happiness, frustration, anger, and sadness.

#### Aspect-based Sentiment Analysis

Usually, when analyzing sentiments of texts you’ll want to know which particular aspects or features people are mentioning in a positive, neutral, or negative way.

That's where [aspect-based sentiment analysis](https://monkeylearn.com/blog/aspect-based-sentiment-analysis/) can help, for example in this product review: "The battery life of this camera is too short", an aspect-based classifier would be able to determine that the sentence expresses a negative opinion about the battery life of the product in question.

#### Multilingual sentiment analysis

Multilingual sentiment analysis can be difficult. It involves a lot of preprocessing and resources. Most of these resources are available online (e.g. sentiment lexicons), while others need to be created (e.g. translated corpora or noise detection algorithms), but you’ll need to know how to code to use them.

Alternatively, you could detect language in texts automatically with a language classifier, then train a custom sentiment analysis model to classify texts in the language of your choice.

**Use Cases**

1. Discover negative reviews of your product or service. On blog posts or eCommerce sites or social media. More broadly anywhere on the web.
2. Aggregate sentiment on financial instruments. Such as specific stocks. What is the recent market sentiment on stock xyz? Also, aspect-based variants. Such as according to analysts at financial company xyz, stock abc is likely to grow 20% in the coming year. Discerning who’s opinion it is provides more information, which may be used to assess credibility or lack thereof.
3. Identify which components of your product or service are people complaining about? Especially strongly. For prioritizing tactical or long-term improvements.
4. Track changes to customer sentiment over time for a specific product or service (or a line of these). To check if things have been getting better …
5. Track shifting opinions of politicians over time. Individuals or groups such as political parties. News media love to do this. To fuel nagging questions such as you said that then but now this!.

**CODE**

**OUTPUT**

**RESULT**

**CONCLUSION**

We have successfully implemented the program to recognize if a document is positive or negative using classification method.