What is sentiment analysis?
Sentiment analysis is when we look at a piece of text and decide if it is positive, negative, or neutral. It shows the emotion or opinion behind the words.

Where can we get reviews?
We can get reviews from places like Amazon, TripAdvisor, Rotten Tomatoes, Twitter, Facebook, Google reviews, and app store comments.

Examples of the importance of sentiment:

- To know if people like a product.
- To understand what people think about a movie or a phone.
- To see what voters think about a politician.
- To check student feedback about a class.
- To predict trends, like elections or market changes.

What are the sentiment analysis steps?

1. Clean the text.
2. Split the text into words.
3. Match the words with a positive/negative dictionary (lexicon).
4. Count positive and negative words.
5. Decide: positive, negative, or neutral.

How do we know if we have a good model?
We test the model using accuracy, precision, recall, and F-score.
If accuracy is above 70%, the model is usually good.

Lexicon Sentiment Analysis

Lexicon rule:
Positive word = +1
Negative word = –1
Total > 0 → Positive
Total < 0 → Negative
Total = 0 → Neutral

Sentence 1

The affluent vice president, known for her hard work and intellectual prowess, navigated the suspect waters of politics with instinctive grace, her vivacious spirit winning over even the most deprived of hearts.

Positive words: affluent, intellectual, instinctive, vivacious → +4
Negative words: vice, hard, suspect, deprived → –4

Total: 0
Result: Neutral

Sentence 2

A ghastly grimace contorted the awful teacher's face as the ignorant student posed a bubbling question that challenged her unwavering authority, sending a ripple of tense anticipation through the classroom.

Positive words: unwavering → +1
Negative words: ghastly, grimace, awful, ignorant, tense → –5
Total: –4
Result: Negative

Sentence 3s

Amidst the unpleasant stench and sticky residue of the garbage dump, a vivacious child, her eyes ablaze with dazzling innocence, unearthed a marvelous treasure – a discarded toy that sparked angelic joy in her heart.

Positive words: vivacious, dazzling, marvelous, angelic → +4
Negative words: unpleasant, sticky → –2
Total: +2
Result: Positive

Sentence 4

Though stuck in the throes of infernal grief, the novel writer, fueled by an effervescent imagination, channeled his insane sorrow into a stirring masterpiece, a testament to the stupendous resilience of the human spirit.

Positive words: novel, effervescent, stirring, stupendous → +4
Negative words: stuck, infernal, insane → –3
Total: +1
Result: Positive

Reflection

In this activity I learned the basic idea of sentiment analysis and how to explain it in simple words. Task 1 helped me understand the theory, such as what sentiment analysis means, where reviews come from, and why this topic is important in real life. Before this task, I only knew that sentiment analysis was used by big companies, but now I understand that it is actually just about finding positive, negative, or neutral feelings in text. The steps were easy to follow, and it helped me see the process from start to finish: clean the text, split it into words, match the lexicon, and then decide the final sentiment. I also learned how we measure if a model is good by using accuracy and other scores.

Task 2 was more practical and helped me apply what I learned. I used the lexicon to count positive and negative words in each sentence. At first the sentences looked complicated, but when I focused only on the words from the lexicon, it became simple. I realised that long and difficult sentences can still be analysed with a very basic method. This task also showed me how a sentence can look positive overall but still contain negative words, so the scoring system is important.

The main challenge was making sure I did not miss any lexicon words in the sentences, because some words look positive but are not in the list. I overcame this by taking my time and checking each word carefully. This made me more confident in manually calculating sentiment scores.