Sentiment Analysis of IMDB Movie Reviews

Understanding audience sentiment and its relationship with movie ratings.

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Introduction to Sentiment Analysis

What is Sentiment Analysis?

Sentiment Analysis is a **Natural Language Processing (NLP)** technique.

It determines emotional tone in text.

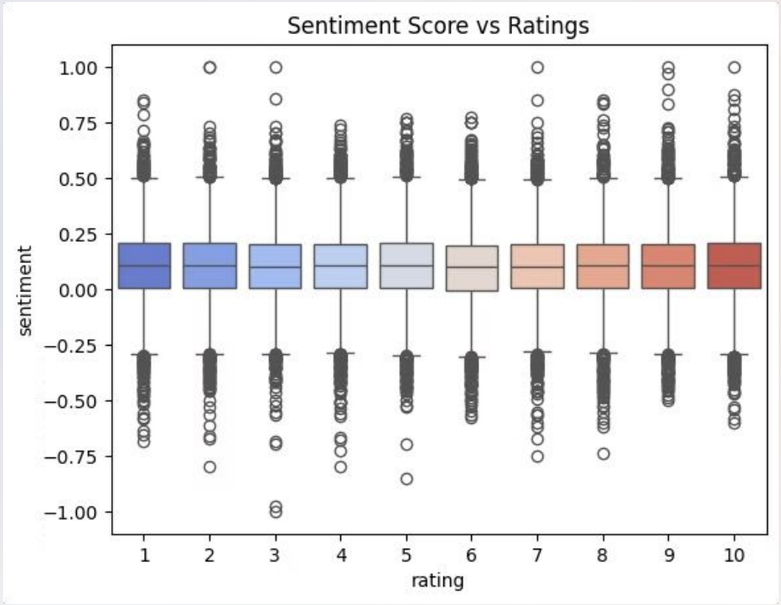
Used in customer feedback, reviews, and social media analysis.

Why Analyze IMDB Reviews?

IMDB contains **millions of user reviews**. It's an ideal dataset.

Helps understand audience perceptions and predict movie success.

The objectives are classifying reviews and visualizing insights.



Dataset and Tools

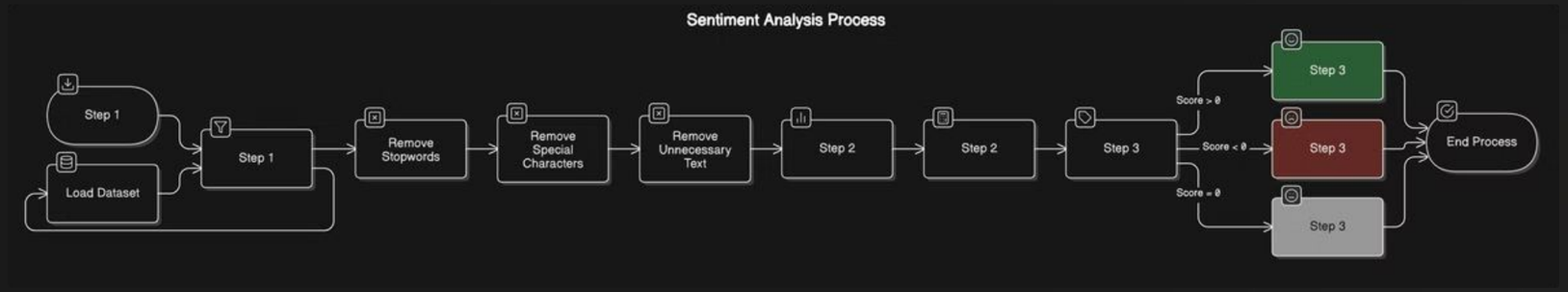
Dataset Overview

The dataset is sourced from IMDB movie reviews.

It includes movie reviews (text) and ratings (1-10).

Libraries Used

- pandas: Data loading & processing
- numpy: Numerical computations
- matplotlib, seaborn: Data visualization
- textblob: Sentiment analysis
- wordcloud: Text visualization



Methodology

1

Data Loading & Preprocessing

Load dataset using pandas.

Remove stopwords, special characters, and unnecessary text.

2

Sentiment Calculation

Use TextBlob to compute sentiment polarity (-1 to +1).

3

Sentiment Categorization

Positive (Score > 0)

Negative (Score < 0)

Neutral (Score = 0)

Sentiment Distribution

Sentiment Distribution (Bar Chart)

Majority of reviews are positive.

Negative reviews are fewer.

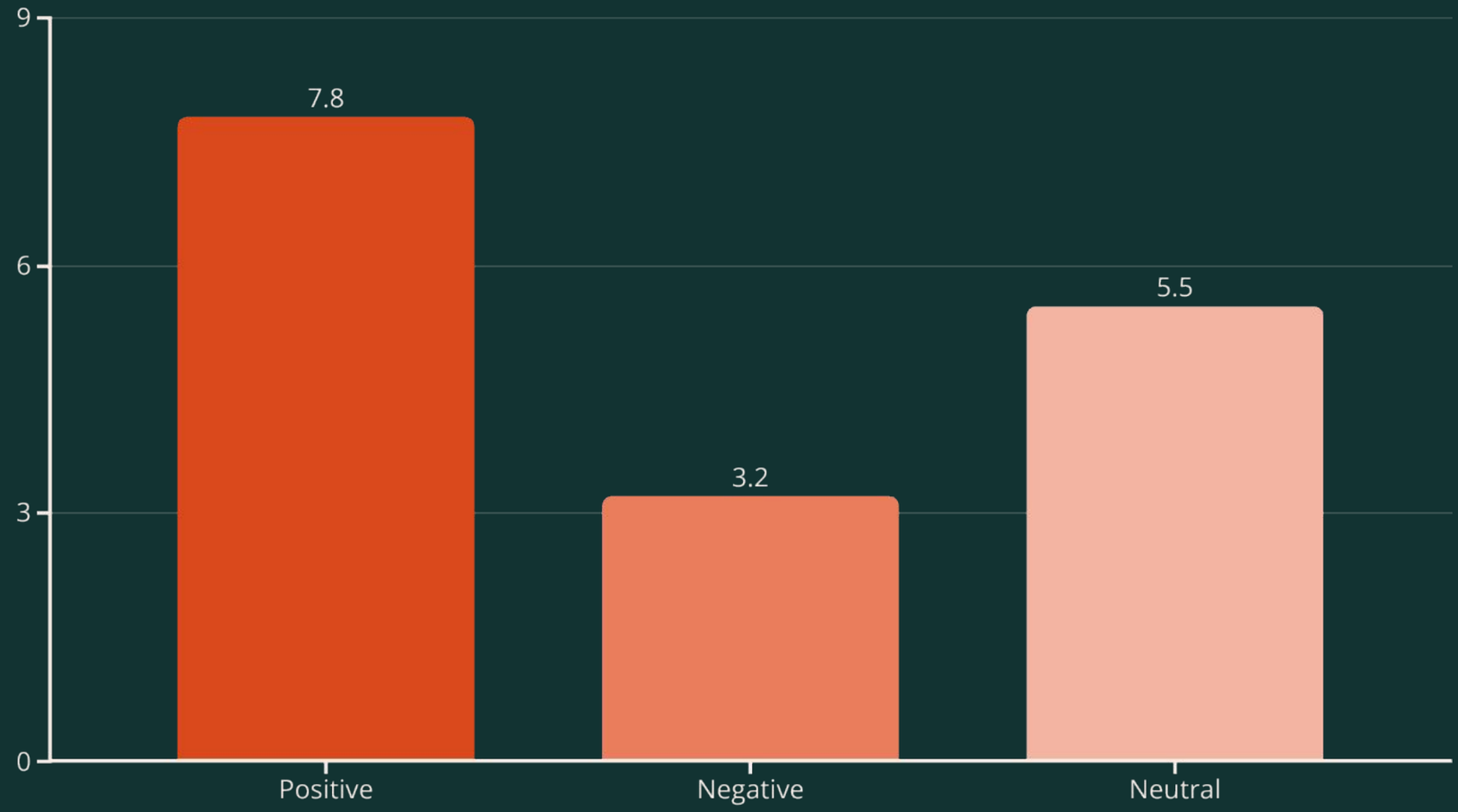
Negative reviews correlate with low ratings.

Word Cloud Analysis

Positive Reviews: love, amazing.

Negative Reviews: boring, worst.

Sentiment vs. Ratings



The chart shows sentiment category vs. rating distribution.

Limitations & Improvements

1 Limitations

Basic NLP model - TextBlob lacks context.

Doesn't detect sarcasm effectively.

2 Future Enhancements

Use Advanced NLP models like BERT, VADER.

Improve Context Handling.

Conclusion & Thank You

Sentiment analysis shows a strong correlation.

Word clouds highlight frequently used words.

Insights can help filmmakers and platforms.

Sentiment analysis provides valuable insights.

It can help improve movie content.

Thank You!