

Sentiment Analysis using Naive Bayes

Introduction

- This project focuses on performing sentiment analysis using the Naive Bayes classifier.

Objective

- To classify reviews into positive, negative, or neutral sentiments based on user ratings.

Dataset Description

- The dataset includes customer reviews and their corresponding ratings. It is loaded from a CSV file.

Data Preprocessing

- The data is cleaned and prepared by handling null values, checking data types, and converting ratings to sentiment labels.

Sentiment Labeling

- Ratings ≥ 4 : Positive
- Ratings ≤ 2 : Negative
- Rating $= 3$: Neutral

Model Building

- A Naive Bayes classifier is trained on the processed dataset using scikit-learn.

Evaluation Metrics

- The model is evaluated using accuracy, confusion matrix, and classification report.

Conclusion

- The Naive Bayes model provides a simple yet effective approach for sentiment classification.