

Sentiment Analysis Report

August 14, 2024

1 Introduction

The purpose of this report is to analyze customer sentiment in hotel reviews. The analysis leverages the VADER sentiment analysis tool to categorize reviews into positive, neutral, and negative sentiments. Additionally, the report provides visualizations to explore the distribution of sentiments and the most common words in the reviews.

2 Data Summary

The dataset consists of hotel reviews with the following columns:

- **Review:** The text of the hotel review.
- **Rating:** The rating provided by the customer, ranging from 1 to 5.
- **Sentiment Score:** The sentiment score calculated using VADER.
- **Sentiment Category:** The classification of the sentiment as Positive, Neutral, or Negative.

3 Sentiment Analysis

Sentiment analysis was conducted using the VADER tool from the NLTK library. The sentiment score for each review was calculated, and reviews were categorized into Positive, Neutral, or Negative sentiments.

4 Data Visualization

Several visualizations were created to explore the distribution and commonly used words in the reviews.

4.1 Sentiments Distribution

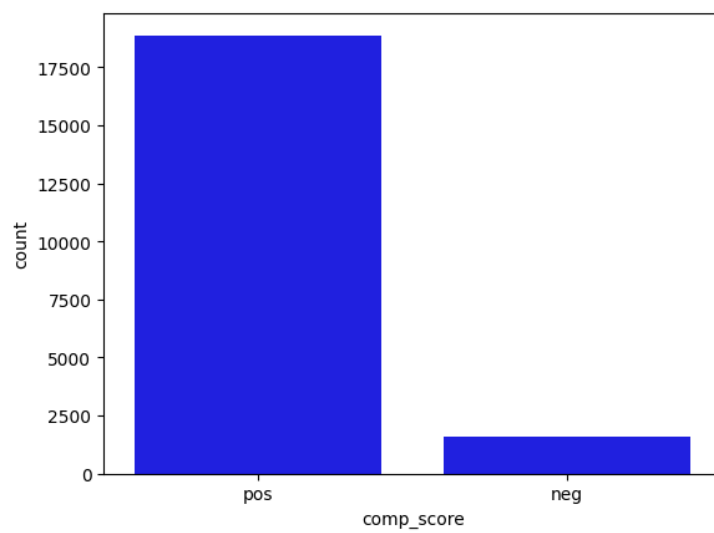


Figure 1: Distribution of Sentiment

4.2 Rating Distribution

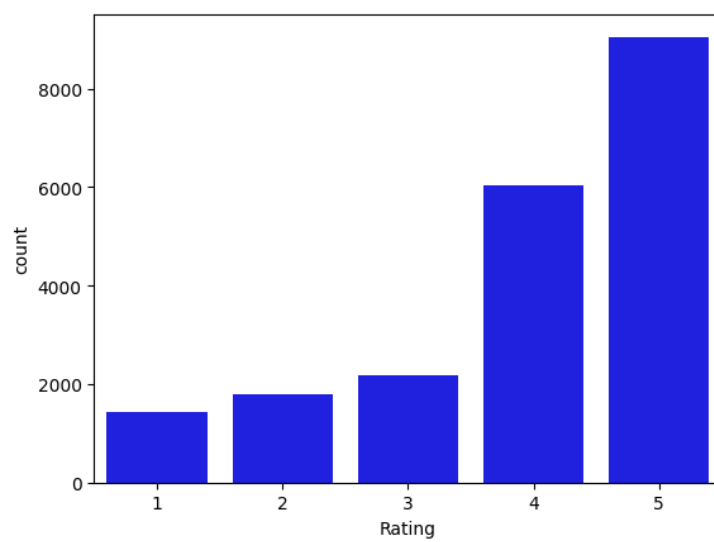


Figure 2: Distribution of Rating

4.3 Overall Word Cloud



Figure 3: Word Cloud of All Reviews

4.4 Word Clouds by Sentiments



4.5 Word Clouds by Rating



5 Conclusion

The sentiment analysis of hotel reviews revealed that the majority of customers expressed positive sentiments, particularly in reviews with higher ratings (4 and 5). The visualizations provided insights into common themes and sentiments in the reviews, highlighting areas where customer satisfaction is high, as well as potential areas for improvement. This analysis can be used to inform strategies for improving customer experience, focusing on areas that correlate with negative sentiment in reviews.