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## Project Overview

**KeyUserAttributes:**Review, Customer\_name, Ratings, Review title

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## Libraries and Data Handling

**Libraries used :** Pandas, Matplotlib, Seaborn.

**Data Loading and preprocessing :** Loading from CSV, data cleaning, handling dates and categorical data.

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## Data AnalysisTechnique

**Descriptive statistics :** Mean, median, count, standard deviation. **Visualization methods :** Bar charts, pie charts, heatmaps, count and distribution plots.

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## Key Findings

**Rating Distribution:** Most reviews are positively skewed with higher ratings.. **Common Themes:** Top positive words include "excellent," "friendly," and "clean," while negative words include "poor," "dirty," and "bad." **Model Performance:** The logistic regression model effectively predicts sentiment with an accuracy score indicating good performance..

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## Advance Analysis

**Geographical Insights:** Mapping reviews by location to identify regional satisfaction trends.

**Temporal Trends:** Analyzing how review sentiments change over time.

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## Visual Insights

**Gender distribution** : Count plots by country.  
Device preference by country. **Subscription type popularity** : Visualization of plan popularity.

## Conclusion

The insights derived from this analysis can help hotel management understand customer satisfaction drivers and areas needing improvement. Data-driven decision-making enables targeted strategies to enhance customer experiences and increase positive reviews. Future analysis with more comprehensive datasets can provide deeper insights into user behaviors and preferences.

## Appendix

**Code Snippets** : Provided Python code used for loading, cleaning, transforming data, and generating visualizations.

**Datasets** : Sample dataset of Hotel Reviews Sentimental Analysis

**Additional References** : Referenced any external datasets or tools used during the analysis process.

**Github Website Link** :  
<https://nineswords.github.io/cse1302/>