PRESENTATION

THE STATE OF HOTELS IN EGYPT

WHAT ARE THE KEY FACTORS THAT DRIVE GUEST SATISFACTION IN HOTELS ACROSS DIFFERENT REGIONS OF EGYPT?

INTRODUCTION

This project explores what truly influences guest satisfaction when booking hotels in Egypt. The analysis is based on a data-set collected from online booking platforms, containing real reviews and ratings from people who actually stayed in these properties. This includes detailed information such as hotel names, locations, star ratings, satisfaction scores, number of reviews, room types, price ranges, amenities, and location ratings. These columns offer a well-rounded view of both guest experiences and hotel features, helping us understand which factors contribute most to a satisfying stay. By examining patterns in this data, the goal is to uncover how elements like service quality, pricing, accommodation type, and overall value influence guest perception. The findings aim to provide practical insights for improving hotel offerings and guiding travelers toward better choices.

POPULATION OF INTEREST

The population we’re focusing on includes all guests who have stayed at hotels in Egypt and shared their experiences through reviews, ratings, or booking details. These guests represent a mix of travel types, such as families, solo travelers, business visitors, and tourists across various hotel types and locations throughout the country.

METHODOLOGY

1. Data Collection: Sourced from Kaggle, featuring hotel names, cities, star ratings, room types, reviews, and satisfaction scores across Egypt.

2. **Data Cleaning:**

- Outliers treated using IQR and capping
- Missing values handled by filling with (mean/mode)

3. Correlation Analysis: Explored relationships among satisfaction, reviews, star ratings, and locations using regression plots

4. Hypothesis Testing:

- Hypothesized that tourist hotspots would have higher satisfaction scores
- Results showed only a slight influence of location on guest satisfaction — indicating other factors like service quality or hotel amenities may play a larger role.

5. Data Visualization:

- Used scatter plots, box plots, heatmaps, and bar charts to reveal trends in ratings, satisfaction, and city preferences

DATASET INCLUDES

Source: https: //www.kaggle.com/datasets/ziadashraf3010/egypt-hotels-dataset?resource=download

Rows: 947 | Columns: 19

Description:

A comprehensive dataset detailing hotels and vacation rentals across Egypt, including location, ratings, pricing, and amenities — ideal for analyzing traveler preferences and hospitality performance.

Key Features:

- Type: Hotel or vacation rental
- Hotel Name
- Coordinates: Latitude & Longitude
- Check-in / Check-out Time
- Overall Rating: Star or customer rating
- Reviews: Total number of guest reviews
- Location Rating
- Price Range: General pricing tier
- Amenities: Facilities like pools, gyms, etc.
- Nearby Places: Attractions or landmarks

Total Samples Used: 947

HYPOTHESIS

1. Review Count Group vs. Guest Satisfaction

Null Hypothesis (H_0): There is no difference in average overall ratings between different review count groups.

Alternative Hypothesis (H_1): There is a significant difference in average overall ratings between different review count groups.

2. Location vs. Guest Satisfaction

Null Hypothesis (H_0): There is no difference in guest satisfaction scores between hotels in tourist cities and those in non-tourist cities.

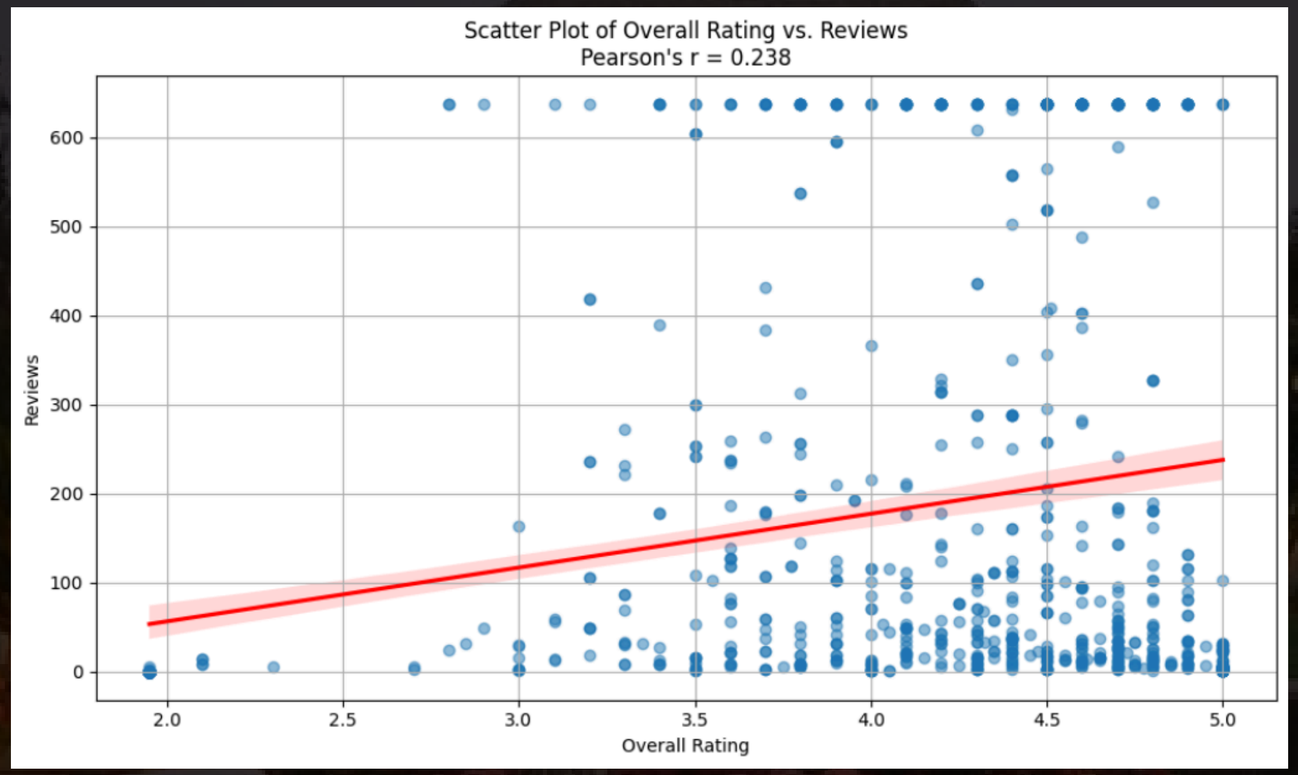
Alternative Hypothesis (H_1): Hotels in tourist cities receive significantly higher guest satisfaction scores than those in non-tourist cities.

3. Price per Night vs. Guest Satisfaction

Null Hypothesis (H_0): There is no correlation between the price per night and guest satisfaction scores.

Alternative Hypothesis (H_1): There is a significant correlation between the price per night and guest satisfaction scores (positive or negative).

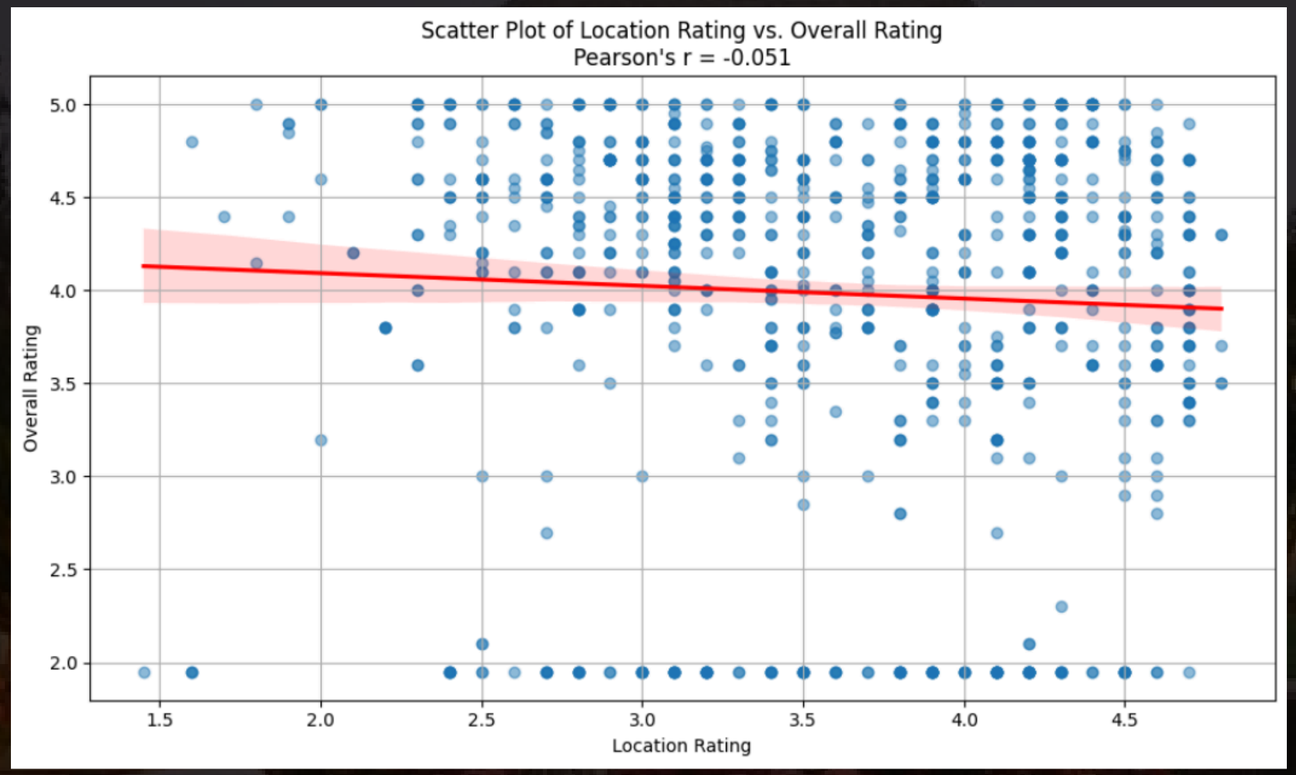
DATA ANALYSIS



Reviews vs. Overall Rating:

The link between overall rating and number of reviews is weak (Pearson’s r = 0.24). This means higher ratings don’t strongly lead to more reviews. The small effect shows that other things, like location or service, likely matter more for how many reviews a place gets.

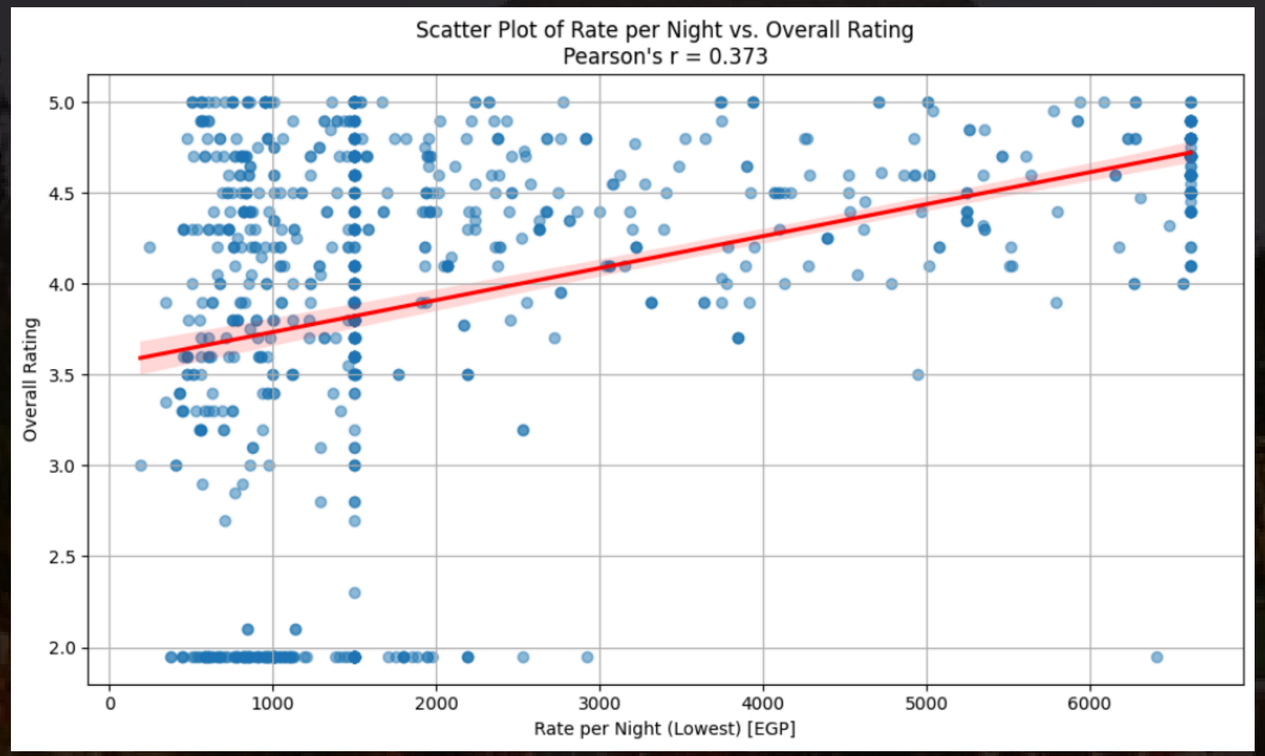
DATA ANALYSIS



Location Rating vs. Overall Rating:

The scatter plot shows a very weak negative correlation between Location Rating and Overall Rating (Pearson's r = -0.051). This means changes in Location Rating have almost no effect on Overall Rating. The small negative trend doesn't matter much, so other factors likely have a bigger impact. Location Rating alone doesn't predict Overall Rating in this dataset.

DATA ANALYSIS



Rate per Night vs. Overall Rating:

This moderate positive correlation indicates that as the nightly rate increases, the overall rating tends to improve slightly. This suggests that guests may associate higher prices with better service, amenities, or overall experience. However, the relationship is not extremely strong, meaning other factors beyond price also influence ratings.

HYPOTHESIS TEST STEPS

1. Review Count Groups vs. Guest Satisfaction

- Test: One-way ANOVA
- F-statistic: 7.65 | P-value: 0.0005
- Conclusion: Significant difference found — guest satisfaction varies across review count groups.

2. Location Group vs. Guest Satisfaction

- Test: One-way ANOVA (grouped by latitude ranges)
- F-statistic: 1.18 | P-value: 0.316
- Conclusion: No significant difference — location group doesn't impact satisfaction scores.

3. Price per Night vs. Guest Satisfaction

- Test: Pearson correlation
- Correlation (r): 0.373 | P-value: < 0.000000000001
- Conclusion: Significant positive correlation — higher prices are linked to higher satisfaction.

CONCLUSION

The analysis shows a slight relationship between guest satisfaction and both review count and price per night, while location has minimal impact. This suggests that other variables—such as service quality, cleanliness, or available amenities—likely play a more important role in influencing guest satisfaction and should be explored further in future studies.

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THANK YOU

FOR YOUR ATTENTION