Hotel Reviews in Tableau

This is the Tableau portion of the report. I have used a shortened data set that was created in the Python report. The data set is named "HotelsForTableau.csv". After importing this data set, I have compared how the inclusion of certain words in the negative reviews or the positive reviews have affected the reviewer's score.

From there I separated out two hotels, Hotel Cavendish and the Shangri La Hotel. Both of these hotels are in the UK. They were selected by finding hotels with approximately 1000 total reviews then selecting two with average scores as far apart as possible. This total amount of reviews is based off the count of reviews in the HotelsForTableau data set. The hotels may have had more reviews with a rating only but no comments. These number of reviews with no comments but a score only can be found under the column AddNumOfScoring in the CleanedHotelReviews data set that was created in the R report. Since the direction of this Tableau report was to look at how certain key words affected scoring, reviews without comments offered no value.

Hotel Reviews in Tableau

Impact of the Words **Breakfast** , **Staff** , and **Service** on Reviewer Score

Breakfast Mentioned in Negative Reviews

Avg. Reviewer Score

7.88 (Yes)   8.45 (No)

Breakfast Mentioned in Positive Reviews

Avg. Reviewer Score

8.71 (Yes)   8.34 (No)

To the left are plots that compare the average score if the word **breakfast** is included in a negative or positive review. If the word **breakfast** is included in a negative review, the score is lowered by about 1/2 a point on average. If it is mentioned in a positive review, the score is raised by about 1/3 of a point.

Staff or Service Mentioned in Negative Reviews

Avg. Reviewer Score

7.02   8.54

Staff or Service Mentioned in Positive Reviews

Avg. Reviewer Score

8.94   8.03

As seen by the plots to the left, the words **staff** and **service** have a much larger impact on the rating. If either is mentioned in a negative review, then the score drops on average by over 1.5 points. If it is mentioned in a positive review, then the score increases by almost a full point.

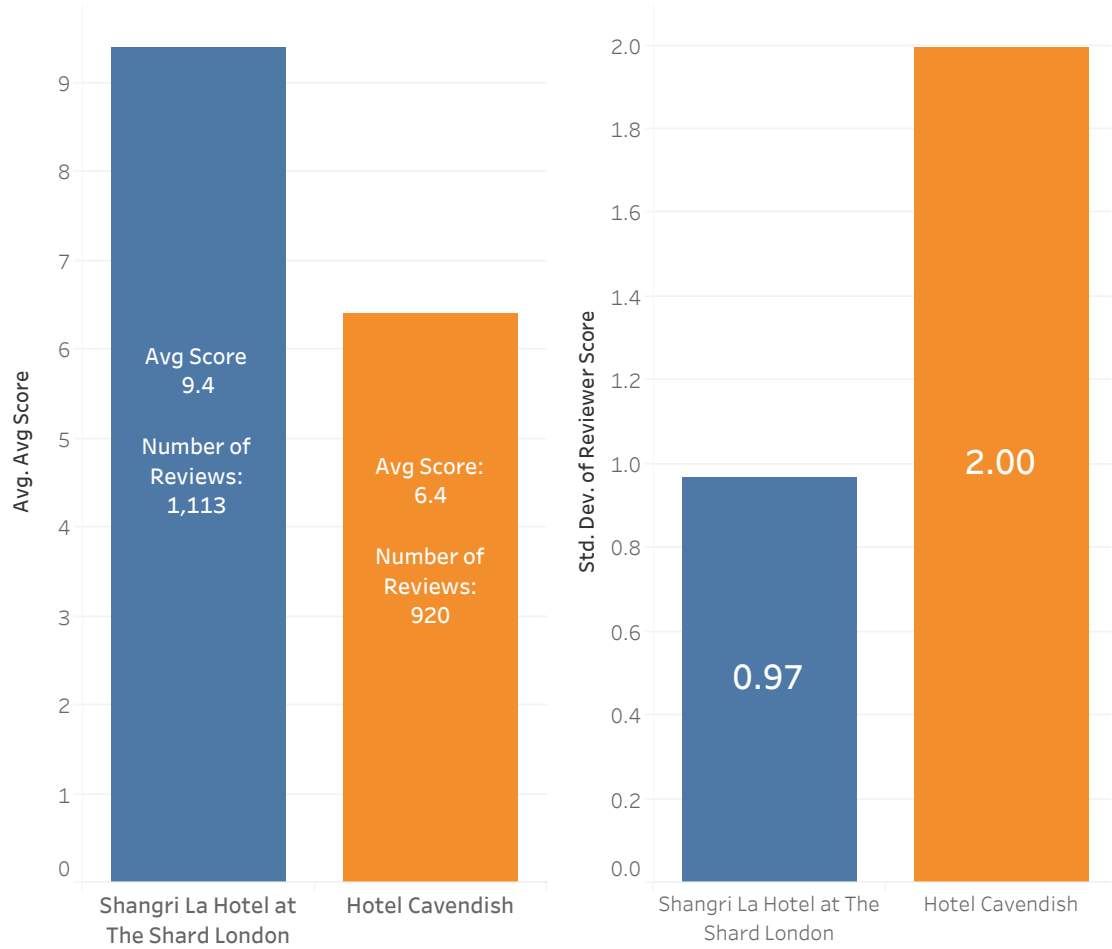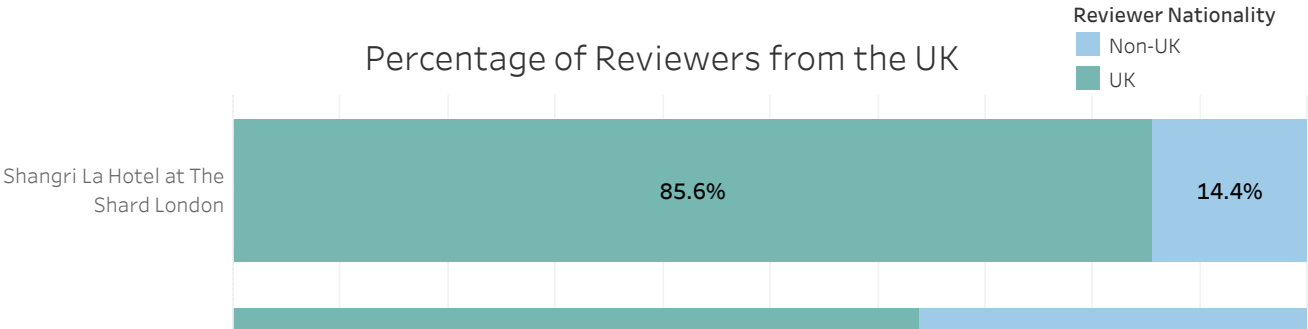# Hotel Reviews in Tableau

A Tale of Two Hotels

Here is a comparison of two hotels that have around the same number of reviews, but were as far apart as possible in their average ratings. In the graph on the far right, the standard deviation of the reviewer score is shown. The standard deviation for the reviews for Hotel Cavendish is twice that of Shangri La Hotel.

Both of these hotels are located in the UK. Below is a plot showing the percentage of reviewers of both hotels that were from the UK. The percentage of their reviewers that are from the UK are vastly different between these hotels. Further research would need to be done to determine why this is so.

Percentage of Reviewers from the UK

Reviewer Nationality
- Non-UK
- UK

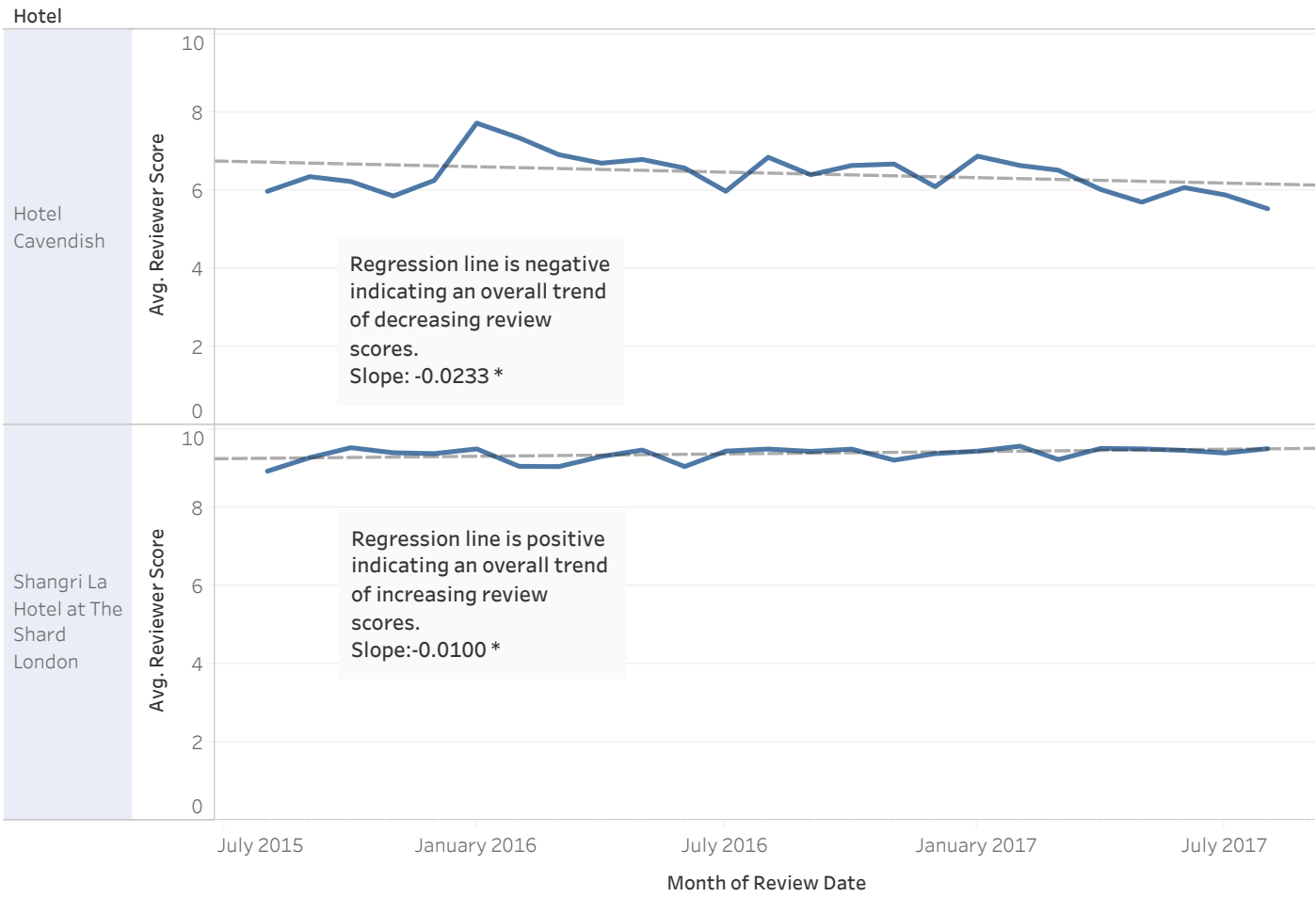Shangri La Hotel at The Shard London — 85.6% | 14.4%

Hotel Reviews in Tableau

Trends in Reviewer Scores

Below are the average scores each month for each hotel. The regression line is plotted and shows an overall negative trend for Hotel Cavendish and an overall positive trend for Shanri La Hotel. The magnitude of the slope of the regression line for Hotel Cavendish is almost 2.5 times that of Shangri La Hotel.

Hotel

Hotel Cavendish	Regression line is negative indicating an overall trend of decreasing review scores. Slope: -0.0233 *
Shangri La Hotel at The Shard London	Regression line is positive indicating an overall trend of increasing review scores. Slope:-0.0100 *

Avg. Reviewer Score

Month of Review Date

July 2015   January 2016   July 2016   January 2017   July 2017

* The original equations for the slope of these lines are:

Hotel Cavendish
Score = (-0.000765158)(Date) + 39.01160

Shangri La Hotel
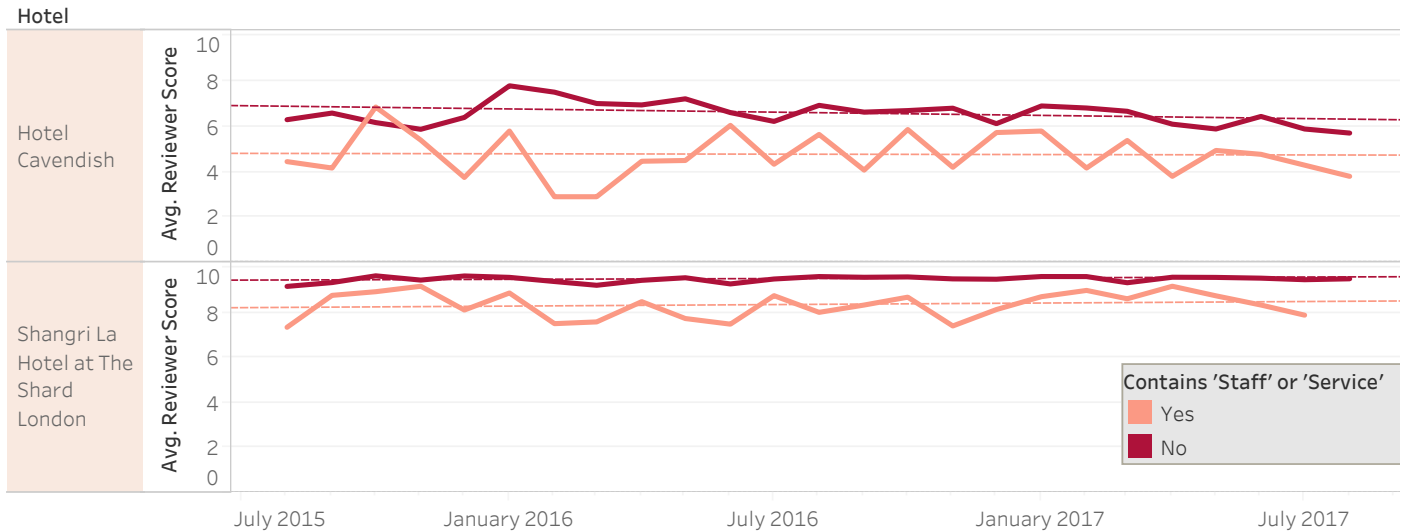Score = (0.000329794)(Date) 4.67215

Hotel Reviews in Tableau

Impact of **Staff** or **Service** vs that of **Clean** on Reviewer Score

Average Score by Month: Split by 'Staff' or 'Service' Mentioned in Negative Review

Hotel

Contains 'Staff' or 'Service'
Yes
No

As with the overall trend lines, the trend for Hotel Cavendish is negative whether 'staff' or 'service' are mentioned or not. Both trend lines for Shangri La are positive. The interesting thing to note is that the slopes are better for both hotels when the words 'service' or 'staff' are included. Thus, even though a reviewer is complaining about the staff/service, it is having less of an impact on the score than it had 2 years ago. This is true for both hotels.

Average Score by Month: Split by 'Clean' Mentioned in Negative Review

Hotel

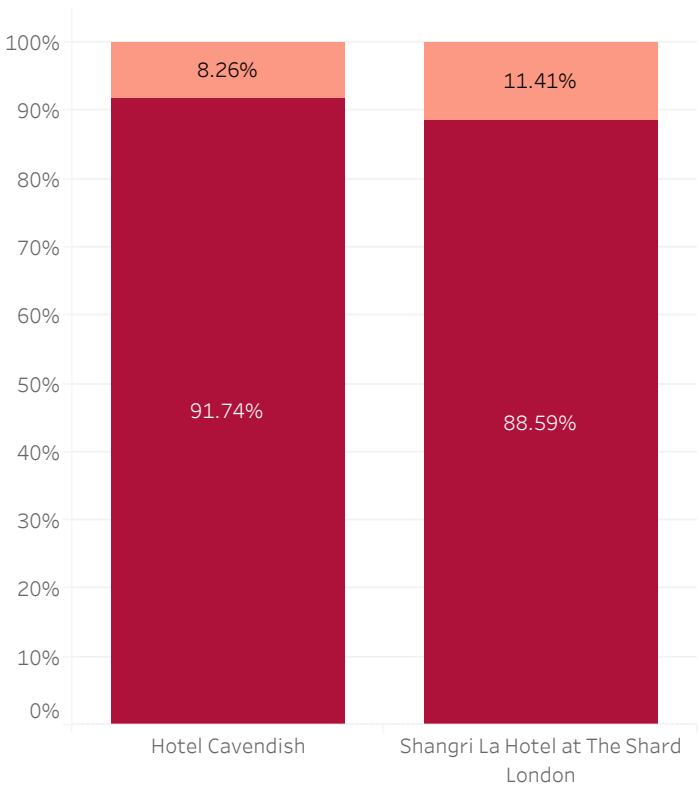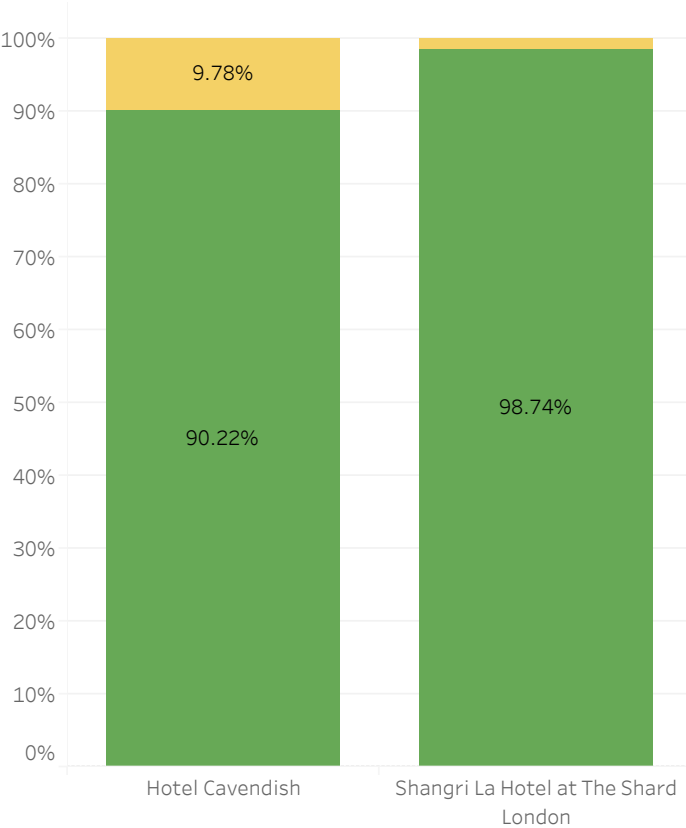**Contains 'Clean'**
Yes
No
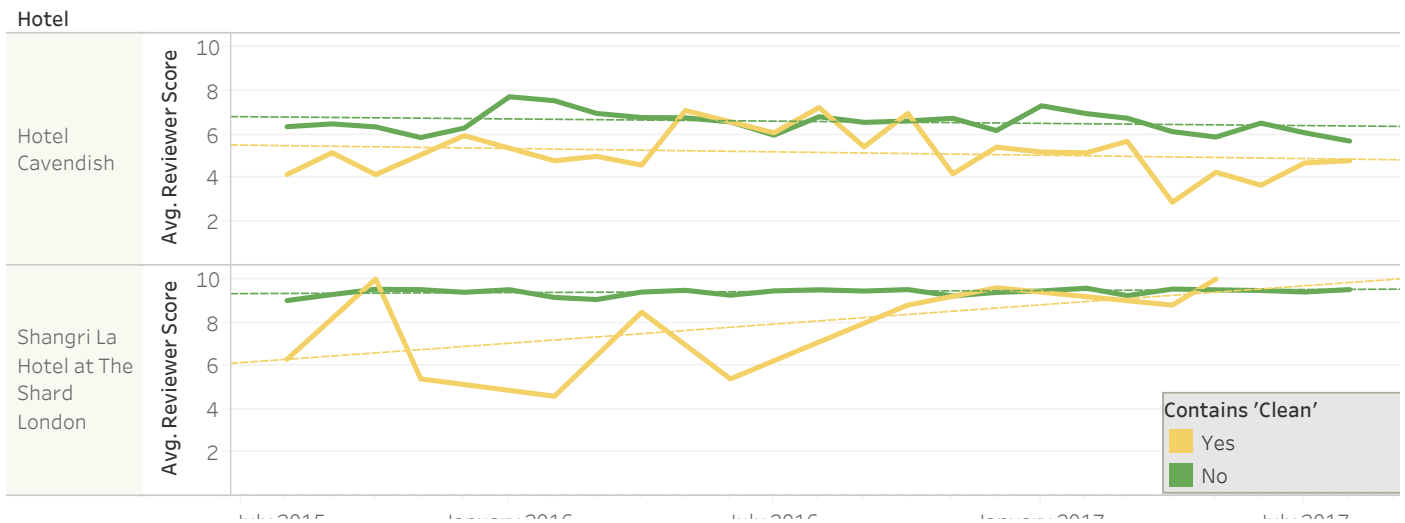
Hotel Reviews in Tableau

Use of **Staff** or **Service** in Negative Reviews

Use of **Clean** in Negative Reviews

This is a large indicator here of the difference between these two hotels when it comes to reviews. The overall trend for Hotel Cavendish is negative while that of Shangri La is positive. Both have a similar percentage of their reviews mentioning the staff or service. In fact, Shangri La has a slightly higher percentage.But the real difference is the cleanliness of the hotel. The cleanliness of Hotel Cavendish is almost 8 times as likely to be mentioned as it is for Shangri La. In addition to that, based off the slope of the trend lines, the reviewers for Hotel Cavendish are scoring the hotel lower and lower over time based off this cleanliness.

This final plot shows the average review given to Hotel Cavendish when there is not mention of **staff**, **service**, or **clean** vs the average score when a reviewer mentions one of these words. A review is apt to get a score of about 1.5 points higher if the reviewer finds the staff helpful and friendly and the hotel clean than they are otherwise.

Is **Staff**, **Service**, or **Clean** Mentioned in Negative Review