September 2025

Online Reputation of Hotels in DFW Area



Market Analysis





I. Executive Summary

This study analyzes Google Reviews of hotels in DFW area to provide a comprehensive understanding of the online reputation of this market. By combining quantitative metrics, topic modeling, and sentiment analysis, the study offers actionable insights for benchmarking performance and improving customer satisfaction.

Market Overview:

A generalized market analysis establishes macro-level benchmarks, identifies overarching themes, and reveals sentiment patterns across local hotels. This contextual view helps individual hotels understand their relative standing and recognize common customer expectations and areas of satisfaction or dissatisfaction. A strong online reputation is critical for customer acquisition and trust in the modern hotel industry.

Key Analyses and Takeaways:

- Star Ratings & Response Promptness: Descriptive analysis reveals overall customer evaluations and hotel engagement with feedback. The histogram plots of star scores and response promptness allow hotels to benchmark themselves against the local market.
- **Topic Modeling:** Identifies six major review themes *overall experiences, location, service, amenities, cleanliness and comfort* and *food* highlighting critical areas influencing customer satisfaction.
- Machine Learning Approach of Sentiment Analysis: Evaluates visibility measure, favorability measure, and a composite measure to quantify different dimensions of online reputation based on machine learning approach of sentiment analysis.
- Aspect-Based Sentiment Analysis (ABSA): Assesses sentiment measures across each theme, providing actionable insights on specific aspects of customer experience.

II. Star Scores and Response Promptness

Google Reviews, like many online platforms, uses a five-star system to show customer satisfaction—five stars mean customers are extremely happy, while one star shows dissatisfaction. While it's a simple measure, it has a big impact on how potential customers view a business. In DFW area, 87.3% of hotels have star ratings. Among them, the average rating is 3.86, ranging from 1 to 5. The median rating is 4.0, meaning that half of the hotels earned star ratings equal to or higher than 4.0. The Figure 1 is the histogram graph of the frequency of hotels that received various star scores. It shows only a small proportion of hotels in DFW area received score scores that equal to or higher than 4.9.

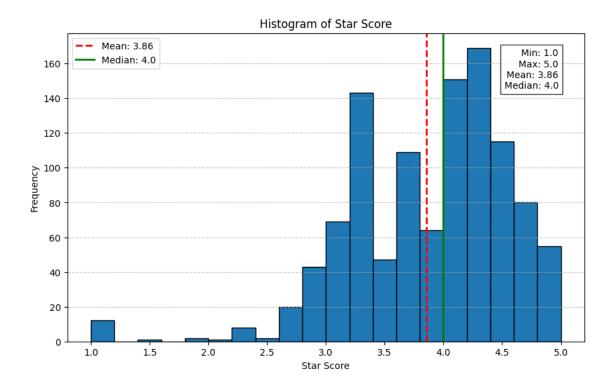


Figure 1: The Distribution of Star Scores in DFW Hotel Market

Timely communication with customers through online platforms plays a critical role in building trust and driving satisfaction. In the DFW hotel market, less than one third (29.2%) of the reviews received a response from hotels, while about 70.8% went unanswered. Among the reviews that were addressed, 84.1% were responded to within 10 days, 90% within 20 days, and 92% within 30 days as shown in the following Figure 2. The average response time is 11.5 days. Customers feel valued when hotels respond to their reviews, which in turn strengthens the hotel's reputation. The high percentage of unanswered reviews and the wide variation in response times underscore the need for more prompt engagement in the DFW hotel market. Hotels that respond quickly stand out in the market and strengthen customer relationships, while those with delayed or absent responses risk missing valuable opportunities to connect with customers and build a strong reputation. To maximize customer satisfaction and competitive advantage, hotels should aim to respond to reviews within 10 days.

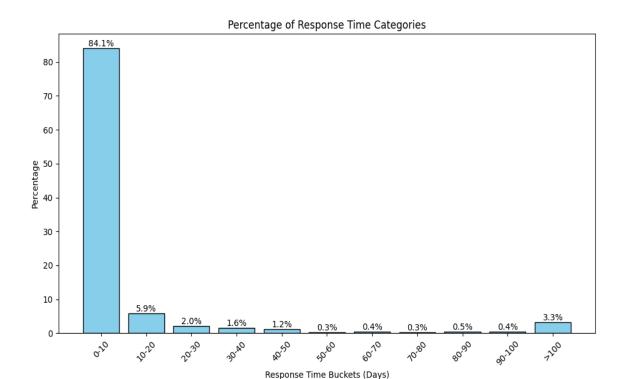


Figure 2: Response Promptness of Online Reviews in DFW Hotel Market

III. Top Three Businesses by Google Review Reputation

The visibility measure is calculated by normalizing the number of online reviews. It reflects both the extent to which a hotel has been reviewed by its customers and the degree to which these reviews are accessed by potential customers. The visibility measure ranges from 0 to 1. We used a media endorsement index to calculate favorability measure. This index reflects the extent to which a hotel is endorsed by its online reviews. The favorability measure ranges from 0 to 1. We created a single measure that combines both visibility and favorability. Visibility shows how much a hotel is talked about in online reviews, while favorability shows how positively people feel about it. On their own, these two measures don't give the full picture—a hotel might be very visible but not very well liked, or the other way around. By bringing them together, the composite measure provides a clearer view of a hotel's overall online reputation.

Table 1 present the top three hotels with highest online reputations in 16 cities that have over 80,000 populations in DFW area. This ranking is based on the values of the composite measure of the hotels in each city.

Table 1
Top Three Hotels Ranked by Online Reputation (16 Major Cities in DFW Area)

Name	Visibility	Favorability	Composite	
Dallas				
Hyatt Regency Dallas	1.00	0.88	0.88	
Omni Dallas Hotel	0.98	0.88	0.86	
Hilton Anatole	0.97	0.82	0.80	
Ga	rland			
Hyatt Place Dallas/Garland/Richardson	1.00	0.60	0.60	
Tru by Hilton Garland Richardson	0.72	0.68	0.49	
La Quinta Inn & Suites by Wyndham Dallas Northeast-Arboretum	0.53	0.76	0.40	
Flowe	r Mound			
Courtyard by Marriott Dallas Flower Mound	1.00	0.68	0.68	
Camp Bow Wow Flower Mound	0.83	0.68	0.57	
The Tavern at Lakeside	0.52	0.79	0.41	
Lev	Lewisville			
Best Western Plus Hotel Lewisville Flower Mound	1.00	0.95	0.95	
Hilton Garden Inn Dallas Lewisville	0.87	0.81	0.71	
Motel 6 Lewisville, TX - Dallas	0.62	1.00	0.62	
Do	enton			
Embassy Suites by Hilton Denton Convention Center	1.00	0.88	0.88	
Best Western Plus Hotel Lewisville Flower Mound	0.76	0.93	0.71	
Dallas/Fort Worth Marriott Hotel & Golf Club at Champions Circle	0.80	0.82	0.66	
Mesquite				
Hampton Inn & Suites Dallas-Mesquite	1.00	0.72	0.72	
Courtyard by Marriott Dallas Mesquite	0.46	0.69	0.32	
Holiday Inn Express & Suites Mesquite by IHG	0.50	0.62	0.31	
Irving				
Omni Las Colinas Hotel	0.98	0.85	0.83	
The Ritz-Carlton Dallas, Las Colinas	0.67	0.93	0.62	
The Westin Dallas Fort Worth Airport	0.76	0.80	0.61	

McKinney				
Adriatica Village	1.00	0.93	0.92	
Sheraton McKinney Hotel	1.00	0.85	0.85	
Hampton Inn & Suites McKinney	0.62	0.77	0.48	
A	llen			
Courtyard by Marriott Dallas Allen at the Event Center	1.00	1.00	1.00	
Marriott Dallas Allen Hotel & Convention Center	0.67	1.00	0.67	
Hilton Garden Inn Dallas/Allen	0.70	0.60	0.42	
Grand	d Prairie			
Home2 Suites by Hilton Dallas Grand Prairie	0.79	0.90	0.71	
La Quinta Inn & Suites by Wyndham Dallas Grand Prairie North	0.74	0.80	0.60	
La Quinta Inn & Suites by Wyndham Dallas Grand Prairie South	0.69	0.80	0.55	
Car	rollton			
Courtyard by Marriott Dallas Carrollton and Carrollton Conference Center	1.00	1.00	1.00	
InTown Suites Extended Stay Carrollton TX - Westgrove Drive	0.27	0.43	0.12	
InTown Suites Extended Stay Carrollton TX - West Trinity Mills	0.26	0.43	0.11	
F	risco			
Embassy Suites by Hilton Dallas Frisco Hotel & Convention Center	1.00	0.78	0.78	
Omni Frisco Hotel at The Star	0.60	0.85	0.51	
The Westin Dallas Stonebriar Golf Resort & Spa	0.37	0.81	0.30	
Arlington				
Sheraton Arlington Hotel	1.00	0.78	0.78	
Live! by Loews - Arlington, Texas	0.75	0.85	0.64	
La Quinta Inn & Suites by Wyndham Arlington North 6 Flags Dr	0.79	0.78	0.61	
Plano				
Hilton Dallas/Plano Granite Park	0.93	0.90	0.84	
Dallas/Plano Marriott at Legacy Town Center	0.91	0.88	0.80	

NYLO Dallas Plano Hotel, Tapestry Collection by Hilton	1.00	0.72	0.72
Fort Worth			
Omni Fort Worth Hotel	1.00	0.83	0.83
The Worthington Renaissance Fort Worth Hotel	0.54	0.86	0.47
Hilton Fort Worth	0.40	0.78	0.31
Richardson			
Renaissance Dallas Richardson Hotel	1.00	0.82	0.82
Hilton Richardson Dallas	0.90	0.59	0.53
DoubleTree by Hilton Hotel Dallas - Richardson	0.88	0.53	0.47

III. Dominant Themes in Google Reviews

To identify key themes in online reviews of hotels, we used a machine learning approach to group customer comments into common topics that represent the dominant themes/aspects of customer experience. This analysis highlights the issues customers discuss most, along with representative keywords that reflect their concerns and praises. The results provide a clear overview of customer feedback and offer insights to guide hotel management and improvement strategies. Table 2 presents the findings:

Table 2 Dominant Themes in Google Reviews

Theme Labels	Top Keywords	Representative Review Snippets
Overall experience	everything, visit,	"The hotel is fairly new, so everything
Overall experience	great, wonderful,	feels clean and updated."
	good, bad, amazing,	"The hotel is newly built, so the property
	thank	inside and out is great."
		"The room was so nice, luxurious and the
		whole hotel smelled wonderful."
Location	location, downtown,	"Perfect location for a weekend and or I
	airport, flight, close,	am sure work week."
	place	"This was good value and not too far
	_	from Dallas downtown and Fort Worth. Both
		are driving distance."
		"Very nice place! Close to airport is a
		plus."
Service	Service, reservation,	"When we arrived, we were surprised to
	check-in, call, staff,	find no reception."

	front desk, friendly, rude, helpful	"The service was not ideal. Did not receive the check in instructions until after check in time so we had to wait." "I NEVER GOT ONE TEXT MESSAGE NOR ANY EMAIL, indicating that my reservation was canceled or that they had issues taking my payment."
Amenities	pool, indoor, water, TV, parking, gym	"I was excited about the splash pad attached to the pool, and it was okay, but my kids preferred to swim." "There are no closets, but a storage space near the TV." "They have a very good space for parking too."
Cleanliness and comfort	Roaches, bugs, bed, mattress, smell, dirty, quiet, noise, clean, sleep, uncomfortable	"I was moved because of roaches and woke up with one crawling on!" "My room was infested with bed bugs and roaches." "The elevator, hallway, window in the room, bathroom, and bath tub were kind of old and dirty."
Food	breakfast, coffee, wine, pizza	"The free breakfast was delicious to say the least, never had we gotten omelets nor biscuits and gravy before." "The breakfast was filled with delicious options." "Breakfast area was wonderful because attendant was present at all times to replenish dishes and coffee as needed."

V. Measures of Themes Online Reputation

We used **Aspect-Based Sentiment Analysis (ABSA)**, a sophisticated method combining topic modeling and sentiment analysis, to gain deeper insights into customer reviews. ABSA allows us to break down feedback into specific service aspects and understand the sentiment associated with each. Since negative reviews can impact a hotel's online reputation, we first examined the percentage of negative reviews for each major theme. Figure 3 shows these results. Notably, **cleanliness and comfort** and **service** are the aspects that generate the most dissatisfaction, highlighting key areas where hotels can focus on improving the customer experience and boosting satisfaction.

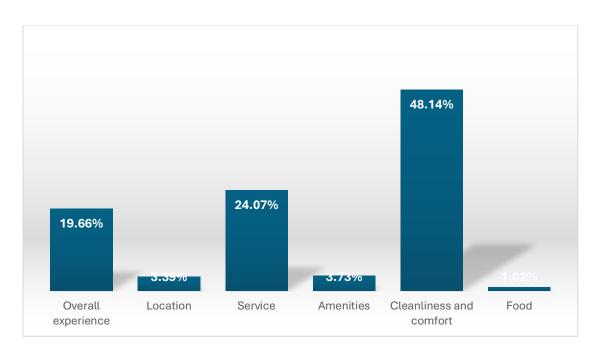


Figure 3: Percentages of Negative Reviews by Major Themes

We also calculated three online reputation measures for each theme/aspect of online reviews. These three online reputation measures provide detailed insights into what customers most often praise or criticize within this hotel market. Table 3 presents the three measures of online reputation based on the results of ABSA analysis.

The **location** theme ranks highest across all measures, highlighting strong overall satisfaction with the hotels' locations. The **overall experience** theme ranks the second highest that is very close to the location theme. In contrast, **cleanliness and comfort** scores lowest on the composite measure and attracts the most negative reviews, identifying a key area where hotels can improve. The **amenity** theme shows lowest visibility but relatively high favorability, indicating that while customers comment less on this aspect, they are generally satisfied with the amenities. The **food** theme ranks the second lowest visibility but highest favorability, indicating the customers appreciate the hotels' efforts to provide a variety of good food — an opportunity for hotels to further highlight their customer-centered care.

Table 3
Three Online Reputation Measures of the Major Themes of Google Reviews

Theme/aspect	Visibility	Favorability	Composite
Labels	Measure	Measure	Measure
Overall experience	1.00	0.54	0.54
Location	0.61	0.90	0.55
Service	0.81	0.47	0.39
Amenities	0.16	0.56	0.09
Cleanliness and comfort	0.83	0.03	0.02
Food	0.30	0.94	0.29

VI. Conclusion

This study analyzes star ratings and response promptness of Google Reviews for hotels in DFW area. Most hotels (87.3%) hold star ratings, with an average score of 3.86. And half of the hotels earned star ratings equal to or over 4.0. Only about one third of the Google reviews were responded by the hotels, indicting many hotels have missed opportunities to build stronger customer relationships.

To gain deeper insights, topic modeling is applied to identify six major themes in the online reviews: *overall experiences, location, service, amenities, cleanliness and comfort* and *food.* These themes capture the aspects of care that customers most frequently discuss and reveal common expectations, as well as areas of satisfaction and dissatisfaction.

Using the machine learning approach of sentiment analysis, this study then evaluates three measures of online reviews—visibility measure, favorability measure, and composite measure. This report presents top three hotels with the strongest online reputations in each city of DFW area, ranked by a composite measure that is the combination of visibility measure and favorability measure.

Building on this, the study employs the Aspect-Based Sentiment Analysis (ABSA) approach to assess the three measures within each of the six major themes. This analysis reveals how hotels perform across specific aspects of the customer experience. Given that negative reviews significantly impact a hotel's online reputation, we examined their distribution across the major themes and found that **cleanliness and comfort**, and **service** generate the highest levels of dissatisfaction—highlighting critical areas for improvement. In contrast, customers express high satisfaction with **location** and **food**. The prominence of negative feedback in the **cleanliness and comfort** aspect suggests that hotels in the DFW area should prioritize enhancing these areas to boost overall guest satisfaction.