

# Behind the stars: A Comprehensive Analysis of Google Reviews for Snap Carwash, Wollongong.

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## Contents

Introduction.....	3
Scope and Objectives.....	3
Data Collection and Preparation .....	4
Methodology .....	5
Key Findings.....	6
Dataset & overall sentiments .....	6
Favorable feedback Analysis .....	7
Critical feedback analysis .....	8
Overall Analysis.....	9
Recommendations.....	10
Conclusion .....	11

## Introduction

In today's digital age, customer opinions have gained unprecedented power in shaping business success. The ability to gauge customer sentiments and feedback has become essential for companies seeking to excel in customer experience. In this context, this report embarks on a journey to unveil the hidden sentiments that lie within the Google reviews of Snap Carwash, Wollongong. By delving into the entirety of Google reviews ever received by Snap Carwash, the aim is to illuminate not only the surface-level perceptions of customers but also the underlying biases, expectations, and the driving factors behind their reviews.

## Scope and Objectives

The primary objective of this report is to unearth the intricate tapestry of customer sentiments that encapsulate Snap Car wash's journey as seen through the eyes of its customers. Every review, whether a fleeting comment or comprehensive feedback, has the potential to offer insights into the nuanced dynamics between the customers and the organization. By analyzing these reviews, we strive to identify the broad spectrum of emotions – ranging from enthusiastic satisfaction to upsetting dissatisfaction – and to map their distribution across the entire review dataset. Beyond unveiling whether a review is positive, negative, or neutral, the report strives to reveal the subtle nuances that shape these sentiments. The identification of customer biases, unmet expectations, and potential causation behind reviews paves the way for actionable insights that can drive strategic decision-making for Snap Carwash, Wollongong.

## **Data Collection and Preparation**

The foundation of this analysis lies in the meticulous collection and preparation of the Google reviews for Snap Carwash, Wollongong. A comprehensive dataset was assembled by extracting reviews from Snap Car wash's Google My Business listing. The dataset encompassed a total of 99 reviews, each containing essential components such as ratings, textual reviews, and timestamps denoting the date and time of posting.

To ensure the reliability and accuracy of the analysis, a rigorous data cleaning process was undertaken. Reviews lacking textual content were removed to focus exclusively on reviews with valuable insights. This step mitigated any potential skewing effects that could arise from including ratings without corresponding comments.

Quality assurance extended beyond textual content. Rigorous efforts were dedicated to identifying and eliminating fake reviews. These spurious entries, including reviews originating from individuals who had never availed Snap Car wash's services but were coerced by external pressures to leave reviews, were identified, and removed from the dataset. This thorough curation process ensured that the subsequent analysis was built on a foundation of authentic and meaningful feedback. With the refined dataset in place, the data was sorted for analytical convenience. The ratings, textual reviews, and timestamps were organized in a structured manner to facilitate efficient exploratory analysis. This sorting not only streamlined the subsequent analysis but also allowed for the identification of potential temporal trends and patterns within the reviews.

## Methodology

To achieve these aims, a multi-pronged approach has been employed. The dataset, consisting of all Google reviews accumulated by Snap Carwash, has been meticulously collected and prepared. Leveraging the power of data analysis tools such as Excel, Python, and Tableau, sentiment analysis has been undertaken to quantitatively assess the polarity and intensity of sentiments expressed in the reviews.

The python libraries which were used to analyze the data include Pandas, TextBlob, scikit-learn, CountVectorization, LatentDirichletAllocation, Matplotlib and Seaborn.

The purpose of these libraries are as follows:

- Pandas – for data processing, organizing and manipulation.
- TextBlob – Library for natural language Processing. For sentimental analysis
- CountVectorization – To convert the data to numerical format so that machine learning models can understand.
- LatentDirichletAllocation – Topic modelling was performed using Latent Dirichlet Allocation
- Matplotlib – For plotting graphs
- Seaborn – To simply graphs and to aesthetically plot complex statistics.

## Key Findings

### Dataset & overall sentiments

- After Data cleaning, out of the 99 reviews, 74 have been considered appropriate for this analysis. This is based on data quality, relevance and reviews which had both textual content and ratings. Furthermore, it was ensured that the cleaned dataset included only people who availed the services of the organization.
- These 74 reviews were further divided based on ratings. It has been identified that, 46 people provided 5- star reviews for the services that they received, four people gave 4-star reviews for the services, three people gave 3-star reviews, three people gave 2-star reviews and 18 people gave 1-star reviews for the services.

Figure 1 attached below illustrates these results.

Ratings	Count
5	46
4	4
3	3
2	3
1	18
Total	74

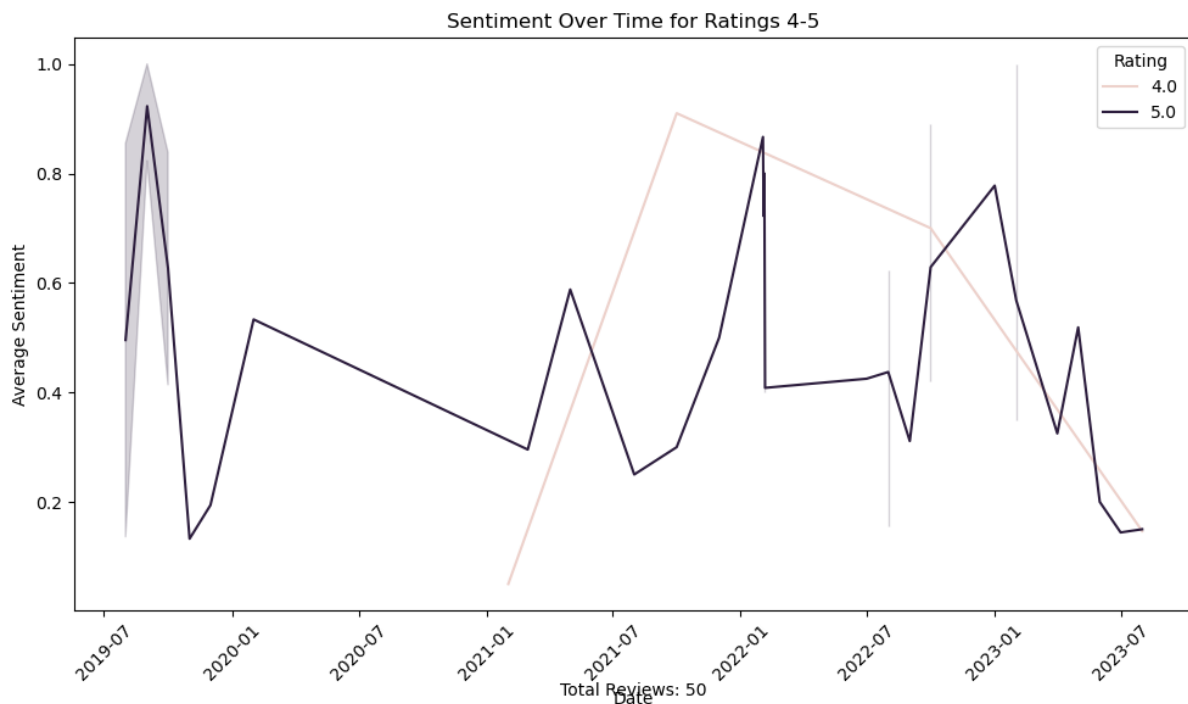
**Figure 1**

- It has been observed that a total of 50 reviews are positive as it has ratings of 4 & 5 and a total of 24 reviews are negative, which has ratings of 1, 2 & 3.
- The average rating out of the 74 has been identified as 3.77 out of 5.

To gain a clearer understanding of customers' perceptions towards the organization's services, the dataset has been categorized into two subsets: Favorable Feedback and Critical Feedback.

The favorable feedback contains 50 reviews which includes dataset of ratings 4 & 5. Critical Feedback contains 24 reviews which includes dataset of ratings 1,2 &3.

## Favorable Feedback Analysis



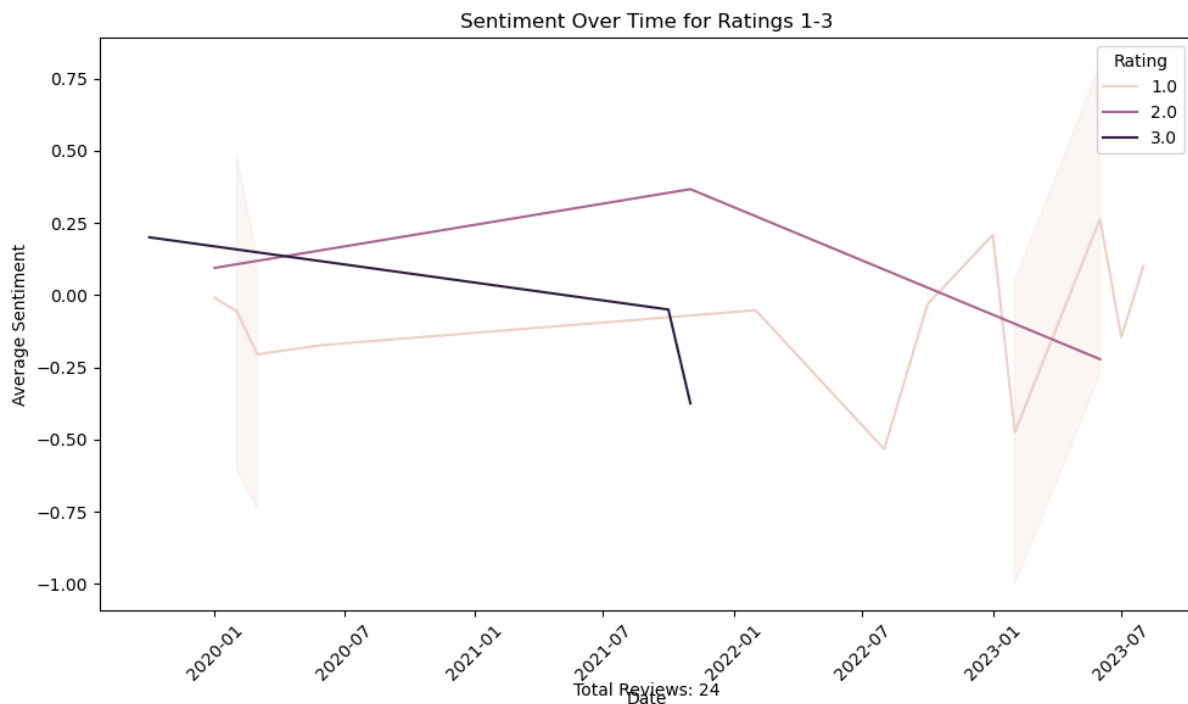
**Figure 2**

While reading Figure 2, it should be noted that the higher the average sentiment, customers feel more positive about the organization.

The dataset under favorable feedback has ratings of 4 & 5. It has a total of 50 reviews out of the 74 reviews considered. When these 50 reviews were analyzed, it was observed that the pattern is random with many ups and downs. Customers felt that the service at Snap Carwash was the most favorable during the end of 2019. Then the pattern followed slight ups and downs and formed an upward trend towards the beginning of 2022. After that, the trend followed a downward slope throughout the year. However, towards the beginning of 2023, the sentiment was positive reaching a score of 0.8 but it quickly dropped and as of July 2023, it has a sentiment value just below 0.2.

It can be therefore concluded that the average sentiment is dropping for favorable feedback. From the beginning of 2023, the trend is downward and as of August 2023, there is no sign of change in the trend. This should be further investigated as a downward trend will adversely affect the overall well-being of the organization. The most repeated keyword for the favorable feedback dataset includes words such as professional, great wash, quick job, and good attention. After further analyzing the reviews, it has been observed that customers find the carwash appealing because of the quick service, the wash quality, and service, and many customers described the ease of parking at the organization.

## Critical Feedback Analysis



**Figure 3**

While reading Figure 3, it should be noted that the higher the average sentiment, the more critical customers feel about the service quality.

The dataset under critical feedback contains 24 reviews of 1,2 & 3 ratings. The average sentiment in 2020 was neutral at 0 and followed a slight downward slope to -0.18 then followed a slight upward trend till 2022 January. From 2022, January, the slope drastically fell and reached its all-time low at -0.50 on July 2022. Therefore, it can be understood that the organization received very little negative feedback during that period. However, From August 2022, the trend rallied high towards 0.25 during the final months of 2022. The trend well again towards -0.50 during January 2023, however, it quickly followed an upward trend rallying to its all-time high at 0.25 in April 2023. Then it slowly dipped a little reaching near zero but only to bounce back to 0.10 as of July 2023.

From Figure 3, it can be concluded that the average sentiment is increasing for critical feedback. This will impact on the overall business performance negatively if the trend follows the same pattern.

The most repeated words under the critical feedback dataset include overcharged, poor vacuum, smear marks, and poor customer service. After analyzing the reviews, it has been observed that customers perceive the service quality as not in par with the value for money they paid.



## Overall Analysis

Even though 50 reviews describe snap carwash positively, the trend is following a downward slope. The organization was showered with positive comments during the mid of 2019 and it dropped near zero by 2020. After that, the organization was positively reviewed during the period of 2022. Especially during the mid- year. However, towards the end of 2022, Customer sentiment towards the organization turned very critical. Towards the beginning of 2023, customer sentiment reached 0.25 which and many of the reviews were regarding poor service quality and cases of overcharging. Nevertheless, From March of 2023, the negative sentiments slowly started to follow a downward trend indicating that customers were satisfied or neutral regarding the service. Towards the mid-year during July and August, the critical feedback reached its all-time high at 0.35 then it dropped but the average sentiment for critical analysis is at 0.15.

It is also important to note that the analysis does not consider any change in management due to the limitations of the data as some comments in positive feedback and critical feedback are random and opposite to each other as in some reviews praise the professionalism and some reviews criticize the lack of professionalism. This should be further investigated with relevant operational data.

Some key takeaways from the overall analysis are.

- Customers felt the service quality of snap carwash was at its best during the end of 2021 (Final 3 months) and towards the middle of 2022 (July- September).
- Customer sentiment regarding the service is following a downward trend indicating that more and more customers are feeling critical of the service.
- The overall satisfactory sentiment trend tends to follow a random pattern with a few extremely good time periods and more critical time periods.
- Even though the critical feedback trend is increasing, the brand maintains a 3.7-star rating. Indicating that the customers possess a sense of trust in the organization's service.

## Recommendations

Considering the seasonal trend of the market for carwash, the coming summer can be lucrative for the organization if the customer perception of the organization and its service is improved. Now, the service provided by the organization in the eyes of the customer is following a downward trend.

If the service quality comes back to how it was during the mid of 2022, the carwash can maintain and boost its reputation.

Some key areas that should be looked at include.

- **Implementing a Quality Standard for Vacuum:**

This is a practical step to ensure consistency in the service provided. A clear and standardized process for vacuuming, along with re-checking and redoing, if necessary, can lead to improved customer satisfaction by ensuring a thorough cleaning process.

- **Final Check for Smear Marks and Customer Satisfaction:**

A diligent final check to eliminate smear marks and ensure a spotless finish is crucial. This attention to detail demonstrates professionalism and can significantly contribute to customer satisfaction.

- **Enhancing Customer Service Etiquette:**

Greeting customers, proactively engaging with them, and displaying professionalism are essential for creating a positive customer experience. Personalized and courteous interactions can leave a lasting impression and improve overall customer sentiment.

- **Transparency Regarding Carwash Plans and Charges:**

Being transparent with customers about the carwash plans and explaining the reasons for any additional work can build trust and prevent misunderstandings. Clear communication about charges can help alleviate concerns about overcharging.

- **Introducing Total Quality Management (TQM) Approach:**

Implementing a TQM approach signifies a commitment to continuous improvement and customer-focused processes. This can lead to a more efficient and effective service delivery, ultimately enhancing the overall quality of the organization's operations.

These recommendations cover various facets of customer experience, service quality, communication, and process improvement. They align with the insights you've gained from the sentiment analysis and provide actionable steps to address the identified issues. Incorporating these recommendations has the potential to positively impact customer sentiment, especially in preparation for the upcoming lucrative summer season.

When implementing these recommendations, it's also a good idea to monitor their effectiveness over time and make necessary adjustments based on feedback and data analysis. This iterative approach will help ensure that the improvements are yielding the desired results and contributing to the organization's long-term success.

## Conclusion

In summary, this text analysis report delves into customer sentiments and thoughts as expressed through reviews and comments on the Google My Business listing. Despite certain limitations, which include the absence of operational and sales data and limitation to identify any change in management, the report provides valuable insights into the general customer perception of the business and the interplay between time and service quality.

The observed correlation highlights that customer regarded the service as excellent during the period spanning 2021 to mid-2022. Conversely, the current trend indicates a critical sentiment towards the service. To harness the potential for improvement, the business should address the issues and conduct a comprehensive analysis of operational data.

By embracing these recommendations, the business can foster an overall increase in favorable sentiment. This correlation, combined with the proposed actions, positions the business to not only identify its weaknesses but also to implement strategies that enhance service quality. This, in turn, will lead to improved customer satisfaction and set the stage for sustained long-term success.

