



Snapchat Sentiment Analysis: A Portfolio Report

Executive Summary

This analysis explores Snapchat app reviews from 2018 to 2025 using sentiment analysis, word clouds, and topic modeling. The results show a polarized user base: while approximately **46% of reviews are positive**, praising creative features, filters, and social connectivity, a significant **38% remain negative**, citing technical issues, intrusive ads, and account or privacy concerns. Notably, app updates in 2024-2025 led to a surge in positive sentiment, yet negative feedback remained consistently high, indicating that unresolved bugs and confusing new features continue to drive user frustration. Overall, Snapchat's success hinges on strengthening platform stability, building user trust, and enhancing usability while preserving its creative edge.

1. Introduction

The goal of this report is to analyze user reviews of the Snapchat mobile application from 2018 to 2025. By leveraging natural language processing (NLP) techniques, including sentiment analysis and word frequency analysis, this study aims to uncover key drivers of user satisfaction and dissatisfaction. The insights gathered can help identify areas for improvement, inform feature development, and ultimately enhance the user experience.

2. Methodology

2.1. Data Source and Preprocessing

- The analysis is based on a dataset of Snapchat app reviews sourced from Kaggle, containing 231,984 entries.
- Initial data wrangling was performed in the “`snaphat_data_wrangling.ipynb`” notebook, which included:
 - Removing reviews with no text content.
 - Dropping over 3,053 duplicate entries to ensure data quality.
 - The final, cleaned dataset consists of **228,928 unique reviews**.

2.2. Sentiment Analysis

- Sentiment scores were assigned to each review using a pre-trained **RoBERTa model** (`cardiffnlp/twitter-roberta-base-sentiment`), a powerful transformer-based model optimized for social media text.
- Each review was assigned a negative, neutral, and positive score. The sentiment with the highest score was chosen as the review's overall sentiment label.

2.3. Text Analysis and Word Clouds

- To identify key themes, the review text was preprocessed by:
 - Converting all text to lowercase.
 - Removing punctuation, numbers, and common "stopwords" (e.g., "the," "is," "and").
 - A custom list of irrelevant words (e.g., "app," "snapchat") was also removed to improve the focus on meaningful terms.
- Word clouds were then generated to visualize the most frequent terms in both positive and negative reviews.

2.3. Topic Modeling: A Comparative Approach

To identify the core themes within the user reviews, topic modeling was employed. Acknowledging that different algorithms can yield slightly different thematic clusters, two distinct methods were applied to ensure the robustness and validity of the results:

- **Latent Dirichlet Allocation (LDA):** A probabilistic model that is widely used for discovering abstract topics in a collection of documents.
- **BERTopic with SentenceTransformers:** A transformer-based approach that uses the “*all-MiniLM-L6-v2*” model to generate semantic embeddings of the reviews. These embeddings are clustered into coherent topics, providing deeper insights than word frequency alone.

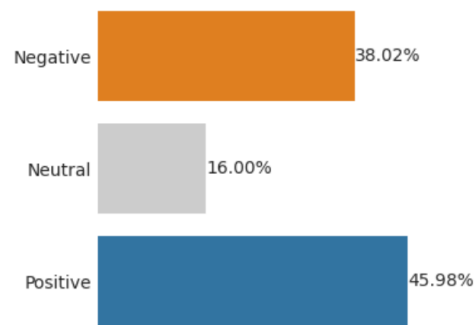
By using both methods, we were able to **cross-check results** and focus on topics that appeared consistently across models. This approach improves confidence in the final themes and ensures a balance between statistical rigor and semantic clarity.

3. Key Findings

3.1. Overall Sentiment Is Polarized

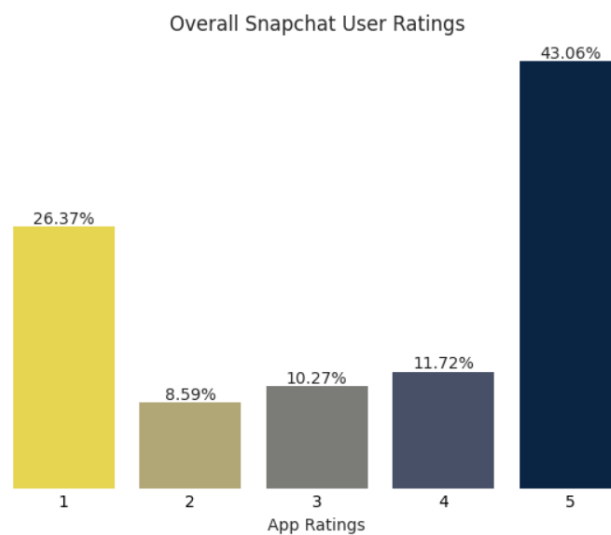
The sentiment among Snapchat users is highly divided. While the largest group of users expresses positive feelings (46%), the volume of negative reviews is nearly as large (38%).

User Sentiment Towards Snapchat (2019–2025)



This indicates that while a significant portion of the user base enjoys the app, there is a substantial group with persistent frustrations.

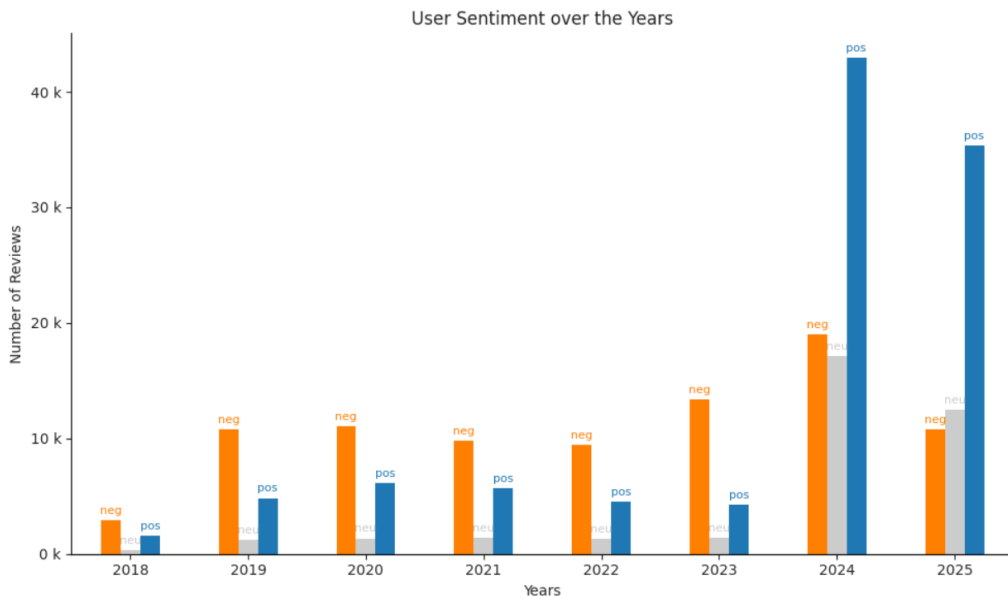
3.2. User Ratings Reflect Mixed Experiences



The distribution of star ratings aligns with the sentiment analysis, showing a high concentration of both 5-star and 1-star reviews. This further supports the conclusion of a polarized user experience, with users either loving or hating the app.

3.3. Sentiment Trends Over Time (2018–2025)

Analysis of reviews by year revealed a significant shift in 2024 and 2025.



- There was a **sharp increase in positive reviews** in these two years, suggesting that recent updates or new features were very well-received by a large segment of users.
- However, **negative reviews also remained consistently high**, particularly in 2024. This suggests that while some users were pleased with the changes, a substantial number continued to face issues, possibly related to bugs or the introduction of unpopular features.

3.4. Key Themes in User Feedback

The word clouds generated from the reviews provide clear insights into what users like and dislike:



Negative Reviews: The most common complaints are related to **technical issues**. Words like "camera," "video," "account," "login," "issue," "problem," and "fix" dominate the negative word cloud. This indicates that core functionalities are not consistently reliable for many users. Frustration is also evident from terms like "crashes," "freezes," and "slow".

Positive Reviews: Positive feedback centers on the app's **social and creative features**. Users frequently mention "friends," "love," "filters," "fun," and "great." This highlights that the app's core value proposition of connecting with friends and using creative tools remains strong and highly appreciated.

3.5. Topic Modeling: A Deeper Dive into User Concerns and Praises

To further dissect the themes from the word clouds, a comparative topic modeling approach was used to group related terms into distinct categories. This method helps ensure the identified themes are both consistent and meaningful.

Key Negative Topics:

1. **Technical Performance & Bugs:** This was the most prominent topic, with users frequently discussing app **crashes, freezing, slow performance**, and features not working as expected after an **update**.
2. **Account Access & Security:** A significant number of users reported problems with **logging in, password resets, banned accounts**, and issues with phone number verification.
3. **Core Functionality (Camera & Video):** Complaints often centered on the **camera quality, video recording failures, sound issues**, and problems with sending or receiving snaps.
4. **User Interface & Experience (UI/UX):** This topic captured frustration with the **new layout, intrusive ads**, and features being difficult to find or use.

Key Positive Topics:

1. **Social Connection:** The most celebrated aspect of Snapchat is its ability to connect users with **friends, family, and people** through streaks and messaging.
2. **Creative Tools & Filters:** Users consistently praised the app's **fun, amazing, and cool filters, lenses, and effects**, highlighting them as a key reason for using the platform.
3. **Overall Enjoyment & Ease of Use:** A large group of users expressed general satisfaction, describing the app as **"great," "good," "easy to use,"** and the **"best"** social media app.

4. Limitations of the Analysis

- **Platform Bias:** The dataset is from Kaggle and may not represent the full spectrum of user reviews from all app stores (e.g., Apple App Store, Google Play Store) equally.
 - **Sarcasm and Nuance:** Automated sentiment analysis models can sometimes misinterpret sarcasm or complex nuances in user reviews, which could lead to minor inaccuracies in sentiment classification.
 - **Lack of Demographic Data:** The analysis is based purely on the review text and does not include user demographics (e.g., age, location), which could provide deeper contextual insights.
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5. Recommendations

Based on the findings, the following actions are recommended for the Snapchat development team:

1. **Prioritize Stability and Bug Fixes:** Given that the overwhelming majority of negative feedback relates to technical issues, a primary focus should be placed on improving app stability, fixing camera/video bugs, and ensuring smooth performance after updates.
 2. **Streamline Account Recovery:** The high volume of complaints about login and account access issues indicates a need for a more robust and user-friendly account recovery process.
 3. **Re-evaluate UI/UX Changes:** Feedback on new layouts and intrusive ads should be taken seriously. A/B testing major UI changes with a smaller user group before a full rollout could help mitigate user frustration.
 4. **Amplify Core Strengths:** Continue innovating on the creative tools (filters, lenses) and features that enhance social connections, as these are the primary drivers of positive sentiment and user loyalty.
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6. Conclusion

This analysis reveals a clear duality in the Snapchat user experience. The app is widely celebrated for its innovative features and its role in fostering social connections. However, its success is significantly undermined by persistent technical problems and usability issues that frustrate a large portion of its user base. While recent updates have been positively received by many, the continued high volume of negative reviews is a critical concern. To ensure long-term growth and user satisfaction, Snapchat must prioritize a **"back-to-basics"** approach focused on **performance, reliability, and a seamless user experience**, while continuing to build on the creative and social features that users love.