



EXECUTIVE SUMMARY

Problem

The TikTok Project aims to develop a machine learning model to classify user interactions as claims or opinions. Initially, the data team was tasked with inspecting, organizing, and preparing the raw dataset for future exploratory data analysis, crucial for effective classification.

Response

The data team performed a preliminary investigation of the claims classification dataset to understand key relationships between variables. They focused on analyzing the counts of claims and opinions to grasp the distribution of video content types. Claims status, author ban status, and video engagement were identified as the most logical starting points to determine potential trends. They also created three new engagement columns to facilitate deeper analysis.

Impact

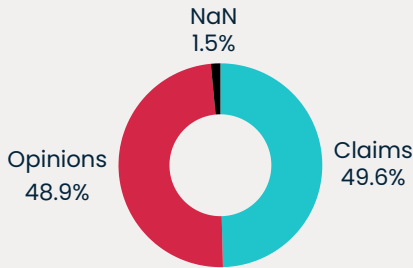
The preliminary investigation and dataset preparation have established a solid foundation for future exploratory data analysis. By identifying and creating key engagement variables, the data team has enhanced the dataset's utility for building an effective machine learning model. This model is expected to significantly improve content moderation efficiency, reduce user report backlogs, and enhance the overall user experience on TikTok. The identification of trends and key variables will allow for more accurate classification of user interactions, contributing to a safer and more engaging platform for users.

Understanding the Data

Reviewing the dataset, which comprises **19,382** TikTok videos with **12** columns of categorical, text, and numerical data, revealed key insights into video engagement and claim status.

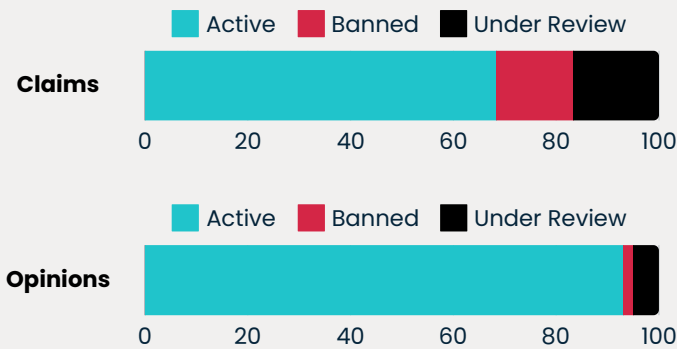
Claims vs Opinions

- With **9,608** claims and **9,476** opinions, we observed a relatively balanced claim status. However, a substantial variance in median video view counts between claims (**501,029**) and opinions (**4,956**), indicates a possible correlation between popularity and controversy.
- 298** null values were identified in **7** columns including claims status.



Author Ban Status

- The data shows a predominance of active authors, but claim videos have significantly higher instances of banned and under-review statuses compared to opinions, suggesting stricter moderation for claims.



- Notably, claim videos from banned and under-review authors exhibit higher values across multiple engagement metrics (views, likes, shares), underscoring that controversial content garners more attention.
- Engagement rates are more influenced by the nature of the content (claims vs. opinions) than the author's ban status, with claim videos, particularly from banned authors, attracting more positive interaction.

Key Insights

The preliminary dataset analysis revealed that claim videos, which face stricter moderation, attract higher engagement, especially from banned authors. This highlights the influence of content nature over author status on engagement rates. With the key variables identified and the initial investigation complete, the process of exploratory data analysis can now begin, leveraging these insights to enhance content moderation and engagement strategies.

This analysis highlights the critical correlation between claim status, author ban status, and engagement levels. Further analysis should provide actionable insights for content moderation and engagement strategies.

EXPANDING ON INITIAL INSIGHTS



Impact of Content Type on Engagement

Claim videos consistently show higher median view counts, likes per view, comments per view, and shares per view compared to opinion videos across all author ban statuses. This indicates that the type of content (claim vs. opinion) has a significant impact on engagement, attracting more interactions from viewers.

Author Status and Engagement

Banned and under review authors have significantly higher median video share counts than active authors. Despite being fewer in number (1,635 banned and 2,066 under review vs. 15,383 active), these authors have much higher average engagement metrics, indicating a potentially impactful minority. This suggests that content from banned and under review authors garners significant attention, possibly due to its controversial nature.

Moderation and Claim Videos

Active authors are predominant in both claim statuses, but there is a significant difference; those in the claim category have a much higher number of banned and under-review statuses compared to the opinion category. This implies that moderation efforts might be more stringent for claims, leading to a higher likelihood of claims being flagged for review or resulting in author bans.

Distribution of Video Shares

Active authors dominate the total video shares due to their larger representation, with 67.96% of total shares from 79.36% of accounts. The total videos shared by author status shows that active authors have just over 217 million shares (67.96%), which is over 4 times more than the shares by banned (49M, 15.35%) and under review (53M, 16.67%) statuses combined. This distribution is logical given the majority presence of active authors.