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Exploring Audience Responses To The Pelangi Di Mars Movie Trailer On Youtube

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Abstract

This study examined audience responses toward the *Pelangi di Mars* movie trailer on YouTube using sentiment analysis and topic modelling approaches. The data were collected from the YouTube comment section on March 10, 2026, resulting in 3,006 comments used as the research dataset. The comments were processed through several preprocessing stages, including text cleaning, tokenization, stopword removal, stemming, and normalization. Sentiment analysis was conducted using the IndoBERT pre-trained model to classify comments into positive, neutral, and negative categories, while Latent Dirichlet Allocation (LDA) was applied to identify dominant discussion topics within audience comments. The findings show that positive sentiment dominates audience responses, accounting for 73.7% of the total comments, followed by 13.9% neutral comments and 12.4% negative comments. Topic modelling reveals five major discussion themes related to animation quality, cinema enthusiasm, Hollywood comparison, story appreciation, and the development of the Indonesian animation industry. In addition, the IndoBERT model achieves an accuracy score of 94%, indicating strong performance in classifying Indonesian-language YouTube comments. The study concludes that YouTube comments function as electronic word of mouth (e-WOM) that influences public perception and supports digital film promotion and audience engagement in the entertainment industry.

Keywords : *Youtube Comments; E-WOM; Movie Trailer; Sentiment Analysis; Topic Modeling*

INTRODUCTION

The development of digital media has transformed the way audiences interact with the entertainment industry, particularly through YouTube (Zamakhsyari et al., 2026a). Movie trailers uploaded on YouTube no longer function solely as promotional media, but also serve as public discussion spaces where audiences express opinions, expectations, criticism, and appreciation toward a film (Syuhaidi et al., 2023). The comment section often reflects spontaneous audience responses regarding visual quality, storyline, characters, and production standards presented in the trailer (Yan, 2023). This phenomenon makes YouTube

comments a relevant data source for understanding audience perceptions of a film in the digital era (Hussain et al., 2024).

One of the Indonesian movie trailers that has attracted public attention is the trailer of *Pelangi di Mars*, uploaded through the Mahakarya Pictures YouTube channel. The official trailer has gained more than 1.6 million views and received thousands of comments from YouTube users. The film is scheduled to be released on March 18, 2026 (Mahakarya Pictures, 2026). The high number of viewers and interactions in the comment section indicates strong public enthusiasm toward the development of the Indonesian animation industry.

Various comments on the trailer reflect audience interactions and discussions regarding animation quality, visuals, storyline, and the development of Indonesia's creative industry (Yan, 2023). YouTube comment sections allow audiences to express opinions, share expectations, and engage in digital discussions related to entertainment content (Wibowo & Rochmania, 2024). In this context, social media platforms have become spaces for public opinion formation and audience interaction in the digital era (Tarnovskaya et al.,, 2025).

In the context of digital communication, audience comments on YouTube can be categorized as electronic word of mouth (e-WOM), which refers to the exchange of opinions and experiences among internet users regarding a product or entertainment content (Tsalisa & Setiyarini, 2025). e-WOM plays an important role in shaping public perception because users' opinions may influence how other audiences perceive a film (Gupta, 2023). Therefore, comments on movie trailers can be utilized to understand audience responses and perceptions toward films distributed through digital media platform (Tibrizi & Wicaksono, 2025).

This study employs sentiment analysis and topic modelling approaches to explore audience opinions toward the *Pelangi di Mars* movie trailer on YouTube. Sentiment analysis is used to identify audience opinion tendencies into positive, negative, and neutral categories, while topic modelling is applied to discover dominant discussion topics within audience comments (Osmani & Mohasefi, 2022). The IndoBERT model is utilized because it is capable of understanding the Indonesian language context commonly found in YouTube comments, including informal language, abbreviations, and emotional expressions frequently used in social media interactions (Jati et al., 2026).

This study aims to explore audience responses toward the *Pelangi di Mars* movie trailer on YouTube through sentiment analysis and topic modelling. The findings are expected to provide insights into public perceptions of the development of the Indonesian animation industry, while also contributing to studies in digital communication, audience response, and the creative industry in the social media era.

METHOD

This study employed a quantitative approach using sentiment analysis and topic modelling to explore audience responses toward the *Pelangi di Mars* movie trailer on YouTube. The research focused on analyzing public opinions expressed in the YouTube

comment section of the official trailer uploaded by the Mahakarya Pictures channel. The overall research procedure is illustrated in Figure 1.

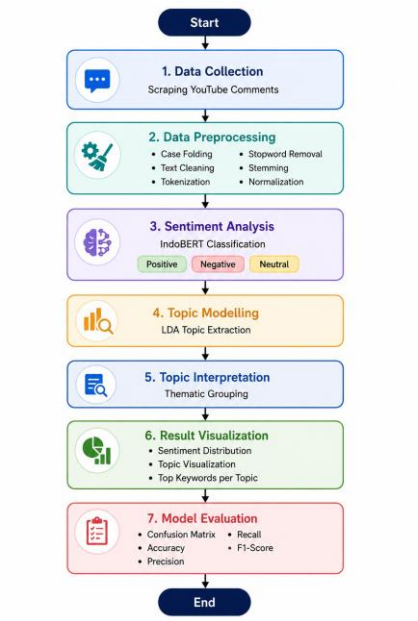


Figure 1. Research Framework of Sentiment Analysis and Topic Modelling on YouTube Comments

The data used in this study were collected from the YouTube comment section on March 10, 2026, using a web scraping technique. A total of comments posted by YouTube users were gathered as the primary dataset for analysis. The collected data were then processed through several preprocessing stages, including case folding, text cleaning, tokenization, stopword removal, stemming, and normalization. These preprocessing steps were conducted to improve text quality and ensure that the data were suitable for Natural Language Processing (NLP) analysis (Sri et al., 2024).

After the preprocessing stage, sentiment analysis was conducted using the IndoBERT pre-trained model to classify audience comments into three sentiment categories: positive, negative, and neutral. IndoBERT was selected because it is specifically designed for the Indonesian language context and is capable of understanding informal expressions commonly used in social media comments (Adhim & Cahyono, 2025).

Following sentiment classification, topic modelling was performed using the Latent Dirichlet Allocation (LDA) method to identify dominant discussion topics within audience comments. The extracted topics were then interpreted and grouped into thematic categories based on the dominant keywords identified in each topic (Nguyen et al., 2024).

The results of the analysis were visualized through sentiment distribution charts and topic visualization graphs to facilitate interpretation of audience responses. In addition, model evaluation was conducted using a confusion matrix along with accuracy, precision, recall,

and F1-score metrics to assess the performance of the sentiment classification model (El Azzouzy et al., 2025).

RESULTS AND DISCUSSION

Data Collection

The data used in this study were collected from the YouTube comment section of the official *Pelangi di Mars* movie trailer uploaded on the Mahakarya Pictures YouTube channel. Data collection was conducted on March 10, 2026, using a web scraping technique. A total of 3,006 comments were successfully collected and used as the primary dataset for analysis.

Total komentar terkumpul: 3006

	text	author	likes	published	reply
0	periodt	@bagassee05	1	9 hours ago	False
1	cgi film ini bagus tapi cgi film merah putih o...	@hafiddertuk-q7b	1	9 hours ago	False
2	Omg this is so cute 🥹	@loria3817	1	15 hours ago	False
3	Semoga full mulus tidak seperti jumbo	@Mamahsenjakala	1	16 hours ago	False
4	Latar nya kaya rf online, ya ga sih	@tyoreynaldy1376	1	18 hours ago	False

Figure 2. Sample of Collected YouTube Comments Dataset

The collected data included several attributes such as comment text, username, number of likes, publication time, and reply status. These comments reflected various audience opinions regarding the trailer, including animation quality, storyline, visual appearance, and public expectations toward the Indonesian animation industry. The large number of comments indicates a high level of audience engagement and public interest toward the movie trailer.

Data Preprocessing

After the data collection stage, preprocessing was conducted to improve the quality of textual data before sentiment analysis and topic modelling were performed (Emmendoerfer, 2024). The preprocessing stages included case folding, text cleaning, tokenization, stopword removal, stemming, and normalization. These steps were necessary to remove unnecessary characters, normalize informal language, and convert the comments into a more structured format suitable for Natural Language Processing (NLP).

Preprocessing selesai!

	text	clean_text
0	periodt	periodt
1	cgi film ini bagus tapi cgi film merah putih o...	cgi film bagus cgi film merah putih one for al...
2	Omg this is so cute 🥹	omg this is so cute
3	Semoga full mulus tidak seperti jumbo	moga full mulus seperti jumbo
4	Latar nya kaya rf online, ya ga sih	latar nya kaya rf online ga sih
5	Ilham ihdarie	ilham ihdarie
6	jgn sampe mentri nepo baby yg gk bisa bhasa en...	jgn sampe tri nepo baby yg gk bhasa enggris ikut
7	WOW Look at that!	wow look at that
8	yeay udah beli tiket buat nonton besok	yeay udah beli tiket buat nonton besok
9	Para dubber ga bisa lebih natural lagikah? Bia...	dubber ga lebih natural lagi biar ga kaya nont...

Figure 3. Example of Text Preprocessing Results

The preprocessing stage also helped reduce noise commonly found in social media comments, such as slang words, abbreviations, repeated characters, emojis, and irrelevant symbols. As a result, the processed dataset became more effective for sentiment classification and topic extraction.

Sentiment Analysis Result

Sentiment analysis was conducted using the IndoBERT pre-trained model to classify audience comments into three sentiment categories: positive, neutral, and negative. The sentiment distribution results show that positive sentiment dominated audience responses toward the *Pelangi di Mars* movie trailer.

Based on the analysis results, 2,215 comments (73.7%) were classified as positive, 419 comments (13.9%) were categorized as neutral, and 372 comments (12.4%) were classified as negative. These findings indicate that most audiences expressed supportive and appreciative opinions regarding the movie trailer. Positive comments were generally related to animation quality, visual appearance, production value, and pride toward the development of Indonesian animated films.

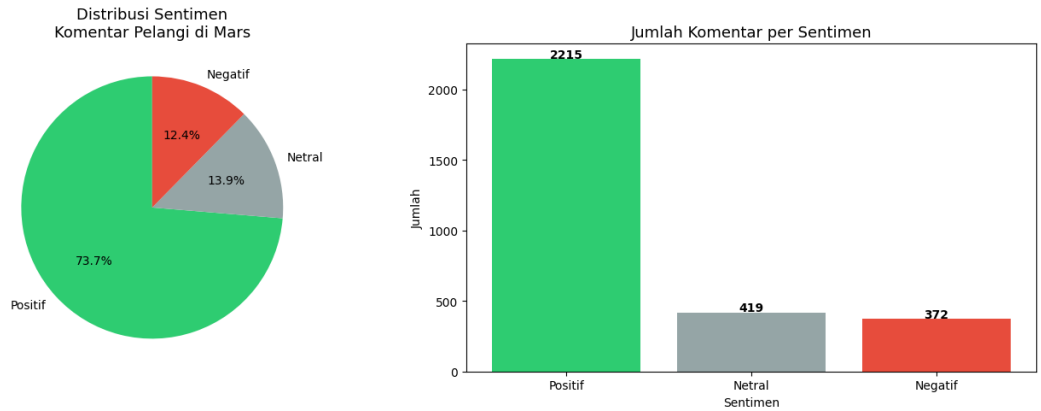


Figure 4. Sentiment Distribution of YouTube Comments on Pelangi di Mars Trailer

Meanwhile, neutral comments mainly contained general discussions, questions, or short reactions without strong emotional expressions. Negative comments were relatively fewer and mostly involved criticism or comparisons with international animation standards. Overall, the sentiment distribution demonstrates that audience responses toward the trailer were predominantly positive. Positive audience responses on digital platforms may contribute to electronic word of mouth (e-WOM), which can influence public perception and audience interest toward entertainment content (Liu & Jayawardhena, 2024). This finding also suggests that YouTube functions not only as a promotional platform but also as a space for audience interaction and public discussion in the digital era (Pramana & Triantoro, 2025).

Topic Modeling Result

Topic modelling was performed using the Latent Dirichlet Allocation (LDA) method to identify dominant discussion themes within audience comments (Rajmohan & Murugesan, 2024). The analysis generated five major discussion topics from the YouTube comments.

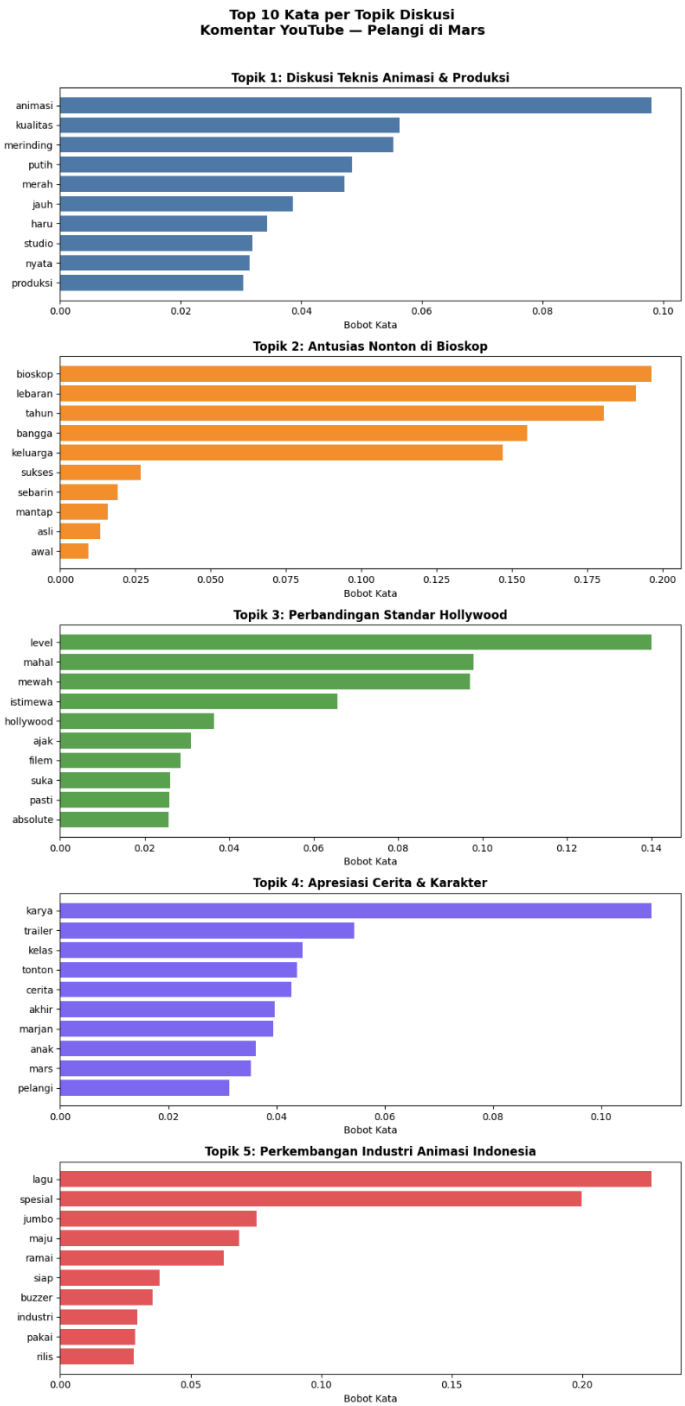


Figure 5. Top Keywords of Discussion Topics from YouTube Comments

The first topic, *Technical Animation and Production Discussion*, contained keywords such as “animasi,” “kualitas,” “studio,” and “produksi.” This topic reflected audience discussions regarding animation quality and production aspects shown in the trailer. Many viewers appreciated the visual quality and technical improvements demonstrated in the film.

The second topic, *Cinema Viewing Enthusiasm*, included keywords such as “bioskop,” “lebaran,” “bangga,” and “keluarga.” This topic represented audience excitement and anticipation to watch the movie in theaters during the holiday season. Comments in this category also reflected a sense of pride toward local film productions.

The third topic, *Hollywood Standard Comparison*, consisted of keywords such as “hollywood,” “level,” “mewah,” and “film.” This topic indicated that audiences frequently compared the trailer with international animated films, particularly Hollywood productions. While many comments expressed admiration, some also compared the production quality with global animation standards.

The fourth topic, *Story and Character Appreciation*, included keywords such as “cerita,” “trailer,” “karya,” and “mars.” This topic reflected audience appreciation toward the storyline, characters, and overall concept presented in the trailer. Many viewers considered the trailer interesting and visually engaging.

The fifth topic, *Development of Indonesian Animation Industry*, contained keywords such as “industri,” “maju,” “ramai,” and “rilis.” This topic highlighted public discussions regarding the growth and future potential of the Indonesian animation industry. Audience comments demonstrated optimism toward the progress of local creative industries and animated film production.

This topic highlighted public discussions regarding the growth and future potential of the Indonesian animation industry. Audience comments demonstrated optimism toward the progress of local creative industries and animated film production (Zamakhsyari et al., 2026). This finding indicates that digital audiences actively participate in online discussions and public opinion formation regarding entertainment content distributed through social media platforms (Yan, 2023).

Sentiment Analysis Per Topic

The sentiment distribution within each discussion topic showed that positive sentiment dominated almost all identified topics. The topic *Development of Indonesian Animation Industry* recorded the highest percentage of positive sentiment at 89.0%, indicating strong public support toward the growth of local animation productions.

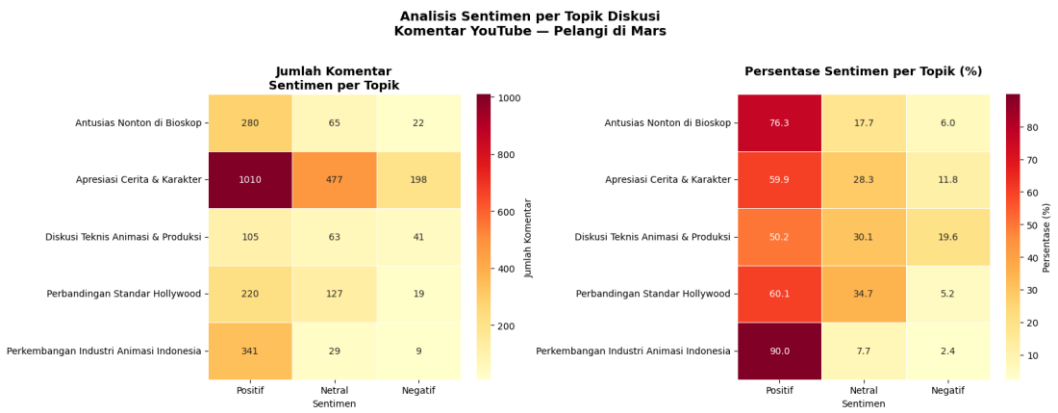


Figure 6. Sentiment Distribution across Discussion Topics

Similarly, the topic *Cinema Viewing Enthusiasm* also showed highly positive audience responses, with 76.3% positive comments. This suggests that many audiences were enthusiastic about watching the film in cinemas and expressed excitement toward its release.

The topic *Story and Character Appreciation* recorded 59.9% positive sentiment, while *Hollywood Standard Comparison* showed 60.1% positive responses. Although these topics contained some critical comments, the overall audience perception remained largely favorable.

Meanwhile, the topic *Technical Animation and Production Discussion* had a relatively more balanced sentiment distribution compared to other topics, with 50.2% positive comments, 30.1% neutral comments, and 19.6% negative comments. This finding indicates that technical aspects of the film generated more critical discussions among audiences, particularly regarding animation quality and production standards.

Model Evaluation

The performance of the sentiment classification model was evaluated using a confusion matrix along with accuracy, precision, recall, and F1-score metrics. The evaluation results showed that the IndoBERT-based sentiment classification model achieved strong overall performance in classifying audience comments.

Table 2. Performance Evaluation Results of the IndoBERT Sentiment Classification Model

Sentiment Class	Precision	Recall	F1-Score	Support
Positive	1.00	0.61	0.76	471
Neutral	1.00	1.00	1.00	761
Negative	0.91	1.00	0.95	1774
Accuracy			**0.94**	**3006**
Macro Average	0.97	0.87	0.90	3006

Sentiment Class	Precision	Recall	F1-Score	Support
Weighted Average	0.95	0.94	0.93	3006

The model achieved an overall accuracy score of 94%, indicating that the sentiment classification process performed effectively on the dataset. In addition, the weighted average precision score reached 0.95, recall reached 0.94, and F1-score reached 0.93. These results demonstrate that the IndoBERT model was capable of accurately identifying sentiment categories within Indonesian YouTube comments.

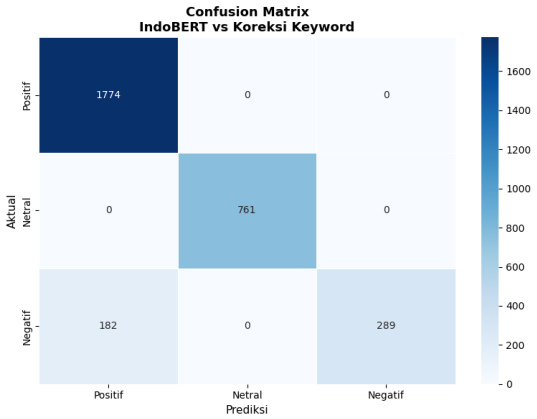


Figure 6. Confusion Matrix and Classification Performance of IndoBERT Model

The confusion matrix results also revealed that most positive and neutral comments were correctly classified. However, several negative comments were occasionally predicted as positive due to the informal and contextual nature of audience language in YouTube comments. Nevertheless, the overall evaluation results indicate that the model performed reliably for sentiment analysis tasks in the context of Indonesian social media discussions.

CONCLUSION

This study concludes that audience responses toward the *Pelangi di Mars* movie trailer on YouTube were predominantly positive, indicating strong public enthusiasm for the film and the development of the Indonesian animation industry. The findings also show that YouTube comments function as electronic word of mouth (e-WOM), where audiences actively share opinions and influence public perception of the movie. The identified discussion topics mainly focused on animation quality, storyline, cinema anticipation, and comparisons with international animation standards. Therefore, film producers and digital marketing teams are encouraged to utilize audience feedback on social media to improve promotional strategies and strengthen audience engagement for future film releases.

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