

# **Understanding Tourism Destination through Music: Digital Engagement Discourse Based on Sentiment Analysis Approach**

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**Abstract**—This research investigates the effectiveness of music-video content as a tool for tourism destination marketing, employing the CRISP-DM framework to approach data collection, analysis, and interpretation systematically. Focusing on the music video "Welcome to Sumba Island" by Marapu Reggae Official, the study analyzes public sentiment and toxicity scores to gauge audience engagement. The findings reveal a predominance of positive sentiments and minimal toxicity, with scores such as 0.02117 for general toxicity and 0.00189 for severe toxicity, indicating a respectful and appreciative audience. The Decision Tree (DT) algorithm, enhanced by the SMOTE operator, demonstrated superior performance in sentiment classification, achieving an accuracy of 95.50% and an AUC of 0.979. While the study's focus on a single music genre and location limits generalizability, it highlights the potential of music videos in tourism marketing. Future research should expand to diverse music genres and destinations and integrate mixed-method approaches for deeper insights. The CRISP-DM framework's effectiveness in this study underscores its value in guiding sentiment analysis and developing impactful tourism marketing strategies.

**Keywords:** Digital Engagement; Music-Video; Tourism Destination; Sentiment Analysis; Sumba

## **1. INTRODUCTION**

Music is an exceptionally effective medium for disseminating tourism information and facilitating the introduction of regional tourism potentials. Through its universal appeal and emotional resonance, music captures the essence of a destination, highlighting its cultural and natural attractions compellingly [1]–[4]. This auditory art form attracts potential visitors by invoking a sense of place and fosters a deeper connection to the destination's heritage [5]–[9]. The ability of music to transcend language barriers makes it a powerful tool for global tourism marketing, promoting destinations to a broader audience [10]–[13]. Consequently, incorporating music into tourism promotion strategies significantly enhances the visibility and attractiveness of travel destinations.

One effective strategy for marketing tourism destinations involves leveraging music as a promotional tool. Utilizing music to highlight unique cultural elements and scenic landscapes effectively captures the interest of potential tourists [14]. Moreover, music's emotional impact creates a memorable connection with the audience, enhancing the destination's appeal [15]–[17]. Employing music in tourism marketing differentiates destinations in a competitive market and enriches promotional content with cultural authenticity [18]–[20]. Consequently, integrating music into marketing strategies significantly boosts the visibility and allure of tourism destinations.

This study aims to analyze sentiments towards the region of Sumba as a tourist destination, narrated through the song "Welcome to Sumba Island" by Marapu Reggae Official. By examining the lyrics and musical composition, insights into public perceptions and emotional responses to Sumba are garnered. Additionally, the song's portrayal of Sumba's cultural and natural beauty provides a unique perspective on its appeal to tourists. Analyzing the sentiments expressed in this musical piece offers valuable information for tourism stakeholders seeking to enhance Sumba's attractiveness. Thus, the study contributes to understanding the role of music in shaping tourist perceptions and promoting destinations.

The urgency of this research lies in its potential to enhance the understanding of how musical narratives influence tourism perceptions. In an increasingly competitive global tourism market, destinations must employ innovative marketing strategies to stand out, and music offers a unique medium to achieve the best result [21]–[25]. Furthermore, analyzing the sentiments conveyed through songs about specific regions provides valuable insights into public opinions and emotional connections [26]–[29]. This approach not only enriches the field of tourism studies but also offers practical applications in destination marketing [30]. Consequently, this research is crucial for developing effective promotional strategies that resonate with potential tourists on a deeper emotional level.

The method employed in the sentiment analysis is the CRISP-DM (Cross-Industry Standard Process for Data Mining). This robust framework involves six phases: business understanding, data understanding, data preparation, modeling, evaluation, and deployment, ensuring a comprehensive approach to data analysis [31]. The sentiment analysis achieves high accuracy and reliability by systematically following these stages [32]. The structured nature of CRISP-DM allows for the effective handling of large datasets and complex sentiment variables. Consequently, this methodological choice enhances the validity of the research findings and provides a replicable model for future studies in similar domains.

This research's theoretical and practical contributions are significant in advancing the field of tourism marketing. Theoretically, the study offers new insights into the role of music as a powerful tool in shaping tourist perceptions and enhancing destination appeal [33]. It extends the existing literature by exploring the intersection of music and tourism, highlighting the emotional and cultural dimensions influencing traveler behavior [34]. The findings provide actionable strategies for tourism stakeholders to incorporate music into marketing efforts, creating more engaging and memorable

promotional content [35]. Ultimately, this research bridges the gap between theory and practice, offering valuable contributions to academic discourse and industry application.

The limitations of this research pertain to the methodology, the genre of music analyzed, and the focus on Sumba as a tourism destination. Methodologically, the study's reliance on the CRISP-DM framework may introduce constraints related to data interpretation and the generalizability of findings. Additionally, the exclusive analysis of reggae music might not capture the broader spectrum of musical influences on tourism perceptions. Furthermore, the specific focus on Sumba limits the applicability of the results to other destinations with different cultural and geographic contexts. These limitations suggest that future research should consider diverse methodologies, musical genres, and destinations to enhance the comprehensiveness and applicability of the findings.

Recommendations for further research emphasize the need to expand the scope and methodology of sentiment analysis in tourism studies. Future studies should incorporate diverse musical genres to capture a more comprehensive array of cultural influences on tourist perceptions. Additionally, employing mixed-method approaches, combining quantitative data mining techniques with qualitative insights, could provide a more holistic understanding of the impact of music on tourism marketing. Exploring various destinations beyond Sumba would also enhance the generalizability of the findings, offering broader applications across different cultural and geographical contexts. Thus, such comprehensive approaches would significantly contribute to the depth and breadth of tourism research.

## 2. RESEARCH METHODOLOGY

### 2.1 Gap Analysis

Gap analysis is essential for identifying discrepancies in research on music narratives in tourism destination marketing and sentiment analysis. This process helps to pinpoint areas where existing studies may fall short, such as the underrepresentation of specific musical genres or the lack of comprehensive sentiment metrics. The analysis reveals critical areas needing further exploration by systematically examining these gaps, guiding future research efforts. Such an approach enhances the robustness of academic discourse and informs practical applications in tourism marketing strategies. Consequently, conducting a thorough gap analysis ensures that subsequent research addresses these deficiencies, leading to more holistic and compelling insights.

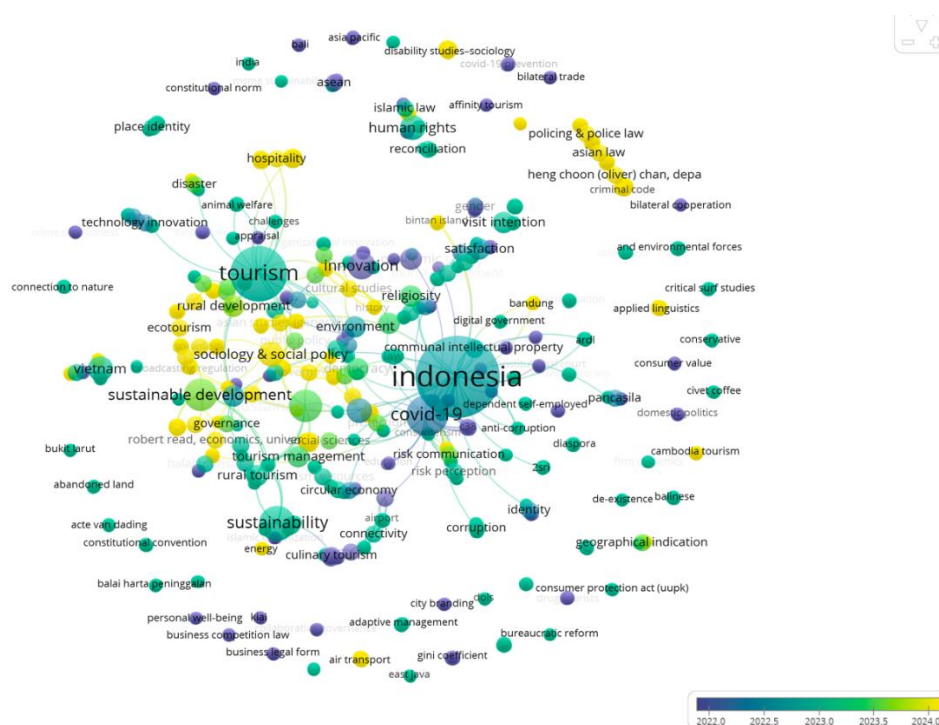


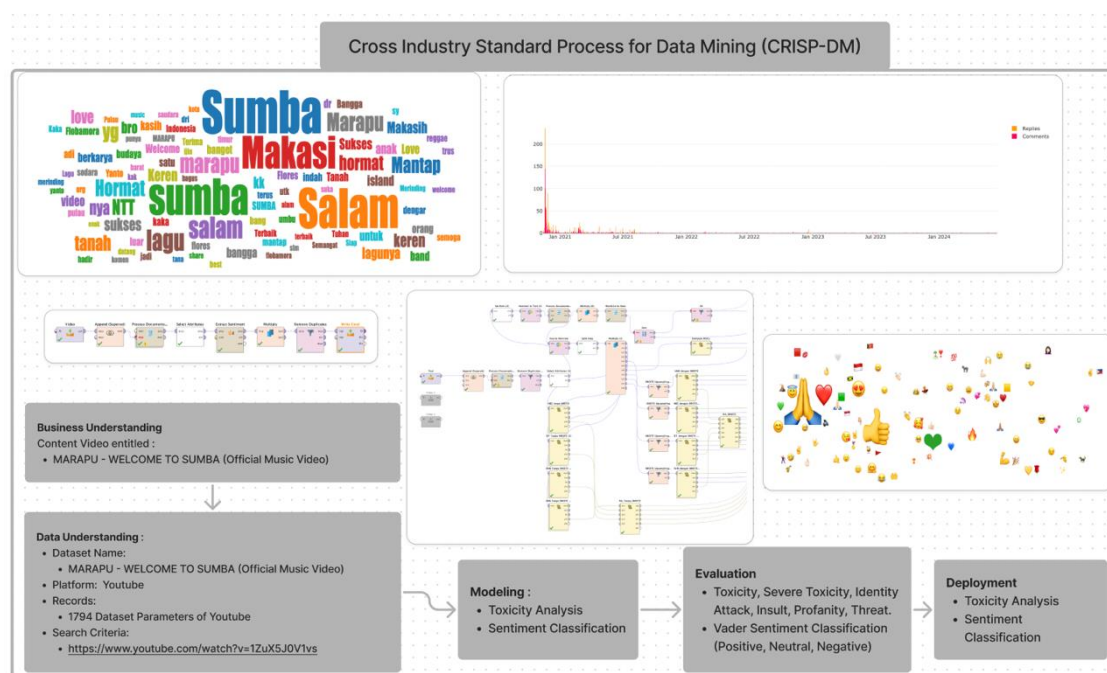
Figure 1. Gap Analysis using Vosviewer

Figure 1 shows the network, overlay, and density visualization. Based on the identified gaps in previous research related to tourism destinations in Indonesia, it is evident that studies on destination marketing through music narratives reveal significant discrepancies. Specifically, the need for research on public sentiment analysis regarding music marketing destinations on digital platforms is pronounced. This gap highlights the necessity for focused investigations to understand how music influences tourist perceptions and behaviors in a digital context. Addressing this gap advances academic understanding and provides practical insights for enhancing tourism marketing strategies. Consequently, conducting such research is imperative for developing effective and resonant promotional content for tourism destinations.

Considering the gaps in previous research, this study aims to analyze public sentiment related to the Sumba tourism destination through the narrative of the song "Welcome to Sumba Island" published on YouTube by Marapu Reggae Official. By examining the comments and interactions on this digital platform, the study provides insights into the audience's perceptions and emotional responses to Sumba as a tourist destination. This analysis addresses the research gap and offers valuable data for enhancing destination marketing strategies. Ultimately, the findings contribute to a deeper understanding of how musical narratives influence public sentiment and promote tourism destinations.

## 2.2 Cross-Industry Standard Process for Data-Mining (CRISP-DM)

The CRISP-DM framework is employed in this research, with contextual considerations at the business understanding stage, where sentiment data classification forms part of the digital engagement analysis process for tourism destination marketing through music. This structured approach ensures a comprehensive understanding of the data within the specific context of tourism marketing. By integrating sentiment classification, the framework facilitates the identification of public perceptions and emotional responses, providing valuable insights for marketing strategies. This methodological choice not only enhances the analytical rigor of the study but also ensures that the findings are relevant and actionable. Consequently, using CRISP-DM contributes to the effectiveness of tourism marketing through music narratives.



**Figure 2.** Implementation of CRISP-DM Framework

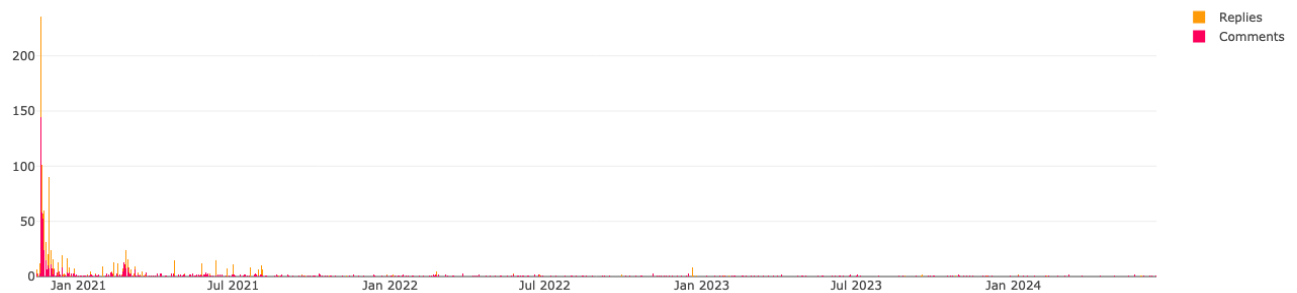
Figure 2 shows the implementation of the CRISP-DM framework. The advantages of CRISP-DM in discussing sentiment analysis results in tourism destination marketing are manifold. Its structured phases, from business understanding to deployment, ensure a thorough and systematic sentiment data analysis. This framework allows for precisely identifying patterns and trends in public sentiment, providing actionable insights for marketing strategies. Additionally, the iterative nature of CRISP-DM facilitates continuous refinement and improvement of the analysis process. Consequently, employing CRISP-DM enhances the reliability and validity of the sentiment analysis. It ensures that the results are effectively aligned with marketing objectives, optimizing the impact of tourism destination marketing efforts.

Based on these advantages, this research employs the CRISP-DM framework for sentiment analysis of Sumba Island as a tourism destination through Reggae music. The structured phases of CRISP-DM, from business understanding to deployment, ensure a comprehensive and systematic approach to analyzing public sentiment. This framework allows for accurately identifying patterns in audience perceptions and emotional responses, which are crucial for effective tourism marketing. Additionally, the iterative process of CRISP-DM facilitates ongoing refinement and improvement of the analysis. Consequently, using CRISP-DM enhances the validity and reliability of the findings and aligns them with strategic marketing objectives, optimizing the promotion of Sumba Island as a tourist destination.

### 2.2.1 Business Understanding

At the Business Understanding stage, the context of sentiment analysis is limited to the music video content published by Marapu Reggae Official, specifically the video titled "Welcome to Sumba Island" with the ID 1ZuX5J0V1vs. This stage involves comprehending the objectives and constraints of the analysis and ensuring that the sentiment data accurately reflects audience perceptions of the video. Focusing on this specific video allows a detailed examination of how its

narrative and musical elements influence viewer sentiment. Consequently, this targeted approach provides a clear framework for analyzing public responses, enhancing the research findings' relevance and accuracy.



**Figure 3.** Video and Post-Per-Day Statistic (Communalystic)

Figure 3 shows the post-per-day statistic. Based on the post-per-day statistics, it is evident that there was significant activity on 2020-11-18 with 144 posts, followed by a notable decrease on subsequent days, with 58 posts on 2020-11-19 and 52 posts on 2020-11-20. The trend continued downward, with only 24 posts on 2020-11-21 and 20 posts on 2020-11-22, eventually reaching as low as 11 posts on 2020-11-30 and 2021-02-24. This pattern suggests a peak in activity on November 18, followed by a rapid decline. The initial surge could indicate a specific event or release prompting high engagement, while the subsequent drop points to a return to normal activity levels. Analyzing these fluctuations provides insights into user engagement and the factors driving these changes, informing future strategies for content dissemination.

Furthermore, the emoji cloud analysis reveals significant appreciation for the video with the ID 1ZuX5J0V1vs. The frequent appearance of positive emojis such as hearts, smiles, and thumbs up indicates a strong positive reception from the audience. This visual representation of emoji usage underscores the video's ability to evoke favorable emotional responses. Consequently, the prevalence of these positive emojis highlights the video's success in resonating with viewers and generating positive sentiment, which is crucial for its effectiveness as a marketing tool. This analysis offers valuable insights into audience engagement and emotional impact, informing future content creation strategies.



**Figure 4.** Emoji Cloud of the Reviews Data (Communalystic)

Figure 4 shows the emoji cloud based on the dataset. Based on the emoji cloud analysis, it is evident that the video has garnered significant appreciation, as reflected by the frequent use of positive emojis. The most prevalent emojis include 🙏 (104 occurrences), 👍 (78 occurrences), and ❤️ (49 occurrences), indicating strong positive emotional responses from the audience. Emojis like 😊, 😄, and 😁 further highlight the positive reception, suggesting the video successfully resonated with viewers. This pattern of emoji usage underscores the video's ability to evoke favorable sentiments, enhancing its effectiveness as a marketing tool. Consequently, these insights into audience engagement emphasize the video's impact in promoting the tourism destination.

Based on understanding the musical narrative context of Sumba Island, review data will be collected and processed to generate valuable information for Sumba's tourism destination marketing. Analyzing this data provides insights into public perceptions and emotional responses elicited by the music, which are leveraged to enhance promotional strategies. The sentiment analysis of reviews, combined with the narrative's cultural and emotional appeal, offers a nuanced understanding of the audience's engagement. Consequently, this approach informs more effective marketing tactics and strengthens the connection between potential tourists and the destination, ultimately boosting tourism appeal.

### 2.2.2 Data Understanding

At the data understanding stage, it is essential to identify the data sources and the volume of data collected. This study utilizes the music video's content with the ID 1ZuX5J0V1vs, which has amassed 1,794 comments from the YouTube platform. This substantial amount of user-generated content provides a rich dataset for analyzing public sentiment and

engagement. Understanding the origins and extent of the data is crucial for ensuring the validity and reliability of the subsequent analysis. Consequently, this comprehensive data collection forms the foundation for deriving meaningful insights into audience perceptions and enhancing tourism marketing strategies for Sumba Island.

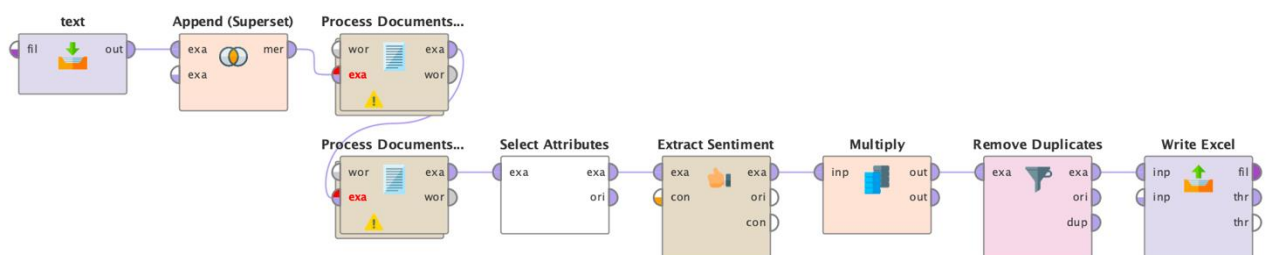
After collecting review data related to the music video published by Marapu Reggae Official, it is necessary to identify the frequently used words from the reviews. This analysis helps in understanding the key themes and sentiments expressed by the audience. By focusing on the most common words, valuable insights into the viewers' perceptions and emotional reactions are obtained. This step is critical for uncovering patterns in the data that reflect public opinion. Consequently, identifying these frequently used words enhances the ability to tailor marketing strategies effectively, ensuring they resonate with the target audience and promote Sumba Island as a desirable tourism destination.



**Figure 5. Words Cloud (Communalytic)**

Figure 5 shows the frequently used words in the dataset. Based on the identification of frequently used words from the dataset, it is evident that "Sumba" appears most frequently, with 155 occurrences. Other common words include "Salam" (143 occurrences) and "Makasi" (113 occurrences), highlighting key themes of gratitude and greetings. Additionally, words such as "lagu" (69 occurrences) and "Marapu" (59 occurrences) emphasize the cultural and musical context of the video. This analysis reveals the audience's focus on elements related to the region and the positive emotional response to the content. Consequently, understanding these frequently used words provides valuable insights into public sentiment and enhances the effectiveness of targeted marketing strategies for promoting Sumba Island.

The collected data is cleaned and extracted using the VADER model through the RapidMiner application. This process involves removing any noise or irrelevant information to ensure the accuracy and reliability of the analysis. VADER, a robust tool for sentiment analysis, is then applied to extract and quantify the sentiments expressed in the data. Employing this method enhances the precision of the sentiment analysis, providing a clear understanding of public opinion. Consequently, this approach enables the generation of actionable insights leveraged to optimize marketing strategies for Sumba Island as a tourist destination.



**Figure 6.** Data Cleaning Process (Rapidminer)

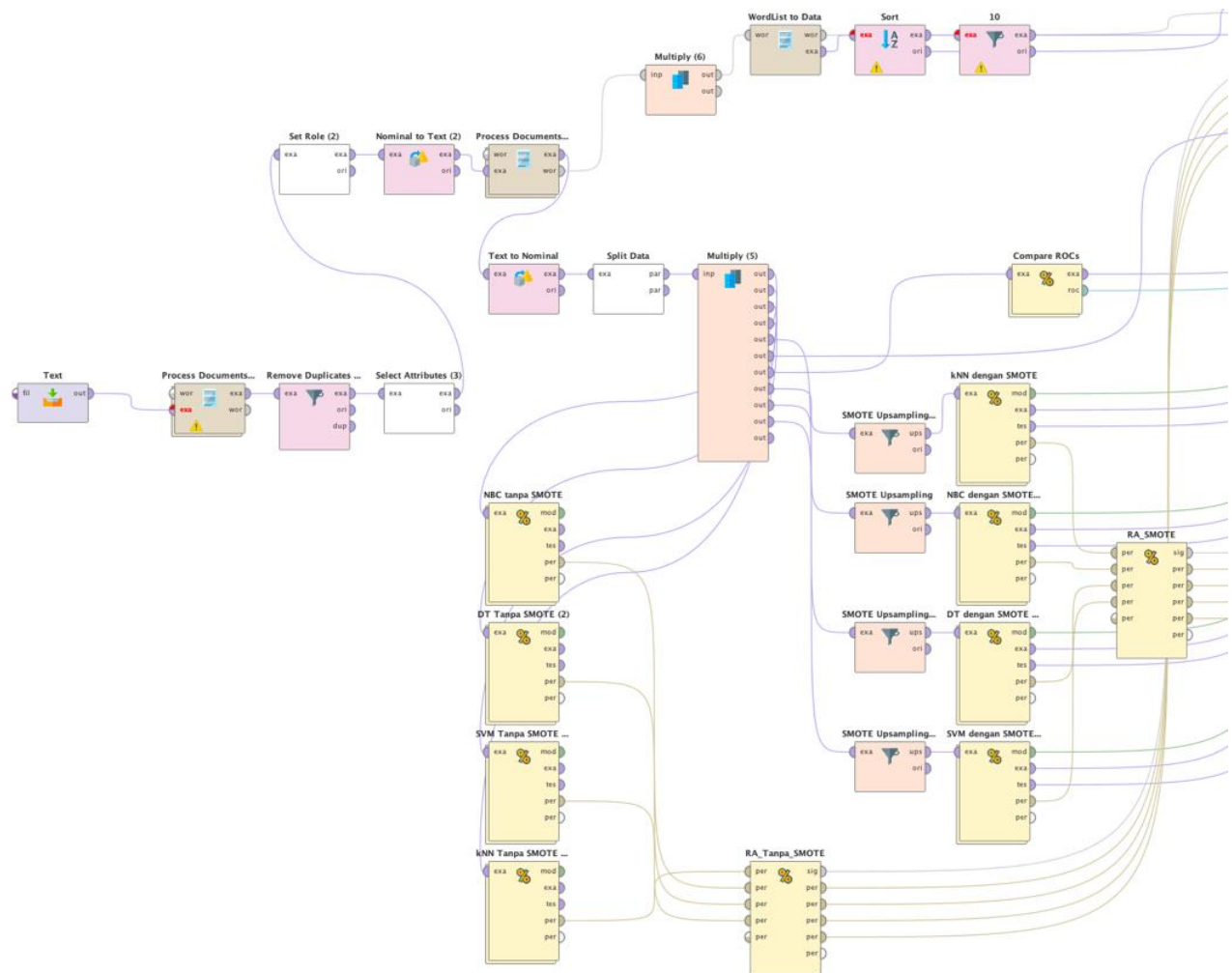
Figure 6 shows the data cleaning process in Rapidminer. The operators used in data pre-processing include tokenizing non-letters, applying regular expression tokenization, transforming cases to lowercase, filtering tokens by length, removing stopwords, and stemming. Tokenizing non-letters helps segment the text into meaningful units, while regular expression tokenization ensures the precision of this segmentation. Transforming cases to lowercase standardizes the text, making it uniform for analysis. Filtering tokens by length removes unnecessary short tokens that do not contribute to the analysis. Removing stopwords eliminates common words that do not have significant meaning, and stemming reduces words to root forms, ensuring consistency. Consequently, these pre-processing steps enhance the quality and accuracy of the data for subsequent sentiment analysis.

The sentiment extraction operator is configured using the VADER model to classify sentiments into negative and positive classes. This configuration involves setting parameters that enable VADER to accurately assess the polarity of

the sentiments expressed in the text data. The classification process becomes highly precise by leveraging VADER's capability to handle social media text and its nuanced understanding of sentiment intensity. This method ensures a clear distinction between negative and positive sentiments and provides a robust framework for sentiment analysis. Consequently, this approach facilitates a deeper understanding of public opinions, essential for informed decision-making in tourism destination marketing.

### 2.2.3 Modeling

The extracted data is labeled as negative or positive at the modeling stage and converted into a binominal format. This labeled data is subsequently tested using various algorithms, including Support Vector Machine (SVM), k-nearest Neighbors (k-NN), Decision Tree (DT), and Naive Bayes Classifier (NBC). Each algorithm is applied to evaluate its performance in classifying the sentiment data accurately. This multi-algorithm approach ensures a comprehensive assessment, identifying the most effective method for sentiment classification. Consequently, this rigorous testing phase enhances the reliability and validity of the sentiment analysis, providing robust insights for tourism destination marketing strategies.



**Figure 6.** Implementation of SVM and DT Models in Rapidminer

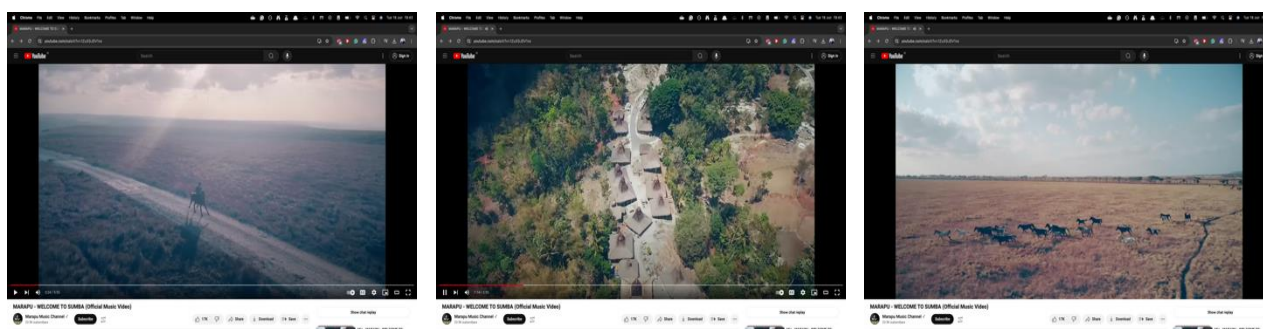
Figure 6 shows the modeling process using Rapidminer. The SMOTE operator is employed to address the issue of data imbalance and to enhance the performance metrics of the algorithms, including accuracy, precision, recall, f-measure, and AUC. By generating synthetic samples of the minority class, SMOTE balances the dataset, allowing the algorithms to perform more effectively. This preprocessing step is crucial in ensuring that the model does not become biased towards the majority class, thereby improving its ability to classify both positive and negative sentiments accurately. Consequently, using SMOTE significantly contributes to the robustness and reliability of the sentiment analysis, leading to more precise and meaningful results.

The algorithm demonstrating the best performance will be recommended as the model for processing review data. Performance metrics such as accuracy, precision, recall, f-measure, and AUC will be used to evaluate and compare the algorithms. The algorithm consistently achieving the highest scores across these metrics will be deemed the most effective for sentiment analysis. This rigorous selection process ensures that the chosen model is robust and reliable, capable of accurately interpreting and classifying the sentiment expressed in the reviews. Consequently, recommending the best-

performing algorithm optimizes the data analysis, leading to more insightful and actionable outcomes for tourism destination marketing.

## 2.2.4 Evaluation

Evaluation is conducted within the context of destination marketing strategies through music. This process involves assessing how effectively the musical content promotes the tourism destination and resonates with the target audience. Key performance indicators include engagement metrics, sentiment analysis results, and the overall impact on brand perception. The evaluation provides a comprehensive understanding of the marketing strategy's effectiveness by focusing on these aspects. Consequently, the insights gained from this evaluation inform future marketing efforts, ensuring they are more targeted and impactful in promoting the destination through music.



**Figure 7.** Footage of the Music Video “Welcome to Sumba Island” by Marapu Raggae Official

Figure 7 shows the music video footage. Based on the musical narrative of "Welcome to Sumba Island," the lyrics vividly depict the customs and traditions of the Sumbanese people. This rich cultural portrayal captures the interest of potential tourists, making it an effective marketing medium. The song's ability to convey Sumba's unique heritage and vibrant lifestyle is a powerful tool to attract visitors. Consequently, integrating such cultural narratives into tourism marketing strategies enhances the destination's appeal, drawing more tourists and promoting cultural appreciation.

The narrative and audiovisual content of the music "Welcome to Sumba Island" attract tourists by showcasing Sumba's cultural attractions and natural beauty. This engaging portrayal captivates the audience and highlights the island's unique heritage and scenic landscapes. The content effectively serves as a powerful tourism marketing tool by immersing viewers in the Sumbanese experience through music and visuals. Consequently, such creative and evocative content significantly boosts the destination's appeal, drawing more visitors and enhancing its visibility in the competitive tourism market.

## 2.2.5 Deployment

At the deployment stage, it is recommended that an effective tourism marketing strategy be implemented by using music narratives and video clips showcasing local attractions. This approach leverages music's emotional and cultural resonance to engage potential tourists. Additionally, incorporating visual highlights of the destination's unique features enhances the promotional content's appeal. Combining these elements effectively captures the audience's interest and conveys the destination's charm. Consequently, this method increases tourist engagement and promotes a deeper appreciation of the local heritage and natural beauty, making it a powerful tool for tourism marketing.

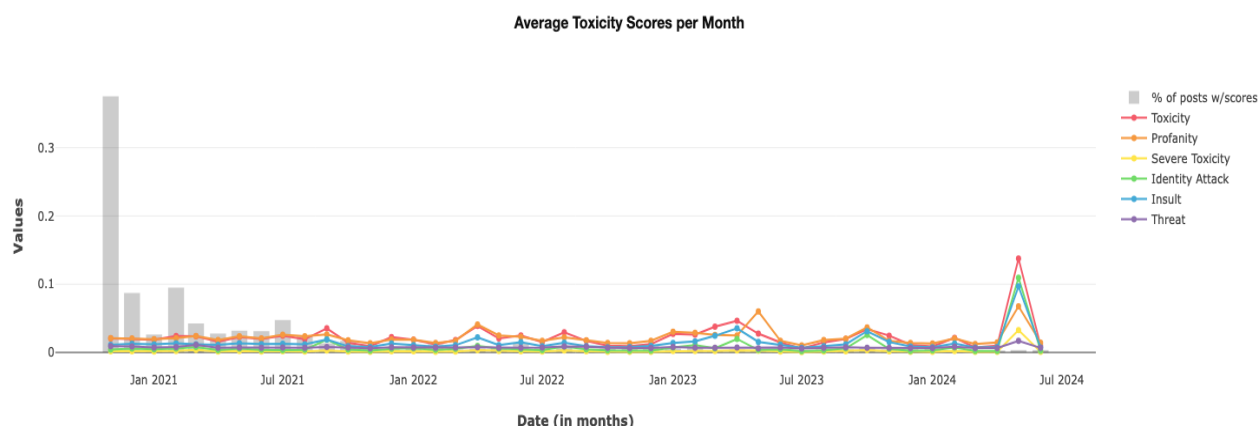
Thus, optimizing tourism marketing strategies effectively achieves digital engagement using music-video content. This approach harnesses the emotive power of music and the visual appeal of video to create a compelling narrative that resonates with potential tourists. This content captures the audience's interest and fosters a more profound connection by highlighting the destination's unique cultural and natural attractions. Consequently, leveraging music video content enhances engagement and strengthens the destination's brand, making it a highly effective tool for promoting tourism.

## 3. RESULT AND DISCUSSION

Based on the implementation of the VADER model, it is evident that viewer sentiment towards the music video "Welcome to Sumba Island" is predominantly positive, accompanied by widespread appreciation for the creative digital work. The analysis reveals a high frequency of favorable comments, highlighting the audience's admiration for the musical and visual elements. This positive reception underscores the effectiveness of the content in engaging viewers and promoting the destination. Consequently, the predominance of appreciative and positive sentiments validates music video content as a powerful tool in tourism marketing strategies.

When analyzed based on toxicity scores using the Perspective API, Communalytic assessed 1,412 posts (out of 1,794) with the following results: Toxicity 0.02117, Severe Toxicity 0.00189, Identity Attack 0.00548, Insult 0.01246, Profanity 0.02139, and Threat 0.00825. These low toxicity scores indicate that the comments are predominantly positive and reflect a high level of appreciation for the creative digital work. The minimal presence of harmful content underscores

the favorable reception of the music video. Consequently, this positive feedback highlights the effectiveness of the digital engagement strategy and reinforces the value of creative content in promoting tourism destinations.



**Figure 8.** Average Toxicity Scores per Month

Figure 8 shows the monthly average Toxicity Scores of the music video. These low toxicity scores indicate that the comments are predominantly positive and reflect a high level of appreciation for the creative digital work. This minimal presence of harmful content underscores the effectiveness of the digital engagement strategy. The music video "Welcome to Sumba Island" successfully engages viewers and enhances the destination's image by fostering a positive and appreciative environment. Consequently, this positive digital engagement promotes tourism, strengthens the destination's brand, and appeals to a global audience.

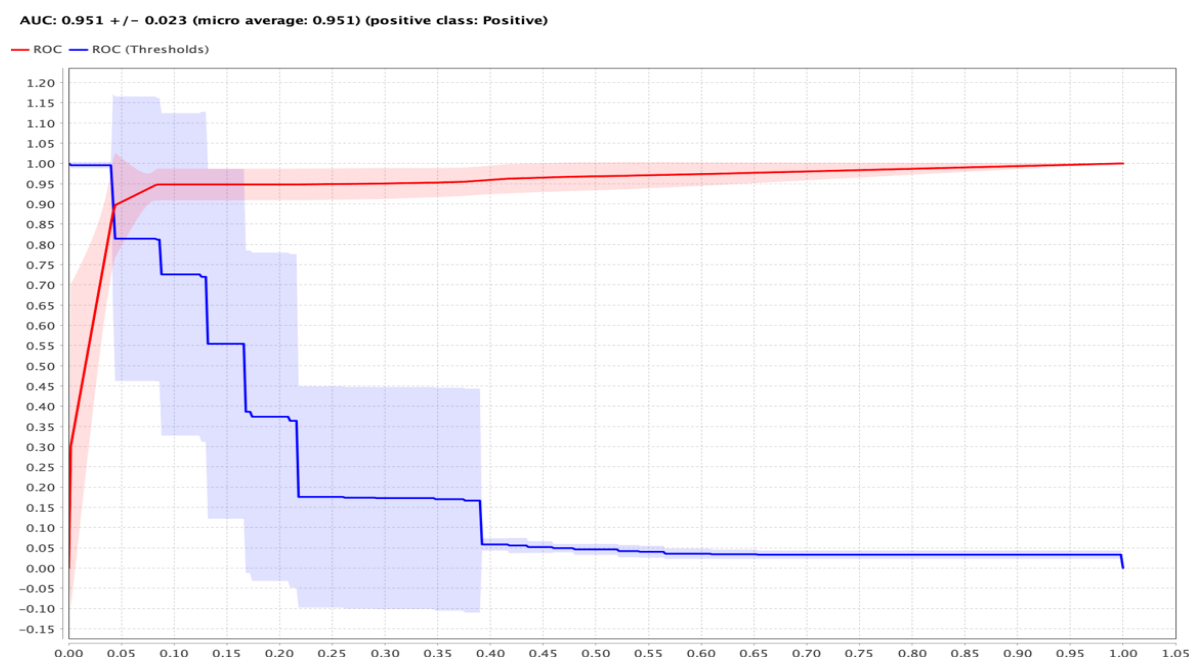
The relationship between toxicity scores and sentiment analysis based on the VADER model is crucial for comprehensively understanding public feedback. Toxicity scores, which measure harmful content, complement VADER's sentiment analysis by providing a deeper insight into the nature of the comments. While VADER identifies overall sentiment as predominantly positive, the low toxicity scores further confirm the constructive nature of the feedback. This dual approach ensures a robust evaluation, highlighting the discourse's positive sentiment and respectful and appreciative tone. Consequently, integrating both metrics enhances the accuracy and reliability of the sentiment analysis, supporting more effective digital engagement strategies.

|                          | # of Posts | Negative Sentiment [-1...-0.05] | Neutral Sentiment (-0.05..0.05) | Positive Sentiment [0.05..1] |
|--------------------------|------------|---------------------------------|---------------------------------|------------------------------|
| VADER<br>(English/EN)    | 124        | 2 (1.61%)                       | 22 (17.74%)                     | 100 (80.65%)                 |
| TextBlob<br>(English/EN) | 124        | 2 (1.61%)                       | 42 (33.87%)                     | 80 (64.52%)                  |
| TextBlob<br>(French/FR)  | 6          | 0 (0.00%)                       | 6 (100.00%)                     | 0 (0.00%)                    |
| TextBlob<br>(German/DE)  | 10         | 1 (10.00%)                      | 9 (90.00%)                      | 0 (0.00%)                    |

**Figure 9.** Sentiment Analysis using Vader Model.

Figure 9 shows the sentiment analysis using the VADER model. Based on sentiment analysis results using the VADER model in Communalytic, it is evident that out of 124 posts, 80.65% exhibit positive sentiment, 17.74% are neutral, and only 1.61% are negative. In comparison, TextBlob's analysis in English shows 64.52% positive, 33.87% neutral, and 1.61% negative sentiments. TextBlob indicates that 100% of French posts are neutral for non-English comments, while 90% of German posts are neutral with 10% negative sentiment. These findings highlight the predominance of positive feedback, particularly in English, underscoring the music video content's effectiveness in positively engaging viewers. Consequently, these insights affirm the video's success in fostering a favorable reception and its potential as a powerful tool in tourism marketing.

Subsequent testing of the model in RapidMiner indicates that the Decision Tree (DT) algorithm with the SMOTE operator exhibits vital performance metrics. The accuracy is 95.50% with a standard deviation of +/- 1.87%, supported by an AUC (Area Under the Curve) optimistic value of 0.979, highlighting excellent model performance in distinguishing between classes. The precision rate is 96.64%, with a recall of 94.40%, leading to an impressive f-measure of 95.41%. The confusion matrix reveals that the model accurately classified 225 true negatives and 220 true positives, with minimal misclassifications. These results affirm the robustness and reliability of the DT algorithm with SMOTE in processing sentiment data, making it a highly effective tool for sentiment analysis in tourism marketing.



**Figure 10.** Area Under Curve of DT with SMOTE in Rapidminer

Figure 10 shows the best performance of the DT algorithm using SMOTE in the modeling phase. Based on the AUC values, it is evident that the performance of the Decision Tree (DT) algorithm surpasses that of SVM, k-NN, and NBC in classifying negative and positive classes. The DT algorithm achieved an AUC of 0.979, indicating superior accuracy and reliability in distinguishing between the two classes. In contrast, the other algorithms demonstrated lower AUC values, reflecting lesser efficacy in classification tasks. This higher AUC score of the DT model underscores its robustness and effectiveness, making it the preferred choice for sentiment analysis. Consequently, the DT algorithm is recommended for accurately interpreting and categorizing sentiment data in tourism marketing applications.

Based on the findings of this research, it is evident that the toxicity values and sentiment analysis results for the music video titled "Welcome to Sumba Island" are dominated by positive comments. The low toxicity scores reflect the minimal harmful content, indicating a predominantly respectful and appreciative audience. Furthermore, sentiment analysis reveals the most positive sentiments, favorably underscoring the video's successfully engaging viewers. This positive reception highlights the effectiveness of the music video as a promotional tool, enhancing its value in tourism marketing. Consequently, these insights affirm the video's potential to boost the destination's appeal and attract tourists.

Subsequently, active communication between the Marapu Reggae Official YouTube channel owner and viewers in the comment section significantly supports engagement. This interaction fosters community and encourages further discussion, enhancing viewer involvement. Engaging directly with the audience helps build a loyal fan base and maintains a positive dialogue, amplifying the video's impact. Consequently, such active engagement strategies are crucial in maximizing the promotional potential of the content and strengthening the connection between the audience and the destination being marketed.

Thus, music videos become the most effective medium for tourism destination marketing through well-crafted narratives that highlight the unique attractions of each area. The combination of engaging storytelling and visual appeal captures the essence of the destination, making it more appealing to potential tourists. Furthermore, the emotional resonance of music enhances viewer connection and recall, significantly boosting the impact of the marketing effort. Consequently, leveraging music videos as a marketing tool attracts a broader audience and fosters a deeper appreciation for the destination's cultural and natural assets.

The limitations of this research and further research recommendations highlight several critical areas for improvement and exploration. Firstly, the study's focus on a single music genre and specific geographic location may limit the generalizability of the findings. Expanding the scope to include diverse music genres and multiple destinations could provide a more comprehensive understanding. Additionally, incorporating mixed-method approaches that combine quantitative and qualitative data could yield more profound insights into audience perceptions and behaviors. Consequently, addressing these limitations in future research would enhance the robustness of the findings and offer more actionable strategies for tourism marketing.

## 4. CONCLUSION

In conclusion, this research underscores the effectiveness of music video content as a powerful tool for tourism destination marketing. By employing the CRISP-DM framework, the study systematically approached data collection, analysis, and interpretation, ensuring a thorough and structured examination of public sentiment towards the music video

"Welcome to Sumba Island" by Marapu Reggae Official. The findings reveal a predominance of positive sentiments and minimal toxicity, with toxicity scores such as 0.02117 for general toxicity and 0.00189 for severe toxicity, indicating a respectful and appreciative audience. The Decision Tree (DT) algorithm, enhanced by the SMOTE operator, demonstrated superior performance in classifying sentiments, with an accuracy of 95.50% and an AUC of 0.979, further validating the robustness of the methodological approach. However, the study's limitations suggest the need for broader research encompassing diverse music genres and multiple destinations and integrating mixed-method approaches. Addressing these areas in future research will provide more comprehensive insights and bolster the strategic use of music videos in tourism marketing. Consequently, the CRISP-DM framework has proven to be an effective structure for conducting sentiment analysis, paving the way for innovative and impactful marketing strategies in the tourism industry.

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