

# Text Mining Approach to Emotion Analysis in Translation of Surah Yusuf With NRC Emotion Lexicon

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## ABSTRACT

This study analyzes the emotions in the English translation of Surah Yusuf using the NRC Emotion Lexicon and text mining techniques. Focusing on eight basic emotions—anger, fear, sadness, disgust, surprise, anticipation, trust, and joy—the research identifies trust as the most dominant emotion (22.89%), followed by joy (15.66%), anticipation (13.25%), sadness (12.05%), fear (10.84%), anger (9.64%), surprise (8.43%), and disgust (7.23%). These results align with the narrative themes of prophecy, betrayal, forgiveness, and divine providence in Surah Yusuf. The findings highlight the effectiveness of lexicon-based methods in analyzing religious texts and provide insights into the emotional and spiritual dimensions of the Quran. This research contributes to the field of text mining in religious studies and has implications for education and religious interpretation. Future studies could expand the analysis to more verses, integrate machine learning techniques, and apply this approach to other religious texts.

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## 1. INTRODUCTION

In the current digital era, access to vast textual data sources has become increasingly widespread, enabling deeper analysis of religious texts such as the Quran. The digitization of the Quran has facilitated its accessibility to a global audience, with English translations like those by Taqi-ud-Din Al-Hilali and Muhsen Khan being widely used by millions of English-speaking Muslims [1]. While sentiment and emotion analysis have been extensively applied to consumer reviews, social media, and news, there is a notable gap in the application of these techniques to religious texts, particularly the Quran. This study aims to fill this gap by analyzing the emotional content of the English translation of Surah Yusuf using the NRC Emotion Lexicon, a tool that has demonstrated 80% accuracy in emotion classification tasks[2][3].

Surah Yusuf, referred to as the "Best of Stories" (Q. 12:3), is one of the most narratively rich and emotionally complex chapters in the Quran. Its themes of betrayal, forgiveness, and divine providence make it an ideal candidate for emotion analysis. Research has shown that religious texts, including the Quran, evoke a wide range of emotions in readers and listeners, with trust and joy being

the most commonly reported[4][8]. By applying text mining techniques, this research seeks to identify the dominant emotions expressed in the translation of Surah Yusuf and to evaluate the effectiveness of the NRC Emotion Lexicon in capturing these emotions.

This study aims to identify the dominant emotions expressed in the English translation of Surah Yusuf, evaluate the performance of the NRC Emotion Lexicon in identifying emotions within religious texts, and explore the implications of these emotional analyses for understanding the spiritual and emotional dimensions of the Quran. By applying text mining techniques and leveraging the NRC Emotion Lexicon, the research seeks to uncover the nuanced emotional tones present in Surah Yusuf, assess the effectiveness of lexicon-based methods in analyzing religious texts, and provide insights into how emotional analysis can enhance the interpretation and spiritual understanding of Quranic teachings.

By leveraging the NRC Emotion Lexicon, this research not only contributes to the growing field of text mining in religious studies but also offers practical insights for scholars, educators, and students seeking to understand the emotional and spiritual dimensions of the Quran. The findings of this study could pave the way for future research on emotion analysis in other religious and historical texts, enhancing both academic and spiritual understanding.

## 2. STUDY LITERATURE

Previous Recent advancements in text mining and emotion analysis have demonstrated the effectiveness of lexicon-based methods, particularly the NRC Emotion Lexicon, in categorizing emotions across various types of text data. For instance, Awais & Durrani (2023) applied the NRC Emotion Lexicon to analyze sentiment and emotion in consumer reviews, achieving reliable performance in categorizing emotions and sentiments in large datasets[2]. Similarly, Mathur et al. (2020) used the NRC Emotion Lexicon to analyze multilingual Twitter data during the COVID-19 pandemic, achieving an accuracy of approximately 80% in emotion classification. These studies highlight the robustness of lexicon-based methods in handling diverse and complex text data, making them suitable for application in religious texts.[3].

Research on sentiment and emotion analysis has not only been conducted on consumer reviews but also on public opinion in social media, such as the study by Zuhanda et al. (2023), which analyzed 5,000 tweets about the monkeypox virus on August 5, 2022, using the NRC lexicon. The results showed that frequently occurring words were "health," "emergency," "public," "covid," and "announce." The most common emotions were fear (19.73%), followed by anticipation (16.78%) and sadness (14.77%). Negative sentiment (51.92%) was more dominant than positive sentiment (48.08%). The NRC Lexicon method proved effective in analyzing sentiment and emotion on social media [5].

Another study on sentiment and emotion analysis was conducted on online media news about Covid-19 in Indonesia using a lexicon-based approach, where the analysis results showed that the sentiment in online media news headlines about Covid-19 in Indonesia was dominated by negative sentiment at 40%, positive sentiment at 34%, and neutral sentiment at 26% [6]. In a similar topic, a study on public sentiment and emotion analysis at the beginning of the Covid-19 pandemic based on Twitter data using a lexicon-based approach showed results focusing on the sentiments and emotions obtained rather than the methods tested. The results indicated that negative sentiment was more expressed, and fear was the most felt emotion by the public [7]. Moreover, emotion detection research was also conducted on social media Facebook, where the study used lexicon-based methods and Natural Language Processing (NLP). The results showed that after improving NLP and matching it with the created lexicon, emotion labels of Facebook statuses were identified. A total of 26 Facebook statuses had detectable emotion labels, with 61.53% accuracy [11].

In the context of religious texts, Rahman et al. (2022) reviewed the emotional and psychological impact of the Quran on readers and listeners, emphasizing the importance of understanding the emotional dimensions of religious texts. Their findings suggest that Quranic verses evoke a wide range of emotions, including trust, joy, and sadness, which aligns with the goals of this study[8].

Table 1. Related Research

Reference	Case Study	Sentiment Analysis	Emotion Analysis	Method	Findings
[2]	Consumer Review	✓	✓	Lexicon-based	NRCLex is efficient for sentiment and emotion analysis, reliable performance, and effective computational capabilities.
[5]	Tweets about the Monkeypox virus issue	✓	✓	Lexicon-based	NRCLex is effective in analyzing sentiment and emotion on social media.
[6]	Online media news about Covid-19 in Indonesia	✓	✓	Lexicon-based	Negative sentiment dominates online news headlines about Covid-19 in Indonesia.
[7]	Tweets at the beginning of the Covid-19 pandemic	✓	✓	Lexicon-based	Negative sentiment was more expressed, and fear was the most felt emotion by the public.
[3]	Tweets during the Covid-19 pandemic	✓	✓	Lexicon-based	The system achieved around 80% accuracy in classifying emotions in Covid-19 related tweets.
[11]	Social media (Facebook user statuses)	✓	✓	Lexicon-based	61.53% of Facebook statuses had detectable emotion labels after improvements using NLP and lexicon.

Based on Table 1, it can be seen that these studies have focused on sentiment and emotion analysis on various topics such as consumer reviews, health issues, and the Covid-19 pandemic, using lexicon-based methods. However, their application to religious texts remains underexplored. This study aims to address this gap by applying the NRC Emotion Lexicon to analyze the emotional content of the English translation of Surah Yusuf. By doing so, it contributes to the growing body of research on emotion analysis in religious texts and highlights the potential of text mining techniques for enhancing the understanding of the Quran's emotional and spiritual dimensions.

### 3. RESEARCH METHOD

#### 3.1 Data Collection

In this research, the selection of the translated texts of Surah Yusuf is based on emotion analysis using text mining methods with a lexicon-based approach. The choice of Surah Yusuf as secondary data is founded on discussions with several experts, who deemed the research feasible. Based on the analysis of each verse in Surah Yusuf, seven verses were found to represent various stories within the Surah: verses 3, 4, 16, 25, 31, 84, and 108. These verses were chosen because they exhibit different variations in sentiment and emotion, thus serving as the focal points for this research.

Data was collected from the Quranenc.com website, which provides an English translation of the Quran by Taqi-ud-Din Al-Hilali and Muhsen Khan. This translation is widely used in most English translations of the Mushaf. The collected data was in CSV format containing columns such as id, ayah, surah, translation, and footnotes. Filtering was then performed, selecting only the necessary data, specifically the English translation of verses 3, 4, 16, 25, 31, 84, and 108 from Surah

Yusuf, while removing irrelevant data such as id, surah, and footnotes. The collected data is shown in Table 2.

Table 2. Collected Data

Id	Sura	Aya	Translation	Foot- notes
159 9	12	3	3. We relate unto you (Muhammad صلى الله عليه وسلم) the best of stories through Our Revelations unto you, of this Qur'ân. And before this (i.e. before the coming of Divine Revelation to you), you were among those who knew nothing about it (the Qur'ân).	
160 0	12	4	4. (Remember) when Yûsuf (Joseph) said to his father: "O my father! Verily, I saw (in a dream) eleven stars and the sun and the moon - I saw them prostrating themselves to me."	
161 2	12	16	16. And they came to their father in the early part of the night weeping.	
162 1	12	25	25. So they raced with one another to the door, and she tore his shirt from the back. They both found her lord (i.e. her husband) at the door. She said: "What is the recompense (punishment) for him who intended an evil design against your wife, except that he be put in prison or a painful torment?"	
162 7	12	31	31. So when she heard of their accusation, she sent for them and prepared a banquet for them; she gave each one of them a knife (to cut the foodstuff with), and she said [(to Yûsuf (Joseph))]: "Come out before them." Then, when they saw him, they exalted him (at his beauty) and (in their astonishment) cut their hands. They said: "How perfect is Allâh (or Allâh forbid)! No man is this! This is none other than a noble angel!"	
168 0	12	84	84. And he turned away from them and said: "Alas, my grief for Yûsuf (Joseph)!" And he lost his sight because of the sorrow that he was suppressing.	
170 4	12	108	108. Say (O Muhammad صلى الله عليه وسلم): "This is my way; I invite unto Allâh (i.e. to the Oneness of Allâh - Islâmic Monotheism) with sure knowledge, I and whosoever follows me (also must invite others to Allâh i.e. to the Oneness of Allâh - Islâmic Monotheism with sure knowledge). And Glorified and Exalted be Allâh (above all that they associate as partners with Him). And I am not of the Mushrikûn (polytheists, pagans, idolaters and disbelievers in the Oneness of Allâh; those who worship others along with Allâh or set up rivals or partners to Allâh)."	

### 3.2 System Design

The system design is explained through a general system flow and made using Python programming language and Jupyter Notebook, as illustrated in Figure 1.

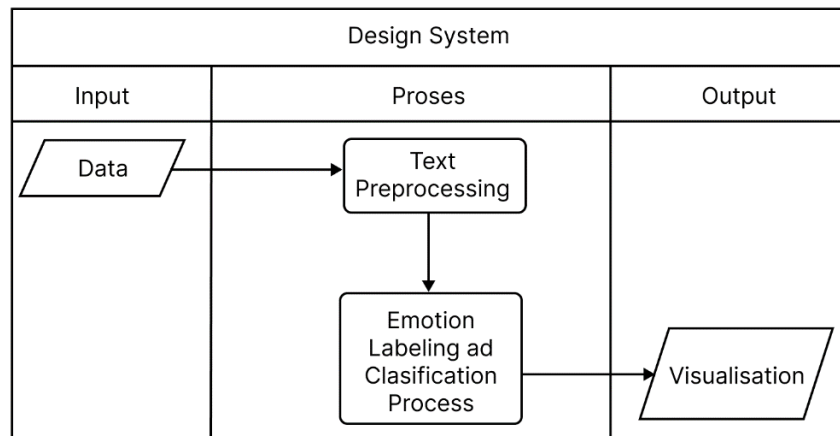


Figure 1. Design System

The overall system design begins with processing the collected English translation text data of the Quran. The first stage involves inputting the data into the preprocessing process to produce clean data. Next, sentiment and emotion analysis is conducted using a lexicon-based approach. In the analysis process, the text is scored based on a lexicon dictionary, followed by labeling to determine the sentiment and emotion classes from the scores. The analysis results are then visualized using Word Cloud to display the most frequently occurring words based on the labeling and classification results for each sentiment and emotion. Additionally, the frequency of sentiment and emotion results is visualized.

### 3.3 Preprocessing

The preprocessing stage is crucial as it modifies the data for easy use in the research process. The preprocessing steps for this research are depicted in Figure 2.

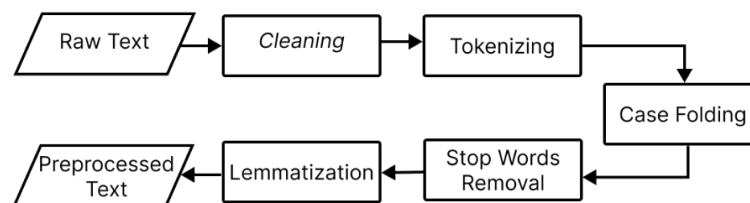


Figure 2. Text Preprocessing

#### 3.3.1 Cleaning

Cleaning aims to clean the data for optimal processing. This involves removing punctuation, and eliminating irrelevant symbols and special characters. The stages of data cleaning in this research are illustrated in Figure 3.

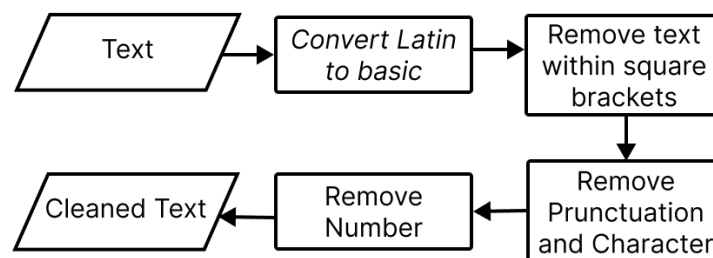


Figure 3. Cleaning Process

Data before and after the cleaning process with the process shown in Figure 3 can be seen in Table 3.

Table 3. Example of Cleaning Process

Before	After
3. We relate unto you (Muhammad صلى الله عليه وسلم) the best of stories through Our Revelations unto you, of this Qur'ân. And before this (i.e. before the coming of Divine Revelation to you), you were among those who knew nothing about it (the Qur'ân).	We relate unto you Muhammad the best of stories through Our Revelations unto you of this Quran And before this ie before the coming of Divine Revelation to you you were among those who knew nothing about it the Quran

### 3.3.2 Tokenizing

Tokenizing is the process of breaking down text into smaller form, such as sentences or words. This step is essential because it allows the text be analyzed at simplest form, enabling the identification to be easier. Without tokenization, it would be difficult to map individual words to their corresponding emotions in the NRC Emotion Lexicon. The example of tokenizing in this research can be seen in Table 4.

Table 4. Example of tokenizing

Before	After
We relate unto you Muhammad the best of stories through Our Revelations unto you of this Quran And before this ie before the coming of Divine Revelation to you you were among those who knew nothing about it the Quran	['We', 'relate', 'unto', 'you', 'Muhammad', 'the', 'best', 'of', 'stories', 'through', 'Our', 'Revelations', 'unto', 'you', 'of', 'this', 'Quran', 'And', 'before', 'this', 'ie', 'before', 'the', 'coming', 'of', 'Divine', 'Revelation', 'to', 'you', 'you', 'were', 'among', 'those', 'who', 'knew', 'nothing', 'about', 'it', 'the', 'Quran']

### 3.3.3 Case Folding

Case folding involves converting all text to lowercase to ensure uniformity. This step prevents the same word from being treated differently due to differences in capitalization. It ensures that words are treated as the same regardless of their capitalization, which is particularly important when using lexicons that are case-sensitive. An example of case folding is shown in Table 5.

Table 5. Example of case folding

Sebelum	Sesudah
['We', 'relate', 'unto', 'you', 'Muhammad', 'the', 'best', 'of', 'stories', 'through', 'Our', 'Revelations', 'unto', 'you', 'of', 'this', 'Quran', 'And', 'before', 'this', 'ie', 'before', 'the', 'coming', 'of', 'Divine', 'Revelation', 'to', 'you', 'you', 'were', 'among', 'those', 'who', 'knew', 'nothing', 'about', 'it', 'the', 'Quran']	['we', 'relate', 'unto', 'you', 'muhammad', 'the', 'best', 'of', 'stories', 'through', 'our', 'revelations', 'unto', 'you', 'of', 'this', 'quran', 'and', 'before', 'this', 'ie', 'before', 'the', 'coming', 'of', 'divine', 'revelation', 'to', 'you', 'you', 'were', 'among', 'those', 'who', 'knew', 'nothing', 'about', 'it', 'the', 'quran']

### 3.3.4 Stop Words Removal

Stop words are non-functional words like "and," "or," "in," "on," etc that do not carry significant meaning or emotional content. The removal of stop words helps reduce noise in the data which makes data processing faster and improves the efficiency of the analysis. Some additional stop words specific to this data, such as "ie" and "unto," were included. The process is illustrated in Figure 4.

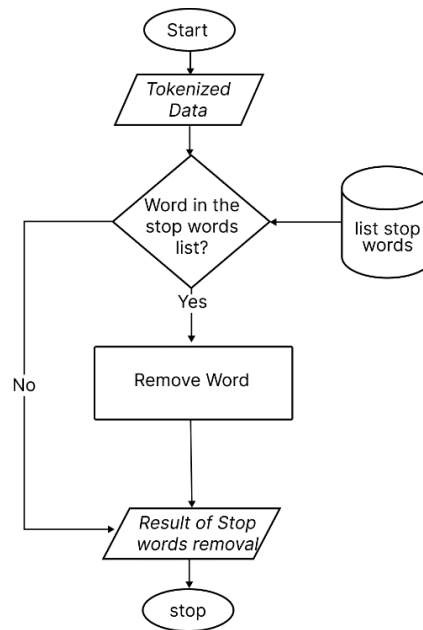


Figure 4. Stop Words Removal Process

### 3.3.5 Lemmatization

Lemmatization involves stripping word suffixes to transform each word into its base form. Initially utilized in text mining with open vocabularies, its purpose aligns with that of stop words removal: to enhance computational efficiency and improve information retrieval capabilities[12]. Lemmatization is crucial for emotion analysis because it ensures that variations of the same word (e.g., "happy," "happier," "happiest") are mapped to the same emotion. Without lemmatization, the analysis might miss emotional cues due to morphological variations of words. Figure 5 illustrates the lemmatization process stage.

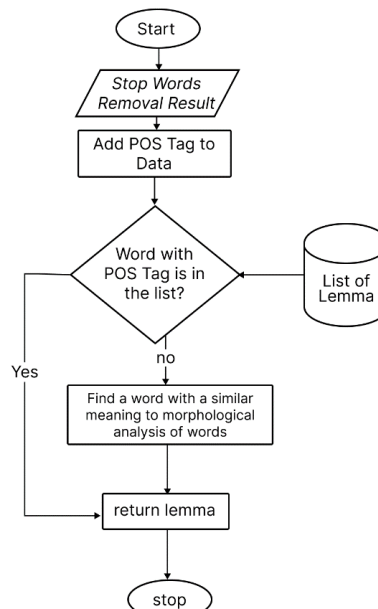


Figure 5. Stop Words Removal Process

## 3.4 Text Mining

The cleaned text data is processed using text mining methods for sentiment and emotion analysis. Text mining aims to discover valuable information and knowledge from unstructured text data.

### 3.4.1 NRC Emotion Lexicon

The NRC Emotion Lexicon is a widely used and well-established tool for emotion analysis. It categorizes words into eight basic emotions—anger, fear, sadness, disgust, surprise, anticipation, trust, and joy—as well as two sentiments (positive and negative). The lexicon has been validated in numerous studies and is recognized for its reliability and accuracy in emotion classification tasks.

The NRC Emotion Lexicon was chosen for this study for several reasons. First, it covers a wide range of emotions, making it particularly suitable for analyzing complex texts like Surah Yusuf, which contains diverse emotional expressions. Second, the lexicon has been successfully applied in various domains, including social media analysis, consumer reviews, and news sentiment analysis[2][3], demonstrating its reliability and accuracy across different contexts. Third, the NRC Emotion Lexicon is publicly available and easy to integrate into text mining workflows, making it a practical choice for this research. Finally, while this study focuses on English translations, the NRC Emotion Lexicon has been used in multilingual contexts, which could be beneficial for future research involving other languages.

### 3.4.2 Emotion Analysis

Emotion analysis is used to identify the emotional tone expressed in the text. This analysis classifies the text into various emotions such as joy, anger, sadness, fear, etc. Like sentiment analysis, emotion analysis uses a lexicon-based approach where the text is scored and labeled based on predefined emotional lexicons.

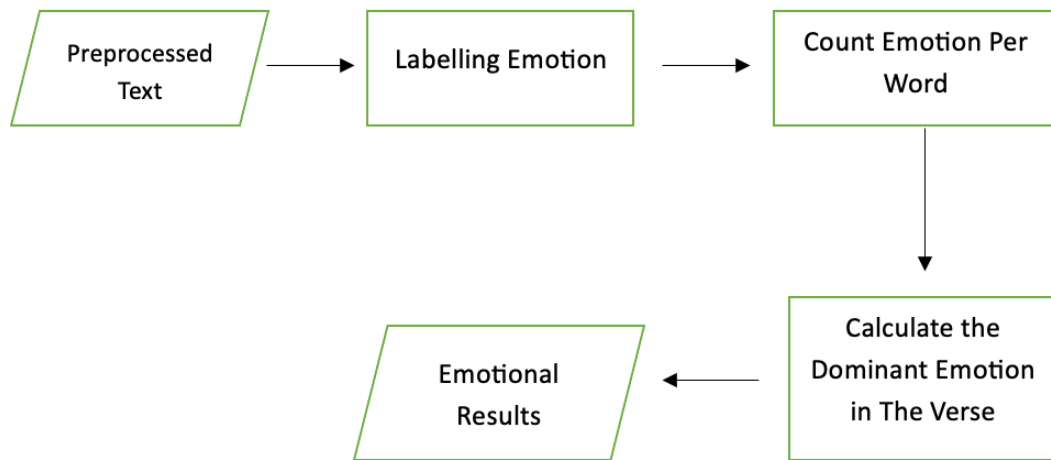


Figure 6. Emotion Analysis Process

During the emotion labeling process, each word in the text is analyzed based on a lexicon dictionary that includes 8 basic emotions: anger, fear, sadness, disgust, surprise, anticipation, trust, and joy. In the analysis stage, each word has the potential to be assigned multiple emotion labels.

$$E_{i,j} = \begin{cases} 1 & \text{If word } - i \text{ have emotion label } - j \\ 0 & \text{If not} \end{cases} \quad (1)$$

If a word has multiple emotion labels in the lexicon, all labels are assigned a score of 1. If a word does not have a specific emotion label, it is assigned a score of 0. After analyzing each word, emotion labels are accumulated across the entire sentence. This process involves summing the

weights of words that have multiple emotion labels. If a sentence contains words with the same emotion label, the weights of those emotion labels are added together.

$$S_{total\ emotion} = \sum_{i=1}^n \sum_{j=1}^m E_{i,j} \quad (2)$$

In equation 2,  $S_{total\ emotion}$  represents the total emotion score for one sentence,  $n$  is the total number of words in the sentence,  $m$  is the total number of emotion labels in the lexicon dictionary, and  $E_{i,j}$  is the emotion score for the  $i$ -th word with respect to the  $j$ -th emotion label in the sentence.

The final step in determining the emotion label is selecting the label with the highest accumulation based on equation 3. Therefore, the outcome of the emotion labeling process is the emotion label with the highest accumulation, reflecting the dominant emotion present in the text.

$$Top\ Emotions = argmax(S_{total\ emotion}) \quad (3)$$

This approach ensures that the resulting emotion label reflects the predominant emotion conveyed in the text. An example of emotion labeling can be seen in table 6.

Table 6. Emotion Labeling Example

Aya	Translation	Words	Emotion Score	Highest Emotion
16	16. And they came to their father in the early part of the night weeping.	['come', 'father', 'early', 'part', 'night', 'weep']	{'anger': 0, 'anticipation': 0, 'disgust': 0, 'fear': 0, 'joy': 0, 'sadness': 1, 'surprise': 0, 'trust': 1}	[('sadness', 1), ('trust', 1)]

### 3.5 Visualization

The final step in the research is the visualization of the analysis results. Word clouds are used to display the most frequently occurring words based on the labeling and classification results for each sentiment and emotion. Additionally, the frequency of sentiment and emotion results is visualized using bar charts or pie charts. This approach ensures a comprehensive analysis of the text data, providing insights into the sentiments and emotions expressed in the selected verses of Surah Yusuf.

## 4. RESULTS AND ANALYSIS

### 4.1 Data Collection

The data for this study was sourced from Quranenc.com, comprising translations of seven verses from Surah Yusuf into English. These verses were selected to analyze their emotional content using text mining techniques with the NRC Emotion Lexicon.



### 4.3 Emotion Analysis Results

Emotion analysis was performed using the NRC Emotion Lexicon, which categorizes words into eight basic emotions: anger, anticipation, disgust, fear, joy, sadness, surprise, and trust. The results of the emotion analysis for each verse are summarized in Table 7.

Table 7. Emotion Analysis Results

Aya	Emotion Score by Words	Emotion
3	relate (), muhammad (), best (), story (), revelation (), quran (), come (), divine (), revelation (), among (), knew (), nothing (), quran ()	-
4	remember (), yusuf (), joseph (), say (), father (trust:1), father (trust:1), verily (trust:1), saw (), dream (), eleven (), star (anticipation:1, joy:1, trust:1), sun (anticipation:1, joy:1, surprise:1, trust:1), moon (), saw (), prostrate ()	("trust", 5)
16	come (), father (trust:1), early (), part (), night (), weep (sadness:1)	("sadness", 1), ("trust", 1)]
25	race (), one (), another (), door (), tore (), shirt (), back (), find (), lord (disgust:1, trust:1), husband (), door (), say (), recompense (), punishment (anger:1, disgust:1, fear:1), intend (trust:1), evil (anger:1, disgust:1, fear:1, sadness:1), design (), wife (), except (), put (), prison (anger:1, fear:1, sadness:1), painful (anger:1, disgust:1, fear:1, sadness:1), torment (anger:1, fear:1, sadness:1)	("anger", 5), ("fear", 5)
31	heard (), accusation (anger:1, disgust:1), send (), prepared (anticipation:1, trust:1), banquet (anticipation:1, joy:1), give (), one (), knife (), cut (), foodstuff (), say (), come (), saw (), exalt (anticipation:1, joy:1, trust:1), beauty (joy:1), astonishment (joy:1, surprise:1), cut (), hand (), say (), perfect (anticipation:1, joy:1, trust:1), allah (), allah (), forbid (sadness:1), man (), none (), noble (trust:1), angel (anticipation:1, joy:1, surprise:1, trust:1)	("joy", 6)
84	turn (), away (), say (), alas (), grief (sadness:1), yusuf (), joseph (), lose (anger:1, disgust:1, fear:1, sadness:1, surprise:1), sight (), sorrow (fear:1, sadness:1), suppress (anger:1, fear:1, sadness:1)	("sadness", 4)
108	say (), muhammad (), way (), invite (anticipation:1, joy:1, surprise:1, trust:1), allah (), oneness (), allah (), islamic (), monotheism (), sure (), knowledge (), whosoever (), follow (), also (), must (), invite (anticipation:1, joy:1, surprise:1, trust:1), others (), allah (), oneness (), allah (), islamic (), monotheism (), sure (), knowledge (), glorify (anticipation:1, joy:1, surprise:1, trust:1), exalted (joy:1, trust:1), allah (), associate (trust:1), partner (), mushrikun (), polytheist (), pagan (), idolater (), disbeliever (), oneness (), allah (), worship (anticipation:1, fear:1, joy:1, trust:1), others (), along (), allah (), set (), rival (), partner (), allah ()	("trust", 6)

The analysis reveals distinct emotional profiles across the verses of Surah Yusuf. For instance, in verse 4, the dominant emotion identified was trust, with mentions of familial trust and prophetic dreams. In contrast, verse 25 exhibited high levels of anger and fear, portraying intense emotions surrounding betrayal and punishment. Joy emerged prominently in verse 31, linked to moments of revelation and awe, while verse 84 conveyed profound sadness, depicting the emotional turmoil experienced by Prophet Yûsuf's father. Trust and joy were prominent in verse 108, reflecting the Prophet Muhammad's unwavering faith and message.

The emotion analysis results of the English translation of the 7 verses from Surah Yusuf indicate that the text is predominantly characterized by words associated with trust, followed by fear, joy, anticipation, sadness, anger, surprise, disgust. The percentages of each emotion are depicted in Figure 8.

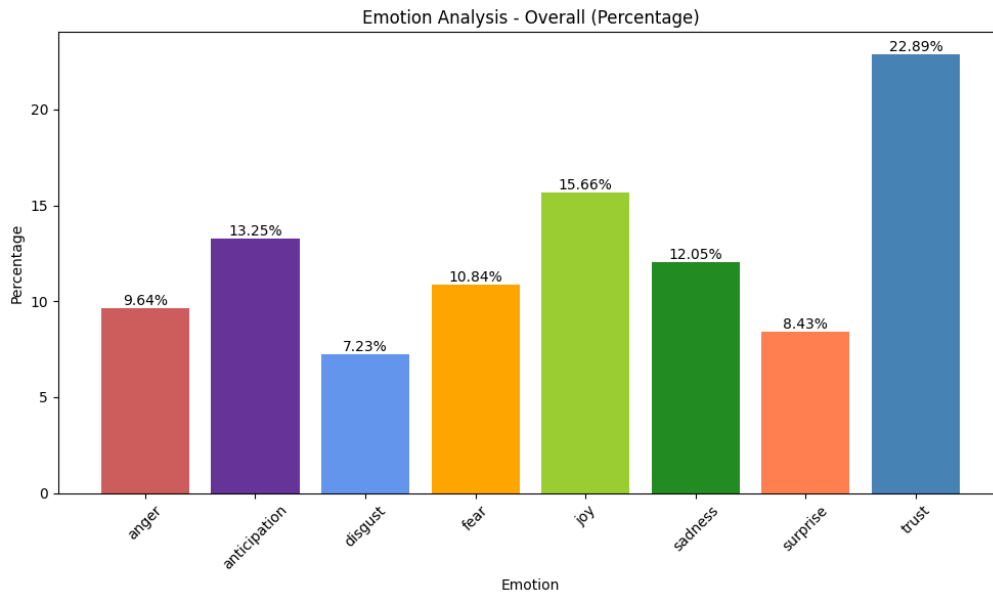


Figure 8. Barplot of Emotion Analysis Result

Each emotion category is predominantly represented by specific words, as depicted in Figure 9. This visualization illustrates those certain emotions, such as trust, joy, anticipation, sadness, fear, anger, surprise, and disgust, manifest through distinct lexical choices within the text

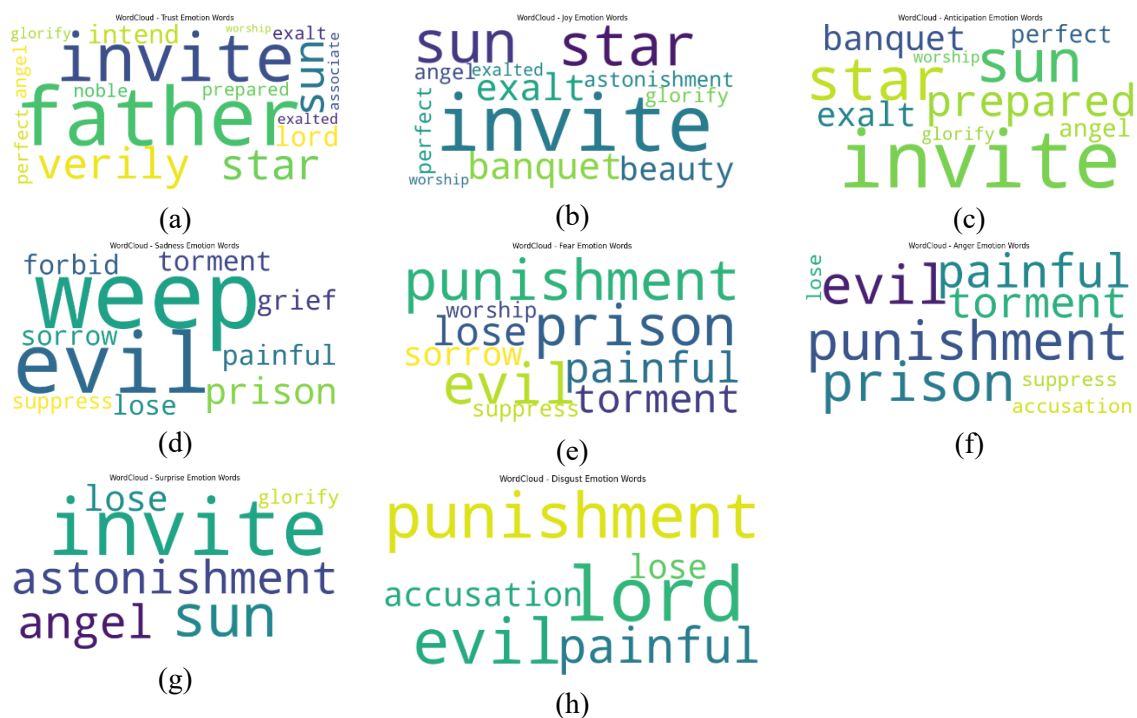


Figure 9. Wordcloud for words (a) Trust (b) Joy (c) Anticipation (d) Sadness (e) Fear (f) Anger (g) Surprise (h) Disgust

Figure 8 shows that the highest frequency in emotion analysis is trust (22.89%), dominated by words illustrated in Figure 9(a), with the most frequent appearances being "invite", "father", "verily", "star", and "sun". The second highest emotion percentage is joy (15.66%), with details

shown in Figure 9(b), with the most frequent appearances being "invite", "sun", "star", "banquet", and "beauty". Anticipation (13.25%) is dominated by words visualized in Figure 9(c), with the most frequent appearances being "invite", "sun", "star", and "prepared". Sadness (12.05%) is dominated by words visualized in Figure 9(d), with the most frequent appearances being "weep", "evil", "prison", and "painful". Fear (10.84%) is dominated by words visualized in Figure 9(e), with the most frequent appearances being "punishment", "evil", "prison", "painful", and "torment". Anger (9.46%) is dominated by words visualized in Figure 9(f), with the most frequent appearances being "prison", "punishment", "evil", and "painful". Surprise (8.43%) is dominated by words visualized in Figure 9(g), with the most frequent appearances being "invite", "astonishment", "sun", and "angel". Disgust (7.23%) has the lowest appearance percentage, dominated by words visualized in Figure 9(h), with the most frequent appearances being "lord", "evil", "painful", and "punishment".

These findings align with the narrative structure of Surah Yusuf, which encompasses themes of prophecy, betrayal, forgiveness, and divine providence. The high prevalence of trust reflects the central theme of reliance on divine guidance. This finding aligns with the central theme of reliance on Allah (tawakkul) that permeates the surah. For example, Quran 12:108 emphasizes the importance of calling to Allah with sure knowledge, certainty, and firm evidence, reflecting the unwavering trust in Allah's guidance that is also demonstrated by Prophet Yusuf throughout his trials[13]. While the presence of joy and anticipation corresponds to moments of hope and fulfillment in the story. The presence of joy and anticipation corresponds to moments of hope and fulfillment in the story, such as Yusuf's reunion with his family and his rise to power in Egypt. These moments are highlighted in Tafsir Al-Tabari and align with the emotional resolution of the narrative[14]. Conversely, Emotions like sadness, fear, and anger are tied to the trials and tribulations faced by Prophet Yusuf and his family. For example, Yusuf's betrayal by his brothers and his father's grief are discussed in Tafsir Al-Jalalayn as emotionally charged moments that evoke empathy and reflection.

#### 4.4 Implications for Education and Religious Interpretation

The results of this analysis have significant implications for education and religious interpretation. For educators, understanding the emotional dimensions of Surah Yusuf can enhance the teaching of Quranic stories by highlighting the emotional and psychological aspects of the narrative. For example, the prevalence of trust and joy can be used to teach lessons about faith and patience, while the presence of sadness and fear can help students empathize with the challenges faced by the characters. Additionally, this analysis can aid in the development of emotional intelligence by encouraging readers to reflect on how the emotions expressed in the text relate to their own experiences.

For religious interpretation, the findings provide a deeper understanding of how emotions are woven into the Quranic narrative. This can help scholars and interpreters explore the spiritual and psychological impact of the text on readers and listeners. For instance, the dominance of trust in Surah Yusuf underscores the importance of faith in overcoming adversity, while the presence of fear and anger highlights the consequences of moral failings such as jealousy and betrayal.

To provide a broader perspective, future studies could compare the emotional profiles of Surah Yusuf with those of other suras in the Quran. For example, suras like Surah Al-Baqarah (which focuses on law and guidance) or Surah Ar-Rahman (which emphasizes divine mercy) may exhibit different emotional patterns. Such comparisons could reveal how emotions are used across different themes and contexts in the Quran, enriching our understanding of its emotional and spiritual dimensions.

## 5. CONCLUSION

This study aimed to analyze the emotional content of the English translation of Surah Yusuf using the NRC Emotion Lexicon, evaluate the effectiveness of lexicon-based methods in religious text analysis, and explore the implications of these findings for understanding the Quran's emotional and spiritual dimensions. The results revealed a diverse emotional landscape, with trust being the most dominant emotion (22.89%), followed by joy (15.66%), anticipation (13.25%), sadness (12.05%), fear (10.84%), anger (9.64%), surprise (8.43%), and disgust (7.23%). These findings confirm the richness of emotional expression in Surah Yusuf and highlight the effectiveness of the NRC Emotion Lexicon in capturing these emotions.

The study's findings have important implications for education and religious interpretation. By understanding the emotional dimensions of Surah Yusuf, educators can enhance their teaching methods, while scholars and interpreters can gain deeper insights into the spiritual and psychological impact of the text. Furthermore, the results suggest that emotion analysis can be a valuable tool for exploring the Quran's emotional and spiritual dimensions, offering new avenues for both academic research and practical applications.

Future research could expand on this study in several ways. First, the analysis could be extended to include more verses or entire suras to provide a broader context and reveal additional emotional patterns. Second, machine learning methods could be integrated with lexicon-based approaches to improve the accuracy and depth of emotion detection. For example, deep learning models could be trained to identify subtle emotional nuances that may not be captured by lexicons alone. Third, the emotional profiles of Surah Yusuf could be compared with those of other suras to explore how emotions are used across different themes and contexts in the Quran. Finally, this approach could be applied to other religious or historical texts, offering a valuable tool for comparative studies and intercultural understanding.

In summary, this study demonstrates the potential of emotion analysis in text mining, particularly in the context of religious texts. By aligning the findings with the initial objectives and suggesting future research directions, this study opens new avenues for exploring the emotional and spiritual dimensions of the Quran and other texts.

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