Sentiment Analysis Algorithm Based on Dance Rhythmic and Melodic Features

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Abstract

INTRODUCTION: Dance is not only able to strengthen the body but also an expression of art. It can not only express the culture of a nation or a country but also express the emotions of a country. Therefore, it is essential to utilize algorithms for the study of dance rhythm and melodic characteristics in today's world, and introduces a sentiment analysis algorithm for the study.

OBJECTIVES: To disseminate our traditional dance culture, carry forward the spirit of our traditional art, enhance the creative level of our dance art, improve the current dance art in our country can not better apply the algorithm, and solve the problem that our current sentiment analysis algorithm can not be combined with art disciplines.

METHODS: Use the neural network and deep learning in sentiment analysis to establish a sentiment analysis algorithm adapted; then use the sentiment analysis algorithm to calculate the in-depth filtering of the dance rhythm and melodic characteristics of the research object; finally, the heat map of the dance rhythm and melodic characteristics of the SRD is calculated according to the experiment of the algorithm.

RESULTS: The core influencing factors of dance rhythm and melodic features are found to be attention mechanism and LMT through heat analysis (knowledge map); the experimental results using the sentiment analysis algorithm can be found to have a significant mediating effect on the joint enhancement of dance rhythm and melodic sense.

CONCLUSION: The development of dance art not only lies in communication and integration but also combination with contemporary computer technology; using sentiment analysis algorithms can better analyze the dance rhythm and melodic characteristics; therefore, the level of algorithm application in the field of dance art should be improved.

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1. Introduction

Emotional expression plays a central role in dance performance and is an essential factor in improving the resonance of dance performance and audience. The body is the most essential form of Dance, and the body language of Dance is not enough to convey the natural emotion of a song(Yue, 2021). Even today, the field of dance performance needs a systematic, scientific and rigorous theoretical framework to strengthen and enrich the leadership of practical and theoretical research(Wasti et al., 2021). Dance itself is lyrical art, and dance performance is not only a physical expression but also an emotional expression that allows the audience to see the dance movements and feel the inner feelings of the dance work. Dancers must take the initiative to understand the emotions of their characters and shape and integrate the spirit of Dance (Bonastre & Timmers, 2021). The Author understands the background of the dance process from the dancer's point of view, shapes the living character, opens the inner world of the character, masters the inner movements and rhythms of the character, connects the actor and the character, and transforms the dance work into a connotation and artistic soul(Leslie-Spinks, 2022).

By analyzing the application of emotional expression in dance performance, the authors continue to discover, reflect and study the art of dance performance, combining theory and practice to continuously improve theoretical knowledge and dance performance and develop into academic theory and practical experience in the complex field of research(He et al., 2023).

In recent years, more and more sports organizations have been performing Chinese dance music on domestic and international stages(Liu & Hu, 2021). At the same time, people are beginning to recognize the status of collective dance choreography and dance performance, which not only shows the creativity of the audience but also perfectly represents the traditional Chinese culture. In competitions, due to changes in the concept of aesthetics, artists pay more and more attention to the level of creative work(Otterbein et al., 2022). An essential feature of Dance is its ability to express emotions. It is the process by which dancers express their emotions through body language, understanding life and observing culture. The same dance piece performed by different actors can produce different dance effects(Ma et al., 2021). This is because different dancers have different concepts and ideas about dance composition, which leads to differences in dance performance(Crone et al., 2021). A good dance composition is impressive not only because the dancers have great body types and regular body movements but also because the dancers have to express their feelings through their dance movements. Emotion is essential in Dance (Stock, 2022). Dancers use their emotional psyches to perceive the inner world of their characters, enabling them to edit their images accurately to improve their ability to express infect and bring their dance works to life(Lovera et al., 2021). Emotions in dance works come from the accumulation of culture and the daily experience of the dancer.

2. Related work

Emotion plays a vital role in Dance. Dance performance requires much emotional support. From the content of the dance work, the richness of emotion comes from the dancer's experience of the inner world of the character, which forces the dancer to take the initiative to feel and present the emotion of the character(Taryana et al., 2021). As an emotional performance art, it is based on life experience. The dancer strengthens their character through the artistic processing and repetition of emotional life experiences. Dance is different from other art forms because it cannot express emotions through words(Milne & Neely, 2022). Dancers can only rely on body movements and background music to create a perfect piece, but dance performances can convey the audience's emotions in the most direct, intense and subtle way(于守健 et al., 2022). The emotional expression of Dance is both that of the actor and that of role-playing. The empirical theory emphasizes authentic experience as the soul and psychology of performance. It requires the actor to communicate with the character, vividly presenting the dancers' experience and inner life(Zhai, 2021). Dancers must immerse themselves in the inner world of their characters, scrutinize and experience the subjects of their performances, and understand their thoughts, ideas and understandings in order to present their work to the public better.

Dance is rooted in social life, and the emotion of Dance comes from the emotional experience of daily life. Dance without life experience feels imperfect and will not infect the audience(Yoo & Lee, 2021). The emotions of life are usually just simple expressions of real emotions, the most touching ones, such as the joy of seeing a friend again, the joy of being separated from a family member, the regret of misunderstanding and the hatred of quarrelling with others(Setyawan et al., 2021). If the dancer has similar feelings in the role, this association will naturally bring those feelings to the character. It is impossible for a dancer to fully experience the different emotions in life simply by feeling their feelings. Therefore, one must be able to observe and experience the emotions of others in life, collect emotions, observe, understand, assume, and experience the inner behaviour of the subject of the performance from the perspective of others, and collect the emotions of life to enrich life experience and help shape the dancer's body and blood type.

In addition to the accumulation of life experiences, emotions can also depend on the accumulation of culture. The authors are currently in an era of knowledge explosion with different forms of cultural dissemination such as digital media, internet, books and magazines(Reiser, 2021). Modern people's pursuit of beauty is constantly evolving. As a comprehensive art form, the integrity of a dance work requires not only a code of conduct but also a rich cultural heritage(Zhang et al., 2023). This requires dancers with excellent professional skills, rich cultural expertise, growing cultural mutual trust, and the ability to tell the world about China's history in the form of Dance (Soheil, 2021). The culture of the series plays a subtle role in the performance, not only increasing the imagination of the actors, introducing them to the characters they are playing and experiencing their lives and the world, but also helping to increase further the confidence of the subjects of the performance in their roles. This is very useful for actors in character design; it also improves understanding of the content of the dancer's work, accurately captures the emotions of the character, makes the dance performance more meaningful, highlights the emotions of the character and better impresses the audience(Park, 2021). Whether emotions are gathered directly through life experience or indirectly through literature, the aim is to make actors feel better about themselves in their roles, to energize them, and to present their work to a fuller, more realistic audience.

3. Introduction to Research Methods

3.1 Deep Learning and Neural Networks

Sentiment analysis at the physical level: In order to achieve this goal, it is necessary to incorporate different perspectives into the theory of their sentiment analysis algorithms. First of all, the use of attention mechanisms can significantly improve the performance of the model; moreover, many researchers have tried to use external grammatical data to simulate the context, but the performance in some datasets is not satisfactory due to grammatical errors caused by the language models and the lack of grammatical knowledge of these models.

Emotional polarization was more meaningful in one aspect when the contextual words were closer to this aspect. In contrast, contextual words further away from this aspect negatively affected the accuracy of the predicted polarization in some aspects. Other researchers have suggested the use of verbs in grammatical dependency; however, the LCF basic model is encoded using a self-checking network, which leads to a slow convergence of the learning process and does not allow for the formation of an adequate representation due to the small size of the data. In addition, LCF-BERT has two local and global BERTAs, which significantly increases the parameters of the model. The sentiment analysis process is shown in Figure 1.
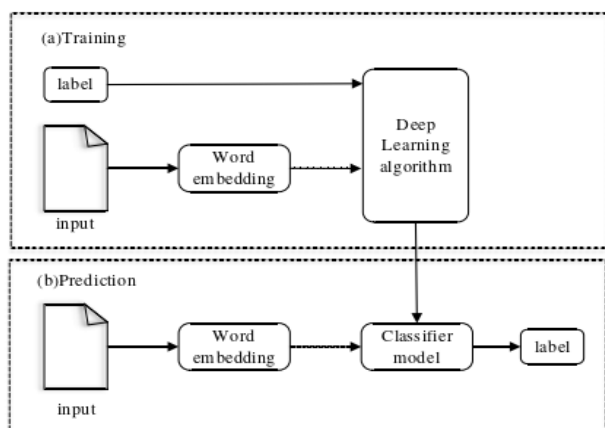
Figure1 Sentiment analysis flow

In this paper, the Author improves the LCF model by proposing a local and global functional fusion network (LGN) model. First, the global built-in words are encoded using Bigru. Then, the global context view is blocked based on the size and appearance of SRD records to obtain the local context view. Finally, attention to several ideas was modelled in both global and local contexts.

In the classification of external emotions, the model input sequence usually consists of a context sequence and a horizontal sequence, in which case the model can study the emotional information in the domain.

This paper introduces the basics of Local and Global Integration Networks (LGGN). Input level: Input sequences are fed as word vectors to obtain contextualized word vectors. Function extraction domain: Local and global contextual concerns are used to distinguish local and global properties from encrypted word vectors using a combination of local and global attributes. Output layer: classifies fused features using multi-layer sensors. In this paper, two LGN models based on BIGRU and BERT are implemented. In order to speed up the learning process and increase productivity, the core model of LGGN is called the LGGN computational system. To improve the performance, the model uses the pre-trained BERT model and switches to the LGFN-BERT model.

The input layer is the first layer of the LGN model and is designed to convert a context sequence into a context view. It consists of an integrated word layer and a coding layer. The LGN computer system uses two separate inputs for the context sequence S and the sequence ST. The SPC input for LGN-BERT is "[cls]+s+"[9element]+st+"[9hment] " and uses the BERT direct wizard instead of the input layer.

Dictionary vectors derived through the internal layer can only represent a word, not the semantics of specific sentences. Therefore, they must be encoded as upper and lower crops. Network coding, CNNs, and bi-directional RNNs can help achieve this. In order to simplify and present the model, a bilateral GRU is used in sentence coding to obtain a better performance and reduce the parameters of the model. As a variant of the RNN, GRU is not only dependent on the LSTM in the long run but also has fewer parameters and comparables than the LSTM. Therefore, GRU was chosen as an alternative to LSTM.

The model uses local and global contexts for more specific individual contexts, which means that the local contexts are more relevant to the words in the body, which helps to categorize them more accurately. In addition to the local context, global context also prevents words that help classify body words into the local context. This section describes the targeting mechanisms at the local context, global context, and attribute extraction levels. In the LGN computational mechanism, partial sequences and contextual sequences are presented separately, so partial observations are used to model the relationship between them. The BERT synopsis combines different contexts and perspectives, so it is possible to focus directly on its inputs and outputs.

When classifying emotions based on perspectives, the polarization of emotions in sentences must be taken into account, so general contextual features must be distinguished from perspective-based approaches. In this paper, the Author uses a method to extract annotations from multiple attributes, obtain contextual attributes, and remove unnecessary attributes. Global contexts contain too much information, while words describing physical words are usually located in highly relevant local contexts, so people should pay more attention to local contexts. To better align the model with the local context, local-global contexts that are not closely related to the

party are hidden to protect the local context. Global high-culture context vectors and low-culture context vectors are obtained by coding a level. The Dynamic Context Masking (CDM) technique then obtains local context vectors to mask invisible context and remove it from the concept of perspective. Finally, an SRD-based M-masking matrix is used. The sentiment analysis algorithm input is shown in Figure 2.
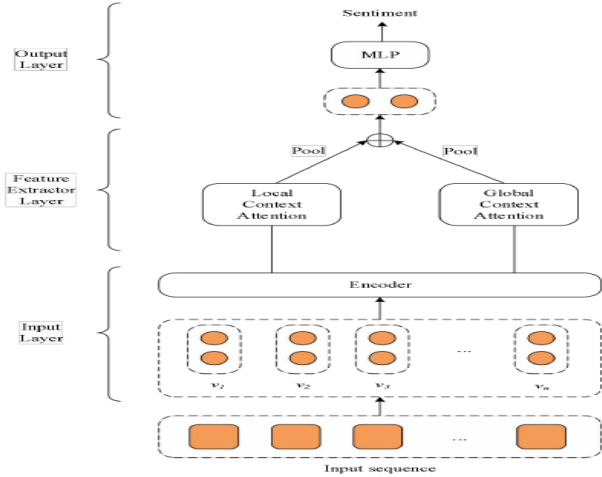
Figure2 Sentiment analysis algorithm input

Semantic distance is the degree of semantic influence of two words in a sentence. Dependency distance is the shortest distance between two words in a syntactic dependency profile tree, e.g., SRDDEP (service, slow) = 2. Suppose a part consists of several words. Two merge distances are also proposed for SRD.

Its SRD-related model is as follows:

$$SRD_{fusion} = \min(SRD_{seq}, SRD_{dep}) \quad (1)$$

Three of the SRDs are the semantic correlation distance of Fusion, semantic correlation distance of seq and semantic correlation distance of dep.

Dynamic context override: overriding certain contextual words that are not related to the emotional orientation of the word when computing the semantic distance between the word and the body in the body SRD utterance. The hidden context vector m is computed.

The specific modelling method is as follows:

$$m_i = \begin{cases} E, SRD_i \leq a \\ O, SRD_i > a \end{cases} \quad (2)$$

$$M = [m_1, m_2, ..., m_n] \quad (3)$$

$$H^1 = H^g oM \quad (4)$$

Where E and O in Equation (2) are the perpendicular standard vector and zeroing vector, respectively. In Equation (3), M_i are subsets of M respectively.

3.2 Experiments on Sentiment Analysis Algorithm

Following a top-down semantic representation of the culture, several attention techniques were used to extract features that help to distinguish the sentiment aspect. Multi-end installation differs from single-end installation in that it is computed several times, enabling the model to study relevant information in different representational subspaces.

Furthermore, a recovery-based attention mechanism based on aspect-oriented features is proposed. It aims to maintain the correlation between the HIC and HIA hidden states of the contextual attribute vectors through weight-based filtering and contextual attribute extraction and to adjust the attention weights accordingly based on the recovery of each contextual word. In the implementation, dot product attention is used to compute the results of attention focusing since the Transformer has been shown to be an effective modelling tool.

The specific modelling is as follows:

$$\beta_t = h_t^c \sum_{i=1}^{m} h_i^{aT} \quad (5)$$

$$\alpha_t = \frac{\exp(\beta_t)}{\sum_{i=1}^{n} \exp(\beta_t)} \quad (6)$$

Equation (5) calculates the combined value of the model's analytical ability, and Equation (6) further calculates its desired weight.

After further extracting the results, it is obtained:

$$O^{final} = mlp\left(O^{FE}\right) \quad (7)$$

$$p = soft\max(W_p O^{final} + b_p) \quad (8)$$

The map in Equation (7) is not the hidden layer of the vector product, but the input layer and p in Equation (8) is to find the probability of entering the output layer.

Three common sentiment analysis data are used in this experiment: the Mission Session 2014 laptop, the Restaurant Review dataset, and the Twitter ACL14 dataset. In addition, 20% of the learned sequences are randomly distributed in the development sequence. To ensure optimal performance of the model, several tests were performed in a series of tests.

In this paper, 300-dimensional pre-training vectors are used to initialize the embedded words and all patterns are initialized after a uniform distribution. Adam is used as the optimizer and defines the SRD parameters.L2 is set to 0.0001, and the batch size is 16. The SRD parameter based on the BERT Base 2 is 3. For the other two coding layers, the MLP level is 2, and the output measurements for the first layer are the hidden layer twice the size of the hidden layer, while the output metric of the second layer

is measured in class 3. In the other comparative models in this paper, the parameters are based on the source code. The ACC and F1 are also used as evaluations.

In models other than the BERT model. which outperforms the baseline model in all datasets. Compared to the baseline LCF-CDM model, the average accuracy of the LGGN-SEQ fusion and LGGN fusion increased by 3.15%, and the average accuracy of the LGGN fusion increased by 3.09%. In addition, LGN F1 showed significant growth rates, averaging 4.87%, 3.29%, and 3.16% for all three datasets compared to the LCF CDM. The accuracy of the LGGN fusion differed from that of the modern DualGCN. by 07%, 1.36%, and 0.2%, whereas the Twitter rank of the F1 decreased by 0.48%.

The Bertie-based model worked well. The model is higher than LCF-CDM in restaurants and laptops and slightly lower than LCF-BERT on Twitter LGN-BERT. This may be due to grammatical clutter in the tweeted material, where comments are less common in the local context, resulting in the inability of the local network to track them. The ReLU vs PreLU of the sentiment analysis algorithm is shown in Figure 3.
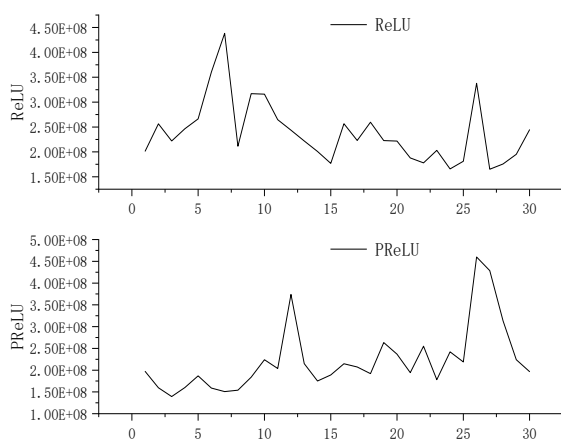

Figure 3 ReLU vs. PreLU for the sentiment analysis algorithm

Overall, Fusion performs best with the combination of the two distances. Experience has shown that the attention network connecting local and global features is suitable for the task of ABSA. The model not only improves task performance but also reduces the size of the model, making it easier to apply in production practice. Knowledge comparison of sentiment analysis algorithms is shown in Figure 4.
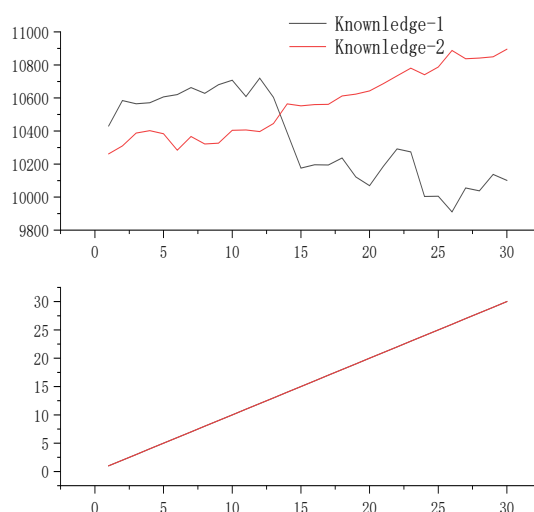
Figure4 Knowledge comparison of sentiment analysis algorithms

For the LGN computational system, using only local contexts in the three datasets is worse than using global contexts. In the global context model, the F1 values are 2.1% and 1.25%, respectively. This is 5.13% higher than the average F1 value in the three local contexts for the three datasets. The embedded models using both local and global context models performed better: the F1 values for the three embedded local context models were 1.63% higher than those for the global context models. The LFFN-BERT model combines both global and local contexts, which is better than models using only local or global contexts. However, this improvement could be better than the LFFN computerized model, probably because Bert is able to distinguish features. A comparison of Tanh and sig function for sentiment analysis algorithm (1) is shown in Figure 5.
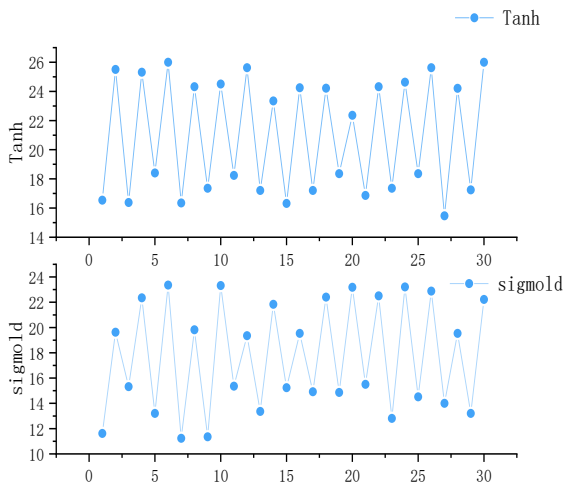
Figure5 Comparison of Tanh and sig function of sentiment analysis algorithm (1)

The experiments show that all the components of the LGGN computerized system and LGGN-BERT work well, and there is a significant improvement between the three materials. The LGN computerized system combines the global and local environments and surpasses the local computerized system. For LGN BERT, BERT itself performs better than the LGN computerized system and, therefore, has less improvement. If only the local context is used as input, the performance is reduced by 2-3%. The experiments show that the LGN model is necessary and effective for various elements.

In the case of LGN-BERT, it is challenging to estimate sufficient SRD variability tests because there is no space in the BERT model (about 1,15×108) for LGN-BERT parameters and 7,7×105 for LGN-computerized parameters). In order to find the best SRD thresholds for the different LGGNα models and materials, many experiments were carried out in order to get the best comparative results due to the differences in the experimental results. The LGFN-BERT is slightly larger than the R-port (which may be related to the data processing, where the inputs are populated with all the groups of the same length, while the R-port is populated with all the groups of the same length), but the model works better. Thus, the model is a valid lightweight model.

4. Sentiment analysis algorithm design results

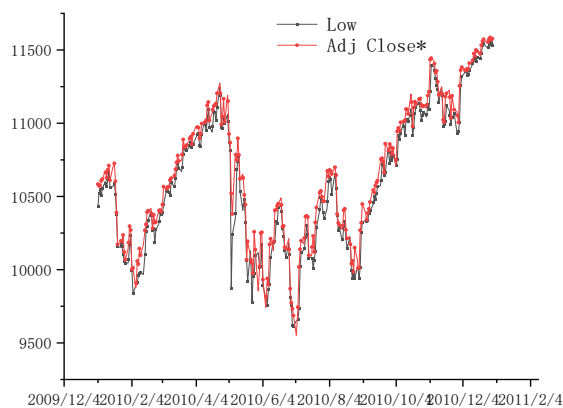## 4.1 Logic of dance Rhythm and melodic characteristics

The integration of Chinese elements into the dance movement group is, first of all, from a systematic point of view, integrated into the construction of the sports dance team. The creation is based on the elements of music, movement and costume, and the Chinese elements are the subsystems. In the whole environment, these subsystems of creative elements exist independently and interact with each other. Secondly, the development of a sports dance troupe with Chinese elements is an open system. The development of sports or artistic work cannot be excluded entirely. The heat map of the sentiment analysis algorithm based on dance rhythm is shown in Figure 6.
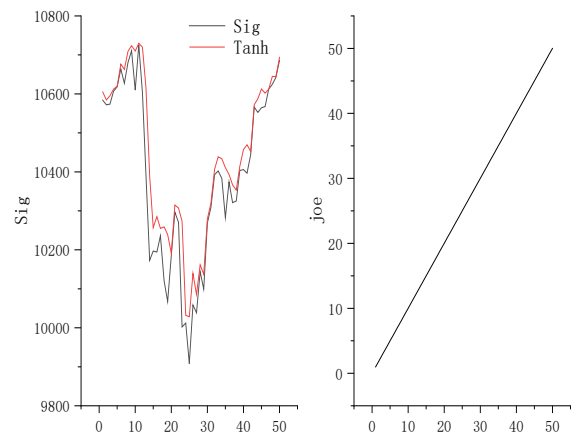
Figure 6 Heat map of sentiment analysis algorithm based on dance rhythm

The development of cultural globalization is itself a contradictory and random process. It can promote integration and division, conflict and cooperation, specialization and universality. Cultural globalization begins with understanding the cultural characteristics of different countries and explaining the differences in their cultural contents. Cultural confidence can only be enhanced by concretizing and liberating the inherent culture. This is not only the beauty of art but also the beauty of Chinese culture, which is a crucial way to enhance cultural mutual trust. In the current international situation, the competition for cultural soft power is becoming increasingly fierce. The in-depth study and dissemination of local culture have been increasingly emphasized. After a thousand years of baptism, modern Chinese socialism has given birth to great cultural soft power and potential. While China's national strength is growing, China's cultural forecasts and cultural exchanges have deepened the understanding of China around the world. In the creation and organization of collective Dance, Chinese elements must be continuously integrated into local elements, understanding the local cultural background and respecting the local development laws rather than using "fetishism" to apply directly. The

excellence of Chinese culture promotes global change, listens to the global voice of Chinese culture, and continuously improves China's cultural soft power. Cultural development promotes the development of the socialist market economy. The LOW and ADJ analysis of the sentiment analysis algorithm is shown in Figure 7.


Figure 7 LOW and ADJ analysis of the sentiment analysis algorithm

4.2 Dance rhythm and melodic characteristics in the mechanism

Sports dance is a sports art that combines sports science, art, dance science and psychology. It has a variety of value functions, such as competitive function, aesthetic function and social function. Due to the living conditions in China, there are specific differences between Chinese and foreign athletes in terms of body size and muscular endurance level related to sports activities. As a result, Chinese dancers are always weaker than the best foreign dancers and need help to achieve good results in sports dance competitions. Sports dance collective choreography incorporates Chinese elements, enriches the content of the dance works, expands the creative methods and creates unique Chinese dances. The International Dance Festival exhibited several excellent works.

Sports dance includes forms of external beauty such as music, costumes and dance movements; for example, the breathing techniques of Chinese Dance and sports dance are the same, and the Chinese Qianbao costumes and sports dance represent the female image very well. The sheer drumming of traditional Chinese music and the apparent rhythms of sports dances are also the same. From a social point of view, the integration of national cultural characteristics into the creation of sports group dances can help Chinese dancers express their emotions, promote friendship, strengthen friendship unity, and pursue the goal of love in dances or competitions. With the help of Chinese elements, the audience can have a

common language that can arouse interest in the Dance and expand the dance team. Comparison of Tanh and sig function of sentiment analysis algorithm (2), as shown in Figure 8.
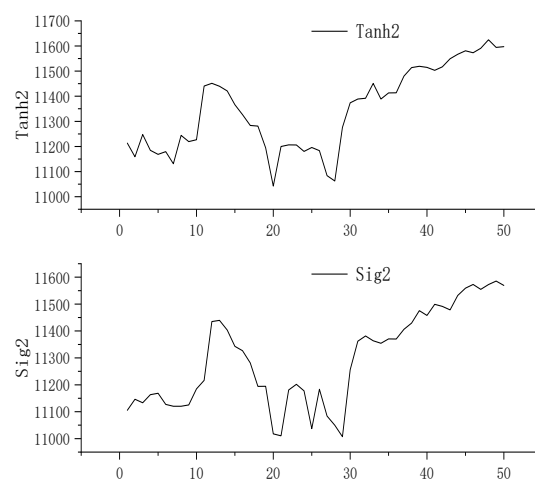
Figure8 Comparison of Tanh and sig functions for sentiment analysis algorithms (2)

It is of great significance to enhance the international status of China's cultural value system in the new era. Incorporating Chinese elements into the creation of physical dance troupes perfectly reflects this change of form. Incorporating Chinese elements into human dance troupes aims to bring the "good story, good motivation and good spirit" of Chinese culture to the audience in the form of art. By transforming Chinese culture into art through stage performances, Chinese culture has been more widely recognized and promoted in China. Dance for Sport is an imported product whose cultural purpose is to innovate and promote international dissemination; horizontally, the measure aims to strengthen cultural exchanges with foreign countries. Horizontal width and vertical depth are necessary prerequisites for building a socialist cultural power in the new era. Comparison of Tanh and sig function of sentiment analysis algorithm (3), as shown in Figure 9.
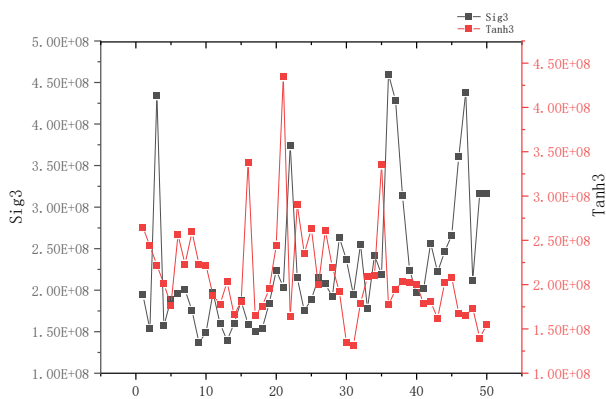
Figure 9 Comparison of Tanh and sig function of sentiment analysis algorithm (3)

Dance is a visual art that expresses thoughts and feelings through body language. The cultural history of Chinese Dance can be traced back to thousands of years ago. During the performance, dancers communicate emotions with the audience and interact emotionally with the public through movements and expressions. Dance is contagious. In addition to regular dance movements and high-level skills, it is essential to emphasize the accuracy and rationality of emotional expression. Body movements must be fully integrated into the inner emotions to increase the expressiveness of the Dance and influence the audience's emotions. During the choreography process, choreographers delve into the design of each theme in order to vividly express the emotions and incorporate real-life experiences to deal with real-life emotions. In a dance performance, the performers intensify their movements and expressions to bring the audience closer to the dancers, which requires the flexible use of different parts of the body. Dancers' movements, expressions, and even breathing on stage convey emotions and communicate calmly with the audience.

In dance performance, the expression of dance emotion is often described as "expression with eyes, expression with form". Dance expressions can be divided into two parts: facial expressions and body expressions. First of all, facial expression expresses joy, anger, sadness and joy in work through facial features such as lifting the mouth in happiness, lowering the angle of view in sadness and lifting the eyes in unhappiness. The eyes are the windows to the soul and play a central role in facial measurements. They convey not only the eyes but also the feelings of the soul. They can express sadness, joy, grief, and many other emotions, such as playfulness. Dancers have "talking" eyes, and in a dance performance, body language is sometimes not enough to convey emotion. It is through the program that emotions are conveyed to the public. Sometimes, dance lines are better than the usual heroes. In a dance performance, the dancer must deeply understand the role of mental activity and use body language so that the audience can visualize the impact of emotional changes.

Secondly, the body expresses literally "form"; it expresses "feeling". Dance is a form of body language in which the dancer uses their body to tell a story and express thoughts and emotions through each movement. Facial expression is significant in Dance. The size and speed of the same movement have different meanings, such as walking in a dance. A slow tempo can express nostalgia, a light tempo can express happiness, and a fast tempo can express excitement.

Dancers can use different parts of their body to express their emotions. In people's daily lives, nodding the head shows understanding and shaking the head shows disagreement, which also applies to Dance. In addition, raising the head usually shows complete hope and loyalty. In Mongolian dances, specific hand movements, such as sturdy shoulders, symbolize chivalry, joy and peace. In addition, in the Dance, a slight tremor of the hands indicates a storm, and a slight tremor of the shoulders indicates back sighs and fear; hand movements, including hand-to-finger movements, are very rich in dance performance. However, the shape of the hands varies depending on the style of Dance, and different hand movements can express different emotions in different scenes, music, backgrounds, and other parts of the body.

The art of Dance allows for not only simulation but also relevant comparisons. The hand movements of dancers in everyday life are transformed and sublimated into something extraordinary; foot movements are an essential part of Dance and the basis of most dance movements. Regardless of the form of the dance movement, foot movements, including jumps and spins, are closely related to the involvement and coordination of foot movements. Dancers must follow these steps carefully and adapt to other expressions of the body to express the beauty of the Dance. Dancers use waist movements to show the beauty of the movement lines and to emphasize the beauty of the steps. The dancer's waist needs to be flexible to allow for tighter dance movements. Using lumbar exercises allows for different emotions to be expressed in different situations. A red hat is left on the hands, chest and waist to express pre-wedding nerves and desire for love; the physical movement that connects pedestrians to different parts of the body affects the up-and-down connection. Changes in body movement partially affect the movement areas and increase body expression. Finally, in order to achieve a "sense of dance" in a dance performance, it is necessary to combine facial expressions with body expressions. Dancers should not only have excellent dance skills but also skillfully use different parts of the body and facial expressions, increase the expressive power of expressions, and accurately and reasonably express emotions in Dance.

4.3 Problem Analysis of Emotion Analysis Algorithm on Dance Compilation

The Fusion of Chinese and Western cultures is a way of cultural exchange in the context of cultural globalization and an inevitable trend for the healthy development of culture. The two rivers were initially separate, but as time went by, they began to merge, move, and act, combining to emit brighter light. In sports dance, Latin Dance mainly expresses love, modern Dance mainly expresses social entertainment, and military Dance must have festivals and different styles. The combination of Latin and modern dances in social entertainment is highly controversial. In addition, military dances show the noble spirit of soldiers sacrificing their independent houses for their country, and Latin sports dances express the theme of personal love above all. Military Dance demonstrates that these two conflicting cultures have both cultural connotations and intuitive perspectives, which intertwine to create confusion and stigma. Therefore, coaches' theoretical knowledge could be more substantial, and there is a need to improve their practical skills to combine the creation of sports dance with Chinese culture. In conclusion, the integration of Chinese and Western cultures could be improved.

Historical integrity is a prerequisite for ensuring the integrity of all works. In the theatre, it is only in conjunction with the plot that the audience can gradually become immersed, enjoy it carefully and read it slowly. The entire plot and the rich characterization play a decisive role in the expression of the theme of the work. In order to make the whole dance story complex and vivid, there is usually much excitement, which creates anticipation and attention in the audience and helps to maintain it. Before the tension is resolved, the audience is left with a surprising impact and an unexpected outcome. Analysis of the selected works shows that the plot could be more evident in many of the narrative themes and the complex tension design. Many scenes were based entirely on music to vary dance movements and highlight plot changes. The expression of emotions does not correspond to the main line, does not correspond to the chronicle, does not emphasize the central plot, and, in some cases, does not even have a plot. The work combines different dance movements and mixes them into a purely technical expression. The reason for this split remains the Author's need for creative skills and theoretical knowledge of choreography creation. A diagram of the three algorithmic paths of sentiment analysis is shown in Figure 10.
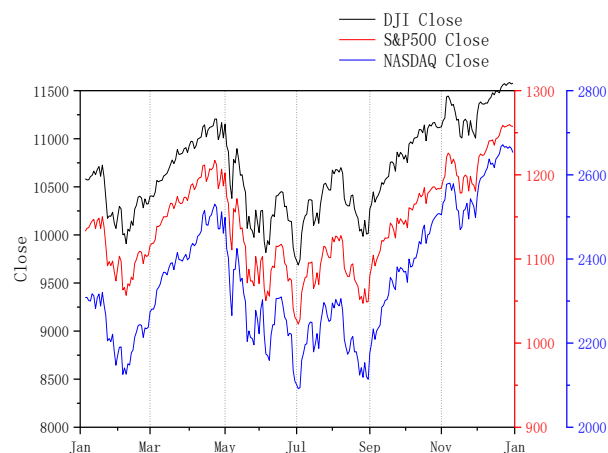
Figure10 Path diagram of three algorithms of sentiment analysis

The purpose of Dance is to express the necessary ideas with dance works that reveal the nature and rights of things. Promote and learn from good works often because the work itself has a deep meaning that inspires and guides life. Many works are not controversial; on the one hand, dancers borrow themes from others, repeat themselves, and hide the ideas they want to express. On the other hand, dancers create the themes they want to express, which is often an unproven choice. In analyzing the dance works of the selected sports dance companies, it was found that many of the dance works needed to be conceptualized, and some were relatively simple. The dancers also perform flat dance forms with traditional music, costumes, and movement. These works can only provide visual pleasure without profound meaning, hindering the audience's empathy. Maslow's theory of needs has always been a process of satisfying needs; therefore, choreography needs to emanate from considering human needs.

Sports dance is a combination of auditory and visual arts. The style, rhythm and cultural aspects of music must be adapted to the complex dance movements. Therefore, it is essential to explain the connection between traditional Chinese musical instruments and the original music of Chinese sports, songs, and Dance. Dancers not only dance to the melody of the music but also feel the inner sound of the music and touch the emotions and movements that their bodies unintentionally express. The music is based on what it contains, and without mastery of the Dance, it looks simple and careful.

The integrity of the structure of the Dance determines the integrity of the whole piece. It combines it with the structure of the human body in order to organize the movements scientifically and rationally. If there are too many synthesized styles in the Dance, the connection between the Dance and the movement needs to be found. Suppose the two dance movements are clearly different.

In that case, they must be rigidly combined, giving the audience a feeling of confusion. Mechanical combinations of different dance movements make everything disharmonious and lifeless. In many selected works, such as the Chinese Drum and Sports Dance, when the Ring Dance and the Hand Dance are combined with the Chinese Classical Dance, they can be the same Dance. However, in reality, the techniques of the two dances are opposite, and the combination of these two arts makes the whole work unpleasant. The work aims to combine the elements of Chinese and Western dances to present a creativity that the audience needs help understanding.

5. Conclusion

The reason why Chinese elements are integrated into the creation of sports group dance is that this mode of creation is a natural need to promote sports dance itself and a realistic need to accelerate the globalization of sports dance. It is a crucial way to increase trust in Chinese culture and an effective way to promote the internationalization of sports dance and accelerate the spread of Chinese culture. The ability to incorporate Chinese elements into the creation of sports group dance is based on a variety of social values such as competition, aesthetics and social function, which are in line with the requirements for the dissemination of Chinese culture and are the intrinsic motivation for the exchange of Chinese and Western cultures. Low integration of Chinese and Western cultures, fragmented history, lack of deep connotations and flat styles, one-sided understanding of musical connotations, oversimplified costume design, rigid and random movement phases, and oversimplified use of props are all problems that need to be further addressed. Appropriate ways to solve these problems are to understand the degree of Chinese cultural integration, integrate classical Chinese theatre, promote innovative thinking in theatre creation, improve musical evaluation and culture, and interpret costume design ideas and concepts. Attention should be paid to the coordination of movements, and the innovative design and use of props should be enhanced. In the future, the collective choreography of sports dance will pay more attention to spreading the revolutionary spirit, and its red story will make the theme selection brighter. Red cultural elements will become the mainstream of sports dance in the future. Chinese tradition is rich in elements, and the red element is only a part of it. In the future, the formation of sports dance groups can have a variety of contents, which not only improves the understanding of Chinese traditional culture but also helps the development of Chinese sports dance culture.

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