Early Warning Mechanism of Agricultural Network Public Opinion Based on Text Mining

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Abstract

With the rapid development of mobile Internet, social network has become an important platform for users to obtain information, express opinions and exchange views. Agriculture concerns people's livelihood, and the network conveys public opinion. It is urgent to improve the monitoring ability of agricultural network public opinion by correctly guiding the guidance of agricultural public opinion and preventing the spread of negative public opinion. At the same time, it puts forward higher requirements for network public opinion monitoring. Using the massive data processing performance of text mining to solve the problems of low storage space expansion and computational efficiency of agricultural-related network public opinion monitoring system, it provides theoretical support and decision-making basis for workers and decision-makers in government, enterprise and other fields. Around the design and implementation of the network public opinion supervision and management system, it has realized the functions of public opinion collection, public opinion analysis and tracking, emotional orientation judgment and public opinion warning. The sentiment orientation analysis model is constructed to judge the emotional type and statistical sentiment frequency of the online public opinion, and to mine and visually analyze the user emotion in the event. The system is operating normally and can be effectively monitored to meet design goals.

Key words: Text Mining; Agricultural Network Public Opinion; Early Warning Mechanism.

1. Introduction

In recent years, food safety incidents and genetically modified controversy have become more and more frequent, which has a huge impact on the industry due to the inadequate response of public opinion. The Internet has become an important medium for people to obtain information and communicate. With the development of Internet technology, the way of communication among netizens is also changing [1]. Public opinion refers to the subjective reflection of certain social realities and phenomena by social groups at different historical stages. It is a comprehensive expression of group consciousness, ideas, opinions and requirements. Develop the monitoring and analysis of public opinion information of agricultural product quality and safety network, timely grasp the development trend, improve the supervision ability of agricultural product quality and safety and the important guarantee of the level of agricultural product quality and safety [2]. It plays an important role in correctly guiding public opinion, ensuring public access to government information according to law, and improving government efficiency and transparency. Text mining technology has typical application scenarios in all areas of production and life [3]. Internet data is a typical semi-structured data. It is also of great practical significance to use text mining technology to process and analyze Internet data and to track the monitoring of network public opinion [4-5]. The explanation was made from the participants, and the main body of the online public opinion was the netizens. The online public opinion was divided between the official and the public. The process of development, conversion, dissemination and utilization of agricultural information resources has been accelerating, and the number of agricultural information resources has been increasing [6]. At present, research on monitoring, collecting and early warning technologies for Internet public opinion has become the top priority of the current work.

Agriculture is an important matter concerning the national economy and people's livelihood. Combing the network public opinion concerning agriculture not only opens a window to understand the current situation and problems of agriculture, but also helps to improve the initiative consciousness and communication ability of government departments in dealing with new media [7]. The importance and complexity of network public opinion require governments at all levels to improve their ability to cope with it, and the construction of early
warning mechanism of network public opinion is an important part of it. The construction of early warning mechanism of network public opinion can discover the beginning of network public opinion in time, study and judge the development trend of public opinion as soon as possible, and prepare for dealing with crisis events of network public opinion in advance [8]. In 2015, researchers studied the application of super-edge coupling algorithm and its analysis of online super-network coupling mechanism [9]. In 2017, research on the dynamics of public opinion in online and offline social networks was proposed [10]. The government can use the online platform and forum to keep abreast of the dynamics of the Internet, collect relevant public information, publish information, solicit opinions from the public, open channels for appeals from netizens, respond to various demands and problems raised by netizens' demands, and effectively resolve the communication between the government and the public. Smooth and existential barriers and opposite emotions [11-12]. Compared with other media, the Internet has stronger user interaction, and has the characteristics of low entry barrier, huge information scale, real-time release and dissemination of information, large user groups, etc [13]. However, in this process, the agricultural network public opinion information is more complex and changeable, including the accuracy and diversity of the agricultural network public opinion information resources; these information cannot timely and fully reflect the problems we face in the agricultural field, and even worse, it may bring negative effects to the agricultural field and even the society because of the false and one-sided nature of these information [14].

The existing information acquisition technology is mainly through links between web pages to automatically obtain page information from the web, and with the links to the entire network continues to expand [15]. With the improvement of the quality of life, more and more netizens begin to pay attention to agricultural public opinion such as "firewood, rice, oil and salt" in daily life. How to do a good job of agricultural network public opinion is particularly important. The diversity and complexity of network public opinion determine that the way of early warning work must be flexible and diverse, and specific problems must be analyzed [16-17]. The public opinion formed by some ordinary netizens expressing irrational opinions on the network should be guided. Establish and improve the government information disclosure catalogue system and e-government hall, and build a government website group system with the functions of the above-level people's government portal as the leading, level government and departmental websites, which are fully functional, convenient, efficient, safe and smooth, and integrated [18]. People relying on the Internet to speak is relatively free, but the negative impact of this is immeasurable. For example, some events that reflect real life spread on the Internet and received widespread attention, which will bring huge public opinion pressure to public opinion objects, and the public opinion orientation has strong uncertainty [19]. This paper preliminarily discusses the early warning mechanism of agricultural product quality and safety network public opinion, in order to provide reference for standard, timely and effective guidance and resolution of agricultural product quality and safety network public opinion crisis.

2. Methodology

Web page information acquisition is the first step in network public opinion analysis. Its significance lies in quickly and accurately extracting valuable information from massive web page information, providing a meaningful data source for network public opinion monitoring. The main service target of agricultural product quality and safety network public opinion early warning is the relevant decision-making department of national agricultural product quality and safety management work [20]. The data in the web page is very complicated, and is often doped in a way of combining unstructured and non-semi-structured. This information storage method is different from traditional text storage, and its information is complicated, and the web page control information is mixed with the web page content, giving Information extraction brings a certain degree of difficulty. The main object of sentiment analysis is to generate content for users on the network, especially texts related to the topic that are actively published by the user. In general, the generalized sentiment orientation analysis is to analyze the psychological attitude of the opinion holders contained in the text. Internet has the characteristics of virtuality, concealment, divergence and randomness. More and more people express their ideas through the network [21]. Traditional queries and reports can only understand the results of events that have occurred, while data mining can help decision makers analyze the existing data, understand the reasons for the development of events, find out the hidden relationship among them, and then predict the possible situation. By analyzing the information of agricultural public opinion on the Internet, tracing the detailed process of public opinion evolution, timely predicting the future development trend of public opinion, helping relevant agricultural departments to solve the hazards caused by public opinion in time, safeguarding the image of government and enterprises, and providing decision support for government departments.

Network public opinion is a collection of netizens’ emotions, attitudes, opinions, expressions, dissemination and interaction, as well as follow-up influence, with the network as the carrier and events as the core. With the rapid development of the Internet, the network public opinion related to agriculture has doubled. The rapid increase in the number of agricultural websites has accelerated the spread of public opinion.
information on agricultural networks and broadened the scope of communication. Table 1 and Figure 1 show the scale comparison of urban and rural netizens.

### Table 1. Comparison of the scale of urban and rural netizens

<table>
<thead>
<tr>
<th>Netizen type</th>
<th>Number of people (10,000 people)</th>
<th>Proportion(%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Town</td>
<td>98.36</td>
<td>45.36</td>
</tr>
<tr>
<td>Rural</td>
<td>45.71</td>
<td>31.24</td>
</tr>
</tbody>
</table>

Figure 1. Comparison of the scale of urban and rural netizens

Agricultural product quality and safety network public opinion early warning is a comprehensive work, and its early warning system is a complex system composed of many factors. There are a lot of duplicate and reprint information in the network public opinion, so there are a large number of redundant web pages in a large amount of data. In the process of lyric search and subsequent analysis, the probability of returning the same content from multiple addresses is large. Web text mining first establishes a target text collection by collecting network text resources, and then processes the text collection by using techniques such as text preprocessing, feature selection, feature representation, and data mining, and obtains the specific information required by the user. Due to the openness and anonymity of network information exchange, the expression of public opinion is more free and closer to the original intention of the people. However, some netizens lack social responsibility when expressing their opinions, and the irrational components are more prominent. The significance of text mining technology in the analysis of hot Internet public opinion lies in that it can obtain large-scale text data, analyze data through various functions, and monitor and warn public opinion through existing data. From the generation of demand for agricultural public opinion information to the planning of agricultural public opinion, the collection of agricultural public opinion information through technical means, the analysis of agricultural public opinion information, the service of agricultural public opinion information, and finally to the decision-making of department leaders.

The final target vocabulary contains 23,000 positive emotional words and 18,000 negative emotional words. Because some emotional words appear in both the positive emotional vocabulary and the negative emotional vocabulary, the target vocabulary is aggregated and 41,000 emotional vocabularies are obtained. As shown in Table 2 below and Figure 2.

### Table 2. Emotional word source

<table>
<thead>
<tr>
<th>Emotional vocabulary</th>
<th>Positive emotional vocabulary (10,000)</th>
<th>Negative emotional vocabulary (10,000)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emotional vocabulary ontology</td>
<td>2.3</td>
<td>1.8</td>
</tr>
<tr>
<td>Derogatory dictionary</td>
<td>1.3</td>
<td>1.5</td>
</tr>
</tbody>
</table>

### Table 3. Time series variation of average polarity intensity of different types of network users

<table>
<thead>
<tr>
<th>Internet users</th>
<th>Time(h)</th>
<th>Average polarity strength</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teacher</td>
<td>2.32</td>
<td>9.96</td>
</tr>
<tr>
<td>Student</td>
<td>1.81</td>
<td>8.17</td>
</tr>
<tr>
<td>Social masses</td>
<td>2.04</td>
<td>9.32</td>
</tr>
</tbody>
</table>
Emotional word source

The time series of the user's emotional polarity intensity is described from a microscopic perspective, as shown in Table 3 and Figure 3 below. Although different types of network users are mainly positive emotions, negative emotions appear multiple times, and they show higher intensity and sometimes even high negatives.

Figure 3. Time series variation of average polarity intensity of different types of network users

The first time to grasp the agricultural product quality and safety network public opinion information (public opinion issues) and timely analysis and judgment is the basis for doing a good job in agricultural product quality and safety network public opinion early warning work. After the content of the document is extracted, the next step is to analyze the text in the sentence, that is, the text segmentation. The relevance of the information can be obtained through text segmentation, and the importance analysis of the text is also dependent on the text segmentation. The network text basically has no fixed data structure and model description, and belongs to unstructured or semi-structured text. Therefore, it is necessary to convert and store data of the network text information in order to complete the mining work. On the one hand, the rise of network media provides a platform and opportunity for people to observe society and express their opinions. This system is a network public opinion monitoring system for the agricultural field, therefore, in terms of information collection sources, it should be targeted for the agricultural field website. The network public opinion monitoring and analysis system of agricultural product quality and safety includes network public opinion monitoring collection, identification, analysis and evaluation, etc. First, we build a keyword dictionary, then extract keywords from the text using a series of segmentation rules, and then use the keyword dictionary to match. If the matching is successful, it means that this paper has interesting content. The emotional information needed in this study is contained in these short micro-blog texts. Therefore, we need to use text mining technology and methods to mine emotional information by processing short micro-blog texts.

In this paper, the "hour" as a unit, the collected different types of network users related micro-blog data statistics, the number of micro-blog publications over time changes as shown in Table 4 and Figure 4.

Table 4. Timing changes in the number of microblogs released by different types of network users

<table>
<thead>
<tr>
<th>Internet users</th>
<th>Time(h)</th>
<th>Number of releases</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teacher</td>
<td>1.5</td>
<td>893</td>
</tr>
<tr>
<td>Student</td>
<td>2.8</td>
<td>781</td>
</tr>
<tr>
<td>Social masses</td>
<td>2.6</td>
<td>683</td>
</tr>
</tbody>
</table>
In this paper, the network public opinion is taken as the research object, and several event-related microblog data are statistically analyzed. The number of microblogs and the number of users participating in each evolution stage are summarized. The statistical results are shown in Table 5 and Figure 5.

### Table 5. Statistics on the release of microblog in various evolution stages of online public opinion

<table>
<thead>
<tr>
<th>Evolutionary stage</th>
<th>Number of microblogs</th>
<th>Number of participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Starting period</td>
<td>24</td>
<td>24</td>
</tr>
<tr>
<td>Outbreak period</td>
<td>843</td>
<td>1530</td>
</tr>
<tr>
<td>Fermentation period</td>
<td>967</td>
<td>1894</td>
</tr>
</tbody>
</table>

Internet public opinion is interactive and immediacy. Compared with the one-way information transmission channel of traditional media, the network is a two-way interactive information dissemination. The system provides time-based and space-based public opinion monitoring services. The system monitors the public opinion information by setting daily, weekly and monthly intervals. We believe that the monitoring of agricultural product quality and safety network public opinion should become the norm, and special public opinion monitoring and analysis work institutions or positions must be set up to establish a sound and efficient system and mechanism guarantee. At present, the research on the development of semantic analysis mainly focuses on statistical segmentation. Among them, there is a representative minimum matching method, the principle is to find the matching object with the smallest error. For micro-blog text data, not only Chinese word segmentation, but also repeated cleaning of text data, deleting the junk data that has no effect on text mining in micro-blog text. Public opinions on common social issues take on a radiating form. This diversity and decentralization can be seen as the diversity of public opinions and attitudes towards a problem, as well as the diversity of interests, needs and values. Aiming at the hot spot information of network public opinion, the system sets the threshold in advance. When the hot spot public opinion information reaches the pre-set threshold, the system should warn by some way. Equipped with relevant professional and technical personnel, professional
expert consultation organizations for public opinion analysis and judgment are established, and timely monitoring, collection, analysis and judgment of public opinion information on agricultural product quality and safety are carried out.

3. Result Analysis and Discussion

The public opinion service module serves users with the results of public opinion analysis. Its main function is to visualize the system's hot spot detection and tracking, sensitivity monitoring, text orientation analysis, trend analysis and so on to users on the basis of public opinion analysis module. Network communication has high efficiency, it can disseminate information all day and release it in real time. The public can discuss topics of interest at any time, which increases the impact of public events. Before analyzing the emotional tendency and evolution of the collected network public opinion data, the collected data should be preliminarily processed, that is to say, data should be de-duplicated, de-emptied and de-advertised. The subject of requirement analysis is user, which forms standard and structured requirement analysis report by scattered and irregular requirement of user. It is necessary to fully mobilize the initiative and enthusiasm of all levels and departments to make the early warning work deep into all aspects of production, processing, storage, transportation, sales and consumption of agricultural products. The function implemented by the public opinion management module is management, which manages and controls each module. It mainly includes functions such as account management, authority allocation, classification management, dictionary management, and system parameter configuration management. It is the role of this carrier that provides an initial entry point for the explicitness of the public's implicit emotions. Sometimes, a text containing multiple positive sentiment words may express a strong negative emotion, while a text containing multiple negative emotion words may express a strong positive emotion.

The statistical software is used to analyze the basic statistical characteristics of the emotional polarity of microblog. In the process of public opinion transmission, due to the strong herd mentality of netizens, it is easy to generate cluster effect in the network, which leads to extreme fluctuations in network public opinion information. The results are shown in Table 6 and Figure 6.

| Table 6. Descriptive statistical characteristics of emotional polarity |
|-------------------------|----------|---------------|
| Variable                | Mean     | Standard deviation |
| Emotional polarity      | 4.35     | 10.44          |
| Minimum value           | 4.21     | 9.15           |

![Graph showing the relationship between mean index and standard deviation index](image)

**Figure 6.** Descriptive statistical characteristics of emotional polarity

Statistical analysis was conducted on the emotional polarity intensity and emotional type of each stage of network public opinion evolution. The results are shown in Table 7 and Figure 7. It can be seen that the user's emotional polarity is positive in each evolution stage, and the number of positive microblogs in each stage is more than the number of negative microblogs. Among them, the number of microblog is small in the beginning period, and the number of microblog is more.

| Table 7. Emotional polarity intensity and type statistics |
|---------------------------------------------|---------------|-----------------|
| Evolutionary stage                         | Forward microblog number | Negative microblog number |
| Starting period                            | 15             | 9               |
| Outbreak period                            | 877            | 1542            |
| Fermentation period                        | 1033           | 2539            |
In the text, if the two adjacent words always appear together or together, the greater the probability that the two words will co-occur in the vicinity, we can say that these two words constitute a more likely the word is. We can use the known two words E2 and E3, their mutual information model is as in formula (1), pp.

\[ E_2 = E_3 = \frac{E_m}{1 - \sqrt{V_f (1 - E_m / E_f^2)}} \]  \hspace{1cm} (1)

The number of sentences in this S is calculated by the word frequency. Let the weight value of the sentiment word k relative to the sentence E be m, then the word frequency can be obtained by calculating the formula (2), pp.

\[ S_N(k) = \frac{\Delta N / N_i}{|\Delta k|/(k_{\text{max}} - k_{\text{min}})} \]  \hspace{1cm} (2)

The value of S in the upper form is positively correlated with the length of the article, so the weight of emotional words in the long text is often greater than that of sentences. In order to avoid this error, we can use the length of the text to normalize the processing. See the following formula:

\[ k = \sum S_N(k_i) \]  \hspace{1cm} (3)

After normalization, formula (3) is further optimized in order to reduce the impact of large word frequency span on computer. See formula (4).

\[ S_i = \frac{\text{cov}(y, x_i)}{\sigma_x \sigma_y} \]  \hspace{1cm} (4)

Markov logical network is a first-order logical knowledge base, each code has a weight. This first-order logical knowledge base can be regarded as the template of Markov logical network. From the point of view of first-order logic, Markov logic network provides a reasonable way to deal with uncertainty, defects and even contradictions in knowledge base, thus reducing the vulnerability of knowledge base. Given a single constant set, a closed Markov logic network can be generated (Figure 8).

**Figure 7.** Emotional polarity intensity and type statistics

**Figure 8.** Closed Markov logic network
Markov logic network learning includes parameter learning and structure learning. Parameter learning includes generating parameter learning and discriminant parameter learning, and their corresponding formulas and approximation algorithms. Structural learning also includes top-down structural learning and bottom-up structural learning. Figure 9 shows the overall structure of the network opinion leader identification system based on Markov logical network.

![Diagram](image_url)

**Figure 9.** The overall structure of network public opinion leader recognition system based on Markov logic network

The main responsibility of the public opinion supervision and management system is to analyze and supervise the network public opinion information in real time, and present the analysis results to the users in a user-accepted manner. It is a comprehensive, accurate and objective system guarantee to ensure that public opinion information is also a legal and regulatory authorization and code of conduct for agricultural product quality and safety public opinion early warning. Maintainability is a process of designing a system. It should be considered to be able to adapt to subsequent users to propose new changes in demand with minimal cost. That is, when the demand changes or the technology changes, the system adds the required functions through the interface, and does not need to re-design the system. To make the public opinion information appearing at different times continuous, and provide a systematic, comparative and analytic essence information after optimization and combination. Different sentence patterns can reflect users' different emotions, such as rhetorical questions and interrogative sentences, which can reflect users' feelings of rhetorical questions or questions about events, exclamatory sentences can enhance users' emotional inclination, and hypothetical sentences can weaken users' emotional inclination. The design of the system also needs to reduce the maintenance cost of users, making maintenance simple and convenient. The main content of the network public opinion supervision and management system is the collection, analysis, detection and emotional orientation judgment of the network public opinion. The early warning level of public opinion on food and agricultural product quality and safety network should be formulated by taking into account the factors affecting its occurrence and development.

By analyzing the time series changes of the number of microblog releases and the average polarity intensity of microblog in the digestion and reflection periods, the results are shown in Table 8 and Figure 10 below. It can be found that the number of microblog releases in this phase is decreasing, and the total number of microblog releases is less.

<table>
<thead>
<tr>
<th>Evolutionary stage</th>
<th>Time(h)</th>
<th>Microblog release number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dissolution period</td>
<td>3.6</td>
<td>800</td>
</tr>
<tr>
<td>Reflection period</td>
<td>2.5</td>
<td>663</td>
</tr>
</tbody>
</table>

Calculate the emotional value of each sentence $w$. The emotional value of the text $u$ can be determined by the sentiment value of the sentence. The expression is as follows:

$$\alpha_{ci} = \delta_{ci} + \tan^{-1}\left( \frac{w_{ci}}{u_{ci}} \right)$$  \hspace{1cm} (5)

In this paper, all verbs and adjectives output by the Chinese lexical analysis system are used as emotional words. Through the algorithm given below, we can calculate the emotional value of the emotional word $R$, as shown in the following form:

$$\alpha = \sqrt{\gamma RT}$$  \hspace{1cm} (6)
In order to make the emotional score more accurate, the formula (7) is given to calculate the emotional words with degree adverbs.

\[ I \frac{d \omega}{dt} = M_A + M_f \]  

(7)

Suppose \( M \) is the sentiment value of each sentence in the text after considering the sentence pattern. According to different sentence patterns, the sentence emotion value after considering the sentence pattern can be summarized. The expression is as follows:

\[ M_A = \frac{1}{2} dS, R, N_c \]  

(8)

Through \( M \), we can further calculate the emotional value \( m \) of the text. See formula (9), pp.

\[ m_{ij} = \frac{1}{r} \sum_{r=1}^{v} (v_{ir}) \]  

(9)

Assuming there is a set of document concept classes \( d \) and a set of training documents, there is a target concept \( X \):

\[ X^{ad} = [d_1, d_2, ..., d_i, ..., d_k]^T \]  

(10)

The purpose of classification learning is to find a \( D \) which is closest to \( X \), that is, to give an evaluation function \( X \) to satisfy \( X \) and \( d \):

\[ X^{ad} = [d_1, d_2, ..., d_i, ..., d_k]^T \]  

(11)

The initial keyword set is filtered, added and adjusted under manual intervention, input into the hot word lexicon, and stored in the following record form:

\[ F = K \times (V - V_t)^2 \]  

(12)

Therefore, semantic similarity can also be expressed by the similarity of vectors. Suppose one has \( K \) document feature items, and \( F \) represents the \( t \) feature item of the corresponding position in the document, that is, the text representation:

\[ V = \sqrt{\frac{F \times V_t}{K} + \frac{F_v^2}{4 \times K^2} + V_t + \frac{F_r}{2 \times K}} \]  

(13)

A text has \( K \) feature items, and each item corresponds to a weight \( I \) of the text. The value of the weight can be expressed by a function, which represents the degree of relationship between the corresponding feature items and the text. Text can be represented as a normalized feature vector through a text model:

\[ \beta_{xy} = \frac{I_{xy}}{\sum_{z=1}^{g-1} I_{xz}} \]  

(14)

The overall design is the core part of the system design, which must focus on the current and future development trend of information technology. On the basis of fully understanding the system requirements, reasonable planning of the system's structure and defining the interface between each module can facilitate the increase of new functions. Public opinion analysis is helpful for decision makers to make correct decisions.
Only when policymakers master the public opinion can they enhance the pertinence and effectiveness of their work and make correct decisions. Its forwarding function enables users' emotions to be quickly spread and spread in a very short period of time, and forms a wide and profound influence. The basic function of public opinion planning is to first determine the subject of supervision on the basis of determining the scope of supervision. According to the theme, the purposeful search can be carried out by means of keywords. The network public opinion warning must simultaneously examine the public opinion media, the mode of communication, the speed of communication, and the stage of communication. The influence of the media (or network opinion leaders) is greater. The system should be able to remain stable and provide a variety of inspection and processing tools with strong fault tolerance. The public opinion monitoring system must also be able to access real-time information and must be able to operate safely and reliably around the clock. The public opinion analysis focuses on the hotspots and difficulties that the people care about, timely reflects the public opinion dynamics, analyzes the public opinion trends in depth, scientifically predicts the future development, and proposes effective countermeasures and suggestions, which provides an important basis for promoting reasonable decision-making.

Since there are many emotional words contained in the event, it is difficult to display all the emotional words in a visual way, but it is necessary to display the representative emotional words. Set the object of supervision and further determine the scope of the search, set it on the website or forum related to the field, which can improve the efficiency of public opinion generation. In view of the different nature of agricultural products quality and safety, we will formulate more detailed judgment standards and early warning plans. When the public opinion reaches a certain level of early warning indicators, we will immediately start the corresponding plan and implement countermeasures. The technologies involved in building a system must use the latest and more mature technologies and architectures. The design process must abide by the standards and norms of software design, and the development tool version must be stable and widely used, so as to ensure that the built system will not be eliminated in the future and that the system is advanced. On the basis of analysis and research, this paper evaluates and predicts the related problems and puts forward some suggestions. The monitoring of network public opinion includes the collection and analysis of network public opinion. The high-frequency emotional words of users in social networks reflect the dominant emotional tone of network public opinion events, especially those close to the visual image center, and reflect the overall emotional tone of network public opinion events. Therefore, through the application of the above technology, we can get the accurate classification of public opinion, and timely early warning, real-time monitoring of public opinion hotspots; and automatic identification of network hotspots, timely guidance; at the same time, generate dynamic trends in public opinion development, and generate public opinion data briefings.

4. Conclusions

With the popularity of the Internet in global, the Internet population coverage is getting higher and higher, and the Internet has become an indispensable component of people's life, work and learning. A comprehensive dictionary of emotional classification is constructed, and an analysis model of emotional tendency is established. Users' emotions in the event are mined and visualized. Users' emotional types and frequency of emotional words are judged and counted, and empirical analysis is used. This paper expounds the current situation and shortcomings of public opinion monitoring in the field of agriculture, and puts forward the necessity of establishing an agricultural network public opinion monitoring system based on the current domestic and foreign research situation in the field of public opinion monitoring. And in-depth analysis of its design and development philosophy, so that it can be used for the design of this system. On this basis, the system is designed and detailed, and the agricultural network public opinion monitoring system is elaborated. Then the overall design of the system is carried out, which is mainly reflected in the system design principles and the overall framework. User participation is the highest. Netizens' attitudes, opinions, emotions and other information can provide sufficient data foundation for online public opinion analysis and monitoring. At the same time, the emotional tendency of the outbreak period largely defines the overall emotional evolution of online public opinion events, trend. An information communication mechanism should be established to maintain close communication and communication with the relevant management departments, and to timely modify, adjust and improve the plan to adapt to the development of the public opinion situation.

References


