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APPLICATION OF INTELLIGENT ALGORITHMS AND BIG DATA ANALYSIS IN FILM AND TELEVISION CREATION

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Abstract. With the rapid development of social media, people can access a large amount of data in a short period of time, and big data technology has emerged. With the vigorous development of cloud computing and big data, the method of mining audience interests through a large amount of data to guide film and television creation has attracted more and more attention from experts and scholars. In order to understand the current situation of film and television drama creation in China and provide suggestions for the shortcomings in the industry, this article mainly analyzes the application of intelligent algorithms for traffic prediction models and big data analysis in film and television creation. This intelligent algorithm can predict the potential audience of movies or TV dramas, helping producers and investors make decisions. This system utilizes artificial intelligence technology to select suitable actors for characters based on their matching degree and past work performance. This article applies intelligent algorithms to big data processing to improve the accuracy of data processing. This article explores the application of intelligent algorithms and big data analysis in film and television creation. Using machine learning algorithms to predict the potential audience of a movie or TV series based on historical data, providing decision-making basis for investors and producers. This system utilizes AI technology to select suitable actors for characters based on their matching degree with characters and past work performance, improving the scientific and accurate selection of roles. The application of these technologies helps to improve production efficiency and quality, reduce costs and risks, and inject new impetus into the sustainable development of the film and television industry.

Key words: Intelligent Algorithms; Big Data; Analysis; Film and TV Creation

1. Introduction. Big data, or huge amount of data, refers to the amount of data involved that is too large to be captured, managed, processed and sorted into information that can help enterprises make more positive business decisions in a reasonable time through traditional software tools [1]. It is a feature of The Times and a synonym for openness, integration and development [2]. The concept of "big data" is widely recognized mainly because of the political TV series "House of Cards" produced by Netflix in the United States in 2013. The popularity of the series has made people realize the value of massive user data analysis in film and television creation [3]. Film and television industry itself is the industry of producing and disseminating information. In the era of big data, film and television plays have great potential: more abundant information sources, better grasp the value and role of information through quantitative analysis of massive data [4]; more accurate understanding of the needs of audiences, and customization of the content and function of works based on the needs of audiences. Communication strategy to achieve accurate communication [5]. Big data is smart enough to make massive data worthwhile—content extraction, sharing, and interaction, so that they can better serve users and tap the value of commercial innovation [6]. In the media industry, big data analysis is deepening into the creative part of the film. This will have a profound impact on the choice of film and television from the choice of script, to the choice of directors and actors, to shooting and post-production and even marketing [7].Big data and intelligent algorithms have become the two driving forces of modern society. Especially in the film and television industry, the combination of these two technologies is revolutionizing the modes of creation, production, marketing, and playback. Big data has not only changed the way the film and television industry operates, but also brought unprecedented enormous value to this industry. Machine learning algorithms can be used to predict the potential audience of a movie or TV series based on historical data, providing decision-making basis for investors and producers. This system utilizes AI technology to select suitable actors for characters based on their matching degree with characters and past work performance. This largely solves the drawbacks of relying on perception and experience to select angles in the past, and improves the scientificity and accuracy of angle selection. Through intelligent algorithms, movies can be automatically

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edited based on audience preferences and market expectations derived from big data analysis, optimizing their rhythm and structure, and enhancing their attractiveness.

Film and television big data refers to the mass data information generated by the network as the information platform in the creation, dissemination and acceptance of film and television works, and the general name of the system for storing, processing and displaying such information [8]. It mainly includes three aspects of user big data, content big data, and channel big data [9]. User big data refers to information about viewers who watch movies and television works online or offline [10]. By collecting and deeply analyzing the user data and mining its internal relationship, we can have a deeper insight into the personal and group information related to the user's experience of watching movies and TV, including the preferences of watching movies, etc. [11]. Content big data refers to the relevant information of film and television works stored in digital form [12]. Channel, as an important bridge connecting the creative works of film and television and the acceptance of users of film and television works, has always occupied an important position in the market [13]. In a certain sense, we should prevent and handle the network ideological risk of the youth. Ideological security is a necessary condition for China's overall national security and an important guarantee for the great rejuvenation of the Chinese nation. With the rise of the Internet, the integration of media has broken down the barriers between traditional media, network and Taiwan linkage, multi-screen interaction, greatly enriched the channels of film and television communication. The integration of channels brings about a great increase in data volume and continuous innovation in the form of film and television programs [14]. Big data may bring profound influence and great value to the film and television industry, which has been widely recognized by media workers.

Through the high-tech industry, big data can be comprehensively collected, mined, sorted out, summarized and refined, so as to achieve unprecedented creative results in the field of film and television creation [15]. As early as 2004, the United Kingdom had established a data analysis company called Epagogix. Through the semantic analysis of the screenplay, he built a model to evaluate the future box office. In 2013, some scholars in the film and television industry have recognized the importance of data analysis for a long time. But when the data grows to a certain extent, it is difficult for people to understand the mystery contained in the data by manual or traditional means of data analysis. In this case, new receipts must be provided. Analytical method [16]. In 2015, some scholars pointed out that data has penetrated into all business functions of the film industry at this stage. In the process of film production, information provided by big data is needed to guide all links, such as conception, production, marketing and so on. People's use of massive data will lead to a new wave of growth in the film industry [17]. In 2015, some scholars pointed out that big data analysis of film and television operation has three most important characteristics. Secondly, there are many types of data, which need to be sorted after data filtering, so that the context of data can be clearer. The third is that the speed of analysis must be fast. Now film investors all require to produce high-quality films in the fastest time. If the speed of data analysis is too slow, obviously better and more beneficial benefits cannot be obtained [18]. In 2017, some scholars realized the layered mixed interest model based on neural network and applied the model to the big data analysis of movies. The system input the original data of user behavior into the neural network and output the movies that users may be most interested in after continuous learning and training [19].

2. Materials and Methods. Big data is the core of prediction, data is not to solve the problem of "why", but to focus on and solve the "what" and "to do" problem, nowadays, the rapid development of the film industry has aroused the concern of the society from all walks of life people and big data using its own characteristics, has a profound internal [20] deep into the film and television industry. In this era of "we media", everyone has the right to speak, and everyone can change into the initiator of information, especially for Internet marketing. The speed of information transmission on the Internet is extremely fast, and the loss of the right to start is bound to lose a lot of attention and weaken attention. In the era of big data, we can get the focus of public attention by sorting out and analyzing big data. Big data is a data accumulation of network user behavior in the Internet era [21]. With the rapid development of new social media, online ticket sales and review websites, China's film and television industry has accumulated a lot of effective and useful data. For example, the user search index such as baidu index, micro blog index, micro index; Video websites are similar to iQIYI, youku and tencent video. Film review websites are similar to douban and mtime. New movie ticket purchasing and movie review websites such as maoyan and ticketing have accumulated a large number of users and provided a lot of usable data for the development of film and television industry. Visual data such as playback volume and

geographical distribution can be obtained on video websites; daily box office can be obtained on Cat's Eye and Time Network; and a large number of film reviews can be obtained in comparison on Douban and other websites. At present, the planning of film and television content often relies on the subjective industry experience and professional sensitivity of practitioners. There are often problems such as inadequate grasp of current hot spots and inaccurate target audience. However, iQiyi Company makes full use of the big data analysis algorithm. It launched the "Green Mirror" video editing function, which is obtained by filtering, sorting and analyzing the massive user viewing information collected in the iQiyi PPS dual-brand back-end database. The user watches the video, especially the behavior habits when watching the video for a long time, and derives the user's viewing behavior data from it.

"Big data" shows its unique advantages in all walks of life. People are using it more and more. Big data also has a great impact on the film and television industry. Big data is analyzed rapidly with massive data scale, rapid data flow and various data types, which not only saves market costs, but also ensures the accuracy of data to the maximum extent, meets the different needs of different audiences, creates films and TV works with high commercial value, and achieves win-win situation [22]. Through big data analysis, it can also be concluded that the viewing habits of audiences have changed from big dramas and formal dramas to live dramas and idol dramas. As a result, the concept of screenwriters of films and TV plays has gradually changed and the theme of their works has also changed. In the 1990s, American blockbusters entered the Chinese market. With their gorgeous pictures and strong visual impact, people once again went to the cinema to watch films. Hollywood-style film and television forms also have a great impact on the literary creation of film and television creators. By using big data analysis, we can know which form of film and television is more acceptable to the audience [23]. In the era of big data in the Internet, big data has played a positive role in film and television creation, providing a way for the film and television creation industry to use information efficiently. It also created a batch of film and television works with rough content and single form, which seriously affected the art of film and television works. Value has had a huge negative impact on film and television creation. Therefore, it is more meaningful to use intelligent algorithms to screen TV dramas.

Structured data is relatively easy to draw analysis conclusions through mathematical tools, while a large number of unstructured data is the key and difficult point of big data analysis. Unstructured data refers to data that cannot be stored and read in a unified structure and format, typically including text, images, audio, video, and other types. Unstructured data has diversity and complexity, making it relatively difficult to process and analyze these data. Due to the diversity and complexity of unstructured data, its processing and analysis require the use of various technologies and tools, such as natural language processing, image processing, audio processing, video processing, as well as algorithms such as machine learning and deep learning. By analyzing and mining unstructured data, more information and knowledge can be obtained, providing more valuable support for decision-making. The emergence of data mining can solve the key problems of how to discover the important information hidden behind the data and analyze it at a higher level so as to make better use of the data. Data mining is a computational process to discover the laws of large data, and it is an interdisciplinary sub-field of computer science. The overall goal of data mining is to extract information from data sets and convert it into understandable structures for further use. Big data provides quantifiable indicators for film and television, and it is no longer a simple experience or feedback from traditional channels as in the past.

This article uses machine learning algorithms to predict the potential audience of a movie or TV series based on historical data, providing decision-making basis for investors and producers. This system utilizes AI technology to select suitable actors for characters based on their matching degree with characters and past work performance, improving the scientific and accurate selection of roles. Based on big data analysis of audience preferences and market expectations, automatically edit movies, optimize their rhythm and structure, and enhance their attractiveness. Suppose there are W search users and there are d big data retrieval resources. If the number of big data resources required by the t-th search user is dt, then the amount of big data resources that the user needs to retrieve is Wj, then the following formula can be established.

$$W_j = d_j / \sum_{j=1}^{m} d_j \tag{2.1}$$

Then, the film and television works are coded to obtain the distribution of retrieval purposes on large data

resources. A sequence of retrieval purposes numbered by large data retrieval resources can be generated:

$$A^{\mathsf{T}} = \begin{bmatrix} 1 & 1 & \dots & 1 \\ 1 & 1 & \dots & 1 \\ \dots & \dots & \dots & \dots \\ 1 & 1 & \dots & 1 \\ y_1 & y_2 & \dots & y_p \\ y_1 & y_2 & \dots & y_p \\ \dots & \dots & \dots & \dots \\ y_1 & y_2 & \dots & y_p \\ x_1 & x_2 & \dots & x_p \\ x_1 & x_2 & \dots & x_p \\ \dots & \dots & \dots & \dots \\ x_1 & x_2 & \dots & x_p \end{bmatrix} \tag{2.2}$$

$$B^{\mathsf{T}} = \begin{bmatrix} d_1^{(1,j)} & d_2^{(1,j)} & \dots & d_p^{(1,j)} \\ d_1^{(2,j)} & d_2^{(2,j)} & \dots & d_p^{(2,j)} \\ \dots & \dots & \dots & \dots \\ d_1^{(n,j)} & d_2^{(n,j)} & \dots & d_p^{(n,j)} \end{bmatrix} \tag{2.3}$$

The complexity of decoding sequences can affect processing and storage requirements. This article needs to consider some indicators, such as the complexity of decoding algorithms, data compression rate, etc. In the actual process of big data retrieval, parallel processing and optimization techniques are usually used to improve performance. For example, using MapReduce or Spark's parallel processing framework can accelerate processing speed. According to the decoded sequence and the ETC matrix, the time consumed for large data retrieval on different large data resources is calculated. The ETC matrix represents the time required for the operation of the first retrieval purpose on the m large data retrieval resources. The time required to complete all the retrieval tasks can be calculated by the following formula:

$$P = \frac{\sigma_i^2}{\Sigma_{i=1}^m \sigma_i^2} \tag{2.4}$$

The decoded sequence and ETC matrix can be used to calculate the time required to complete the h-th retrieval purpose. The addition formula is shown as follows:

$$P_h = \frac{\Sigma_{i=1}^h \sigma_i^2}{\Sigma_{i=1}^m \sigma_i^2} \tag{2.5}$$

The average time taken to implement user retrieval can be calculated using the following formula:

$$t_{max} = \frac{1}{\lambda} In(\frac{1}{i_0} - 1) \tag{2.6}$$

The purpose of big data search is to retrieve useful information in a short time. At the same time, the average time required to complete the search task should also be considered. Therefore, two fitness functions are defined:

$$S_j = \Sigma_{i=1}^N W_{ij} X_i \tag{2.7}$$

$$P_\lambda = \frac{(M_p \bullet Q_{cal} + A_p)}{Sin(\theta_{SE})} \tag{2.8}$$

Table 2.1: Big Data Search Engine Results

Parameter	Traditional method search	Intelligent algorithm search
Search time/ms	94	35
Search accuracy%	61%	89%

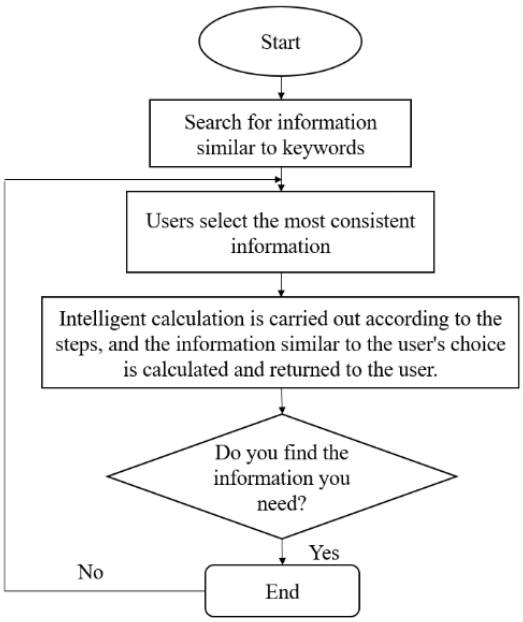

Fig. 2.1: Search Engine Search Process

In the formula, Xi denotes the jth largest data resource in the ith individual, and wijxi denotes the time required for the ith individual to complete the search task. The results of valid data can be roughly shown in Table 2.1.

From Table 2.1, we can see that using intelligent algorithm search can improve the efficiency of large data search, less time-consuming than traditional methods of large data search, and higher accuracy. The search engine with intelligent algorithm can enable users to actively participate in the search process, and the search results are the closest to the user needs, so as to ensure the accuracy and satisfaction of the search results. Its working flow chart is shown in figure 2.1. Intelligent algorithm can effectively improve the search efficiency of users. The corresponding process is shown as follows:

Step 1: According to the user's search needs, the resources related to the keywords entered by the user are obtained from the large database and displayed to the user as an initialization population.

Step 2: Search users according to their own needs, from the information obtained to select the most useful.

Step 3: The big data retrieval system takes the information with the highest evaluation value as the best, and uses the intelligent algorithm to perform the calculation. Through the crossover and mutation operation, the information close to the user's demand can be obtained, and the information is fed back to the user.

Step 4: Terminate the algorithm when the information fed back to the user meets the requirements; otherwise, return to step 2.

3. Result Analysis and Discussion. A large amount of data is generated on various websites, social media platforms, forums, and other internet platforms, which can be used for big data analysis. For example,

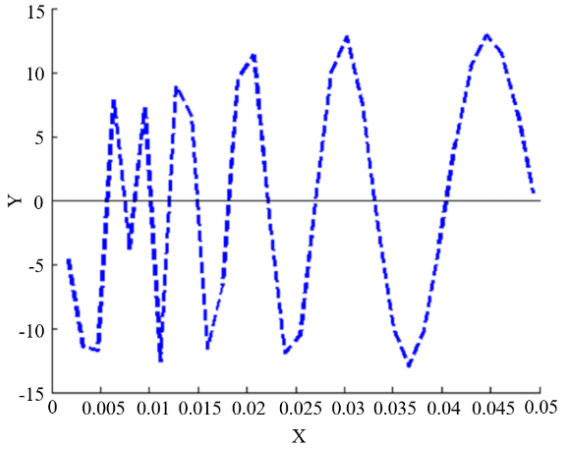

Fig. 3.1: Intelligent Algorithm Optimization Problem

search engines such as Google and Baidu can collect a large amount of user search data, while e-commerce platforms such as Amazon and Taobao can collect user shopping data. In the era of big data, the idea that "everything can be quantified" has begun to penetrate the hearts of the people. Big data provides the basis for quantitative analysis of film and television. Successful film and television works have some repetitive and referable features in terms of material selection, content, and form. Grasping these characteristics can provide guidance and support for the creation of film and television works [24]. We can also use the data to analyze the box office of the film and sort out the factors affecting the box office accurately.

Intelligent algorithm is a search algorithm. Search algorithm is essentially a process of finding the best advantage in a high dimensional space. In figure 3.1, for example, to find the maximum value of this random curve, we need to check the values of different abscissa as much as possible. However, there are countless points in the continuous curve. It is impossible to test each point, so it can only be tested with a certain precision. This is what intelligent algorithms mean: find a suitable path and let the algorithm converge to the target point as quickly as possible.

In films and TV plays, the whole group can be decomposed into a series of independent and interconnected action groups. In the planning stage, by using big data analysis technology, in-depth exploration and analysis of market trends, audience preferences, and topic popularity can be conducted, providing producers with more accurate decision-making basis. At the same time, intelligent algorithms can also provide inspiration and direction for script creation based on these data, making the story more in line with market demand and audience taste. Secondly, during the casting stage, through the application of intelligent algorithms such as the "Yihui" intelligent casting system, suitable actors can be selected for the character based on their matching degree with the character and past performance. This not only improves the scientific and accurate selection of roles, but also provides guarantees for the integration between actors and characters. In addition, intelligent algorithms and big data analysis can also play an important role in the filming and production stages. For example, using AI technology for automated editing and special effects production can improve production efficiency and quality. Meanwhile, through big data analysis technology, real-time monitoring and analysis of the environment, shooting equipment, shooting effects, etc. at the shooting site can be carried out, providing more accurate data support and guidance for shooting. The interaction between them is determined by the potential energy function which varies with the group. Assuming that each interacting group is independent and does not receive the influence of other groups, its expression is as follows:

$$I(X,Y) = \Sigma_{y\in Y}\Sigma_{x\in X} p(x,y) log(\frac{p(x,y)}{p_1(x)p_2(y)}) \tag{3.1}$$

where p is the interaction between the film and television groups. The form of interaction between the simplified

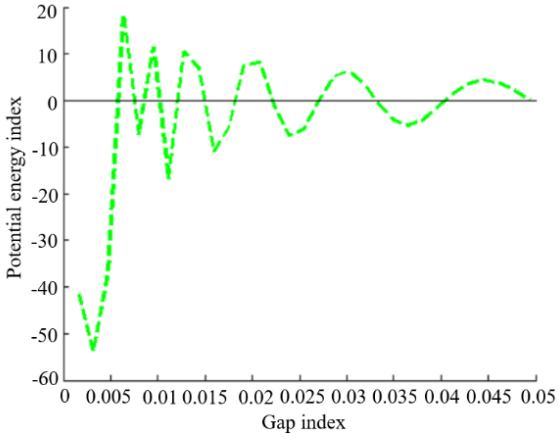

Fig. 3.2: Potential Energy Curve

film and television groups can be expressed by the following formula:

$$P_R = \frac{P(t+1) - P(t)}{P_N} \tag{3.2}$$

where P represents the potential energy between two groups, t is the difference between them, R and N are two empirical parameters. The following graph can be obtained from equation 9, as shown in figure 3.2.

As shown in the figure 3.2, when P is greater than 0, it means that the two are mutually exclusive. When they are less than 0, they attract each other. When the difference between the two is small, they are mutually exclusive. As the gap increases, the repulsive force gradually decreases. The above figure can better describe the overall characteristics of the interaction between film and television groups, but the detailed description of the interaction between group inspection is not enough. Therefore, the following formula is used to describe the interaction in detail:

$$P_i = \frac{f_i}{\Sigma_{i=1}^{N} f_i} \tag{3.3}$$

Among them, P represents the potential energy between two groups, f represents the gap between two groups, and N, I are two empirical parameters. The curve can be shown in Figure 3.3.

As shown in the figure 3.3, the force between the two can not be accurately described at a very small gap, but it is closer to the reality. In general, intelligent algorithms will adopt some forms of root mean square error for moderate evaluation. The fitness function used in this paper is shown as follows:

$$dF_r = \tau b dx \tag{3.4}$$

$$dF_r = 2b \int_0^L \tau dx \tag{3.5}$$

where b is the value to be formulated, x is the different output of each value to be fitted when the input values are different, and d is the number of values to be fitted. The fitness optimized by the intelligent algorithm varies with the number of iterations as shown in figure. The fitness value of the intelligent algorithm is compared with that of the traditional method as shown in Table 3.1, and the search range is compared with that of the traditional method as shown in figure 3.4. From the chart, we can see that in the film and television industry, the optimization effect of intelligent algorithm is better.

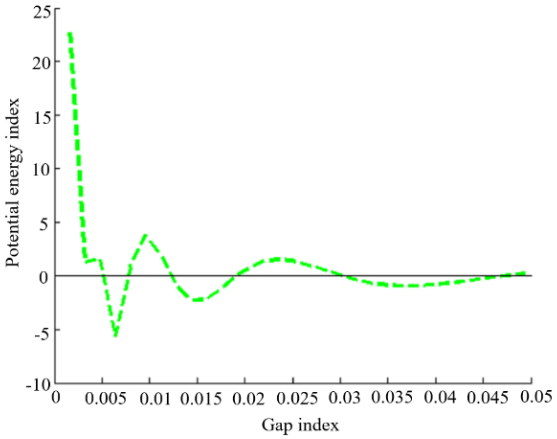

Fig. 3.3: Potential Energy Curve

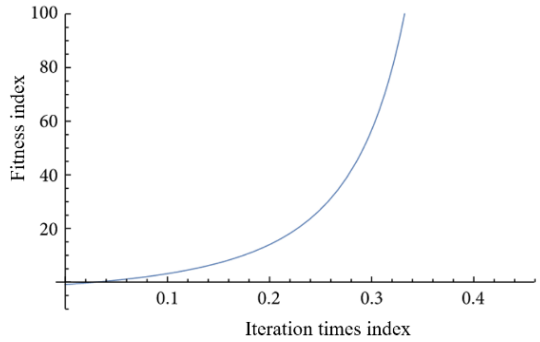

Fig. 3.4: Intelligent Algorithm Optimization Renderings

It can be seen from Table 3.2 that the potential energy function parameters optimized by the intelligent algorithm are closer to the actual one; and the search range is broader and more effective. This paper analyzes intelligent algorithm search and traditional method search through computer big data. The results can be represented by Tables 3.3 and 3.4, Figures 3.5 and Figure 3.6.

In Figure 3.3, the control group method may refer to a design of a controlled experiment used to compare the performance of intelligent algorithms and big data analysis methods with traditional methods. The control group method is an experimental design strategy that randomly divides subjects into two groups, one group accepting new methods such as intelligent algorithms and big data analysis, and the other group accepting traditional methods to evaluate the superiority of the new method. As can be seen from the chart, the search execution time of intelligent algorithm in large data environment is less than that of traditional method, and the effect is better.

In the actual creation process of films and TV plays, cloud storage and cloud computing are also needed to analyze the data to guide the selection of themes, scripts, actors, directors and later marketing. The data model is used to calculate multiple schemes, and then the optimization is selected to ensure the combination's efficiency and economy [25]. Before the creation of film and television dramas, relevant masters can use the big data technology to collect, deepen and analyze the data on the subject direction, delivery platform, target audience and other factors, and then draw whether the subject matter is attractive enough, whether the platform traffic is Reasonable and critical issues such as the main online behavior habits, and based on this, conduct correct

Table 3.1: Comparison of Film and Television Parameters

	Intelligent algorithm	Traditional method
First principles	3.7216	5.0231

Table 3.2: Scope of Film and Television Parameters Search

	Intelligent algorithm	Traditional method
Minimum value	0.1	1
Maximum value	100.1	85.9

market evaluation and provide decision support for the follow-up film and television drama creation practice. At the same time, before the official start of the shoot, the use of big data technology to explore the market positioning, distribution channels, post-production and other data mining and analysis of film and television drama, can effectively improve the market visibility and competitiveness of film and television drama under the premise of ensuring the quality of shooting. In the filming team building, using big data technology, the ability, experience, achievement and influence of team members such as scheduled directors, execution, late stage and actors are thoroughly evaluated, and then the team members are timely adjusted according to the objective evaluation results, so as to realize the optimization of the structure of creative personnel. In the preparatory period of film and television drama creation, the use of big data technology to accurately calculate the total number of shooting, different actors' parts, etc., so as to ensure the scientificity of the actors' shooting schedule, enable actors to better plan the shooting time, and ensure the high efficiency of film and television drama creation. At the same time, the application of big data technology in the field of preliminary preparation can comprehensively reduce the shooting cost, shorten the creation cycle in the scientific shooting plan, and maximize the investment and benefit ratio of film and television drama creation. To sum up, big data analysis plays a role as a platform for film and television production and investment advice. To some extent, it can provide a more rational expectation of the market and calculate the possible rate of return on investment with accurate quantitative figures.

By collecting and analyzing audience evaluations and feedback, the quality and popularity of works can be quantified. For example, indicators such as average rating and positive feedback can be used to measure the reputation of a work. For TV or online videos, ratings or views are commonly used indicators to measure the popularity of a work. High viewership or viewing frequency means that more viewers are interested in the work. The era of big data brings not only opportunities but also great challenges to film and television creation. We need to look at the problem from a scientific and rational point of view. In the creation of movies and TV plays, using big data technology to understand the data related to the audience, although it has the advantages of intellectualization and objectivity, it also has the drawbacks of inadequate optimization. China's Weibo, Weixin, Baidu, Taobao and other websites have developed rapidly, and some video websites have also developed rapidly. However, few of these websites can be used to analyze the big data of film and television creation. Although the big data contains a large amount of data, the actual usable data is far from meeting this standard. Not only do we need enough data storage space, but we also need sophisticated techniques to analyze, process, and reorganize data. At the same time, in the current situation of big data film and television creation, its data lacks authenticity and there is a lot of water. Therefore, we need to objectively analyze the content value of information. China still lacks a truly professional data analyst who specializes in big data. Data analysts not only need to fully understand the data content of related fields, but also need to understand the direction of future data needs. From the perspective of big data technology industry at the present stage, all enterprises engaged in big data work are non-standard and unprofessional, and current data analysts do not have enough data analysis ability, nor have they established rigorous thinking of data analysis. In the film and television creation industry, data analysts need to develop a complete data framework. First, they need to sort out the data sources, then establish a chart or table for daily monitoring, find out the core data, communicate with film and television creators, and understand the focus of today's film and television creation. Only by fully

Table 3.3: Intelligent Algorithms Search Running Time Changes

Kernel number	1	2	4	6	8	10	12
Running time	76153	56419	34672	10294	8026	6113	5716

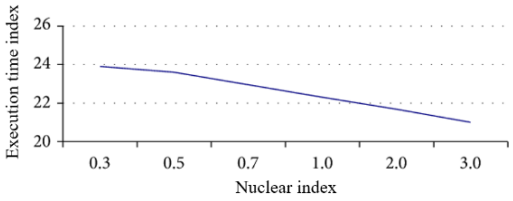

Fig. 3.5: Intelligent Algorithm Search Running Time Change

understanding the needs of the audience can scientific data analysis be carried out, so as to provide effective decision-making support.

In order to ensure the accuracy of intelligent algorithms and big data analysis, the author should establish a mechanism for evaluating data quality and accuracy. This includes evaluating the reliability of data sources, the effectiveness of data cleaning and preprocessing, and the accuracy of algorithm models. At the same time, it is also necessary to consider how to handle possible inaccurate results to avoid negative impacts on artistic creation. Faced with the opportunities and challenges of film and television drama creation in the context of big data, we must take effective measures to optimize and adjust, seize opportunities, meet challenges, and explore the path of change in film and television drama creation. First of all, we must pay attention to data sharing and optimize the data structure. Open data access interfaces to improve the sharing of data sources can effectively enhance the authenticity and accuracy of big data analysis. Secondly, we should cultivate strategic vision and increase talent reserve. In the context of the era of big data, decision-makers of film and television drama creation should have keen market insight and strong execution ability, so as to ensure the optimization and integration of resources and reach a high level of consensus at the strategic level.

4. Conclusions. With the advent of the era of big data, the research of big data processing has become a new social hot spot, and the role of big data is more precise and clear. It will play an important role in the early, middle and late stages of the creation of film and television dramas. It will also play an important role in the creation of scripts, the construction of team, the positioning of audiences and marketing. Aspects have an effective guiding function. In this paper, the problem of optimization in big data processing of film and television is studied by using intelligent algorithm. Compared with other forms of media art, film and television art in the blending zone of art and science has a natural dependence on new technology. It is in the era of digital media information that big data of film and television, as a core technology for the acquisition and application of film and television information, is bound to have a profound impact on the future creation and development of film and television, and become the fundamental of interactive experience and quantitative cognition of film and television. Through big data technology, strategic support and auxiliary operation can be provided for market insight, project incubation investment, marketing and distribution, cinema operation, so as to minimize the risk of film and television investment, improve the quality of film and television works, provide accurate positioning for film and television stars, and promote the prosperity of domestic cultural undertakings. The promotion of big data to promote the development of the film industry is also in line with the trend of the contemporary media industry. The film and television creation is more and more in line with modern advanced technology. The film and television creation gradually moves from single to plural, from closed to interactive, which is also the international trend of China's film industry. An important threshold for the development of China's film industry is an important "milestone".

Table 3.4: Traditional Methods to Search for Running Time Changes

Kernel number	1	2	4	6	8	10	12
Running time	91384	77261	53084	30021	10264	9546	7412

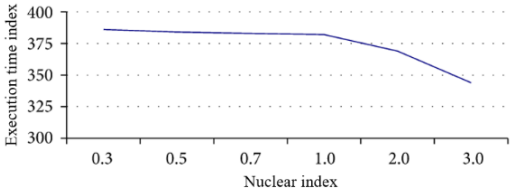

Fig. 3.6: Changes in Search Time Running of Traditional Method

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