Hindawi

*Research Article*

# Analysis on the Multimedia Information Retrieval Algorithm Based on Enterprise Correlation Financial Analysis under the Background of Big Data

**Jun Yan** [1] **and Hui Liu** [2]

[1]*School of Accounting, Wuhan College, Wuhan 430212, China*
[2]*Zhejiang Institute of Communications, Hangzhou 311100, China*

Correspondence should be addressed to Jun Yan; junyan1314666@163.com

At present, based on the background of the big data era, the operation of enterprises has a great impact, and relevance is a principle set to meet the needs of enterprise operation and management. In today's digital and network era, multimedia has become the main part of the Internet information transmission, and multidisciplinary art and science communion has promoted the development of the multimedia information retrieval. As a result, this paper examines the correlation of big data against the background of financial and multimedia information retrieval algorithms.

## 1. Introduction

With the development of society, traditional financial work has gradually entered a high-end period. With the rapid development of the Internet era, where everything can be quantified, analysed, and made intelligent, the company's development mode and business environment have changed a lot. Financial accounting as a general business language of resource allocation, its value, performance, and limits are greatly affected by electronic information technology. Using a multimedia information retrieval algorithm to analyze accounting relevance has important practical significance for the quality and relevance of financial information [1]. Firstly, this paper expounds the research trends of multimedia information retrieval, then discusses the development direction of the application of corporate financial relevance, and expounds the opportunities and challenges brought by accounting relevance to the development trend of multimedia information retrieval.

## 2. The Current Situation of Multimedia Information Retrieval Algorithms

The existing algorithms for multimedia information retrieval are facing great challenges. Taking accounting as an example, we cannot master more financial accounting terms and customer experience, evaluate the algorithm with typical, reliable, and true test sets, and basically adjust the algorithm. To put it simply, because the language gap between software and hardware and between people cannot be closed, current algorithms cannot make a big impact on correlation. Therefore, we will narrow the gap between the two and improve the efficiency of the multimedia information retrieval algorithm, including new features, new media, evaluation, and browsing summaries [2].

*2.1. New Features and Similarity.* In the context of big data, many fragmented and unstructured pieces of data information cannot be reasonably calculated, resulting in

redundant information such as short video information and image information. Therefore, the current scientific research has not only optimized the search optimization algorithm but also made progress in terms of the new characteristics and similarity limits of tone, grain, and shape. This kind of unstructured and fragmented information is applied to financial accounting information management. The similarity is one of the main aspects of image search, and the distance between points in feature space is a typical calculation method [3]. In the formula below, $D(A, B)$ is the distance between image A and image B, where AI stands for the ith feature vector in image A, and BI stands for the first feature vector in image B. The distance measurement method is shown in Figure 1.

### 2.1.1. Minkowski Distance Measure.
If image feature vectors are equally important and independent of each other, the Minkowski distance LP can be used to measure the similarity between images.

$$d(A, B) = \left( \sum_i \left( a_i - b_i^P \right)^{(1/p)} \right). \tag{1}$$

### 2.1.2. Histogram Intersection.
It can be regarded as a special form of L1 distance. The distance between two image histograms is defined as

$$d(A, B) = 1 - \frac{\sum_{i=1}^{Ni} \min\left(a_i, b_i\right)}{\min\left( \sum_{i=1}^{Ni} a_{i,} \sum_{i=1}^{Ni} b_{i,} \right)}. \tag{2}$$



FIGURE 1: Distance metric method.

### 2.1.3. Quadratic Distance.
The formula can be expressed as

$$d(A, B) = \sqrt{(A - B)C(A - B)}. \tag{3}$$

The quadratic distance considers the correlation between different colors, so the retrieval results are more consistent with human visual perception and better than the previous two methods, but the computational complexity and amount of the correlation symmetric matrix are larger [4]. The histogram types are shown in Table 1.

### 2.1.4. Mahalanobis Distance.
When the experimental data are different, the Mahalanobis distance can be used for the experiment. The expression is as follows:

$$d(A, B) = \sqrt{(A - B)E^{-1}(A - B)},$$

Reverse de rivation of Markov's formula: $d^2(A, B) = (A - B)E^{-1}(A - B)^{T},$

$$\tag{4}$$

where $E$ represents the covariance matrix of the image feature vector. If there is no relationship between each component, only the difference of each component needs to be calculated, and then the following can be obtained:

$$d(A, B) = \sum_{i=1}^{N} \left( \frac{(a - b_i)^2}{e_i} \right). \tag{5}$$

Mahalanobis distance is shown in Figure 2.

In the process of calculation, different formulas are chosen according to the experimental conditions. Since there are some errors in the actual application of this kind of algorithm and the conclusions seen by our eyes, the research on the measurement method of image similarity still has a certain difficulty coefficient [5]. Therefore, how to reduce the difference between the numerical calculation and the traditional calculation method of information search algorithm in multimedia system is one of our research problems.
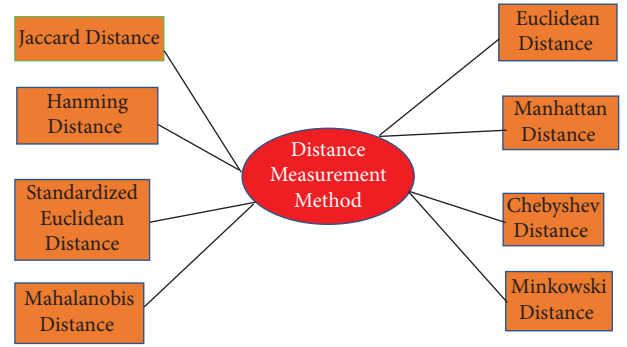
Mahalanobis distance is a distance based on sample distribution, as shown in Figure 3.

### 2.1.5. K-L Distance.
The K-L divergence is defined as

$$d(A, B) = \sum_{i=1}^{N} a_i \log \frac{a}{b_i}. \tag{6}$$

This method has some shortcomings, such as asymmetry and sensitivity to histogram column values.

Texture is generally defined as a partial property of an image or as a limit that considers the relation between the sharpness of some areas. Texture is not related to color or chromaticity, but it can reflect the visual effect of image uniformity. It is also possible to think of an image as composed of areas of different textures. As one of the key and difficult features of narrative object, texture is also the main case clue to be found based on specific content [6]. In

TABLE 1: Histogram types.

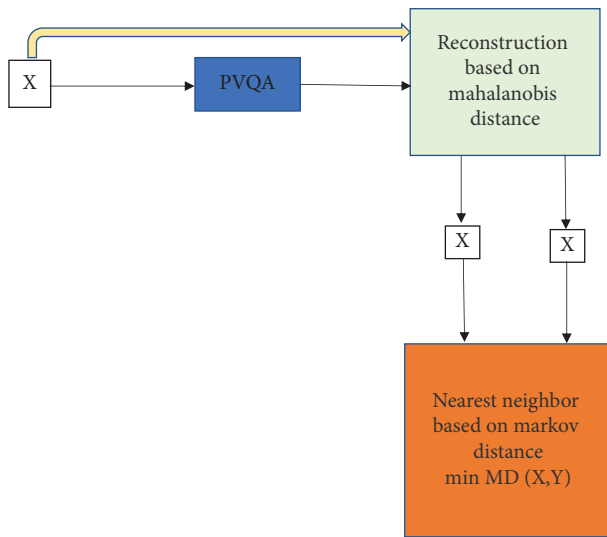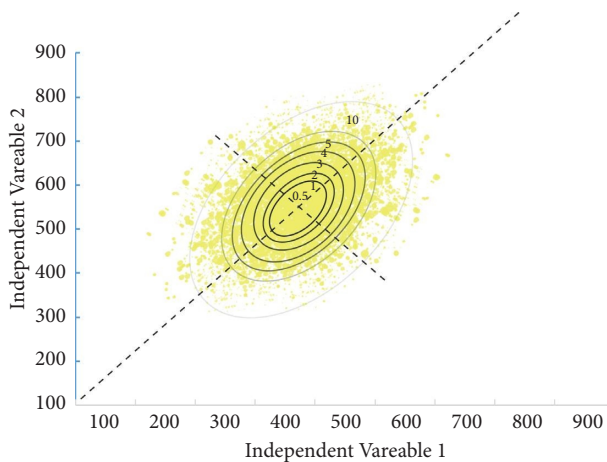| Histogram type | Lightness Color |
|---|---|
| Histograms everywhere | Amount of the camera ACR/LR Curves/levels |
| Look through the histogram | Tone: over exposure, under exposure, gray Tone: partial color, not transparent |
| The "unreliable" histogram | Contrast big scene, white and black subtraction, large area color block |



FIGURE 2: Mahalanobis distance.



FIGURE 3: Mahalanobis distance ellipse.

accounting, we can partition the color features of each image in the test data according to the texture features. Texture features are shown in Figure 4.

In recent years, people have done a lot of exploration on image fusion and construction and found that the traditional texture solid model with Markov characteristics is superior to the common texture bar graph in the texture understanding control module. Sclaroff et al. proposed

a pattern recognition method using a vibration curve graph and conducted experiments on its speech, traditional musical instruments, and other aspects. Achieve the desired effect. As far as new features are concerned, the way to confirm their similarity is very important [7]. From the perspective of speech analysis, Foote is used to analyze the temporal structure of speech with the method of data visualization, and similar characteristics are found in the experimental operation. In addition, accounting standards for enterprises can also interview video data executives and shareholders on time, create a relevant entity model, use a certain algorithm to reasonably identify the specific content and emotion of the video, and assess business development and financial risk, which are more valuable and relevant to fill and optimize the traditional database. At the same time, the increase in the proportion of intangible assets will also lead to a bad change in the correlation of financial information. At present, intangible assets play an increasingly important role in enterprise operations and financial statements, but they cannot be accurately measured and verified. For example, Internet technology generates revenue not only effectively but also efficiently. Along with customer promotion, traffic gains add inestimable revenue, which cannot be reflected in financial reports and cannot be accurately measured with credit coins. In the long run, it must be. The rapid development of information retrieval algorithms in multimedia systems has brought about a method to measure the immeasurable value of intangible assets. However, the information retrieval algorithm of a multimedia system cannot consider the value of every piece of information at all [8].

*2.2. The New Media.* Most of the scientific research on information search algorithms in multimedia systems focuses on content image search. The advantage of this method is that it is easy to calculate, does not affect the translation and rotation of the database, and conforms to the retrieval purpose of some users to some extent. However, many users do not care about the overall similarity of the image, but rather about the valuable regions of interest in the image. At this time, because the global feature cannot describe the content space difference of the image, the efficiency of the method based on global feature is relatively low. The image retrieval process is shown in Figure 5.

In recent years, people are paying more and more attention to media other than text, audio, and images, so we have access to 3D mode and other Internet media. You can apply a 3D model to Baidu search engine, which is similar to a spherical and acoustic measurement to identify accurate measurements. Some scholars have studied the application of rotating image to carry out relative density numbering of the endpoints of the complex projection in two-dimensional space and finally form two-dimensional histogram. Another industry we should consider is accounting, which can analyze the accounting database system and represent the data information more realistically with two-dimensional histogram [9].

The image retrieval optimization algorithm according to the region seems to have a very good search effect on some
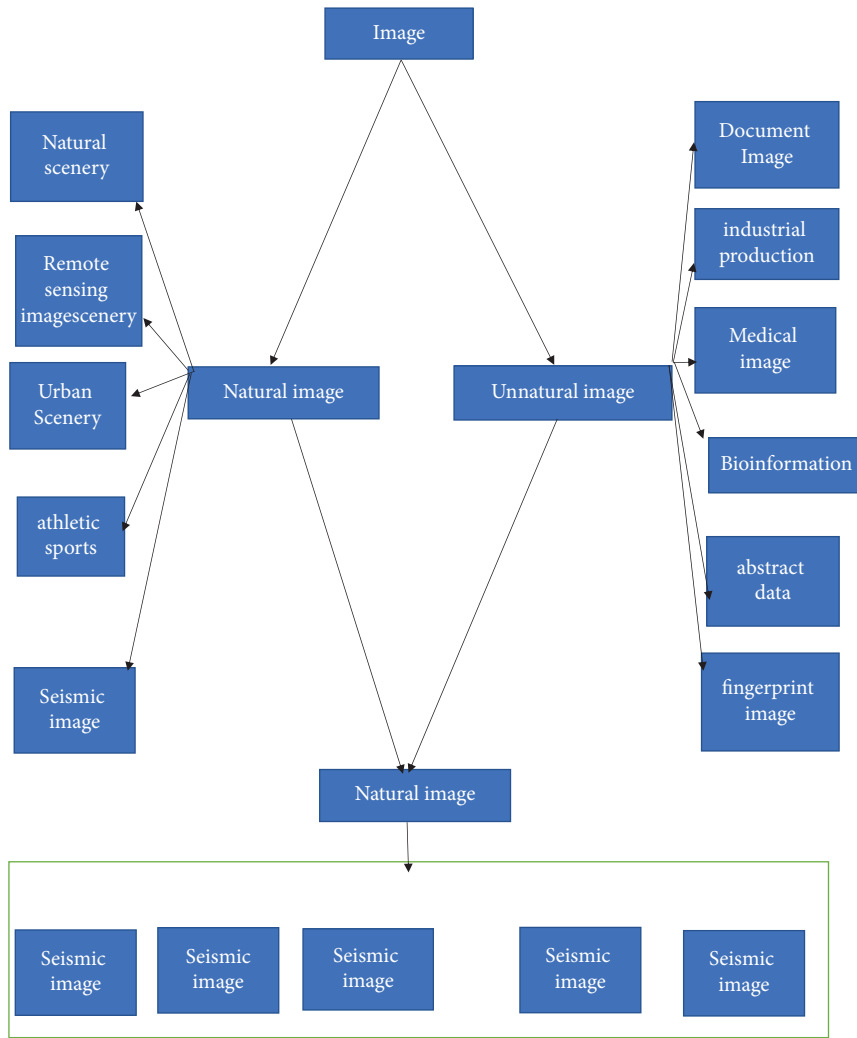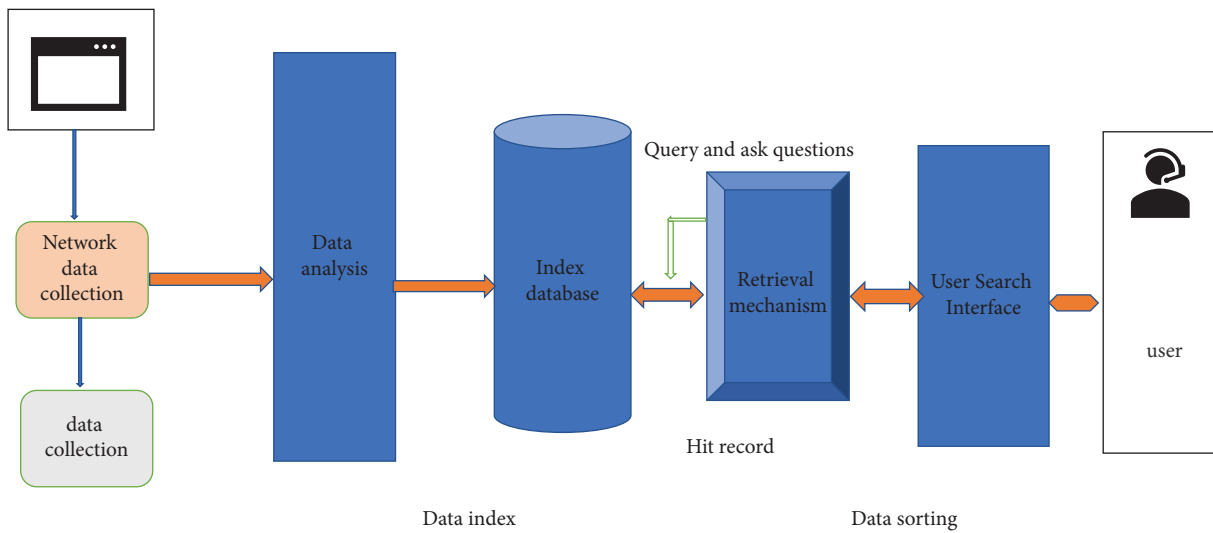
FIGURE 4: Texture features.



FIGURE 5: Flowchart of image retrieval.

images. For example, different areas of an image include different types of data volumes. Like the relevance principle of accounting standards, accounting information must be related to the economic decisions of users of information content. In fact, the application of accounting information is for relevance. You use different kinds of methods, and the search leads to different kinds of conclusions. The principle of correlation is one of the principles to be followed in environmental impact assessment. The principles to be followed in environmental impact assessment are pertinence principle, comprehensiveness principle, relevance principle, consciousness principle, stability principle, dynamic principle, contingency principle, rationality of social development principle, mass participation principle, diversity principle, and participation principle. In order to get better data information, it is necessary to use new media technology in the past accounting standards to further reduce the difference in data information. The eight basic principles of accounting are shown in Table 2.

*2.3. Browse and Summary.* With the continuous development of the amount and type of multimedia data, scholars around the world intend to focus on access and summarization in order to enable people to find the information they want to view more effectively. So we can investigate the method of transforming the image database system into animation, and then the animation into animation tape. In addition, some scholars also gave some video summarization problems, including specific content sorting, file directory division, video structuring, reducing information redundancy, and comprehensive formation of summary file directory.

In enterprise accounting, it is very important to do a good job in financial management. Accounting methods mainly include accounting entries and account setting, double-entry bookkeeping, voucher filling and approval, account book filing, cost calculation, financial liquidation, and accounting statements. Accounting method forms the whole process of accounting cycle. Accounting subject is a general term that scientifically categorizes specific content. Because the content of accounting objects is various, scientific types can be systematized. If multimedia video is used to carry out group management of financial data and generate system software, it will be convenient for the company to audit and adjust accounts [10]. This is not only in accordance with the requirements of accounting standards related to Chinese macroadjustment enterprises but also to grasp the multiparty enterprise profitability and operating performance and strengthen the company's internal management needs. The accounting information provided should be related to the needs of the users of accounting information, which is conducive to the decision-making of the users of accounting information; that is, it should be useful and provide accounting information according to the needs of the users of relevant information. Within the scope of relevant provisions, users of accounting information should provide their own required information content. The accounting method is shown in Figure 6.

*2.4. Semantics and Feedback.* In the experiment of a data retrieval algorithm for multimedia system, the traditional retrieval system is based on computer, and the query records obtained cannot meet the needs of users. How to let the computer master the user's demand from the user's service quality of retrieval results, learn and train the user's enthusiasm, and improve the user's retrieval accuracy rate has become the focus of the current research.

*2.4.1. The Semantic.* Semantics is a crucial definition, but the concept of semantics is not sound at present. Semantics comes from multimedia information such as image, short video, and audio. The inclusion of temporal interrelationships between key objectives in multimedia implies concrete content. In recent years, the optimization algorithm of multimedia data information retrieval has gradually developed from case-based and keyword-based retrieval to semantic-based retrieval. Users can carry out retrieval according to the keywords of semantic information, which should also reflect the semantic structure type according to the characteristics of multimedia [11]. The introduction of video semantic segmentation is shown in Figure 7.

*2.4.2. Related Feedback.* Relevant feedback can be seen as an exception to the value of spontaneity, also known as fine-management viewing, interactive retrieval, etc. The results show that the feedback technology can not only improve the search effect but also read the semantic information of data objects through the learning and accumulation of feedback information to guide the search. The most basic theory of feedback is: first, enumerate the information of a multiobject multimedia system. The consumer is then asked to determine if each object is relevant. Finally, according to the result obtained by reverse locking, the semantic space, characteristic space, or categorization space of the main parameter space are changed to respond to the related and unrelated objects. In the past 10 years, the scientific research of relevant feedback technology has gradually formed a dynamic research content, and a variety of relevant feedback optimization algorithms are various. Scholars regard the correlation feedback in the comparative study of various optimization algorithms as an exception to the spontaneous semantics. The interactive test of fine management query discusses the relevant feedback technology, and the results show that feedback technology can not only improve the search effect but also read the semantic information of data objects through the learning and accumulation of feedback information and specifically guide the search [12].

The relevant feedback theory is based on: first, list a lot of multimedia system information that needs to be solved. The consumer is then asked to determine if each object is relevant. Finally, according to the result obtained by reverse locking, the semantic space, characteristic space, or categorization space of the main parameter space are changed to respond to the related and unrelated objects. In the past 10 years, the scientific research of relevant feedback technology has gradually formed a dynamic research content,

TABLE 2: Eight basic principles of accounting.

| The principle of | Content |
|---|---|
| Reliability | Enterprises are required to confirm, measure, and report on the basis of actual transactions or events |
| The correlation | The accounting information required from enterprises should be related to the economic decision-making needs of financial report users such as investors |
| Understandability | The accounting information provided by enterprises should be clear so as to facilitate the understanding and use of financial report users such as investors |
| Comparability | Longitudinal comparison; horizontally comparable |
| Substance over form | Enterprises are required to carry out accounting recognition and measurement and report in accordance with the economic substance of transactions or matters, not only based on the legal form of transactions or matters |
| The importance of | The accounting information required from an enterprise shall reflect all important transactions or events related to the financial position, operating results, and cash flow of the enterprise |
| Prudential | You should not overestimate assets or earnings and underestimate liabilities or expenses |
| Timeliness | Confirmation, measurement, and reporting shall be carried out in a timely manner and shall not be advanced or postponed |
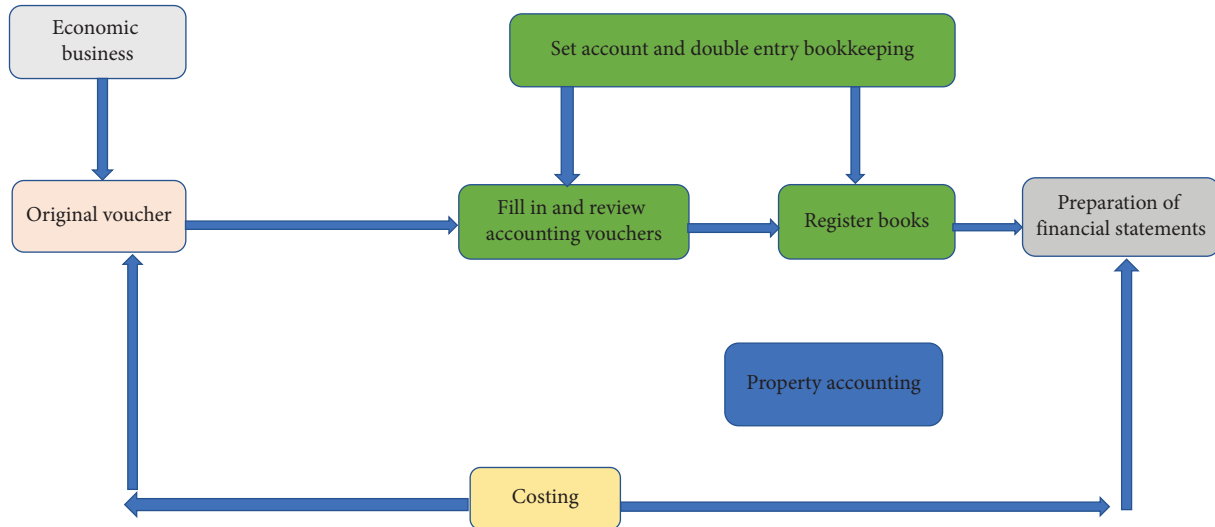


FIGURE 6: Accounting method.



(a) Input Image      (b) Fcature Map      (c) Pyramid Pooling Module      (d) Final Prediction
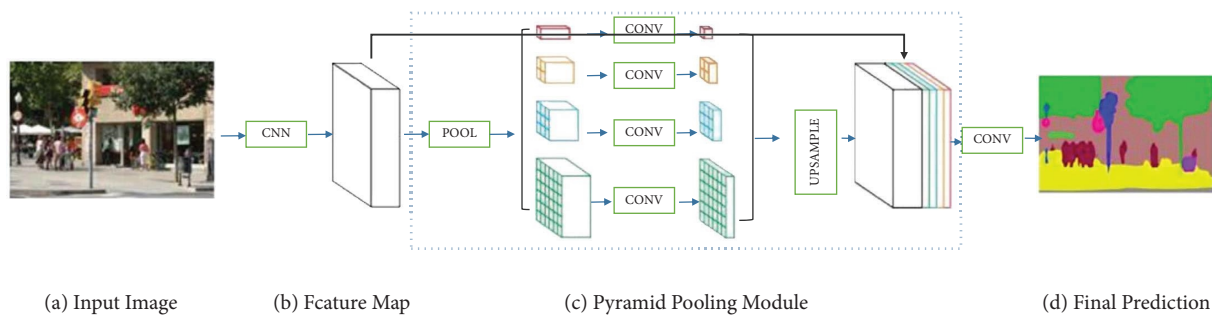
FIGURE 7: Video semantic segmentation. (a) Input image. (b) Feature map. (c) Pyramid pooling module. (d) Final prediction.

and a variety of relevant feedback optimization algorithms are various. Researchers have summarized and compared a variety of optimization algorithms.

For us to distinguish whether information is relevant depends on its predictive value, feedback value, and timeliness. This feedback can be useful if there is information that helps decision makers better predict the future, and customers can refer to the predictable results. Since the information will affect the decision maker, correlation is an important enterprise accounting standard. If a piece of

information allows the client to determine or modify the specific conclusions of previous forecasts and feed them back to the decision maker, you can use the comparison with the expected results to detect whether the previous forecast was incorrect, thereby reducing errors in making the same decision. Thus, the value of information feedback is a process conducive to future decision-making, so it is an indispensable part of relevance. If you do not prepare the forecast in advance, it is difficult to make reasonable use of the relevant basic principles.

## 3. Financial Accounting Correlation and Multimedia Information Retrieval Algorithm Construction

According to the exploration of multimedia information search algorithm, it is found that the enterprise value is immediately related to the quantifiable data storage structure of monetary measurement under the traditional accounting working mode. Causality analysis is used to measure many economic matters and business activities in the entity management method of the company, which really reflects the value of the enterprise. Multimedia data retrieval algorithms are usually unstructured and fragmented indirect data information, which is related to enterprise value. However, it is impossible to determine the specific relationship between its factors and enterprise value by logical relationship, so it is necessary to analyze and clarify the correlation method [13].

The basic theory of enterprise evaluation uses the sum of discount rates of future cash flows (nonaccounting information of the company) to evaluate the enterprise value. The existing financial accounting system is mainly concerned with cash flow (company financial information), resulting in great differences between enterprise value assessment and accounting, and cannot get the correct sales performance expense budget and evaluation [14]. The structure of enterprise valuation model is shown in Table 3.

According to the relevant enterprise accounting standards, the future cash flow is overwhelmingly attributed to the company's nonfinancial class. Loan interest has not been included in the financial accounting algorithm design management system; in the future, it may become a structured way of information. Presenting unstructured and fragmented data information can also be a real customer. In order to express enterprise value and evaluate the company, it is necessary to consider a variety of future cash flows and cash flows closely linked to establish an integrated relationship or projection relationship with enterprise value.

## 4. Development Direction of Multimedia Information Retrieval Algorithm

*4.1. Human-Centered Approach and Learning Model Based on Traditional Accounting.* In the Internet era, users have different personas in each stage, which can be used to scientifically study the research content of users. The scientific research on users' needs enables scholars to have an in-depth understanding of users' ideas and needs. The interaction between the user and the optimization algorithm must be considered in the face of human multimedia. Therefore, under the application of multimedia, we can choose the serious shortage of traditional accounting human resources. Only when data information has certain relative density, value, and credibility of data information, it can be more personalized, reduce the influence of accounting manipulation by traditional accounting methods as much as possible, and project all things objectively and truthfully [15].

*4.2. Multimedia Collaboration.* With the world now connected by wired and wireless networks, it is crucial to find a better way for companies to interact with their financial statements on computers. There are many difficulties in a multiway cooperative environment. This paper thinks that the cooperation between Internet media and finance can supplement the existing qualitative information and data. In our development, people's thinking has always been around our daily life. In the era of multimedia systems, unstructured, pan-entertaining, and unsystematic data are playing an increasingly important role in society. The data of quantitative analysis, diversification, and efficient operation, the whole is better than the part, the combination is better than the single, which is locked in the enterprise capital management. If we rely on big data information, ignoring big data financial and accounting information too much will damage the integrity of the company's financial information. Only proper processing and application of this information, as a supplement to detailed information, can truly reflect the economic benefits of the company. For example, in the traditional accounting practical operation, the important unit of credit business is credit money, but monetary measurement cannot become the feedback of qualitative narrative data information. Qualitative data information generally comes from correlation. Although there is some correlation, the results show that random events, compared with causal logic thinking, process accuracy is certain. Based on a deeper analysis and research of these two elements, it is found that the method of applying quantitative data values to accounting measurement and summarizing the correlation of companies is usually driven by the progress of the past times, which can no longer meet the requirements of financial information content correlation analysis in the Internet era. We can directly use accounting information to analyze the relevance, performance, and accuracy of some information content, which is a reasonable supplement to existing accounting information statistical analysis Therefore, the in-depth cooperation of Internet media will play an extremely important role in promoting the development of the financial industry of the company [16].

*4.3. Categorization.* Until now, it has been difficult to fully extract multimedia data from financial information, and completely automatic text extraction has been impossible. At this stage, the Baidu search engine that everybody uses must be perfected ceaselessly. For big information such as

TABLE 3: Structure table of enterprise valuation model.

| | |
|---|---|
| Assuming | Including operating activities assumption, working capital assumption, capital investment assumption, capital structure assumption, and so on |
| Forecasted financial statements | Including income statement, balance sheet, and cash flow statement |
| The result of prediction | Including FCF, FCFE, and AE |

TABLE 4: Advantages and disadvantages of categorization.

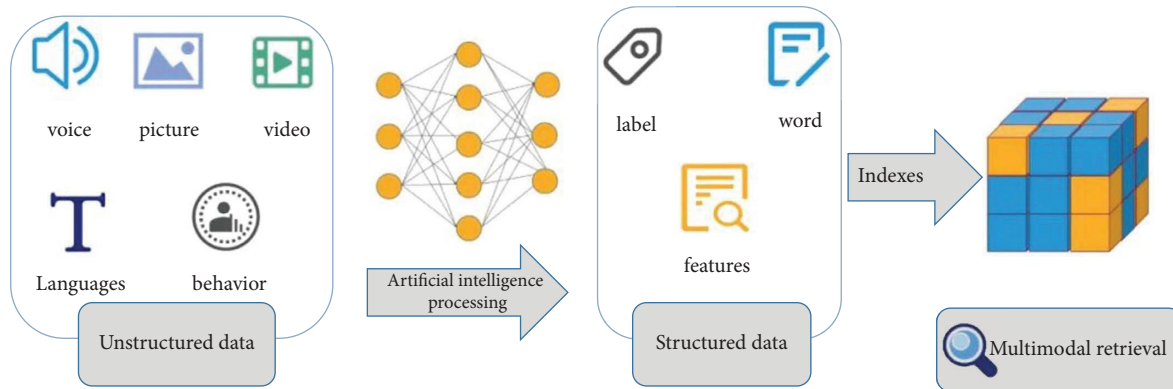| The advantages of categorization | The disadvantages of categorization | Improvement measures |
|---|---|---|
| Dynamic: updated at any time | Lack of semantic relation | Provide upper and lower data, hierarchical |
| Heuristic: the group effect | There is a lack of standardization among labels | Provide different translation tools |



FIGURE 8: High-dimensional retrieval techniques.

financial accounting, simple classification methods can no longer meet the needs of users. Therefore, some scholars give a classification method according to the information labeling in the relational database to carry out labeling and classification so as to facilitate the public search, compared with traditional classification [17]. The advantages and disadvantages of crowd classification are shown in Table 4.

When carrying out face-to-face communication of accounting entries, it is necessary to simply derive the scientific name, do not have to divide the types of property, debt, interests, etc., and there will be no loan relationship, so that it can be divided into several types. In other words, in order to reflect the company's financial situation according to accounting entries and facilitate the production of midfinancial to postfinancial reports, it is necessary to combine human wisdom and stereotyped information and data.

## 5. The Challenge of the Multimedia Information Detection Algorithm in Enterprises Based on Relevance Criterion

5.1. Association between High-Level Concepts and Low-Level Concepts. At the present stage, because the multimedia system understands the high level of technology and the low level of technology, there is a big difference between the low level and the high level [18]. High-end ideas that computers cannot reach automatically, and people have to participate.

It has the ability of fully automatic semantic narration and semantic search, and is a specific content retrieval system that integrates the characteristics of the dwarf layer.

5.2. Interactive Search and Technical Feedback. The application of multimedia system information search algorithm in accounting is undoubtedly the research direction in the near future, and the human-computer interaction technology is completed. In the interactive link, quick text retrieval, quick data prediction, and a few database feedbacks show the relevance of the application of enterprise accounting standards. How to make the information more intelligent system, deeply understand the needs of consumers, further scientific research and exploration, and must integrate other subjects to solve this problem. Naturally, apart from correlation standards, the company can also be used in all financial management systems to change from traditional accounting to big data intelligent financial accounting period [19].

5.3. High-Dimensional Retrieval Techniques. Image feature vectors are often high-dimensional. The high-dimensional retrieval technology is shown in Figure 8.

In CBIR system, in order to ensure the accuracy of retrieval, it is sometimes necessary to acquire more image features. The more detailed the acquisition accuracy, the greater the retrieval accuracy. When traditional financial
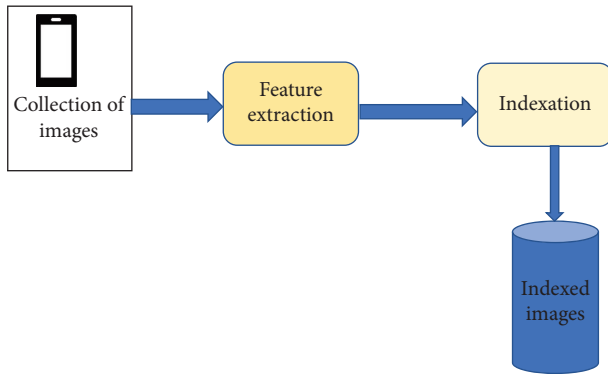
Figure 9: CBIR system.

analysis is applied to manage high-dimensional retrieval technology, it is necessary to study a new method of routing and machine learning. Although high-dimensional retrieval techniques are a thousand times the average retrieval techniques, it is not a good orientation. 100 times of information retrieval will make feature measurement more and more complicated and slow. Analyzing a company's business situation, it is impossible to find data information quickly and accurately, and it only creates stress. Therefore, feature extraction can also be used to reduce and remove the intermediate correlation and redundancy design of high-dimensional image features so as to improve the production efficiency. Naturally, in addition to this challenge, because the relevance definition is used in enterprise management, multimedia information retrieval optimization algorithm is widely used in financial statement analysis, different types of feedback, different types of levels of harm correlation prediction analysis, put forward many challenges [20]. The CBIR system is shown in Figure 9.

## 6. Conclusion

In this paper, by comparing the efficient development of modern society, we examine how the application of new media technology to enterprise accounting standards seriously affects the relevance of corporate accounting and financial information content. We discussed the current situation of the multimedia information content data algorithm, and the results showed that, in addition to the traditional text, image, video, voice, and, multimedia information retrieval scientific research, the traditional accounting also provides for the development of multimedia technology and the application of multimedia at our own will in the near future. More perfect and diversified, the development of accounting has brought a new development direction.

## Data Availability

The labeled data set used to support the findings of this study is available from the corresponding author upon request.

## Conflicts of Interest

The authors declare that there are no conflicts of interest.

## Acknowledgments

## References

[1] Y. P. Zhang and A. F. Amp, "Optimization analysis of enterprise financial model of BP neural network based on MATLAB," *Journal of Changchun Normal University*, vol. 37, no. 2, pp. 49–55, 2018.

[2] T. B. Sebastian, P. Klein, and B. B. Kimia, "Recognition of shapes by editing their shock graphs," *IEEE Transactions on Pattern Analysis and Machine Intelligence*, vol. 26, no. 5, pp. 550–571, 2004.

[3] R. C. Veltkamp and M. Hagedoorn, "State of the art in shape mal-ching: visual information retrieval," in *Proceedings of the 3rd International Conference on Visual Infomation Systems*, pp. 87–119, Springer-Verlag, London, October 2021.

[4] K. Jafari-Khodzani and H. Soltanian-Zadei, "Radon transform orientation estimation for rotation invariant texture analysis," *IEEE Transactions on Pattern Analysis and Machine Intelligence*, vol. 27, no. 6, pp. 1004–1008, 2019.

[5] S. Herat and D. Woods, "The impact of big data on accounting," *Business Administration Review*, vol. 12, no. 2, pp. 186–193, 2021.

[6] W. Wang, X. Yu, B. Fang et al., "Cross-modality LGE-CMR segmentation using image-to-image translation based data augmentation," *IEEE/ACM Transactions on Computational Biology and Bioinformatics*, vol. 19, 2022.

[7] A. P. Pentland, R. Picard, and S. Sclaroff, "Photobook: content-based manipulation of image databases," *International Journal of Computer Vision*, vol. 18, no. 3, pp. 233–254, 1996.

[8] M. E. Dönderler, E. Saykol, U. Arslan, Ö. Ulusoy, and U. Güdükbay, "BilVideo: design and implementation of a video database management system," *Multimedia Tools and Applications*, vol. 27, no. 1, pp. 79–104, 2005.

[9] W. Shao, Z. You, L. Liang et al., "A multi-modal gait analysis-based detection system of the risk of depression," *IEEE Journal of Biomedical and Health Informatics (JBHI)*, vol. 26, no. 10, pp. 4859–4868, 2022.

[10] H. Rao, S. Wang, X. Hu et al., "A self-supervised gait encoding approach with locality-awareness for 3D skeleton based person Re-identification," *IEEE Transactions on Pattern Analysis and Machine Intelligence*, vol. 44, no. 10, pp. 6649–6666, 2022.

[11] C. Remco, "Veltkamp, mircla tanase. Content-based image retrieval systems: a survey," *Department of Computing Science, Utrecht University*, vol. 18, no. 2, pp. 11–23, 2019.

[12] M. L. Kherfi, D. Ziou, and A. Bernardi, "Image retrieval from the world wide web:issues, techniques, and systems," *ACM Computing Surveys*, vol. 36, no. 1, pp. 35–67, 2004.

[13] M. J. Swain and D. H. Ballard, "Color indexing," *International Journal of Computer Vision*, vol. 7, no. 1, pp. 11–32, 1991.

[14] M. Zhou and G. Geng, *Wei Na Based on Content Image Retrieval Technology*, Tsinghua University Press, Beijing, 2019.

[15] Y. Zhuang, Y. Pan, and F. Wu, "Online multimedia information analysis and retrieval," *Beijing: From Tsinghua UniversityEdition*, vol. 11, no. 3, pp. 35–48, 2020.

[16] T. Wang, B. Lu, W. Wang, W. Wei, X. Yuan, and J. Li, "Reinforcement learning-based optimization for mobile edge

computing scheduling game," *IEEE Transactions on Emerging Topics in Computational Intelligence*, vol. 7, no. 1, pp. 55–64, 2023.

[17] Y. Liu, D. Huang, B. Li et al., "Association between $\alpha$1-antitrypsin and acute coronary syndrome," *Experimental and Therapeutic Medicine*, vol. 20, no. 5, pp. 119-120, 2020.

[18] L. Wang, "Discussion on the relationship between the correlation and reliability of accounting information," *Science and Technology of Energetic Materials*, vol. 83, no. 7, pp. 40-41, 2020.

[19] X. Liang, "Building an accounting information platform to improve the quality of accounting information," *Science and Technology News*, vol. 8, no. 27, pp. 111-112, 2018.

[20] J. Jiao, "Harmonization of relevance and reliability of accounting information," *Mall Modernization*, vol. 27, no. 3, pp. 149–151, 2018.