# Retraction

**Retracted: Image Target Detection Algorithm of Smart City Management Cases**

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# Image Target Detection Algorithm of Smart City Management Cases

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**ABSTRACT** With the rapid development and wide application of Internet technology, the use of the concept of ''smart city'' has been concerned and promoted. It is an inevitable way to strengthen the breadth and depth of urban services, and to move forward from digital to intelligent application. The purpose of this study is to further promote the small and medium-sized cities in China to improve the ''smart city'' management mode and promote the harmonious development of society, which has important reference and practical significance. In this paper, in-depth analysis of the background of smart city, different image target detection algorithms are studied. The infrared target detection algorithm suppresses the background by means of a high-pass filter, and the coefficient of correlation between the characteristics is used as the fusion weight, while the weighted grey synthesis is performed, area and seroid offset. The ultra-spectral target detection algorithm extracts some content indicators from the initial data, and finally realizes the optimization of the algorithm. The mean filtering algorithm can reduce the effect of noise by pre-processing the image. The algorithm a hog-target detection describes the features of the object's surface edges in areas such as graphics and image processing; and calculates the distribution of characteristics in the direction of inclination of the particular part of the image. These algorithms have their own advantages and characteristics. The results of the experiment show that the accuracy and rate of recall of the infrared target detection algorithm after aggregation of characteristics are higher than other algorithms, the accuracy is higher than 6.3% of the original infrared image algorithm, and the recall rate is 5.4% higher than the infrared image anide algorithm. The change in the value m of the main vector dimension will affect the accuracy of target detection.

**INDEX TERMS** Smart city, target detection, algorithm research, accuracy comparison.

## I. INTRODUCTION

### A. BACKGROUND AND SIGNIFICANCE

The smart city, also known as the ''digital city'', links smart technology to human intelligence and innovation through smart technology innovation management tools, Like the Internet of Things. On this basis, the traditional management system has also been reformed and the specific implementation is to effectively address various problems that exist in urban development with optimise the structure of the system and ultimately implement the ecological development and sustainable development of the city itself [2]. Therefore, in the ''smart city'', the management of the city's own security should be carried out in the same logic. In other words, through the use of modern Internet information technology and Internet platform, we must change the existing traditional security management concept of the city, must innovate the mode and means of security management, in order to achieve a new path of urban security management development [3].

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### B. RELATED WORK

In recent decades, vehicle network has become the core network technology to provide comfort and safety for drivers [4]. However, the emerging applications and services need to make a major breakthrough in the basic network model and calculation, which requires new road network planning [5]. At the same time, as one of the subversive technologies, blockchain has emerged and developed rapidly in recent years, which may completely change its. Pradip proposes a block VN (block VN) in smart city. Block VN is a reliable and secure architecture. It runs in distributed mode to build a new distributed transmission management system [6]. Pradip is considering a new vehicle network system block VN [7]. Academic attention to the smart city and its governance is growing rapidly, but the fragmentation of methods has led to a complex discussion. Shelton brings some ideas to it the discussion by analysing the database of editions 51 and summarising the conclusions [8].

The laser scanning system for measuring multi wavelength reflection combines the advantages of active spectral imaging and precise ranging [9]. The hyperspectral lidar system of the Finnish geodetic Institute is one of them. HaShem has carried out a systematic test in an outdoor experiment. According to its spectral response, the artificial targets are three camouflage nets with different structures and colors. HaShem compared the spectral response results of the experiment with those of silver birch (Birch), Pinus sylvestris L. and Salix caprea, and used the clay block response as the artificial comparison target. The novelty of the experiment is the 26 hour measurement, both day and night. In the data set collected at night, the overall accuracy rate of target classification is 80.9%. When the wavelength is about 700 nm, that is, the so-called red light, the reflection of four wavelengths is used as the classification feature [10]. Li proposed a detection method based on data-driven object modeling, which implicitly deals with the change of object appearance. Given the training set of the target image, the Li method constructs models based on the local neighborhood of the training set. Using these models, a new metric is proposed, which does not interfere with the appearance of the target. Under this construction model, Li constructs a low dimensional embedding of test image. Then, whether there is a target in each image is determined based on the embedded detection score. This method has been applied to the side scan sonar image data set and achieved satisfactory results in mine detection [11].

### C. INNOVATION

The following problems need to be solved in the research and design of image target detection algorithm.

The first is the real-time performance of the algorithm. The test and tracking algorithm must meet certain time requirements. Otherwise, it will lose the practical application value. The object processed by the image target detection and tracking algorithm contains a lot of image data [12]. If the algorithm is not optimized, the image processing process will spend a lot of time and space, which will lead to difficulties in meeting the needs of real-time processing. Therefore, it is necessary to study the optimization and acceleration methods of the algorithm for specific application scenarios.

The second is the stability of continuous tracking. During the target movement, the target will be blocked by other interfering objects in the environment, and it may cause irregular deformation and disappear temporarily, or the target position matching cannot achieve the best effect due to the low contrast of the target motion. If the target is lost in a short time due to environmental interference, it cannot be captured quickly, which indicates that the target is abnormally lost or no alarm signal is generated.

Finally, the accuracy of the target detection. In the practical application environment, light changes, non-targeted traffic jams, camera imaging noise, etc. It is easy to identify as a false target, which will affect the accuracy of the detection of a moving target location and the extraction of target pattern information.

## II. RESEARCH ON IMAGE TARGET DETECTION ALGORITHM OF SMART CITY MANAGEMENT CASES

### A. INFRARED IMAGE TARGET DETECTION ALGORITHM

The weak target can occupy an area of 3 * 4 pixels in the infrared image, and as the final judgment target, the basis of the fusion data of a single pixel is not reliable, and it is easy to make errors under the influence of noise [13]. Firstly, if cluster analysis method is used to display the pixels, and then the pixels with similar image positions are collected as a type, then each type represents a local area, and the characteristic value of the pixel points is obtained by adding the fusion data of the set region [14]. Finally, the weak target detection is completed based on the fusion data of the aggregation region Measurement. Obviously, the positions of adjacent pixel sets are similar. Obviously, the positions of the adjacent pixel groups are similar. To solve this problem, a dynamic notation algorithm between non-zero pixels is proposed, and the Euclide distance is used as a measure of sample similarity.

$$D_{IJ} = ||x - y|| = \sqrt{\sum_{k=1}^{d} |x_k - y_k|^2} \tag{1}$$

In the formula, D is the dimension of the characteristic space; XK and YK are the coordinates of two non-zero points respectively. Since the number of regions in the image is unknown before set analysis, the number of types cannot be determined. Moreover, if new samples are classified as existing types each time, the set center may change [15]. Therefore, after filtering with dynamic aggregation algorithm, the grayscale in the image shows the type label of non-zero pixels [16], [17]. According to the type label, the fusion data is counted and the decision data of the region type are obtained.

By calculating and reasoning the detection probability based on the suspicious data in the target area, the analysis of the reliability of the suspicious target area is an important part of the detection algorithm, and the region with high convergence and high decision data may be the target. In addition, the decision data in the target area should be much larger than that in the background and noise [18]. Therefore, it is necessary to use the probability of the difference between the local decision data probability and the judgment quantity as the inference evaluation of the two features [19]. The D-S evidence reasoning method is corrected by reasoning evaluation data, and the reliability evidence interval of each region is finally obtained [20].

### B. HYPERSPECTRAL IMAGE TARGET DETECTION ALGORITHM

The problem of analysing the main components of hyper-stimulation is how to extract some comprehensive indicators from the initial data. Apart from maintaining as useful as possible information in the initial data and elimination of a large number of unnecessary information, some of these comprehensive indicators must be independent of each other and comply with the specifications to a certain extent, The most common rule of thumb is maximising variability, and the conversion process is as follows [21].

(1) The inter band covariance matrix (if there are k bands, the covariance matrix C with the size of K * k is obtained). Let X=[$x_{i1}$;,$x_{i2}$,…,$x_{ik}$] and M=[$M_1$,$M_2$,…,$M_k$] denote the feature dimension vector and band mean vector of each pixel respectively. Let n be the number of image pixels. Then C is,

$$C = \frac{\sum_{i=1}^{n}(X_i - M)(X_i - M)^t}{n-1} \tag{2}$$

(2) Find the eigenvalues and eigenvectors of the matrix. The linear equation used to solve eigenvalues and eigenvectors is,

$$(C - \lambda_i I)A_i = 0 \tag{3}$$

where $A_i = [a_{i1}, a_{i2}, \ldots, a_{ik}]^t$ is the eigenvector corresponding to the characteristic $\lambda$ and i is the identity matrix.

(3) According to the $y = A^T X$ formula, the original data is projected into the new feature subspace by using the obtained eigenvectors to form new feature data.

### C. IMAGE PREPROCESSING OF MEAN FILTERING ALGORITHM

For example, all the images obtained by the camera have noise, the sensor is sensitive to the environment and light, and the image will generate noise during transmission [22]. In order to detect and locate the tracking target more accurately, it is necessary to preprocess the video image sequence and eliminate the noise of the video image sequence [23], [24]. The output of the mean filter algorithm is the mean value of the pixels in the filter template area. It is a smooth linear spatial filter, which can delete details that are not in the image. Since random noise consists of rapid change of level grey, and the degree of noise interference received by each pixel is different, the effect of noise can be reduced by replacing the value of the pixel with the mean value. The filtering process of an image through an m×n mean filter is as follows:

$$g(x, y) = \frac{\sum_{s=-a}^{a}\sum_{t=-b}^{b}\omega(s, t)f(x+s, y+t)}{\sum_{s=-a}^{a}\sum_{t=-b}^{b}\omega(s, t)} \tag{4}$$

In the formula, f (x, y) is the gray value of the original pixel, g (x, y) is the result of filtering wave, and $\omega$(s,t) is the template coefficient. The size of filter template directly affects the ability of noise removal and leads to different degrees of blur. If the template is too small, the effect of noise removal is poor; if the template is too large, the calculation amount is large and the time is long [25].

### D. HOG TARGET DETECTION ALGORITHM

The Hog feature is a feature manager, describing the edge characteristics of the object in areas such as graphics and image processing, and calculating the distribution of the feature through slope direction in the given image block [26], [27]. As a classification algorithm, hog-svm combines the characteristics of the Hong and SVM classifier, which is a typical use. The media support machine (SVM) has been widely used in computer vision. The algorithm is usually used to classify positive and negative samples, even if the training samples are small, it can achieve a good classification result [28]. The deformed component model, i.e. DPM, It's much better than hog-svm at target detection accuracy.

The core of target detection algorithm based on DPM is to build a model called DPM. The model has a large structural difference and is a star structure model. This model also includes the root model, part model and the relative position relationship between the root model and the part model [21], [29]. The root model is the same as hog-svm model. The hog characteristics are calculated in the calculation process, and the characteristics of the part model are calculated in the resolution space of twice the root model. All targets are marked with rectangle box. The position of the rectangle box is the position of the initial root model, while the position of the initial part model is determined according to the position of the root model [30]. The calculated original hog features have a lot of residual information, which is not conducive to the expression of target features, and the calculation is complex, which affects the training of target test model and the efficiency of target detection [31]. When calculating hog features of images, principal component analysis (PCA) can significantly reduce the dimension of feature vectors and eliminate unnecessary feature information. The processed features are similar to the original features or features with good performance [32].

### E. CHARACTERISTICS OF SMART CITY

#### 1) WIDE RANGE COORDINATION

Smart city has a strong form of cooperative city [33]. It is based on network interconnection, data exchange and sharing, and the platform of public management and service is also the interaction between government, enterprises and urban residents. Comprehensive cooperative service is the highlight of all services. It provides high-quality cooperative services for the whole city residents and provides cooperative management for enterprises and enterprises. In addition, it provides a series of cooperative management modes, such as inter-governmental cooperative management and Inter City cooperative management. These management tools enable the government to more systematically apply to urban management and operation [34]. Intelligent, intelligent, fast, efficient, convenient, flexible decision support system, management service means and innovative application model. Smart city is a comprehensive city in many fields. It includes the complete process from information collection, transmission, processing, sharing to application. It is the intelligent dissemination of information, which represents a deeper, all-round, effective and extensive reform needs. It is an innovative application model and management tool for perception, wisdom, interconnection and cooperation [35].

#### 2) HIGH EFFICIENCY SHARING

Smart city has a very wide range of sharing in every field. It establishes platform level system facilities of technology, evaluates credit, exchanges lists, proves status and settlement through effective management system innovation, and establishes deep multidimensional between information systems [36]. Enhance the comparison, circulation, exchange and sharing of a large number of data in the city, so as to ensure that the information and data of different locations in the city can be shared to the greatest extent. These data sharing provides a good environment for the application, and produces a good synergy effect. At the same time, data exchange and sharing greatly improve the efficiency of data information update and solve the virtuous cycle of urban management problems. It can quickly and actively explore problems, and relevant functions can be automatically adjusted, and problems can be solved quickly [37].

#### 3) ALL ROUND CONNECTIVITY

Smart city must be connected with highways. It connects all communication media in the city with high-speed bandwidth, and connects it to the entire information network [38]. At the same time, the information and data obtained from the Internet of things can be accessed to this information network in real time, which helps the government to observe the overall situation, effectively analyze and deal with problems, and carry out multi-faceted cooperative management through the network [39]. The biggest difference between smart city and information city is that smart city is not a remote island independent system. It integrates each independent system into a system and makes it a huge system tower. The nature of this mutual connection is that the traditional government has completely changed the way of urban management, operation and development, making the city into a state of interaction and correlation everywhere.

#### 4) DEEP INTELLIGENCE

The city is the large-scale storage of information resources, the operation mode of smart city is distributed in the city, the collection of urban public service facilities, and sensor detection and other monitoring equipment are distributed in the city [40]. Government information systems, organizational data, and people's personal information to build urban infrastructure including all kinds of important information can be collected and collated in real time. Urban application database includes real-time monitoring information of urban roads, infrastructure monitoring information and public security, etc., which can make the city reach a higher management level. The government is the essential information basis for urban management and urban operation, and modern urban management is essential for countless urban information [41]. Only the effective information feedback data is the key to the government's urban management. The effective information and data represent the construction needs and development direction of the city. The basic idea of smart city is to use effective data and information to rationalize the government's administrative means and management methods.

## III. EXPERIMENTAL RESEARCH ON IMAGE TARGET DETECTION ALGORITHM OF SMART CITY MANAGEMENT CASES

### A. RESEARCH OBJECT

With the continuous expansion of the city scale, people's material life is more and richer; people's spiritual life is also more and more rich. At the same time, in the past, there are more and more problems in the urban development mode which is mainly incremental and extensive expansion. In terms of transportation, there are traffic congestion and frequent traffic accidents [42]; in terms of environment, there are rising greenhouse gases and acid rain; in terms of the government, public services cannot keep up with and it is difficult to handle affairs; in terms of medical care, it is difficult to see a doctor and expensive to see a doctor; in terms of education, it is difficult to go to school or go to a kindergarten. These problems put forward new requirements for the urban development mode, and correspondingly the ideology of smart city has emerged, which means to provide services for the people through science and technology, aiming at promoting innovation, and committed to sustainable development. This is a new urban development mode, and points out the direction for the development of smart city.

This study aims to promote the transformation of government functions and the sustainable development of the city by introducing the management concept of smart city. Taking our city as an example, this paper explores and demonstrates how to use a small amount of modern information technology and modern scientific management mode to build a smart city, focusing on the current situation of our city, aiming at improving the city's development. Through the realization of intelligent management and the sustainable development of the city, the intelligent state is finally achieved. The object detection and positioning experiment is carried out on the MATLAB platform. There are two main objects: scene one, street crowd target sequence image; scene two, vehicle target sequence image of normal driving on urban road.

### B. SCENE EXPERIMENT

#### 1) A NORMAL DRIVING TARGET ON THE CITY ROAD

In this experiment, the improved multi frame average method is still used to extract the background. The background gray distribution is uneven and the river environment is unstable, such as light change, tree blowing and water surface reflection. The accuracy of the limit value is ensured by variance calculation. At this time, the judgment limit value has certain noise filtering effect, Therefore, compared to the algorithm, the algorithm uses approximately one 2*2 cross-section component, and because the car has a normal shape, the algorithm uses a 4*4 square extension.

#### 2) SCENE 2 EXPERIMENT: CROWD TARGET IN THE STREET

In this experiment, the improved multi frame average method is used to extract the background. In this scene, the threshold is determined by the empirical formula with less calculation, and the overall gray distribution of the background is relatively uniform, and the scene is fixed. Among them, the gray level of human target is similar to the average gray level of background, and due to the increasing complexity of background, the value of weight coefficient in empirical formula will be appropriately reduced to effectively affect the moving target area and ensure the effective detection of the target. Since the threshold value of weighting factor is small and noise is easy to be affected, diamond structure elements with length of 2 are used for corrosion to eliminate interference, and disk structure with radius of 4 is used [43]. The moving target area is marked by recursive representation which is easy to implement. As the center of the gate, the display value of the gate is drawn on the screen.

### C. NORMALIZED CROSS CORRELATION MATCHING

If T is the template image and F is the image to be matched, the correlation coefficient between the image to be matched and the template image is calculated by the following formula:

$$R(x,y) = \frac{\sum_{m=0}^{H}\sum_{n=0}^{W} T(m,n)F(x+m,y+n)}{\sqrt{\sum_{m=0}^{H}\sum_{n=0}^{W} T^2(m,n)\sum_{m=0}^{H}\sum_{n=0}^{W} F^2(x+m,y+n)}} \tag{5}$$

Among them, $0 \le m < h$, $0 \le n < W$, $0 \le x < x - H + 1$, $0 \le y < y - W + 1$, h, W are the height and width of the template, X and y are the height and width of the image to be matched, and R is the correlation value between the template and the image to be matched.

## IV. EXPERIMENTAL ANALYSIS OF IMAGE TARGET DETECTION ALGORITHM

### A. ACCURACY COMPARISON OF HOG ALGORITHM

Positive samples 526 and negative samples 547 were selected as test samples. The rate of accuracy of detection of the two models was tested and the effect of changing the value m of the main vector dimension on the accuracy of target detection was tested, such as: shown in Table 1, the accuracy of detection of the target detection model hog-pca-svm corresponding to the change in the main body dimension shall be measured.

**TABLE 1. Detection accuracy of target detection model based on HOG-PCA-SVM algorithm.**

| Dimension of principal vector | Test positive samples | Test negative samples | Total detection accuracy |
|---|---|---|---|
| 100 | 72.83 | 74.69 | 73.76 |
| 200 | 79.62 | 78.37 | 79 |
| 300 | 80.15 | 82.54 | 81.35 |
| 400 | 82.63 | 81.62 | 82.12 |
| 500 | 78.47 | 77.44 | 77.96 |

From the data in the table, we can see that when the dimension of the principal vector is set to 300 or 400, the detection accuracy is relatively high, which indicates that the hog features have good feature expression ability at this time. In order to compare the detection effect of hog-pca-svm with hog-svm under different principal vector dimensions, as shown in Figure 1, two curves are used to show the detection accuracy of hog-pca-svm and hog-svm with different principal vector dimensions.

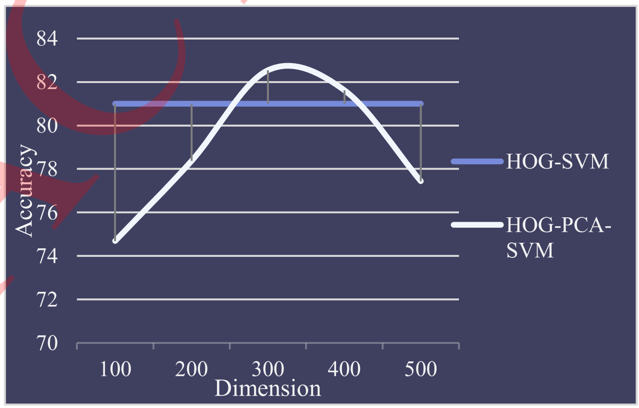


**FIGURE 1. Comparison of test results.**

As can be seen from Figure 1, the detection effect is the best when the dimension of the principal vector is between 300 and 400, and the detection accuracy is slightly higher than that of hog-svm without PCA dimensionality reduction. Therefore, the dimension of the principal vector is set to 300 when PCA dimensionality reduction is performed on hog features in this experiment. However, the feature pyramid is involved in the target detection using the DPM target detection model. When reducing the dimension of hog features of different size images, the dimension of the main vector is set as the result of multiplying the image size and the scale coefficient of 32*64 by 300.

### B. COMPARISON OF DETECTION RESULTS OF THREE ALGORITHMS

Three target detection algorithms are used to test the test data set, and the experimental data are counted. In the detection process, the overlap rate of the detected target window and the real target window must reach more than 60%.

When detecting an image, there are multiple targets. As long as the coincidence degree of one target position and the real target position meets the conditions, the detection is considered to be correct. As shown in Figure 2, the accuracy and recall rates of different algorithms in the test set are counted.

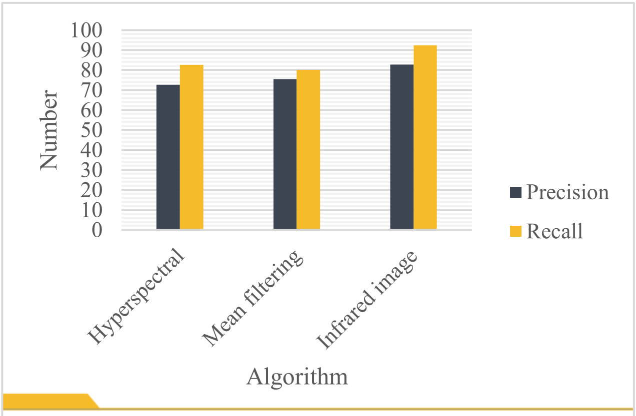


**FIGURE 2. Comparison of detection results of three algorithms.**

It can be seen from the data in the figure that the accuracy and recall rate of the infrared image target detection algorithm after feature fusion in this study are higher than those of other algorithms, the accuracy is 6.3% higher than that of the untreated infrared image algorithm, and the recall rate is 5.4%. It can be seen that the infrared image algorithm after feature fusion improves the recognition of target information and background information, the false detection rate is reduced. Compared with hyperspectral image algorithm and mean filtering algorithm, the detection accuracy and recall rate of infrared image target detection algorithm are significantly improved. The recall rate of hyperspectral algorithm is the lowest. After adding samples, the false detection rate of the algorithm can be reduced, but the missed detection rate will be relatively increased. Compared with other algorithms, hyperspectral image algorithm has the worst detection accuracy when applied to pedestrian detection.

### *C. NEW THRESHOLD SELECTION ALGORITHM*

Due to the uniform limit value of the traditional filter algorithm, this value is mainly expressed at a very low price at the beginning. In order to ensure the detection rate 100% at the beginning, the accuracy rate is sacrificed. taking the values of each simple classifier as the prediction limit, the whole process is equivalent to a search process, which is not only time-consuming and will lead to poor generalisation, but will also easily cause false detection when the image quality is poor. Through experiments, it is found that the distribution of eigenvalues corresponding to face samples and non-face samples is unbalanced, which makes them more clearly distinguished. The feature selection of Haar rectangle feature is not calculated by the original pixel value, but is obtained from the image by a simple filter. In the selection of classification features, considering the real-time requirements of computer recognition, the selection of features should be as simple as possible.

As shown in Figure 3, the abscissa is the eigenvalue of the sample, and the ordinate is the proportion of the target image corresponding to the eigenvalue in the total sample. It can be seen from the graph that in the range of 500 to 1000, the face corresponding to the Harr feature accounts for the largest proportion of the sample. Therefore, the threshold interval of each feature can be found through the eigenvalue distribution map, which greatly improves the speed of the classifier to find the threshold. At the same time, it can lock the threshold more accurately, and can use fewer weak classifiers to form a strong classifier, which speeds up the calculation speed of the algorithm.

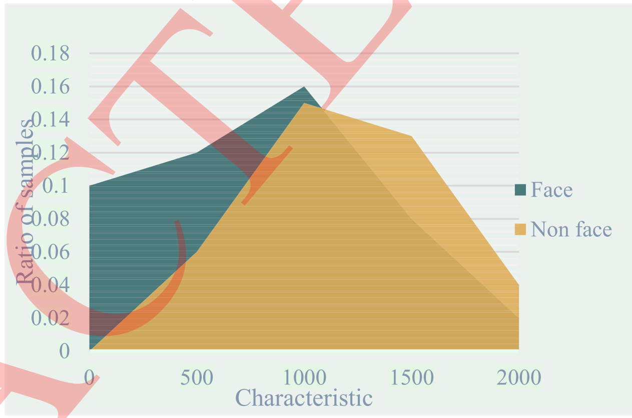


**FIGURE 3. Eigenvalue distribution.**

### *D. COMPARISON OF TARGET DETECTION ALGORITHMS IN HYPERSPECTRAL IMAGES*

In the experiment, the first 300 samples of 600 face samples, the last 300 samples of 500 non face samples are used for training, and the remaining 500 faces and non-face samples are used for detection. The full size of training samples is normalized to 48 × 128 pixels, and more than 1200 Haar features of each image are extracted. The hyperspectral image target detection algorithm is used to carry out face detection simulation experiment [44]. The experimental results are shown in Figure 4.

Although the algorithm optimization can greatly reduce the computational complexity and improve the search speed. However, in the whole search process, a lot of unnecessary calculation is generated, the most important is the error estimation of motion. Because the error matching surface of whole pixel search has the characteristics of irregular multi peak surface, there will be many relatively small average absolute errors. The possible minimum average absolute error is the local minimum, which leads to the ineffective fast convergence, Create unnecessary searches. As can be seen from the shape data, the target detection algorithm of the hyperthoracic image significantly reduces the time taken for samples to be taken, ensuring a high level of detection. At the

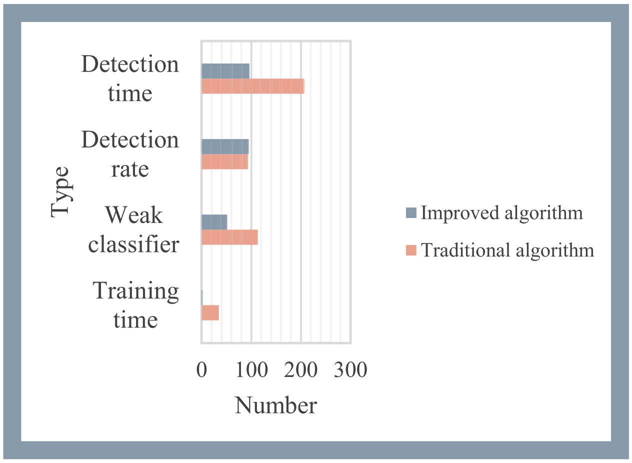


**FIGURE 4.** Comparison of hyperspectral image target detection algorithms.

same time, due to the improvement in the limit, the number of patients classifiers is decreasing and the detection time is improving.

## V. CONCLUSION

The management of the smart city in our city is based on technological and ideological innovation, the further development and innovation of digital urban governance. By creating an information platform on urban governance, restoring effective procedures for the management of cities, setting up a system for the management and supervision of staff, improving urban governance and replacing management procedures. The Government and its functional departments shall carry out their tasks voluntarily and shall carry out: intensive and efficient administration of urban management. In fact, the purpose of building a smart city is to facilitate people's livelihood and improve the functioning of the city's services, which are the urgent problems to be solved in urban development. We cannot simply carry out administrative reform of the government and construction public service establishments, The purpose of building a smart city is to make it more suited to the sustainable urban form of a wide range of public needs.

The smart city is also known as a "digital city." It links smart technology to human intelligence and changes the traditional management system through its management tools. smart innovation technology, such as the Internet of Things, its specific implementation is to effectively address various problems in urban development by optimising the structure of the system, and finally become aware of the ecological development and sustainable development of the city itself. the management of the city's own security must be carried out with the same logic. In other words, using modern information technology on the Internet and the Internet platform, we need to change the existing traditional concept of urban safety management, to innovate the way and means of safety management, in order to achieve a new development path in urban security management.

Smart city management mode is the product of the information age, and is the beneficial exploration and practice of new public management theory in urban management. First of all, we need to improve the legal system. We will continue to organize relevant laws and regulations. We will refine and improve laws and regulations, especially the laws related to smart city management, and carry out urban management activities in accordance with the law from the perspective of the rule of law. Secondly, by observing the direction of the problem, this paper analyzes the practical problems in the process of smart city management, and considers the application of image target detection algorithm in urban management at home and abroad, and combines it with the real idea, further explores the application in smart city management, promotes the effective operation of smart city management mode, and makes contributions to the development of the city.

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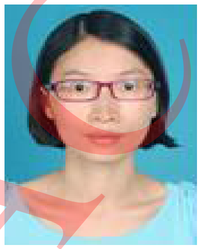

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