Retraction Notice

The Editor-in-Chief and the publisher have retracted this article, which was submitted as part of a guest-edited special section. An investigation uncovered evidence of systematic manipulation of the publication process, including compromised peer review. The Editor and publisher no longer have confidence in the results and conclusions of the article.

FC and YF either did not respond directly or could not be reached.

Intelligent resources based on active vision sensing strategy in the evolution of food aesthetics system

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Abstract. The active vision research platform allows the computer to recognize the local information around one or more images, even if the device can observe the geometric information of the objects in the area. We analyze and study the evolution of the diet aesthetics system based on the intelligent resources of active vision sensing strategies, modeling, and analysis of images with vision sensors and aim to combine the advanced vision research technology of active vision with the main body of food that is most closely related to the development of human society as the research object. The discussion makes this process more consistent with the human development process. This article is mainly divided into two parts to expand the narrative. The first part is the theoretical basis, including the construction of the active vision system, imaging applications, and these theories. The second is the specific role it plays in the promotion of dietary aesthetics as the basis for the development of intelligent resources. The article spends a lot of space on the analysis of active vision imaging. The content of this part can make the sensing strategy of active vision clearer. The experimental results show that the application of intelligent resource active visual sensing can make the sound characteristics in food aesthetics more vivid and more real. Vividness is the main indicator to reflect the beauty of food; among them, the maximum value of vividness before application is 5.97, the maximum value after application is 8.18, and even the minimum is 6.66, higher than the maximum value before smart resource application. The active visual sensing strategy of intelligent resources also has a huge impact on the aesthetics of the diet. The overall evaluation value of the audience has reached 8.41 after big data analysis. © *2022 SPIE and IS&T* [DOI: 10.1117/1.JEI.31.6.062010]

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1 Introduction

Computer vision technology has developed with the development of computer technology, and visual tracking technology is an important topic in the field of computer vision.[1] Active visual tracking has the advantages of automatic, intermittent, and multiangle tracking. Due to the continuous movement of visual equipment, the background of the collected images is complicated. Extracting moving targets under dynamic and complex backgrounds is a difficult problem in active visual tracking. The model-based vision mode is to adjust the camera on the target object, model and analyze the target and use active vision to track the target, and calculate the distance between the camera and the model through the model image taken during the field transfer process to determine the position of the field or the basic vision mode model. This technology is to transfer the camera to a certain position in space, adjust the premade image on the target, and use the same method to calculate the position of the lens.[2] For active vision systems, the main function of vision equipment is to collect real-time target information and feed it back to the control system to achieve closed-loop control, and ultimately enable the system to track moving targets stably.[3]

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Nowadays, the diet is diversified, but at the same time, diet is increasingly becoming a way of distinguishing people and defining identities. Diet has become a code of identity construction and one of the signs of ethnic identity.[4] Taking the food that is most closely related to the development of human society in daily life as the research object, it is closer to the entire human development process, and the study of its eating habits and expression changes can better reflect the development and changes of human society. The rise of industrial production in modern society has not only changed people's eating habits but also promoted the evolution of food culture to a certain extent. Such as fast food culture in fast-paced cities. Traditional food culture has slowly disappeared in the noisy society.[5] It brings together the audience's expectations in the three dimensions of art, technology, and culture unique cultural characteristics, macroelevating China. For example, dumplings have a unique appearance and a long-standing culture. When it comes to the construction of China's visual art territory, the status quo and prospects of domestic three-dimensional (3D) novels, a series of developments on the prospects of microdocumentaries, and new media communication of recipes have also been used for reference.[6]

The application of sensors and the related literature on the combination of sensors and aesthetic systems are increasing day by day. Among them, Tao et al. studied the near-field error sensing of the free-field multichannel active radiation control system and found that the best position of the error sensor that minimizes the square sum of sound pressure is between the primary sound source and the secondary sound source. When there are enough secondary sources, the optimal position of the error microphone is independent of the type of primary source. These optimal positions remain unchanged at low frequencies and move to secondary sources when the number of secondary sources increases.[7] In various other applications, object classification, target tracking, medical diagnosis, and sparse signal estimation require activity tracking. The Kalman-like estimator recently proposed by Zois and Mitra used for status tracking. Then, the relevant mean square error and general sensing cost metric are used in the partially observable Markov decision process formula, and the optimal sensing strategy is derived through dynamic programming recursively.[8] Davis and Munoz pointed out that failure to explicitly consider the size of the agent and the potentially large temporal changes in the diet may lead to erroneous predictions in any downstream analysis (such as conservation planning or paleo-habitat reconstruction). A cross-scale framework was proposed to conceptualize a diet suitable for modern ecologists and paleontologists and to provide suggestions for any research involving dietary data.[9] The purpose of Andersen et al.'s research is to adjust the development of SPOTLIGHT virtual audit tool to evaluate the young people who are considered to be with adults, evaluate the internal and internal reliability of the tool, and compare virtual audits to on-site audits. The adaptation of the tool is based on the results of literature review and qualitative investigation, investigating how young people perceive the impact of the environment on diet and physical activity behavior.[10] Many memories and imaginations are "unique sensory" representations, and what one wants can be obtained by translating these representational theories into concrete categories. Macneill provided a unique theory of sensory representation and then used it to weigh a series of debates. In the context of a unique theoretical framework, visual sensing and aesthetics are directly linked.[11] Friedman and Remeš compared the color evolution rate in the context of the visual system, measured the reflectance spectra of 24 species, and estimated five color indicators that are not related to vision, as well as the color contrast between color blocks and the receiver's neutral color space. Fit Brownian motion and Ornstein–Uhlenbeck models to estimate the evolution rate of these indicators.[12] For similar colors, the receptor noise model has been proven to be an effective method for estimating the discrimination threshold. However, the best way to quantify the saliency of distant color pairs in the perceived space has not been widely recognized. This makes it difficult to test and confirm the effectiveness of different perception distance models. Fleishman et al. used visual attention reflex to test the relative significance of different stimulus/background color combinations, which has been shown to have less impact than other commonly used color classifications in early experiments.[13] In the above research, the details of active vision sensing, such as the image data processing and analysis of the vision sensor, are studied. However, the research objects and research methods are too singular in general, so the representativeness of the data is not obvious. To highlight the active vision and the tremendous value brought by the application of sensing strategies is analyzed in this study based on the evolution of the diet aesthetics system.

Analyze the camera model, establish the relationship between the moving target and the image pixels, analyze the basic knowledge and foundation of image processing, and focus on the realization of active vision technology, such as camera calibration, coordinate system conversion, and control the camera's perspective. Increase the viewing angle of the camera while reducing the resolution; on-site calibration of the camera's pose relative to the turntable is one of the important links to ensure the accuracy of the measurement data splicing of the active vision coordinate measurement system. In this paper, a linear algorithm based on matrix direct product theory and a fixed two-step calibration method are proposed. By combining the nonlinear programming of point repeated measurement, the detection accuracy of moving objects can be improved and the influence of noise during measurement can be eliminated. It is attractive to adjust and improve the accuracy of the experiment; diet aesthetics conducts data analysis from three aspects of food characteristics (including diet plan, cooking, kitchen, and tableware), behavioral eating habits, and dietary recommendations.

2 Theoretical Basis and Analysis of Related Research

2.1 *Impact of Smart Resources on the Construction of Diet Aesthetics System*

Different regions of the world have different cultures and traditions, and food is one of the hottest topics.[14] In the field of comparative research on Chinese and Western food culture, many experts have analyzed the root causes of the differences between Chinese and Western food traditions or the differences between Chinese and Western cultures reflected from the analysis of food culture. The ultimate goal of computer vision is to enable computers to perceive and understand the world through human vision and to adapt to the environment independently.[15] People in different eras have different understandings and different value orientations, different ways of expression and conscious thinking, which reflect the speech and cultural level of the time, and also reproduce the emergence of new ideas and new trends. Artistic expression is the overall image of our emotions in time, space, and images, and a rich group and imagination are the prerequisites for creating synesthesia technology. The concept of vision is directly related. Food has become a medium of emotional communication.[16] In general, the Chinese food documentary in 2012 had a high-profile "initial impact" on the development of the entire industry. Humanity's exploration of food has never stopped. It can be said that in the evolution of human civilization, food has opened up more specific human thinking capabilities. Food anthropology uses food as a window to dynamically study the issues of people, society, and nature behind food and study the two-way flow of objects in nature and people in society. Its multifaceted interdisciplinary research has become a discussion of social politics, Expansion of thinking on issues such as economic system and cultural adaptation. The food list of the world's intangible cultural heritage is constantly expanding. The cuisine launched by French cuisine reflects the unique cultural characteristics and dining etiquette. The traditional Mexican diet uses corn, beans, and peppers as the main ingredients. The ingredients are planted, harvested, and then cooked. Production is the spiritual sharing of traditional society. The preparation time and procedures of traditional Japanese cuisine of Japanese cuisine are relatively cumbersome. The rise of fast food has had an impact on traditional cooking skills, the corresponding food etiquette, and eating habits, and the selection of World Intangible Heritage has prompted traditional skills to regain attention. The food culture is extended and inherited.[17] Food follows the cultural operation mode to construct different cultural meanings. Some of the food stills are shown in Fig. 1.

2.2 *Analysis of Active Vision System Design Strategy*

Color images contain rich visual information, and vision is the most important feeling for a person to obtain information. Visual information accounts for 80 of the total information collected by individuals.[18] Vision sensors are popular among robot researchers because of their low price, flexible use, large amount of information, and no need to touch targets. From a biological point of view, only the human eye has high resolution in the central area of the retina, and the lack of vision in the high resolution area is compensated by the rotation of the eye.[19] Active pan/

Fig. 1 Some food stills.

tilt control is the basis for realizing active vision sensing. To optimize the real-time performance of the system, it is necessary to increase the processing speed, increase its algorithm, and increase the communication speed to ensure the real-time performance of the system. The main technical basis of active generation is to choose to understand the field of view and track. The structure of the active vision system is shown in Fig. 2. An active visual tracking system that removes motion information from the image layout can give full play to the real-time automated monitoring of automated robots, uncontrolled tracking and tracking, and drone vision methods, and can expand the monocular vision range of monitoring. The object image in the image is the real object image on the camera's magnetic field after the viewing angle is changed. It is different from the real object in shape, showing close-up features of large and small.[20] On the one hand, the actual shape of the object needs to be restored before application; on the other hand, to determine the relative position of the object and space, the camera needs to measure, that is, the relationship between the camera coordinate system and the field coordinate system is statistical.[21] The behavior of the active generation is that the camera can be rotated, so the correlation between the camera coordinate system and the field coordinate system is not unique, and a lot of adjustment settings are required.

Compared with the static background visual tracking system, the active vision system has stronger flexibility and intelligence. It can be adjusted according to the movement of the target during the tracking process, and it can track the target in a large range.[22,23] By adjusting the pitch and yaw angles of the PTZ camera in real time, the optical axis of the camera is always pointed to the geometric center of the reference object to solve the FOV constraint problem. The research on the FOV constraint problem mainly focuses on the 3D motion field and the plane-based motion graph 3D exercise plan. Among them, the role of light is very obvious; it will cause the contrast of the road edge in the image to change, and it will also increase the intensity of the tree shadow on the road.[24] In fact, these are the main interferences of image algorithms. The image editing module is responsible for removing moving objects on a complex basis. The

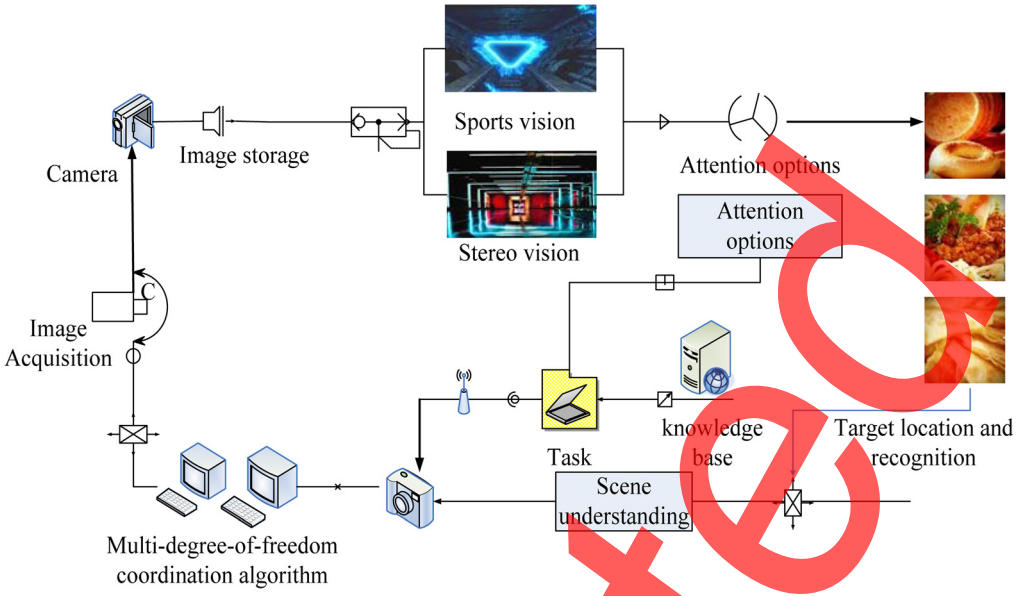

Fig. 2 Active vision system structure.

controller controls the rotation movement according to the change of the image position restored by the image.[25] To this end, first analyze the relevant parameters such as the coordinate system of the camera imaging, and the system coordinate system is established as shown in Fig. 3.

Suppose the rectangular plane coordinates of the object are (a, b), and its imaging coordinates are expressed as

$$\begin{bmatrix} x \\ y \\ u \end{bmatrix} = \frac{1}{z_i} \begin{bmatrix} g & 1 & 1 \\ 1 & g & 1 \\ 1 & 1 & u \end{bmatrix} \begin{bmatrix} X_i \\ Y_i \\ Z_i \end{bmatrix}, \tag{1}$$

$$\begin{vmatrix} p \\ q \end{vmatrix} = \begin{bmatrix} u & 1 \\ 1 & u \end{bmatrix} \begin{Bmatrix} \frac{1}{tx} & 1 & p_1 \\ 1 & \frac{1}{ty} & q_1 \\ 1 & 1 & p \end{Bmatrix} \begin{bmatrix} x \\ y \\ u \end{bmatrix}. \tag{2}$$

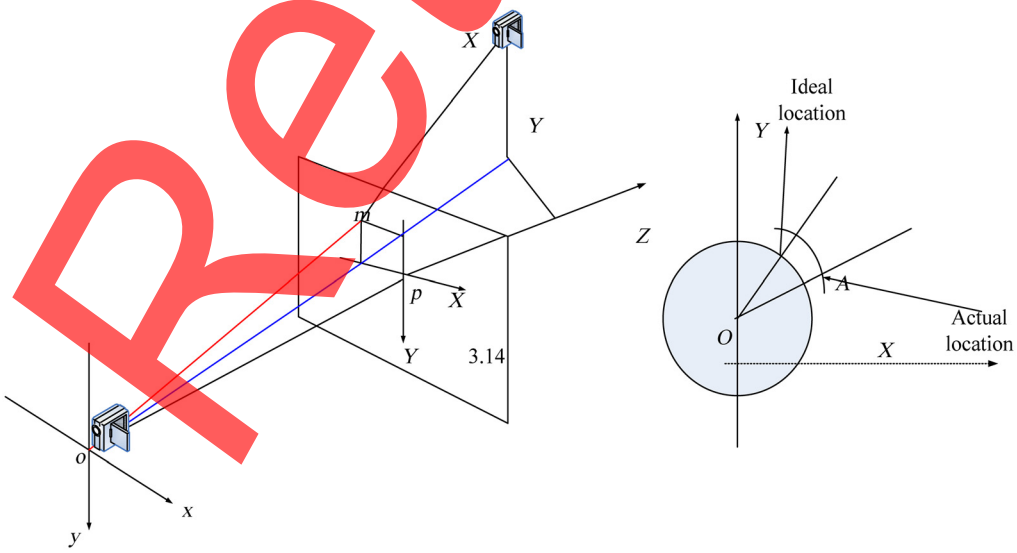

Fig. 3 Camera system coordinate system.

Equation (2) is derived from the relationship between the image point on the imaging plane and the internal image imaging coordinates of the camera, tx, ty are the physical distance on the axis x and axis y, respectively; according to the linear image model of the visual sensor, the projected object projection point can use the equation as

$$\left|\begin{matrix} p \\ q \end{matrix}\right| = \frac{1}{z_i}\begin{bmatrix} u & 1 \\ 1 & u \end{bmatrix}\begin{bmatrix} \delta_x & 1 \\ 1 & \delta_y \end{bmatrix}\begin{bmatrix} p_1 \\ q_1 \end{bmatrix}. \tag{3}$$

Among them, $\delta_x = \frac{h}{tx}$, $\delta_y = \frac{h}{ty}$, h is the focal length; the coordinate relationship between the cloud platform and the camera is constructed and expressed as

$$\begin{Bmatrix} l \\ e \\ f \end{Bmatrix} = \begin{bmatrix} \cos\delta & 1 & -\sin\delta \\ 1 & u & 1 \\ \sin\delta & 1 & \cos\delta \end{bmatrix}\begin{bmatrix} u & 1 & 1 \\ 1 & \cos\gamma & \sin\gamma \\ 1 & -\sin\gamma & \cos\delta \end{bmatrix}\begin{bmatrix} l_2 \\ e_2 \\ f_2 \end{bmatrix}, \tag{4}$$

$$[\,p \quad q \quad u\,]^{\alpha} = \frac{u}{{}^{g}z_i} \bullet \begin{bmatrix} u & 1 \\ 1 & u \end{bmatrix} \bullet [\,{}^{g}x_i \quad {}^{g}y_i \quad {}^{g}z_i\,]. \tag{5}$$

Among them, δ, γ are the pitch angle and the movement angle, and the center point of the image of the object is represented by a pinhole, that is, $[\,p \quad q \quad u\,]^{\alpha}$. To accurately image the sharpness, it is necessary to measure the pixels during the movement. This process uses the size of the object to calculate the reference. The coordinate value of the object in the direction of the optical axis of the camera, recorded with an equation, there is

$$VK_1 = \frac{K_1K_5}{\sin K_1VK_5} \otimes \frac{\sin K_3VK_5}{K_3K_5} * VK_3 = c \bullet VK_3, \tag{6}$$

$$c = \frac{K_1K_5}{\sin K_1VK_5} \otimes \frac{\sin K_3VK_5}{K_3K_5}, \tag{7}$$

$$VK_3 = \sqrt{K_1K_3^2/(1 + c^2 - 2\cos K_1VK_3)}, \tag{8}$$

VK_1 is the precise parameter value of the projection point on the equivalent plane, which is obtained according to the law of cosine; the value of c is obtained according to the law of sine. Borrowing a four-dimensional column vector to simplify it, we have

$$x + y = \begin{bmatrix} x_i + y_i \\ x + y \end{bmatrix}, \quad \eta x = \begin{bmatrix} \eta x_i \\ \eta x \end{bmatrix}, \tag{9}$$

$$r = x + y = \begin{bmatrix} x_1 \\ x_2 \\ x_3 \\ x_4 \end{bmatrix}\begin{bmatrix} y_1 \\ y_2 \\ y_3 \\ y_4 \end{bmatrix} = \begin{bmatrix} x_1 \\ X \end{bmatrix} * \begin{bmatrix} y_1 \\ Y \end{bmatrix} = XY. \tag{10}$$

Among them, x_i, y_i is the effective value of the projection point on the abscissa and ordinate, and η is the effective pixel value. The equation of motion of the object during the movement can be obtained as

$$\begin{bmatrix} \bar{p} \\ q \end{bmatrix} = g_{mr} \otimes m_r + g(\beta \otimes l \bullet \beta_l) + g_{\beta r} \bullet \beta_r, \tag{11}$$

$$g_{lr} = \frac{u}{{}^{\alpha}z_3}\begin{bmatrix} -\delta_p & 1 & \nu_l \\ 1 & -\delta_q & \nu_r \end{bmatrix}{}^{\alpha}_{r}g - {}^{\alpha}_{r}g^{t}. \tag{12}$$

${}^{\alpha}z_3$ is the depth information in the imaging coordinate system, and g_{lr} is the relative position between the center of the vision sensor and the object, which is also a constant value. After

analyzing the imaging-related details, the image processing is the next step, and the active vision image processing is analyzed according to the linear weighting method, there are

$$a, b = \cos^{-1}(o * w) + w \otimes i(o + 1), \tag{13}$$

$$P_a = Q_2 \cos a + (1 - \cos a)cc^o + [c] \bullet \sin a, \tag{14}$$

$$f(a) = \frac{u}{L}\sum_{i=1}^{L}[\alpha_i^u - (a - \alpha_i^1)^{u-1}]\cos \alpha. \tag{15}$$

p_a is the public coordinate system in the space. Active vision needs to obtain the initial position information of the moving target through the target detection algorithm, combining the light and the darkness of the surrounding environment to construct the deviation matrix a, b; $f(a)$ is the absolute value of the average deviation. The images between adjacent frames perform the difference operation to judge the moving target, and the equation is expressed as

$$f_i = w_1 \sum_{i=1}^{m} j(\|a_i\|^2)\varphi[b(a_i) - v], \tag{16}$$

$$f_i(v) = w_r \sum_{i=1}^{m_i} j[(b - a_i)/k]^2\varphi[b(a_i) - v]. \tag{17}$$

a_i is the density estimation, where k is the measured target and j is the predicted pixel value around the measured target. The similarity between the two is determined by ϕ. Using the linear approximation to define it, the equation can be expressed as

$$s(s(i), t) \cong \frac{1}{2}\sum_{r=1}^{n}\sqrt{s_r(i_0)t_i} + \frac{1}{2}\sum_{r=1}^{n}s_r(i)\sqrt{\frac{t_{ir}}{s_r(t_0)}}, \tag{18}$$

$$S(i) = \frac{1}{2}\sum_{r-1}^{n-1}\sqrt{s_i(i-1)t_r}/\frac{l_e}{2}\left\|\frac{t - s_i}{e}\right\|^2, \tag{19}$$

$$T(s_i) = \left\{\begin{array}{ll} 1 & I - (s_i^{r_1}) > 1 \\ 0 & \text{other} \end{array}\right\} - \sum_{0 \le i \le N} 2t_{i-1}. \tag{20}$$

$s(s(i), t)$ is the field of perception, which is the description of the feature value t_0, and $T(s_i)$ is the expected value. After obtaining the binary descriptor l_e like this, it is equivalent to completing the feature t_r extraction.

3 Active Visual Sensing Plays a Role in the Development of Food Aesthetics

3.1 *Active Visual Sensing Strategy Experiment*

The active visual search technology platform allows the computer to identify local information through one or more pictures. The active vision installation framework is shown in Fig. 4. The optical attraction component uses optical materials to obtain the above-mentioned median value with respect to the depth. At present, foreign 3D rewriting technology is mainly used for online monitoring of industrial production, medical research, auxiliary design, maintenance, and repair of games and artworks. Various fields increasingly rely on 3D topographic surveys. The traditional passive stereo technology reflects the imaging measured under natural light. Most of the research on stereo generation technology has focused on the optimization and design of stereo compatible algorithms. The calculation part relies on computers or digital equipment in application. And the software part needs to design a suitable algorithm to calculate the transition from

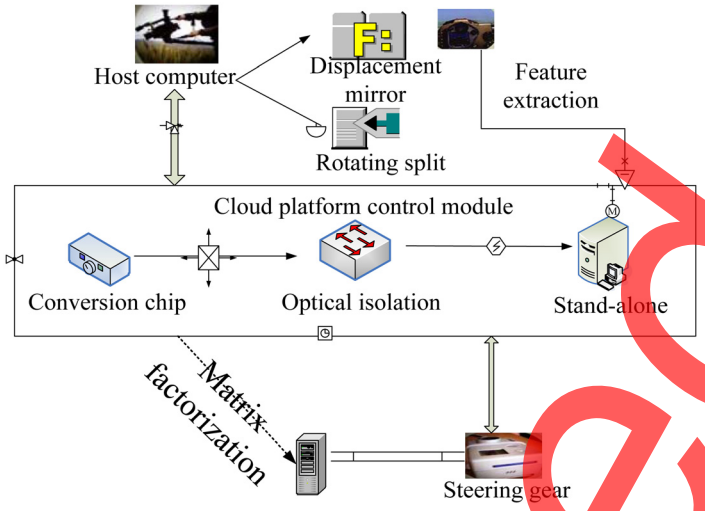

Fig. 4 Active vision installation architecture.

the physical median to the depth. In food documentaries, directors more or less show the relationship between people and food through this window, as well as the traces of traditional culture remaining in the changes of the times, hoping that young people can understand food culture through images inherited. The groundbreaking use of a large-format digital camera with interchangeable lenses makes the space appear concrete and detailed, making the foreground, middle ground, and background blurry and realistic freely.

For the Chinese, diet is not just for the physiological needs of a fruit belly. The taste is not limited to the taste of the food itself. The taste of memory, the taste of childhood, the taste of grandma, and the taste of the new-year represent a period of life. Experience contains the longing for time and hometown. The food culture complex is full of our common memory. Perhaps, the local accent has changed and the temples have faded, but the eating habits are difficult to change. The memory on the tip of the tongue will last forever. This is the national and cultural identity maintained by food. More and more documentaries now use VR to achieve immersive experiences. Pure vision, hearing, and touch can no longer meet the needs of users. Recently, many new VR technologies are being developed to stimulate the lips and the tip of the tongue to let the experiencer. Chewing in a virtual environment, even if there is no real food in the mouth, you can still experience the taste of different foods. Test the stability time of different installation methods of the cloud platform system. The data are shown in Table 1.

The controller controls the movement of the switch according to the change in the position of the beam returned by the image. The servo system executes the controller's commands, controls movement, adjusts the camera position, and detects power failures. When the object moves in the visual viewing area, the position of the object can be tracked. The advantage of this method is that the space itself does not require complex applications. In addition to the limitation of the viewing angle of the camera, the active viewing mode solves the problem that the range of motion is limited by the angle of view of the camera, but at the same time there are also problems such as excessive signals leading to an increase in calculation time. The results are shown in Table 2.

Table 1 Settling time test data.

Location	Group 1	Group 2	Group 3	Group 4	Group 5
No-load steering gear	0.199	0.198	0.203	0.127	0.125
Cloud platform	0.203	0.224	0.209	0.187	0.127
Install the vision sensor	0.118	0.202	0.147	0.155	0.123

Table 2 Performance comparison of active visual tracking methods.

Method	Performance		
	Fixed threshold tracking	Adaptive visual tracking	Light detection adaptive
Recognition rate (%)	54.21	96.87	94.27
Single frame time consuming (ms)	49	131	77

Cooking technology is the key to the world-famous Chinese cuisine. In Chinese cuisine, the key to cooking is to pay attention to the heat control and coordination of the five flavors. "Taste" is the highest goal of Chinese food, that is, the raw materials are delicious. The theme of Chinese cuisine is how to taste the ingredients and analyze the influence of active visual sensing strategies on dietary aesthetics for the beauty of interest, beauty of process, beauty of interaction, sense of ritual, etc., as shown in Fig. 5.

For model-based tracking, the idea is to model first, then feature matching, and finally track through some matching methods. Since the target motion space is much larger than the visual field of the visual equipment, how to control the posture of the visual equipment to ensure that the target is kept within the visual field of the visual equipment at all times is an important research direction of visual control. However, in practical applications, it is difficult to establish a model of a moving target, so the application of this method is limited. The main difficulty in realizing an active vision system is that there will be noise in the process of image acquisition, partial occlusion, illumination changes, complex background, and easily confused with the target and many other complicated situations in the process of target tracking. Therefore, there are still some shortcomings in the record of dietary aesthetics. The effects presented cover regional, language characteristics, eating habits, cultural identity, and other characteristics. Correlation analysis is carried out on pictures, sounds, and stories, as shown in Fig. 6.

In the entire target tracking system, the camera provides feedback on the motion information of the dynamic target. In the tracking process, the posture of the visual device changes all the time, and the background of the captured image also changes all the time. Therefore, the target is identified from the dynamic background and the target parameters are extracted, and how to adjust the pose of the visual device in real time according to the target motion information, so the target remains in vision in the field of view of the device, there are two difficult problems in visual tracking.

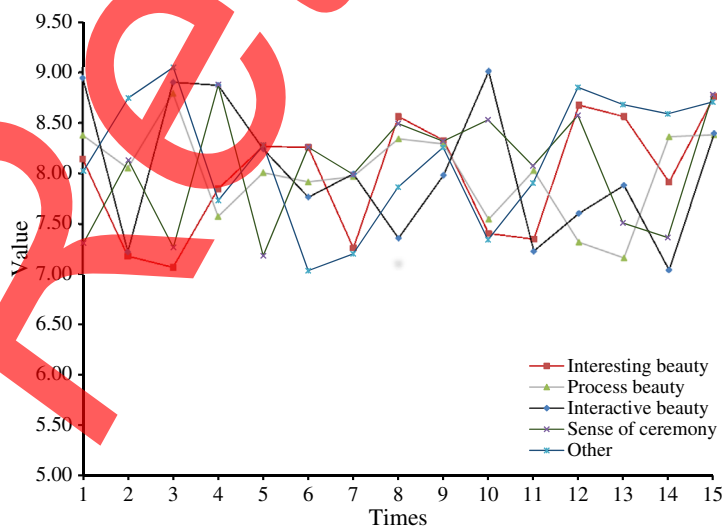

Fig. 5 Active visual sensing strategies affect dietary aesthetics.

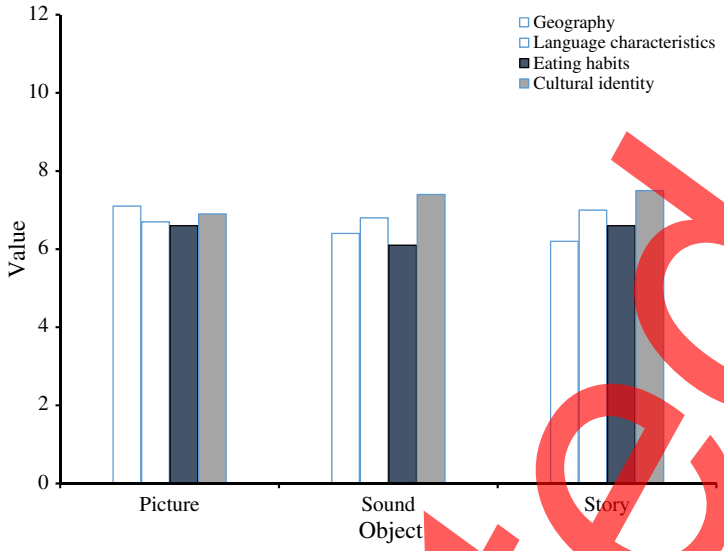

Fig. 6 Active visual presentation effect.

3.2 *Smart Food System*

The emotion reflected in the film and television works is mainly an aesthetic emotion. In the social emotion structure, after we exclude the low-level physiological emotions, the human's high-level social emotions can be divided into three emotions: beauty, morality, and reason. In the perspective of receiving aesthetics, creators cannot blindly cater to the user's psychology. When the gap between the expected field of vision and the appearance of the work is small, it is difficult for users to be interested in popular content, but too large a gap in aesthetic distance may cause users to give up directly. Viewing, therefore, the aesthetic distance needs to be maintained in a moderate range; it is necessary to strive to break the user's established schema, but also to continuously improve the user's aesthetic level. Media dependence and Internet loneliness have become a common symptom. Therefore, we have a deep understanding of the user's heart, expressing delicate emotions in a life-like way, and let users feel that this warmth penetrates into the fragmented life, which is what short videos are good at. The form of expression is what the creator of short video must do. In food documentaries, directors more or less show the relationship between people and food through this window, as well as the traces of traditional culture remaining in the changes of the times, hoping that young people can understand food culture through images inherited. The focus of the image of "Bite of the Tongue" is to show those humble and simple workers in the process of searching, fishing, collecting, building, making, and cooking. They will embrace and appreciate the gifts of nature with them. It emphasizes the use of descriptive techniques including relaxation, rehearsal, visualization and communication, performance, and free metaphors, emphasizes the performance of "the wonderful relationship between people and food," and praises it as the foundation of "history from top to bottom." The following is a research on the dietary aesthetics of this work and analyze the effect of emotional acceptance, as shown in Table 3.

The display of active vision allows the selection and operation of the visual tracking system, which improves the flexibility of the system and the ability to adapt to the surrounding environment, autonomously recognizing moving targets, and stably tracking dynamic targets. The system adopts image-based visual tracking, provides the feature value of the visual image to compare with the expected image feature, and designs the controller to control the rotation angle of the turntable. For the analysis of active visual sensing strategies, the above table mainly analyzes big data from the sense of beauty, morality, and sense of reason. Among them, the sense of beauty and morality are more emphasized in the diet aesthetics system. The maximum value investigated is 2.01 and 2.02. Focus on the overall evaluation is shown in Table 4.

High-resolution digital cameras and real-time systems collect high-resolution digital images of test objects and use high-performance computers to capture the 3D coordinates of the test

Table 3 Emotional acceptance effect.

	Beauty	Sense of morality	Sense of sanity
Number of cases	200	200	200
Minimum	2.01	2.02	1.55
Maximum value	4.87	4.87	4.87
Average value	4.173	4.098	4.105
Standard deviation	0.653	0.791	0.794

Table 4 Overall evaluation.

	Number of cases	Minimum	Maximum value	Average value
Process evaluation	100	4	9	5.17
Realism	100	5	9	5.89
Tableware, kitchenware	100	6	9	7.88
Program effect	100	4	8	5.97
Touching story	100	5	9	6.28
Sense of life ritual	100	6	9	8.01

objects and their algorithms through imaging and relationships. From the perspectives of sound, picture, performance art, and style performance, the role of the application of intelligent resources on the development of the food aesthetics system was analyzed. First of all, in terms of sound, for the same food, in different expressions of different people, it also represents different culture. The culture on the "taste buds" is subtle, constantly changing and developing with social changes. The cultural changes of different ethnic groups can be reflected in the food. At the same time, we can also find the development process of ethnic groups from the changes in the presentation of food. The sound characteristic analysis is shown in Fig. 7.

The data in the above figure show that the application of intelligent resource active visual sensing can make the sound characteristics in food aesthetics more vivid and more real; among them, the maximum value of vividness before application is 5.97, the maximum value after application is 8.18, and even the minimum is 6.66. It is much higher than the maximum value before smart resource application. The 3D coordinate measurement can be achieved by stitching

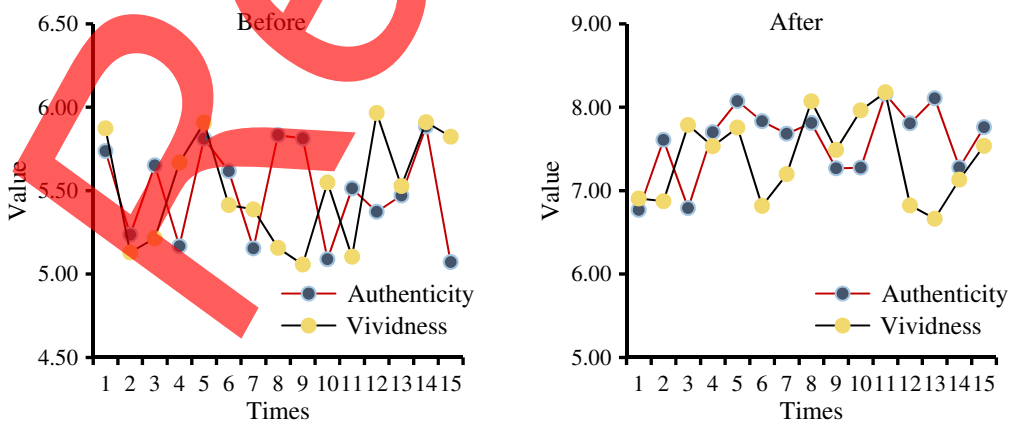

Fig. 7 Sound characteristics analysis.

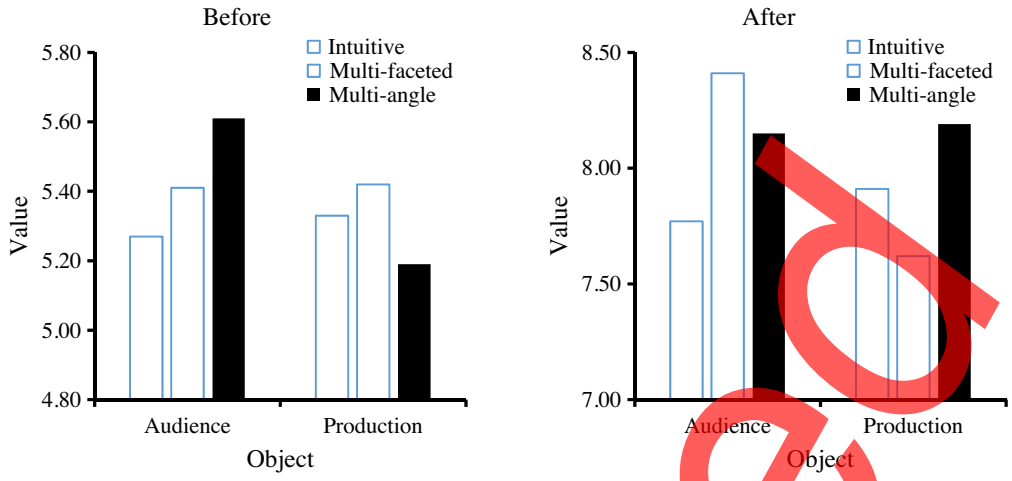

Fig. 8 Screen analysis.

multiple images acquired by the camera at different imaging positions, and the measurement space can be expanded arbitrarily, but the cumulative error of this method is relatively large, and the measurement accuracy decreases as the measurement space increases. The exhibition is no longer limited to special occasions. Everyone in daily life has become a performer and an audience, and they are constantly changing between the two roles. People use social media to imagine and experience a sense of virtual reality. The purpose of this kind of share is to express oneself selectively to obtain self-pleasure and identification. The data are the comparative analysis from the angle of intuitiveness, multifacetedness, and multiangle of the screen, as shown in Fig. 8.

The light intensity control unit controls the luminous intensity of the characteristic points on the optical measuring rod to obtain uniform characteristic image points in the entire measurement range. There are few motion constraints, and corresponding definitions and rotations can be designed for different types of robots and vision sensors, which helps to fully understand the customization process and automation. The active visual sensing strategy of intelligent resources has also brought a huge impact on the aesthetics of the diet. The overall evaluation value of the audience has reached an 8.41 score after big data analysis. Aiming at the problem of the limited field of view of a single camera, the method of tracking the optical probe can be used to measure each part of the test piece separately, and then the overall measurement can be completed through global data splicing. The coincidence of different genetic concepts has created many symbiotic historical centers. Data statistics from three aspects of artistic effects: lyric, rendering, and fiction, as shown in Fig. 9.

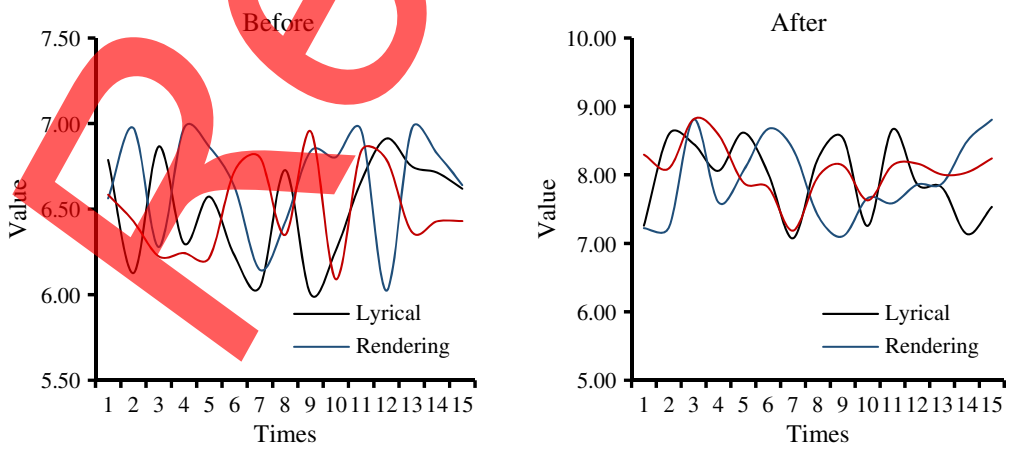

Fig. 9 Artistic effect analysis.

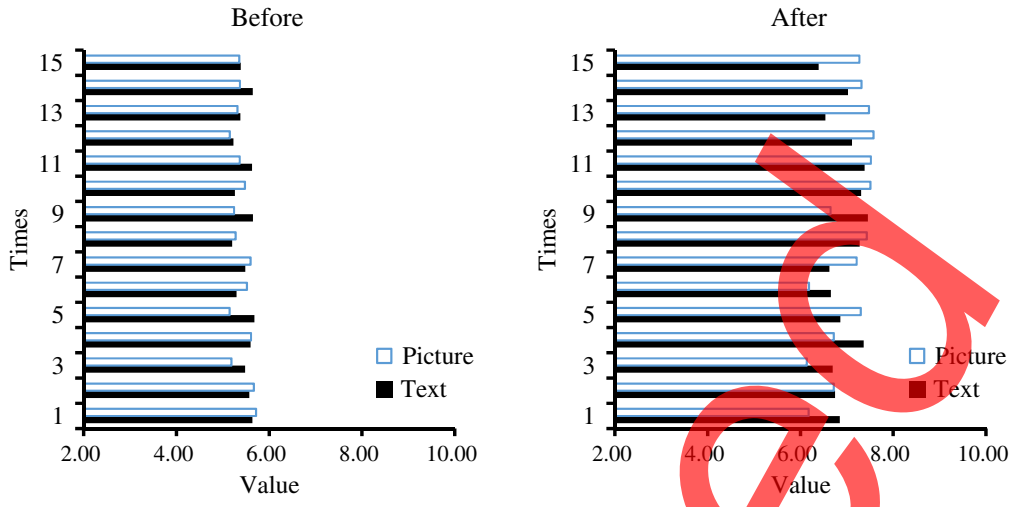

Fig. 10 Analysis of style manifestation.

Compared with other sensors, the visual sensor has the largest information capacity of the surrounding environment, and it is a completely noncontact detection method. The positioning based on a single frame image only uses one frame of image for image processing. This kind of visual positioning method adopts very little environmental information. A reference artificial icon with a known position must be set, the characteristic elements of a frame of image must be extracted, and the pose coordinates relative to the artificial icon must be solved. In the visual servo control system, it is necessary to use real-time captured images with features of the reference object to control the robot. The position-based viewing control system uses the image captured by the vision sensor to calculate the camera's position in the global coordinate system. The intelligent resources of active vision sensing are analyzed on the improvement of pictures and texts in terms of style expression, as shown in Fig. 10.

4 Discussion

Because the solution of nonlinear systems requires monocular vision based on subtype features, the process is more complicated and the application scenarios are not particularly extensive. Using the feature point pairs of the current image feature and the desired image, the homography matrix between the two viewpoints is calculated. Then, the homography matrix is decomposed to obtain the rotation component and position component of the vision sensor, and then the position and posture of the robot in the world coordinate system are obtained according to the hand-eye relationship. Due to factors such as improper application design and excessive software processing time in the application system, the system cannot meet the limited time response requirements, leading to real-time problems of embedded applications. If a large sampling frequency is set, the sensor will continue to scan to view the information status, which will lose a lot of unnecessary power; the sampling frequency is too low, the sampling is insufficient, and the user status monitoring error is large. The sampling time interval is too large, although the energy consumption is obviously reduced, but at the same time the detection error is obviously increased. If the sampling interval is too small, a lot of energy will be consumed. The final control point of the pan/tilt control module is to place the camera's viewing angle near the set angle, which is first achieved by rotating the pan/tilt switch of the cloud platform.

5 Conclusion

Current food writers are combining everyone's cultural identity with TV photographers. While guiding the cohesion and culture of health and beauty, they also clarify the common cultural foundation and taste of beauty for the viewers. Authors can develop important stories, voices, and values on certain topics. The main point of the article is that storybooks can make audiences

feel different points of view by proposing a specific topic. From the perspective of cognitive psychology, people's cognitive process is also the process of inner emotional changes. The temperature of this emotion can be expressed by visual symbols, feel emotions with vision, create visual associations with emotions, and increase the cognition of synesthetic design. Active vision is the current hot direction in the development of computer vision. Under the fast-paced cutting combination of fast push, fast pull, and fast push, it naturally brings out the delicious food hidden in the folk, the deep feelings between people and food, and the urban temperament that is hidden under the daily surface. Regarding food as a light, in today's digital age, there is deeper thinking, fast-paced virtual reality, and symbols of family and national emotions and humanistic care embodied in food have entered the relatively stable image of the medium. The information of each dish pays more attention to Chinese culture, science, and storytelling. It is told to the classroom from time to time. The cultural interpretation and the hidden history behind the meal also inadvertently enhance the style and taste of the film.

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Data Availability

No data were used to support this study.

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