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APPLICATION OF INTELLIGENT ROBOT IN THE INTELLIGENT RECOMMENDATION OF MOBILE APPLICATION CONTENT

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Abstract. In order to bring a new perspective of human-computer interaction to TV program hosts, increase program highlights, and promote the integration and development of new technologies and new media, the authors propose the application of intelligent robots in mobile application content intelligent recommendation. Designed and implemented an artificial intelligence virtual assisted hosting robot system, including overall system design, knowledge base design, and robot interaction control system implementation. A "smart investment advisory model" has been established based on multidimensional calculations and analysis of project areas, investment amounts, and on-site attention. The results showed that the final system did not recommend the 6th and 7th investors with the highest matching degree in the field, nor did it recommend the 8th investor with the highest matching degree in investment amount, nor did it recommend the 4th investor with the highest matching degree in communication. Instead, it selected the 1st investor by combining three factors, the entrepreneurs of this period ultimately followed Little A's advice and chose investor 1 as their entrepreneurial investor. In 46 investment recommendation applications, there were 6 times when Mr. A's investor selection suggestions were not the highest bidding investors on the program site. In these 6 times, 5 entrepreneurs followed Mr. A's suggestions, and his analysis received recognition from different entrepreneurial mentors multiple times, demonstrating the rationality of Mr. A's recommendations, with a recommendation adoption rate of 97.72% (45/46). The system has achieved intelligent data analysis and recommended reasonable investors for entrepreneurs, with a high recommendation adoption rate. The comprehensive application of technologies such as speech recognition, facial recognition, and natural language processing has achieved interactive functions for program hosting, ensuring consistency and fluency in program hosting. The practical application effect is good, promoting the application of artificial intelligence robots in television media.

Key words: Artificial intelligence, Hosting robots, Natural language processing, Recommendation algorithm, Q&A system

1. Introduction. With the development of technologies such as artificial intelligence, big data, the Internet of Things, and 5G, "everything is a medium" is no longer just a beautiful vision. Intelligent technology has already integrated into every aspect of people's lives and profoundly changed and shaped the news and communication industry as a core driving force, giving birth to real-time responsive media services. A truly user centered and interconnected ecosystem is emerging, continuously providing dynamic and infinitely close to media scenarios [1]. The popularity and development momentum of smart media is strong. According to a report by International Data Corporation (IDC), the global smart voice assistant market is expected to reach a scale of 7.7 billion US dollars by 2025. The Global Data Journalism Survey shows that data news is showing a rapid growth trend globally, with over 70% of surveyed news organizations reporting that they have started using data news for reporting in the past five years [2]. This data indicates that data news, as one of the important directions for the development of intelligent media, has gradually become the mainstream form of news reporting.

In the perspective of intelligent media, traditional news production faces a series of problems and challenges: Firstly, information overload. In the Internet era, information sources are extremely rich, and traditional news may be difficult to meet the public's demand for high-quality news content when screening and integrating a large amount of information. Secondly, the issue of timeliness [3]. The production and dissemination speed of traditional news is relatively slow, making it difficult to meet the modern people's pursuit of real-time information. With the rise of emerging platforms such as social media, traditional news faces serious challenges

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in terms of timeliness. Thirdly, the objectivity and accuracy of news [4]. Due to the influence of human factors, political stance, commercial interests, and other factors, traditional news reporting may sometimes encounter issues such as bias and inaccuracy, which can affect the objectivity and accuracy of news. Fourthly, low audience engagement. The traditional news production process is mostly top-down, with relatively low public participation [5]. However, audiences increasingly hope to participate in the production and dissemination of news, so traditional news may not be able to meet this demand. Fifth, the presentation form is singular. The traditional form of news presentation is relatively single, mainly consisting of text, images, and videos, which is difficult to meet the needs of modern audiences for diverse and visual information [6]. Data news is an innovative form of news that has emerged from the perspective of intelligent media. Based on data elements, it provides an effective way to solve problems in traditional news production by fully utilizing interdisciplinary knowledge such as big data, artificial intelligence, and computer science. A way of conveying news information to readers through visualization and interaction.

2. Literature Review. Until now, many researchers have conducted various studies on robot content recommendation in open domain human-computer interaction systems [7]. Meng et al. proposed an intelligent recommendation method based on multi interest networks and adversarial deep learning, which applies multi-source behavioral information to multi view embedding extraction for better predictive performance. Specifically, multi view preference embedding, including self embedding, interaction aware embedding, and neighbor based embedding, is combined to build user interests at a finer granularity [8]. Zheng, F. et al. proposed a personalized education system based on hybrid intelligent recommendation. Specifically, a hybrid framework for artificial intelligence has been proposed, with a focus on providing targeted recommendations for implementing a comprehensive standard curriculum plan. This will be the main tool for creating flexible differentiated teaching plans that fully meet the individual needs and specificity of each student [9]. Zhang, X. et al. proposed a collaborative filtering recommendation algorithm that improves the user model. Firstly, the algorithm takes into account the rating differences caused by different user rating habits when expressing preferences, and adopts a decoupling normalization method to normalize the user rating data; Secondly, considering the forgetting transfer of user interests over time, a forgetting function is used to simulate the forgetting law of scores, and the weight of time forgetting is introduced into user scores to improve the accuracy of recommendations; Finally, improvements were made to the similarity calculation when calculating the nearest neighbor set [10]. Ghahramani, M. et al. proposed an intelligent method for route recommendation in an IoT waste management system under given spatial constraints. It conducted a thorough analysis based on artificial intelligence methods and compared the corresponding results [11].

The author introduces an artificial intelligence virtual assisted hosting robot, little A brother, designed and developed based on the needs of the CCTV Entrepreneurial Investment Program. Little A appeared on the TV screen as a cartoon character, able to perform corresponding robot actions while engaging in intelligent conversations. Its use in programs mainly includes two aspects: Firstly, partnering with real hosts to assist on-site hosts and increase intelligent interaction; The second is to recommend investment projects and investors reasonably through data analysis.

3. Research Methods.

3.1. Related Work.

3.1.1. Knowledge Q&A System. Knowledge question answering systems are one of the important research directions in the field of natural language processing, with the aim of enabling machines to communicate, think, and answer questions like humans. In 1950, the famous British mathematician Turing published a paper titled "Computers and Intelligence" in Mind, proposing the concept of machine intelligence and the experimental method for machine intelligence testing, the Turing Test. Afterwards, a number of question and answer systems for professional fields emerged in Western countries, such as ELIZA for mental illness and Baseball question and answer system for the American basketball league. The START Q&A system developed by the Massachusetts Institute of Technology in the 1990s was the world's first open domain Q&A system. In the 21st century, with the emergence of IBM's Watson and Apple's Siri, the application of question answering systems has experienced explosive growth, mainly including knowledge-based question answering systems, community-based question answering systems, and web-based question answering systems [12].

A question answering system based on a knowledge base, which uses the content in the knowledge base as the source of knowledge. Knowledge is mainly stored in a knowledge graph or structural document in the form of triplets "entity, relationship, entity" or "entity, attribute, attribute value". How to construct a knowledge graph and how to query a knowledge graph are two important research directions. A community-based question answering system, with question answering communities as the source of knowledge, mainly focuses on problem classification, question matching, and answer screening. The purpose of problem classification is to narrow down the search scope of questions and improve the accuracy of answer acquisition. Question matching is the process of comparing the actual question text with the question answer, which can be further divided into text similarity comparison and semantic similarity comparison, in order to find similar questions and obtain answers. Answer screening is the process of selecting the best answer from multiple sources. The web-based question and answer system uses the Internet as the source of knowledge, and uses search engines to search for answers to questions contained in web pages. The advantage is that there is no need to create and prepare knowledge data in advance, and the latest knowledge content can be obtained at any time. The disadvantage is that web search answers are not precise enough, making it difficult to ensure the effectiveness of question answering compared to knowledge bases or community question answering systems. The required research content includes problem keyword extraction, problem rewriting, reading comprehension, and named entity recognition.

The author comprehensively considers the advantages and disadvantages of question answering systems with different answer sources and constructs an auxiliary program hosting robot question answering system suitable for TV program recording scenes.

3.1.2. Recommendation System. Recommendation systems are an application research direction in the field of data mining. Traditional recommendation algorithms can be divided into five categories: Content-based recommendation algorithms, collaborative filtering based recommendation algorithms, knowledge-based recommendation algorithms, association rule-based recommendation algorithms, and hybrid recommendation algorithms [13,14].

Content based recommendation algorithm is based on the user's previous rating of the project, learning the user's preferences, and recommending content that is similar to the user's preferences to the user. The advantage is that there is no need for user historical data, and there is no cold start problem with new content. The disadvantage is that there is a cold start problem with new users, and the diversity of recommendation results is poor.

Recommendation algorithms based on collaborative filtering are divided into user collaborative filtering algorithms and project collaborative filtering algorithms. Based on the premise that similar users have similar interests in content, the former recommends the same content to similar users, while the latter recommends similar content to the same user. The advantage is that recommendations have diversity and can recommend unknown new content to users, which can be used in the multimedia field. The disadvantage is that there are problems with new users and cold start of new content, and there is a strong dependence on user rating data.

Knowledge based recommendation algorithms convert user requirements into rules and recommend corresponding content based on the rules. The advantage is that there are no new users or cold start issues with new content, and the recommendation results are interpretable. The disadvantage is that a knowledge base needs to be built, and the algorithm has poor scalability.

A recommendation algorithm based on association rules, if a user is interested in a certain content, they may be interested in other content related to that content and recommend the relevant content to the user. The advantage is that it is easy to discover new content points of interest and does not require domain knowledge. The disadvantage is that the degree of personalization is low and the extraction of association rules is complex. A hybrid recommendation algorithm is a combination of two or more of the above recommendation algorithms to generate better recommendation results [15].

3.2. Design of Virtual Hosting Robot System. The system design of the hosting robot for this program mainly includes: overall network architecture design, interaction control process design, and knowledge base system design. The system is implemented using JAVA web technology, which facilitates the updating and management of backend data as well as the calling of various functional modules.

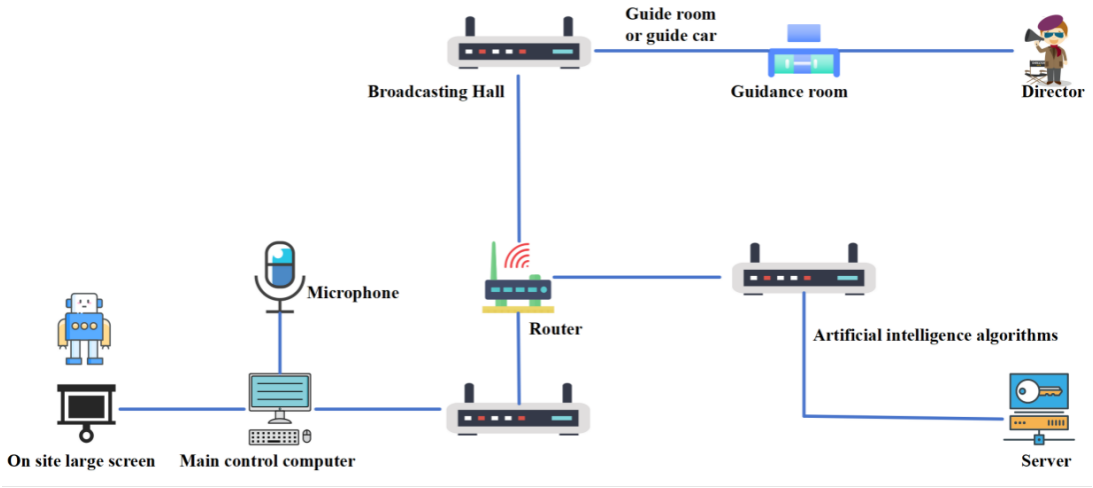

Fig. 3.1: Network Architecture of Program Hosting Robot

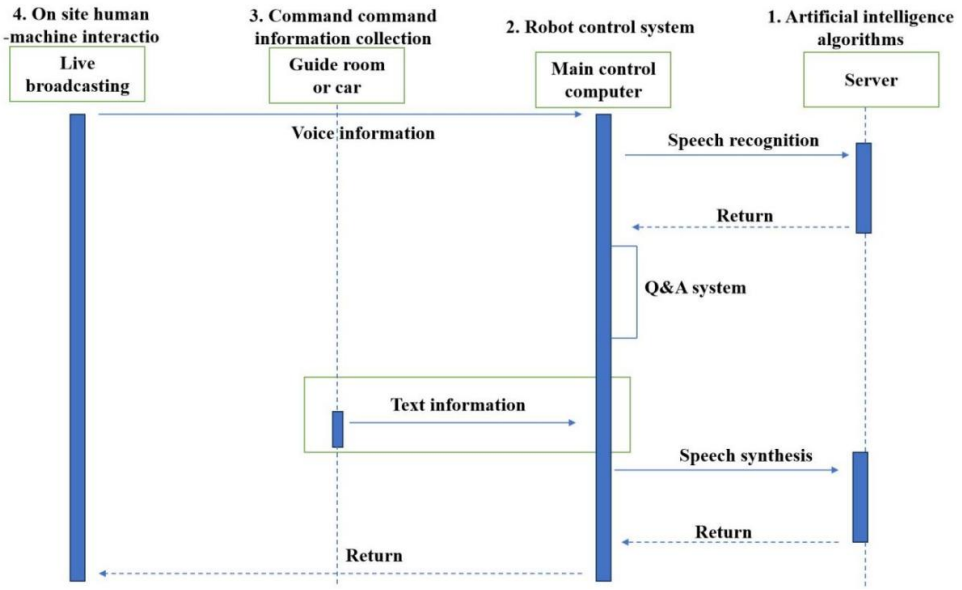

Fig. 3.2: Interaction sequence of program host robots

3.2.1. System Network Architecture Design. According to the network environment requirements of the program recording site, a network system for hosting robots has been added to the existing network system, as shown in Figure 3.1. The interaction sequence between each part is shown in Figure 3.2.

It mainly includes the following four parts:

1. Artificial intelligence algorithm server, which is installed with artificial intelligence speech recognition, facial recognition, naming recognition, knowledge base system, etc;
2. The robot control system is connected to the server and broadcasting command system respectively, and real-time data analysis is carried out based on the on-site situation of the program;
3. The command command information collection system in the guidance room issues action commands

Table 3.1: Program Hosting Robot Knowledge Base System

Serial Number	Knowledge base name	Include content examples
1	Common Corpus for Hosts	Hello everyone, hello, welcome everyone. I'm glad I'm here. I'm here. Okay, no problem, take a break. I'm sorry, your question is beyond my scope of knowledge. It's a bit difficult, won't it bother me? Thank you, no need to thank you. Goodbye, goodbye, etc
2	Entrepreneur Information Library	Entrepreneur's name, gender, age, graduation school, education, major, entrepreneurial experience, work experience, nationality, family background, overall situation of the entrepreneurial team, etc
3	Entrepreneurial Project Information Database	Project name, industry, expected investment amount, current progress of the project, intellectual property situation, existing investment situation of the project, market situation, project development plan, etc
4	Investor information	Investor's name, gender, age, education, major, previous investment experience, development status of invested projects, field of invested projects, etc
5	Investment learning case library	Establish a case library of past investment projects, analyze investment situations, and lead the robot system to conduct self-learning. If necessary, automatically adjust the corresponding weight coefficients to improve and enhance the reliability of recommendation algorithms.
6	Robot expression and action library	Smile, cross your waist, nod, applaud, somersault, forward, backward, spin, kick, punch, etc

to the robot based on the guidance command information;

4. The on-site human-computer interaction system obtains real-time information based on the dialogue and communication between the host, investors, and entrepreneurs on site, and provides corresponding responses and interactions after analysis [16].

3.2.2. Knowledge Base System Design. Analyze the "roles" of this investment program, which mainly include: Host, entrepreneur, and investor. Establish corresponding knowledge bases based on these roles, as shown in Table 3.1.

3.3. Implementation of Question and Answer Analysis System. The program hosting robot system utilizes multiple natural language processing technologies to deeply understand and analyze the text of speech recognition results. Firstly, text correction technology is used to automatically correct the words that are recognized incorrectly in speech recognition, and preliminary analysis of the text is carried out using segmentation, part of speech tagging, named entity recognition, and dependency syntax. Afterwards, conduct semantic understanding of the text and clarify the dialogue intention. When the conversation intention is identified as answering a question, the system retrieves the knowledge base, knowledge map or the Internet according to the question type to obtain the corresponding answer or knowledge, and then combs the answers, selects the best answer from the candidate answers, and returns to the program scene through speech synthesis. In addition, virtual robots can also pose questions to entrepreneurs like hosts, which are pre inputted into the system before the program is broadcasted. When the system recognizes the dialogue intention as requiring questioning, the robot will automatically appear on the screen and ask questions for entrepreneurs or investors to answer [17].

The architecture of a robot question answering system based on natural language processing is shown in Figure 3.3, which mainly uses techniques such as text error correction, lexical analysis, naming recognition, and question answering retrieval.

1. Text correction: After speech recognition, text correction is an important guarantee for correct recognition of question and answer intentions. Errors in speech recognition will lead to errors in subsequent steps. After extensive system testing, it was found that the main errors in speech recognition are homophone errors and approximate speech recognition errors caused by accent issues. In errors, entities are primarily named with the names of individuals and institutions. The system has carried out targeted

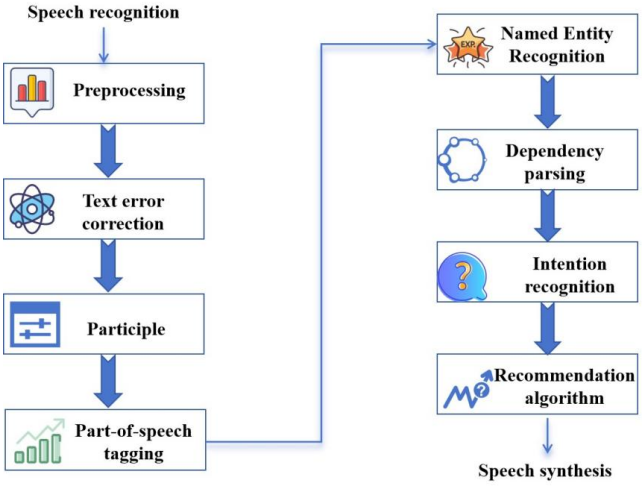

Fig. 3.3: Architecture diagram of robot question answering system

error detection and correction through rule templates and deep learning techniques.

2. Lexical analysis: Mainly includes Chinese word segmentation, part of speech tagging, named entity recognition, and dependency syntax analysis. Chinese does not have space separation between words in English, which affects the semantic analysis of Chinese due to word boundary errors. Word segmentation technology can make Chinese sentences have semantically reasonable word sequences. Part of speech tagging is to label unique parts of speech for each segmented word, which helps with subsequent dependency syntactic analysis. Named entity recognition specifically identifies entities with specific meanings in a statement, which are often crucial information in question answering. Dependency syntax is mainly used to recognize the interrelationships between words in a sentence, such as subject verb relationships, verb object relationships, and definite center relationships. Through syntactic analysis, the semantic backbone of a sentence can be extracted, helping intelligent robot systems achieve precise understanding of dialogue intent.
3. Naming recognition: Naming recognition is a part of lexical analysis in the field of natural language processing, mainly solving the problem of unregistered noun recognition in robot systems. It mainly includes person names, place names, institution names, or professional domain nouns. These words appear less frequently in general corpora, but are crucial for question answering and information retrieval tasks [18]. This technology was applied in the program hosting robot system, which obtained 49270 investment field news headlines through web crawler technology, and used domain dictionaries for initial annotation. Serious annotation errors were manually corrected, achieving automatic recognition of named entities in communication problems by the robot system, and finally generating corresponding knowledge graphs.
4. Q&A retrieval: When the conversation intention is recognized as an answer to a question, the system will search the knowledge base or knowledge graph based on different types of questions. The system sets a high threshold to ensure the accuracy of the answer, and the results in the knowledge base will be directly returned. The results in the knowledge graph will be packaged into templates according to different contents and then returned, if no results can be found in the knowledge base and knowledge map, the system will use the search engine to search the corresponding answers on the Internet. If there are structured answers, the system will give priority to the structured answers. If there are no structured answers, the system will crawl a large number of relevant search results, and use the in-depth learning method of reading comprehension to summarize and extract the correct answers. In the previous program recording, the knowledge base and knowledge graph we built successfully answered the vast majority of questions, with only a few questions applied to the network search step, and the

system application effect was good.

An example of actual interaction between the host and the robot in a certain episode of the program is as follows:

Host: "Little A Brother".

Robot: Hello everyone, I'm here.

Host: Did you see the underwater robot just now? Are you strong or was the underwater robot strong just now?

Robot: I'm too difficult! As both robots, it's not too urgent to argue with each other. I can speak but not swim, it can swim but not speak, so let me summarize that both of us have our own achievements in different fields.

Host: You're still quite impressive, okay, thank you, little brother A.

Robot: Goodbye.

3.4. Intelligent Investment Advisor Recommendation Algorithm Model. Through data mining and analysis of the program materials provided by the program team, there are three main factors that have a significant impact on the final successful signing, namely:

1. Investors themselves pay attention to whether the investment field matches the entrepreneurial field of entrepreneurs;
2. Does the amount of investment made by the investor match the required funds for the entrepreneurial project;
3. On site communication and interaction between investors and entrepreneurs.

An "intelligent investment advisory algorithm model" was established by analyzing these three factors. During the program recording process, the matching degree between investors and entrepreneurial projects was calculated in real-time on-site. When entrepreneurs consulted, recommendations were given for choosing investors.

3.4.1. Investment advisory algorithm calculation model. Based on the analysis of multiple entrepreneurial investment programs, an investment advisor recommendation model was established. The calculation formula is divided into four parts, and the final score is obtained by adding the scores of the four parts according to their weights. This set of five formulas together forms the investment recommendation algorithm model. The following equations 3.1, 3.2, 3.3, 3.4 and 3.5:

$$x_i = \epsilon + \sum_{n_i} \gamma \tag{3.1}$$

$$y_i = \frac{g_i}{e} \tag{3.2}$$

$$z_i = \frac{d_i}{max(d) + \eta} \tag{3.3}$$

$$m_i = \lambda \frac{(e - g_i)}{e} \tag{3.4}$$

$$s_i = \alpha x_i + \beta y_i + \delta z_i + m_i \tag{3.5}$$

The above algorithm is explained in steps 1-6:

Step 1: First, calculate the fit xi between the investor's focus area and the entrepreneur's entrepreneurial field, as shown in equation 3.6.

$$x_i = \epsilon + \sum_{n_i} \gamma \tag{3.6}$$

Among them: ϵ to establish the minimum level of fit in the field of venture capital, γ to add points to single field matching, n_i represents the number of areas that the i-th investor focuses on and are related to the entrepreneurial project of the entrepreneur.

Step 2: Calculate the matching degree y_i between the investor's willingness to contribute and the entrepreneur's financing needs, using the formula shown in equation 3.7.

$$y_i = \frac{g_i}{e} \tag{3.7}$$

Among them, g_i represents the amount that the i-th investor is willing to contribute, and e represents the financing needs of the entrepreneur.

Step 3: Calculate the matching score z_i for on-site communication between investors and entrepreneurs, as shown in equation 3.8.

$$z_i \frac{d_i}{max(d) + \eta} \tag{3.8}$$

Among them, d_i represents the number of times the i-th investor interacts with the entrepreneur, and max (d) represents the number of times the investor interacts with the entrepreneur the most among all on-site investors, η to establish a foundation for communication.

Step 4: Calculate the additional score mi when the investor's investment amount exceeds the financing needs of the entrepreneur. The calculation formula is shown in equation 3.9.

$$m_i = \lambda \frac{(e - g_i)}{e} \tag{3.9}$$

Among them: γ for single field matching, e represents the financing needs of the entrepreneur, and g_i represents the amount of investment that the i-th investor is willing to contribute.

Step 5: The calculation results of equations 3.6-3.9 are weighted and summed according to the importance of investment factors to obtain the final matching score Si. The investor with the highest matching score is the recommended investor by the system, and the calculation formula is shown in equation 3.10.

$$s_i = \alpha x_i + \beta y_i + \delta z_i + m_i \tag{3.10}$$

Among them, x_i, y_i, z_i, and m_i respectively have the aforementioned meanings, α β δ weight coefficients of each focus item are respectively, based on past statistical analysis results, it is generally assumed that α=0.2, β=0.5, δ=0.3, adjusted appropriately according to different project types.

Step 6: Perform a final rationality check on the matching score si obtained in step 5.

If it falls within the range of the project's entrepreneurs and investors, the final result is determined to be the recommended value. If there is a deviation beyond the expected range, adjust the corresponding coefficients in the previous steps and recalculate the s_i result until a relatively more reasonable investor is selected as the main recommendation.

In addition, there are also individual abnormal situations, such as when all investors give up their investment and turn off the lights, the project ultimately fails to invest. In this case, the robot recommendation system can also provide investment matching scores, but the score is extremely low. When the matching score is below 0.5, the system does not recommend choosing investors [19].

3.4.2. Analysis of Focus Areas. According to incomplete statistics, 642 entrepreneurs from different fields have stepped on the stage of a TV station's entrepreneurship program through layer by layer selection. According to statistics of the entrepreneurial fields of these 642 entrepreneurs, the 8 fields with the largest entrepreneurial projects are 372 Internet projects, 250 software applications, 181 life services, 131 intelligent manufacturing projects, 88 education projects, 73 medical and health projects, 72 cultural and creative projects, and 64 new materials, as shown in Table 3.2.

The system regularly updates the investor information knowledge graph to obtain information on the investment areas of interest for all investors on site. Through the introduction of the entrepreneur's project, a

Table 3.2: Program Hosting Robot Knowledge Base System

	Area	Number	Proportion/%
Statistics of	internet	372	57
Internet	outside the Internet	270	41
(including software)	software applications	250	38
other areas	outside of software applications	391	60
classification	life services	181	27
statistics	Intelligent manufacturing	131	20
	Educational technology	88	13
	medical hygiene	73	11
	cultural and creative	72	10
	new materials	64	10
	other areas	27	3
	amount	642	100

pre trained classification model is used to automatically identify the entrepreneur's entrepreneurial field. If the entrepreneurial field of the entrepreneur is the same or related to one or more of the investor's areas of concern, the system will give a higher score. If the field is not relevant, or if investors have little or no investment in the entrepreneurial field where the entrepreneur is located, the system will give a lower score, but not zero, because investors are likely to invest in this project in this episode.

3.4.3. Analysis of Investment Amount. Through sorting and analyzing the program materials, it was found that the financing needs of previous entrepreneurs ranged from 2 million to 30 million. Compared to the financing needs of entrepreneurs, the amount of investment provided by investors was relatively low, at least 500000 yuan, in the successfully signed projects, the final price of 500000 to 2 million (excluding) accounts for 3.07%, 2 to 6 million (excluding) accounts for 38.51%, 6 to 10 million (excluding) accounts for 52.48%, and 10 million and above accounts for 5.94%. The main reason for financing failure is that there is a significant difference between the amount of investment from investors and the financing needs of entrepreneurs, and the amount of investment has a significant impact on whether the contract can be successfully signed. At the live broadcast of the program, real-time information on investor bids is obtained, and the financing needs of entrepreneurs are compared [20]. When the amount is insufficient, the system calculates the score proportionally. When the bid exceeds the financing needs, the system will give investors an additional score when calculating the total score.

3.4.4. On site communication analysis. The system utilizes speech recognition and facial recognition technology to recognize and analyze the speech and facial expressions of investors, determine the number of interactions each investor has when facing entrepreneurs, and analyze their level of investment willingness. The number of times investors speak and interact with entrepreneurs reflects their level of attention to the project. The more interested investors are in the project, the more they will ask entrepreneurs about project information in order to tap into the development potential of the project.

4. Result analysis. A virtual hosting robot (Little A) has participated in the recording of 24 episodes of a venture capital program on a certain TV station. There have been no incidents where the recording of the program was affected by issues with the robot. While ensuring the accuracy of answering questions during hosting interactions, little A's response speed gradually improves with the continuous optimization of the system. The actual application case analysis is as follows.

4.1. Application examples of recommendation systems. At the recording site of the entrepreneurship program, the "Intelligent Investment Advisor Algorithm" will calculate the "investment matching degree" based on the project field, investment amount, and on-site communication situation, providing entrepreneurs with advice on selecting reasonable investors. Figure 4.1 shows the calculation results of the investor recommendation system for a certain period.

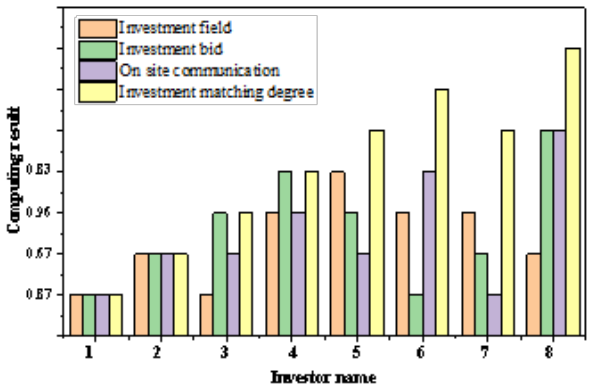

Fig. 4.1: Calculation results of investor recommendation system

From Figure 4.1, it can be seen that the final system did not recommend the 6th and 7th investors with the highest matching degree in the field, nor did it recommend the 8th investor with the highest matching degree in investment amount, nor did it recommend the 4th investor with the highest matching degree in communication. Instead, it selected the 1st investor by combining three factors, the entrepreneurs of this period ultimately followed little A's advice and chose investor 1 as their entrepreneurial investor. When a TV program is actually broadcasted, when a host or entrepreneur consults a robot, little A will broadcast the recommended results on the big screen: According to artificial intelligence calculations, the investor recommended by brother A has a matching degree of 0.86 in his investment field, 0.74 in on-site communication, 0.82 in investment amount, and 0.82 in comprehensive matching. The highest matching degree among investors is investor 1.

4.2. Reasonability analysis of recommendation algorithms. Regarding the investor recommendation system, out of a total of 73 entrepreneurial projects in 24 episodes of the program, 40 entrepreneurs actively sought advice from Mr. A, while another 6 entrepreneurs consulted Mr. A's opinions on the host's advice. In 46 investment recommendation applications, there were 6 times when Mr. A's investor selection suggestions were not the highest bidding investors on the program site. In these 6 times, 5 entrepreneurs followed Mr. A's suggestions, and his analysis received recognition from different entrepreneurial mentors multiple times, demonstrating the rationality of Mr. A's recommendations, with a recommendation adoption rate of 97.72% (45/46). For one of the entrepreneurs who did not choose the investor recommended by Brother A, the main reason for consulting is to consider that "the chosen investor's location can provide greater market resources and quickly help the project generate sales." In this sense, the "region and market" dimensions can be further considered in the recommendation model, which can be further improved and perfected in the future.

5. Conclusion. The author introduces the implementation method of artificial intelligence virtual assisted hosting robot, and proves the effectiveness of the method through successful application in a TV program. Artificial intelligence and robotics technology are being widely applied in various industries, and television programs are no exception. The author designed and implemented a virtual intelligent hosting robot system, established an intelligent investment advisory algorithm model, and implemented intelligent question answering and investment recommendation functions during the program hosting process. This is an innovative application of artificial intelligence robot technology in television programs, which is of great significance for promoting the intelligent development of the film and television media industry.

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