

# AI Technology Promotes Innovative Application Research of Simulated Interview Platform

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**Abstract:** With the number of college graduates increasing year by year, the employment situation is becoming more and more severe. Whether it is for college or employment, the interview is used as a criterion for talent selection. Through investigation and literature research, the team found that fresh graduates lacked relevant interview experience, and the interview training market developed slowly. At present, AI technology is mature, AI+ education is well-known by the public, policy support is strong, and development prospects are good, AI technology can promote the development of the interview training market to a certain extent. Therefore, in view of the large number of interview demand groups and the immature market situation of simulated interview products, the form of the simulated interview platform is innovated through the design of anthropomorphic AI interviewers, the creation of interesting and challenging sections, and the multidimensional evaluation of the interview process by AI, so as to help users improve interview skills, enrich interview experience and improve interview ability.

**Keywords:** Interview Training; Online Mock Interview; AI Technology; Form Innovation; Multidimensional Evaluation

## 1. Introduction

Interview is an important way for enterprises and colleges to evaluate the ability and quality of interviewees. As the content and form of the interview are complicated and changeable, coupled with the lack of practical experience and communication ability of college students, the success rate of college students' interview is low. In recent years, with the development of artificial intelligence, the use of AI technology to build a simulated interview platform has become an important development direction of interview training and education. Such as chat

beans technology, Beijing Zhipu Huazhang Technology Co. Ltd. and other enterprises are currently conducting research and development of AI interview technology. On the basis of relevant research, in view of the situation that there are many demand groups in the interview training market at home and abroad and the products lack innovation, this paper innovates the simulated interview platform by designing anthropomorphic AI interviewers, adopting the teaching method of "learning by playing" to add fun and challenge modules, and adding multidimensional evaluation function of AI. The purpose is to help users with interview needs improve their interview ability. Increase employment rate and enrollment rate.

## 2. The Necessity of AI Technology to Promote the Innovation of Simulated Interview

### 2.1 AI Enables Simulated Interviews to Stabilize Employment and Promote Innovation

Employment is the most basic people's livelihood, adhere to the priority of employment, and promote high-quality and full employment of college graduates. The employment of college graduates is related to the national economy and people's livelihood, economic development and overall social stability [1].

Interview is the key link for employers to determine employment, college students need to continuously improve their interview ability, improve competitiveness and promote employment. The survey shows that college students lack appropriate interview skills and abilities, among which 83.4% of respondents expect more help and support related to interviews, and 64.1% of respondents hope that schools can provide guidance for different types of interviews

[2].

The deviation between market supply and job demand, the post-epidemic era, the lack of interview ability of college students and other aspects have a great impact on college students' employment.

Based on the background of artificial intelligence technology and virtual reality technology, it is necessary to build an online simulation interview platform with low cost, high flexibility and strong interest for difficult employment and interview problems. Through several simulated interviews, the interviewees can improve their self-confidence and frustration tolerance, participate in, summarize and reflect on themselves, improve their interview ability from practical and psychological aspects, and promote full employment.

## **2.2 AI Enables Simulated Interviews with Good Policies and Broad Prospects**

The total global IT investment in AI is expected to increase to \$512.42 billion by 2027, and about 45% of the future market will be AI startups. According to IDC, China's AI market size is expected to exceed \$18.43 billion in 2025 and will be close to \$40 billion in 2027.

Since 2020, the recruitment market, which is gradually oriented to online recruitment, is in urgent need of continuous empowerment of emerging technologies, digital transformation and intelligent transformation and upgrading. AI interview and other artificial intelligence methods are gradually applied to all aspects of the job market, becoming an important assistant for talent discovery [3]. Under the change of the interview form, how to improve the personal career literacy of job seekers and stand out among many job seekers is a topic of great concern for every college student who is about to graduate or has graduated, and the high prosperity and potential huge development space of the AI industry will provide a good foundation for the development of the interview training industry.

The online simulation interview platform officially grafts the offline traditional education method to the online, which can realize the clever docking of the traditional industry and the Internet.

## **3. Current Situation and Problems of AI Technology Promoting Simulated Interview Innovation**

### **3.1 Development Status of AI Simulated Interview Products**

Due to the impact of the epidemic in the early stage, enterprises choose to recruit online for security reasons. However, the convenience of online interview greatly increases the number of people submitting resumes, which brings many difficulties for enterprises to select talents during recruitment [4]. AI can automatically analyze and evaluate the answers of job seekers through natural language processing and machine learning technology, and initially screen out candidates who meet the requirements of enterprises, which greatly reduces the work burden of recruiters and improves the efficiency of resume screening [5].

In recent years, more and more enterprises have begun to pay attention to AI simulated interview, such as chat bean technology, Google, Beijing Zhipu Huazhang Technology Co. LTD.

In November 2021, Chat Bean Technology officially began operation, after a year of research and development, officially launched AI interview products at the end of 2022, and then began to serve major universities. Its functional modules are mainly divided into AI interview, mixed interview and online interview three parts, the main advantages include personalized question bank Settings and test groups, can be audio monitoring, can quickly generate thousands of interviews. However, the simulated interview scene is too simple, resulting in the lack of immersive interview feelings.

In May 2022, Google launched the Interview Warmup website. The website has a rich question bank, including 50 high-frequency interview questions, covering three aspects such as professional terms, language habits, and covered topics. 5 questions are randomly selected each time, and the answers are intelligently optimized by AI technology. The automatic detection of relevant professional vocabulary helps interviewees improve their answers. But the site does not score users' answers and gives no feedback on the next interview, limiting user promotion.

In January 2023, Beijing Zhipu Huazhang

Technology Co. LTD. released the MetaGC· Sometimes platform. The platform has a hyper-realistic AI digital human interviewer, users have a highly immersive interview interactive experience, and includes popular college recruitment positions, in terms of technology with a multi-dimensional competency model, the use of multi-modal evaluation algorithm to make the evaluation results true and accurate. However, the platform lacks of interest, and there is only one plate of full simulated interview.

To sum up, although more and more enterprises are beginning to pay attention to AI simulated interview, there are still few simulated interview products in domestic and foreign markets. Some enterprises still achieve the effect of improvement through question exercises, and the application of AI technology is not involved too much, and there are still large shortcomings in learning interest, immersive interview and comprehensive evaluation.

### **3.2 There is a large Demand for AI Simulated Interview Products**

The Ministry of Education is expected that the number of college graduates in 2024 will reach 11.79 million, and the huge number of graduates will bring huge competitive pressure on employment and study. Whether it is job hunting or study examination, interview has become an urgent need for many graduates. However, nearly 70% of college graduates have not experienced systematic interview practice, resulting in poor performance in formal interviews.

Under the pressure of huge interview demand, the country also puts the employment demand of college graduates in a more prominent position. The Ministry of Education has strengthened the employment guidance for college students, including the employment guidance course as a credit subject, so that all college students can receive employment guidance. Even so, the interview knowledge taught by college teachers can not fully cope with the recruitment of enterprises.

In recent years, under the dual influence of the progress of science and technology and the previous epidemic, enterprises have increasingly relied on online interviews for recruitment [6]. Compared with traditional interview, online interview has both freedom and flexibility in time and space. Under this background, online

simulated interview comes into being. Online simulated interview can provide interview guidance for interviewees, accumulate interview experience, and greatly fill the vacancy of interviewees' demand for simulated interview. But at present, the online simulated interview products are mixed, and the lack of a product that can improve the interview level of the interviewer in all aspects.

## **4. Specific Measures for AI Technology to Promote the Innovation of Simulated Interview**

### **4.1 Design an Anthropomorphic AI Interviewer Image to Enhance the Interaction between Users and AI Interviewers**

Although AI interviewers can help enterprises save recruitment costs and improve interview efficiency, in the face of AI interviewers, the psychology of candidates has not fully adapted to AI interviewers, and it is easy to conflict with AI interviewers. Creating a live-like simulation interview platform is one of the ways to let users adapt to AI interviews as soon as possible. The first step is to design anthropomorphic AI interviewers. Start with three design features of AI interviewers: external image, language style, and result feedback [7]. In terms of external image, you can increase the dynamic characteristics of the AI interviewer, such as smiling, small gestures, slightly nodding, and making eye contact with the user from time to time, etc. These dynamic characteristics can give the user a certain degree of confidence and encouragement, and alleviate the embarrassment and tension in the interview. In addition, compared to AI interviewers of different genders, interviewers of the same gender as users are more friendly to users. In terms of language style, you can set the AI interviewer's language to a high emotional style, and increase the use of some polite expressions, such as "thank you very much for your answer." In terms of feedback, with the development of information technology, AI interview system can use speech recognition, natural language processing and deep learning algorithms to

analyze users' answers in a short period of time, so as to provide accurate and personalized feedback to users immediately after the interview, and high-information feedback helps users timely adjust the interview state and enhance their confidence in AI interview.

Second, new technologies can be developed to enhance the interaction between users and AI interviewers. The one-way interaction between the candidate and the AI interviewer is one of the important reasons for the candidate's resistance [8]. Now there is an emerging AI dialogue robot ChatGPT on the market. Compared with ordinary artificial intelligence chatbots, ChatGPT has the advantages of anthropomorphism of artificial intelligence language, providing users with a more humanized communication experience. It has certain feedback learning ability, memory ability and association ability, and will continue to improve according to users' feedback. This is what AI interviewers currently lack [9]. Therefore, on the premise of ensuring the accuracy of the content and solving the realistic cost problem, ChatGPT can be applied to the AI interview, which is conducive to realizing the two-way interaction between the user and the AI interviewer, so as to improve the user experience and reduce the user's resistance.

#### **4.2 Add the Fun Module to Enhance the Fun of Learning for Users**

Early European and American educators put forward the teaching method of "learning by playing", introducing "playing" into the process of "learning" is conducive to stimulating learners' enthusiasm and improving learning efficiency [10]. The fun and adventure section is added to the mock interview platform so that users can master interview knowledge through edutainment. In the "Fun" section, users can answer a large number of interview questions collected by the algorithm to complete the level. After passing this level, users can obtain a certain number of virtual gold coins, which can be used to offset the actual currency during the recharge process, which is conducive to stimulating users' learning enthusiasm. Through the online matching function, users with the same interview needs can be matched to carry out online competition. The participants have two choice modes to choose from: one is to jointly answer the questions raised by the AI intelligent interviewer, and the AI intelligent

interviewer will score the answers of both participants according to the score, and get the corresponding number of gold coins according to the score; It is also possible to choose the second mode, that is, both users experience the roles of the interviewer and the interviewee, and after the user as the interviewer asks questions, the AI intelligent interviewer and the AI intelligent interviewee jointly score the answers of another user on the premise of referring to the score points of the questions. Both participants can choose identity exchange, which helps users experience the interview process from different angles and feel the development and implementation process of the interview. The innovation of fun and adventure module helps users to promote learning by playing, which helps to further accumulate interview skills and improve interview ability.

#### **4.3 Add AI Multidimensional Evaluation Function to Provide Refined Feedback Reports**

In order for users to improve their interview ability in a short period of time, the platform needs to provide high-quality information feedback. First of all, AI technology can be used to analyze the whole process of user simulation interview in three aspects: image, speech and semantic. Image analysis refers to the analysis of the user's facial features, check whether the appearance is qualified, capture and recognize facial expressions and small movements. Speech analysis refers to analyzing the user's speed, tone, fluency, and level of Mandarin. Semantic analysis refers to evaluating the professional ability and industry experience of users by analyzing the richness and logic of their answers to questions, to find out whether the users have a strong desire to seek employment and study by analyzing the tone and emotion, and to assess whether their adaptability and ability to withstand pressure are qualified by analyzing the response time and fluency of users' answers to questions. Doing so can magnify points that users don't normally notice and provide a basis for subsequent feedback reports.

Secondly, after the mock interview, AI will conduct multidimensional evaluation of the

interview process and provide a detailed AI mock interview feedback report. The report includes three parts: rating overview, multidimensional analysis and interview review. The overall score includes three aspects - general quality, professional ability, language expression, three levels - 0-30 poor, 30-70 medium, 70-100 excellent, while the overall performance will be rated: A/B/C/D, indicating that more than \_% of the candidates in the same position competition, and will give the next round of interview opinions; In the multidimensional analysis, 11 evaluation elements will be set up: language expression, appearance and personality, work experience, motivation and expectation for employment, professionalism, initiative, work attitude, organizational discipline, analysis and judgment ability, adaptability, self-knowledge, self-control, organization and coordination ability, interpersonal relationship handling ability, interest, energy and vitality, professional knowledge investigation [11]. Specific interview questions will be formulated according to the evaluation elements, each element will have the corresponding evaluation points, evaluation scores: excellent 5, good 4, average 3, poor 2, very poor 1; The interview review includes text review and video review, text review refers to the AI converts the user's verbal responses into text through language recognition technology, and then generates paper responses for each question in the form of question-response-reference answer-keywords. A video review is a video replay of an interview. The purpose of designing the feedback report in this way is to let users clearly understand their shortcomings in the interview practice, so as to make targeted corrections, improve practice efficiency and enhance confidence.

### 5. Conclusion

In this paper, three simulated Interview products such as Chatou AI Interview, Interview Warmup and MetaGC. Sometimes are selected as the research objects, their advantages and disadvantages are analyzed respectively, and the shortcomings of the interview training market at home and abroad are concluded: few products and lack of innovation, combined with the current situation of a large number of users in demand. AI technology is intended to promote the innovation of the simulated interview platform, and the innovation points are as

follows:

- (1) Design an anthropomorphic AI interviewer from three aspects: external image, language style and result feedback, and use ChatGPT to enhance the interaction between users and AI interviewers in simulated interviews.
- (2) Integrate the teaching method of "learning by playing", design a fun and challenging module, AI algorithm matches users with the same interview needs to compete online, participate in both users to answer questions, and users can also play roles to experience the dual identity of the interviewer and the interviewee.
- (3) Add multidimensional evaluation function of AI, use image analysis, speech analysis and semantic analysis of AI technology to evaluate the interview process of users, and provide a refined interview feedback report after the interview.

This paper, through the above three ways to innovate AI technology to promote the application of simulated interview platform, help users improve their interview ability, and at the same time provide feasible innovative ideas for relevant enterprises.

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