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Explore the Factors and Influences of the Frequency of Use of Artificial Intelligence Technology in Entertainment Software

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Abstract: AI technology is developing quickly, and as a result, it is being used extensively in many different contexts and industries. The advancement of these technologies cannot be separated from user feedback and experience. At the current stage of continuous development and progress of AI technology, how to increase the frequency of users' use of new AI technologies, especially in software applications, is a question worth exploring. Based on the TPB method, this article takes the artificial intelligence search function launched by the iQIYI platform as an example to explore the impact of personal experience and information dissemination methods on the frequency of users using artificial intelligence technology on entertainment platforms. The research shows that by improving personal experience and optimizing information dissemination methods, users' frequency of using AI technology can be increased, and user satisfaction can be improved. Therefore, it should focus on the design and optimization of user experience and information dissemination methods to attract more users to use AI technology and increase their frequency of use. This will help promote the development and application of AI technology, bringing more convenience and innovation to people's lives.

Keywords: AI, AI Search, Trust in artificial intelligence, personal experience, information dissemination

1. Introduction

This study looks at how to increase user trust and the frequency of new AI technologies in software. The use of AI is growing rapidly and permeating many aspects of daily life for the average person, both in personal and professional settings [1]. Understanding the frequency and demand of users for AI technology, by understanding the personal experience related to AI use, and optimizing the way information is disseminated, is essential to promote the development and application of AI technology.

This study is mainly from personal experience and information dissemination. In terms of personal experience, the researcher will focus on the feelings and needs of users when using AI technology and increase the frequency of users' use of AI technology by improving the user experience. In terms of information dissemination, the researcher will study how to introduce AI technology to users more vividly and interestingly to attract more users to try and use AI technology [2].

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To carry out this study, the researcher used literature analysis to search and read relevant materials and literature. This method can help us understand the previous research results and experience of AI technology and user experience, analyze the application of the TPB method in the field of AI research, and provide theoretical support and reference for research. At the same time, through the literature separation method, people can better understand the development trend of AI technology and the changes in user needs, providing a strong basis for research [3].

The ultimate research goal of this study is to increase the frequency of users' application of new AI technologies in software and optimize the personal experience and information dissemination. To achieve this goal, the researcher will conduct a series of research work, including collecting and analyzing user feedback, investigating user needs, designing experiments, and so on. At the same time, researchers will continue to improve and upgrade technology and services to meet the needs and expectations of users [4].

2. Method

2.1. Application of AI Technology in Entertainment Software

Nowadays, AI has moved from the laboratory stage to the application stage and has a huge impact on social production and life. Artificial intelligence has been integrated into all aspects of content creation, production, distribution, etc., greatly improving industrial efficiency while providing users with a better experience [5].

The AI search function recently launched by iQIYI is the first time in the industry to apply generative AI technology to the three search scenarios of role search, story search, and star search [6]. Different from traditional search, the upgraded "AI search" flagship allows the audience to direct their favorite content with a single click on the search link. That is, in the search bar for the role of the play, the story of the keyword, and the corresponding actor's name search, you can generate relevant exciting story Lenovo recommendations and the role of highlight card segment, through the corresponding fragments.

2.2. Critiques of the Theory of Planned Behavior (TPB)

The theory of planned behavior is a theory that links beliefs and behavior, proposed by Ajzen in 1985. The purpose is to improve the predictive ability of rational action theory by incorporating perceptual behavioral control [7]. It mainly discusses three aspects: attitude, subjective norms, and perceived behavioral control, which encourage people to make or change certain behaviors by influencing their behavioral intention.

First, attitude towards behavior is an individual's evaluation of a specific behavior, including the benefits and drawbacks, risks and benefits of the behavior. If a person has a positive behavioral attitude, they are more likely to adopt relevant behaviors [8].

Second, subjective norm Refers to an individual's perception of social expectations and the opinions of others. If a person believes that the general public supports or expects them to take a certain behavior, they are likely to be influenced by this subjective norm and take relevant actions [9].

Third, perceived behavioral control is the level of individual belief in their ability to control behavior. If a person believes that they can easily take a certain behavior and believes that there are not too many obstacles and obstacles, then they are more likely to take that behavior [10].

Finally, the TPB theory believes that these three elements together determine a person's willingness and the likelihood of deciding to take a certain behavior. When a person has a positive attitude towards behavior, is influenced by subjective norms, and believes that they can control their behavior, they are more likely to take relevant actions.

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This article quotes two scales designed by Paul Rodway and Astrid Schepman as an auxiliary study. Factor loadings derived from the exploratory factor analysis of data on general attitudes towards AI (Table 1).

Table 1: Factor load of AI overall attitude data.

Item	Pos	Neg	U	IRC	Mean	SD
I have a keen interest in incorporating AI systems into everyday routine.	0.78		0.43	0.64	3.56	1.03
AI encompasses numerous advantageous applications.	0.77		0.40	0.68	4.22	0.82
The field of AI is exhilarating.	0.76		0.49	0.59	3.91	1.00
AI has the potential to create fresh economic prospects for this nation.	0.70		0.48	0.64	3.75	1.01
I am eager to integrate AI into my professional work.	0.66		0.54	0.59	3.13	1.24
An AI agent could outperform a human employee in numerous routine tasks.	0.60		0.66	0.50	3.08	1.17
I am admired for the capabilities of AI.	0.60		0.63	0.53	4.13	0.89
AI has the capacity to enhance people's well-being positively.	0.58		0.69	0.47	3.97	0.76
AI systems have the potential to contribute to people's happiness.	0.57		0.74	0.41	3.19	0.92
AI systems can outperform humans in certain tasks.	0.54		0.62	0.58	3.55	1.03
Many aspects of society stand to gain from a future rich in AI.	0.49		0.63	0.57	3.55	1.03
For regular transactions, I prefer dealing with an AI system over a person.	0.47		0.79	0.39	3.15	1.20
I believe that AI poses a threat.		0.75	0.51	0.47	2.86	1.04
Organizations are using AI in an unethical manner.		0.74	0.52	0.47	2.71	0.97
I consider AI to be ominous.		0.65	0.45	0.63	3.42	1.09
AI is employed for surveillance purposes.		0.64	0.67	0.32	2.35	1.00
The thought of future applications of AI makes me shudder with unease.		0.62	0.43	0.66	3.06	1.34
AI could potentially gain control over person.		0.48	0.78	0.35	2.90	1.22
I believe that AI systems frequently commit mistakes.		0.47	0.73	0.43	2.90	0.95
Individuals such as myself may endure hardships as the usage of AI continues to increase.		0.41	0.59	0.60	3.23	1.20

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The load of the 20 items is retained, and the factor is loaded into the Positive (Pos) and negative (Neg) components, uniqueness (U, i.e. 1 minus). Item-break correlation (IRC), mean, and standard deviation (SD). Factor loading derived from the exploratory factor analysis of comfort with particular AI applications (Table 2).

Table 2: Factor load of comfort for specific AI applications.

	F1	F2	U	IRC	Mean	SD
Reducing exam as well as assessment-related fraud	0.86		0.31	0.70	4.10	1.06
The recognition of diseases from human breath pleasant smells	0.75		0.54	0.53	4.21	1.02
Identifying novel chemical compounds that could be utilized in the pharmaceutical or industrial sectors.	0.73		0.44	0.65	4.33	1.00
Finding novel chemical compounds for use in industry or pharmaceuticals	0.72		0.62	0.42	4.54	0.91
Assisting farmers in weed control and crop gathering	0.66		0.59	0.54	4.33	1.00
Examining and assessing risks within legal agreements	0.64		0.48	0.65	3.62	1.28
Predicting the impact of storms on free plantations for forestry purposes	0.63		0.59	0.56	4.30	0.91
Identifying counterfeit art pieces	0.59		0.66	0.49	4.04	1.20
Employed in automotive production or industry facilities	0.59		0.50	0.66	4.35	0.99
Offering hair care guidance based on data collected from smart hair brushes.	0.56		0.63	0.54	3.57	1.30
Reviewing extensive document collections for pertinent legal evidence.	0.54		0.66	0.52	4.11	1.03
Assisting investment bankers in decision-making by modeling various scenarios.	0.48		0.48	0.69	3.70	1.15
Serving as a moderator for content posted on social media platforms.	0.41		0.82	0.37	3.42	1.38
Choosing personnel for hire.		0.85	0.47	0.48	2.13	1.21
Working as a bank branch staff member.		0.79	0.44	0.59	2.77	1.34
Serving as a physician in a general practitioner's office.		0.72	0.53	0.56	1.77	1.11
Overseeing patient care and flow within a major hospital.		0.67	0.55	0.57	2.96	1.32

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Table 2: (continued).

Working as a call center agent.		0.65	0.53	0.60	3.08	1.36
Offering social engagement to patients in healthcare facilities.		0.56	0.71	0.45	3.09	1.35
Operating a motor vehicle.		0.52	0.68	0.49	2.79	1.43
Crafting new fairy tales in the tradition of the Grimm brothers.		0.50	0.70	0.49	3.05	1.41
Determining the allocation of assistance in humanitarian emergencies.		0.50	0.59	0.61	2.78	1.34
Choosing squads and formulating soccer strategies.		0.44	0.75	0.46	3.26	1.31

It was loaded onto factor 1 (F1, Big Data and Automated AI Comfort) and factor 2 (F2, Big Data and Automated Comfort). Human Judgment Task for Ergonomic Intelligence Applications), Uniqueness (U), Item Rest Calibration (IRC), item mean, and standard deviation (SD) for 23 items. Comfort ratings were kept in the exploratory factor analysis.

Drawing upon insights from the Theory of Planned Behavior (TPB) and the Moral Space of human judgments regarding machines, researchers can start to integrate and further the examination of AI-related personal experiences and how media information is disseminated, which in turn influences users' behavior toward AI technology within entertainment software. As such, a three-layer approach is proposed to explore how to improve people's use of AI technology in software based on these two factors: Contexts, Variables, and Statistical Models.

In the course of the survey, this article has a random sampling of nearly 400 iQIYI app users. According to their daily life and work, they have a detailed understanding of the contact situation and experience of AI-related technologies. The survey found that everyone loves to try new things, especially when it comes to technology. With the popularity of the Internet, most viewers have developed a habit of receiving fragmented information. This means they are more likely to get a quick overview of a selection or watch a clip that interests them.

When there are some highlights on the hot search or entertainment media, or when people around the show talk about the relevant information, these will stimulate people's interest in learning more. At this point, AI search technology can play a huge role. Through a key transmission, the audience can jump directly to the relevant fragments, convenient and quick.

Moreover, the threshold for the use of AI search technology is not high, and most people can easily master it. In this way, not only to meet the needs of those who cannot accept the fragmented information of the audience but also for the film played a very good drainage effect.

In general, AI search technology offers viewers a completely new viewing experience. It not only facilitates the audience to quickly understand and watch highlights but also stimulates their interest in the film. This technology not only improves viewing efficiency but also brings new development opportunities for the film and television industry.

The above three aspects affect whether people will use the AI search technology in the iQIYI app.

The variables are shown in Figure 1.

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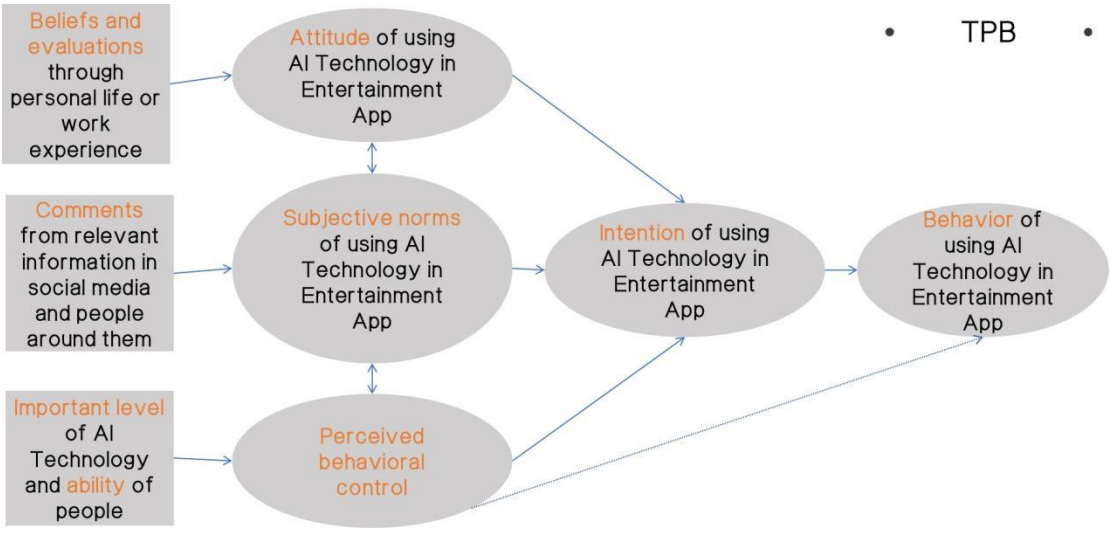

Figure 1: Variables.

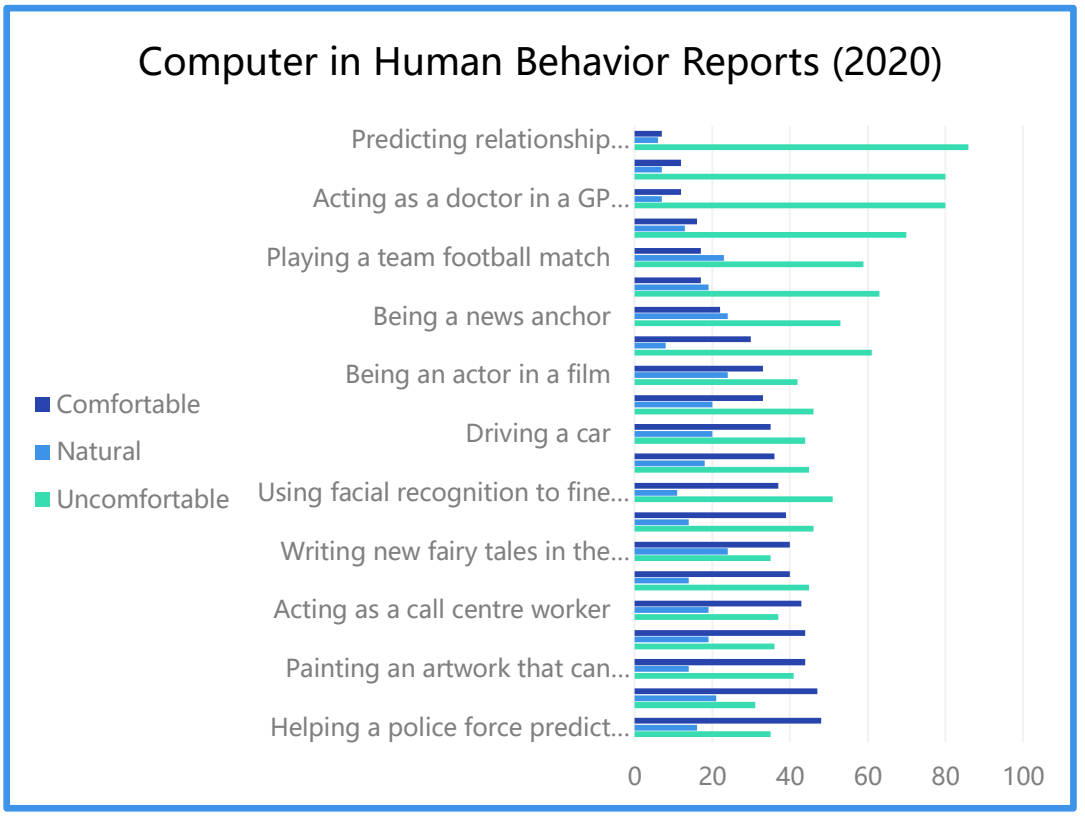

Figure 2: Statistical models.

From Figure 2, it can be seen that users' trust and understanding of AI technology are not enough. From the perspective of personal experience, the promotion of AI technology can be appropriately improved to let users understand the working principle and advantages of the AI function so that users are more familiar with it and have the desire to try it.

Increasing users' trust in AI technology and improving the ease of AI technology can significantly increase the frequency of people's use of AI technology in entertainment software. In the present day, amidst the swift progress of science and technology and the surge in intelligence, the application of

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AI technology in entertainment software is becoming more and more common, but it also faces users' doubts about its credibility and reliability. Therefore, it is important to increase user trust and improve the convenience of AI technology.

First, increasing users' trust in AI technology can increase its use frequency in entertainment software. People's trust in AI technology directly affects their willingness to use it. If users believe that AI technology can effectively provide support and assistance in entertainment software, and will not violate their personal information and privacy, they will be more inclined to actively use these entertainment software. Therefore, improving users' trust in AI technology is the key to strengthening the frequency of AI technology used in entertainment software.

Second, improving the ease of artificial intelligence (AI) technology in entertainment software is also an important factor in increasing user frequency. The user's expectation for entertainment software is to be able to obtain higher convenience and pleasure. If AI technology can respond to user needs more quickly and intelligently in entertainment software and provide easy-to-use interfaces and functions, users will be able to enjoy the fun of entertainment software more easily.

To improve the ease of AI technology, entertainment software developers and AI technology providers need to work in the following areas. First, they should optimize the responsiveness of AI technologies. Users expect immediate feedback and results, so AI technology should be able to respond quickly to user requests and actions in a short period. Second, they should provide intuitive, easy-to-use interfaces and functions. Users don't want to be confused or bothered when using entertainment software, so AI technology should be able to provide a simple and intuitive interface and functionality that users can easily use and understand.

By improving the accessibility of AI technology, entertainment software developers and AI technology providers can provide a better user experience, making users more willing to use this entertainment software and increasing their frequency of use. This will help promote the development of the entertainment software industry and provide users with a more convenient and intelligent entertainment experience.

In addition, there are several key factors to consider when it comes to increasing user trust in AI technology and improving the ease of AI technology. The first is to protect users' personal information and privacy. Entertainment software should pay attention to protecting users' personal information when using AI technology to ensure that information is not abused and leaked. The second is to ensure the accuracy and stability of AI technology.

3. Conclusion

The results of this study show that improving the convenience of AI technology in software and increasing people's trust in AI technology is the key to improving people's use frequency of AI technology in software. Only in this way will people be able to realize the full potential of AI technology and make it better serve human society. The level of trust and frequency of use of AI technology in entertainment software depends on its ability to provide accurate and stable services and results. Focus on user experience and user participation. Developers should fully consider user needs and feedback, and actively improve and optimize AI technologies to provide a better user experience and a sense of engagement. Affiliations, including the organization, address, and email, should be centered.

Meanwhile, this study provides a lot of valuable reference significance for future research in the direction of AI research in entertainment software. The application of artificial intelligence technology in the entertainment software industry has broad prospects. Future research should grasp this development trend, from the protection of user information security, improving the accuracy and stability of technology, optimizing the user experience and other aspects, and comprehensively improving the user's trust in artificial intelligence technology and frequency. This will help promote

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the sustainable development of entertainment software industry and provide more abundant and convenient entertainment services for the people.

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