Development Trend of Computer Artificial Intelligence Technology Optimization Strategy in Software Development

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Abstract. CAIT(Computer Artificial Intelligence Technology) is a modern science and technology based on computer technology and artificial intelligence technology. At present, the technology has been widely used in all aspects of society, and it can be predicted that its application prospects are very broad, so in recent years, it has been paid more and more attention by relevant departments. In order to explore the application effect of this technology in software development, we selected two software development companies a and B, of which a was the test object, which applied CAIT in its software development, while company B as the experimental control group, it has taken the original technical means as always. Finally, the experimental results show that the software development efficiency of company a is significantly higher than that of company B. The highest efficiency of software development in company a is 97%, while that of company B is 80%, which is 17% different. And when investigating consumer preferences, company a software is more popular on the market than company B.

Keywords: Computer Artificial Intelligence Technology, Optimization Strategy, Software Development, Trend Research

1. Introduction
CAIT is the product of the continuous development of modern social science and technology. From the beginning, it has received the attention of the relevant departments, so up to now, it has been widely used in many fields [1]. Now is the Internet age, a variety of emerging media platform app emerge in endlessly, and the development of various novel software has become the main means for many companies to compete for the market, but many software companies have always been unable to get around these two kinds of problems - how to quickly develop a new software and how to design a new software that can make more consumers love [2]. The emergence of CAIT provides new ideas and methods to solve these problems [3].

The rapid development of China's economy also provides a good development environment for the development of science and technology, and the rapid development of science and technology in turn promotes economic growth, thus forming a virtuous circle. Nowadays, the development of the Internet has stimulated the prosperity of the Internet economy, and a variety of new software has been developed to meet people's various needs. Yang Bo, Zhang Neng, Li Shanping think that in recent
years, the scale of open source software community is expanding, which contains more and more data. Therefore, CAIT has been greatly developed and improved, which has a great positive impact on the improvement of software development technology [4]. Now, due to the development of network technology, as well as the science and technology has undergone several rounds of development and transformation, it has gradually become mature, and the traditional technology has gradually been unable to adapt to the development of the current era. Now many experts and scholars are trying to develop a new reform technology to replace the traditional technology. Nowadays, the computer network technology is gradually developing in the direction of intelligence. As the artificial intelligence technology has been widely used in the computer network, now the computer technology is inseparable from the artificial intelligence technology, which is also the foundation and core of the intelligent development direction of the computer network technology [5]. Zhang Xiaochuan believes that the main development direction and purpose of the combination of CAIT and software development should be to better cater to and meet the various daily needs of consumers. Only in this way can software development have application value and be recognized by most people [6]. Nowadays, CAIT is a very important technology for various industries, and it has a very wide range of applications in different fields of society [7-8]. The users and researchers of CAIT should strengthen the understanding of its application in different fields, promote its better development in all aspects, and constantly explore the application fields of CAIT with continuous innovation in the market environment. Now the development of social network information is moving towards the direction of diversification, and the level of computer technology in China is also higher and higher. Computer software technology has brought more and more benefits to people's production and life [9]. It plays an important role, which will also become an important foundation to promote social development. All of the above fully reflect the characteristics of CAIT, and all kinds of software will better meet people's different needs [10].

2. Method

2.1 CAIT

In a broad sense, CAIT is a new system, which is different from computer system and artificial intelligence system. It is an independent new system derived from the combination of these two technology systems. It is based on the premise of the high development of computer, and then to study people's tired daily activities, and to complete some work and tasks that need human intelligence to complete. This new technology includes many subjects, in addition to computer technology, philosophy and psychology are also included.

2.2 Application of CAIT

With the rapid development of computer network, CAIT is widely used in remote control and planning. Compared with the traditional manual operation, the application of computer-based artificial intelligence technology can analyze the data more accurately, so as to help us get better planning. Taking the aerospace field as an example, it can realize the specific operation process of satellite remote control based on CAIT. The computer artificial intelligence system can analyze the data in advance, reasonably plan the route, monitor the operation of the spacecraft, and give appropriate instructions according to the actual situation. CAIT is not only applied in the field of science and technology, but also plays an increasingly important role in information processing. Artificial intelligence is the concrete embodiment of the application of CAIT in complex information. The principle of this technology in practical work is to deeply analyze the known relevant information, so as to realize the deep learning and mastery of relevant information. It can process information more effectively, which is conducive to the maximum use of information.

2.3 Future Development of CAIT
Data acquisition and analysis is the reason why CAIT is widely used in various industries. Because CAIT has these two functions, people can use it to better mine and collect relevant information, and analyze these data more quickly, so as to help decision-makers make better choices and decisions. However, due to the rapid growth of database data, the pressure of CAIT in the process of practical application is also increasing, and even it will appear analysis errors when processing some relatively complex information. In the future development of computer artificial intelligence, relevant developers must effectively improve the level of data acquisition technology and improve the quality of data. The accuracy of collection and classification, so that the ability and quality of CAIT processing information can be guaranteed, and further explore its future development prospects.

2.4 Algorithm Formula
When we calculate the data in the experiment, in order to see the big from the small, and to ensure the objectivity and accuracy of the experiment, we often use some probability formulas, such as conditional probability and mathematical expectation formula:

\[ p(B \mid A) = \frac{P(AB)}{P(A)} \]  
(1)

\[ E(X) = \sum_{k=x}^{\infty} x p_x \]  
(2)

\[ E(X) = \int_{-\infty}^{+\infty} xf(x)dx \]  
(3)

3. Experiment

3.1 Object of Experimental Investigation
In order to explore the application effect of CAIT in software development, we selected two software development companies a and B, of which company a applied CAIT in its software development, while company B as a control still used the original traditional technology. We also investigated the consumer's preference for the software of the two companies to explore the popularity of the software in the market.

3.2 Steps of Experimental Investigation
We used the development efficiency of two companies as experimental indicators to investigate the efficiency of software development of the two companies over the past year. Then we investigated the number of downloads of the two companies' software on the market, and investigated the consumers' preference for the two companies.

4. Discussion

4.1 Development Efficiency of Two Companies in One Year

| Table 1. The development efficiency of the two companies in a year |
|----------------------------------------------------------|
| Test | Company A | Company B |
|------|-----------|-----------|
| Test 1 | 82% | 78% |
| Test 2 | 86% | 75% |
| Test 3 | 92% | 80% |
| Test 4 | 97% | 72% |

We divide a quarter as a group of measurement units, then divide the software development efficiency of two companies into four groups in one year, and then a group includes three months of
time. Then we test the development efficiency of the four groups respectively, and finally record and sort out the data obtained, and the details are shown in the table below:

![Figure 1. The development efficiency of the two companies in a year](image)

As you can see in the chart above, we can see the development efficiency of these two software development companies in this year. First of all, we can see that the development efficiency of the first group of company A is 82%, that of the second group is 86%, that of the third group is 92%, and that of the fourth group is 97%. These four groups of development efficiency data of company A are rising all the way. We can also intuitively feel this straight-line rising trend from the above figure. Then we observe the development efficiency of company B. The development efficiency of company B was 78% in the first quarter. Compared with the first quarter, the development efficiency of company B decreased slightly in the second quarter to 75%. However, the development efficiency of group 3 increased to 80%, and the development efficiency of group 4 decreased to 72%. We can also see from Figure 1 that the development efficiency of company B has been fluctuating, not particularly stable, and it is the most efficient. The efficiency rate is only 80%, which is lower than the lowest value of company A (82%), and the efficiency of other groups of company A is basically in the range of 70% ~ 80%. Compared with company A, its overall efficiency is low.

4.2 Consumers' Preference for the Software of the Two Companies

We randomly surveyed 200 consumers on the market about the popularity of the software developed by the two companies, so as to investigate the popularity of the two companies' software in the market.

|                | Company A | Company B |
|----------------|-----------|-----------|
| Very elated    | 50        | 25        |
| elated         | 80        | 47        |
| general        | 45        | 70        |
| disgusting     | 25        | 58        |
Figure 2. How consumers like the software of the two companies

From Table 2 and Figure 2, we can see that the popularity of company a software is higher on the market. Whether from the table or from the figure, we can see that among the 200 consumers surveyed, obviously, the software developed by company a has gained more praise. We can see from the above data that the number of consumers who express great love for the software of company a is 50, and the number of people expressing love is 80, indicating that the average number is 45, and the number of people who express dislike is 25, and the number of consumers is 25, which means that the average number is 45. The total number of people who expressed good feelings in the group was 130, accounting for 65% of the total. This can show that more than half of the consumers interviewed have a good impression on the software of company a, and expressed satisfaction with the software of company a as a whole. As for the survey of software love degree of company B, we can see that the number of consumers who express great love for it is 25, the number of people who express their love is 47, the average number is 70, and the number of people who express dislike reaches 58. This shows that consumers are not very fond of software of company B, especially the number of people who hate it accounts for the total number of people 29%, the proportion of this number is relatively large, which is not a good phenomenon. Therefore, the staff of company B should reflect on and improve it, optimize and upgrade the existing software development technology, so as to make a more popular software out of the consumers.

5. Conclusions

With the development of social economy, the CAIT is also carrying on the reform and innovation. It has become a common understanding that more and more people in the field of computer artificial intelligence are applying it to software development. From the experiment in this paper, we can also see that the combination of CAIT and software development can promote the upgrading and optimization of software development system. This technology can improve the development efficiency and quality of software development system, and thus become more popular in the market. These advantages are crucial for major software development companies, because it means who can preempt the market and get more profits. Therefore, the combination of AI technology and software development will help us develop better and better software, so as to provide more convenience for our daily needs.

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