

# *Analysis of the Application of Artificial Intelligence in the Smart Business Field of Sense Time*

Qingqiu Huang<sup>1,a,\*</sup>

<sup>1</sup>International Academy, Wenzhou Business College, Wenzhou City, 325000, China  
a. 22211207060@wzbc.edu.cn

\*corresponding author

**Abstract:** Sense Time is a company with profound academic accumulation, which makes it rank high in the market of China artificial intelligence (hereinafter referred to as AI) software and applications. Its business is divided into four modules: high-tech business, city, life, and car. People in the industry highly praise the related products launched from these. Its achievements do not achieve overnight but in the exchange of mutual learning with other companies and joint cultivation. Sense Time cultivates its own high-precision talents and cutting-edge technology by enabling innovation and improving independent research and development capabilities. That is how they have today's brilliant achievements. Although AI's technological outlook is perfect, AI technology is also in high demand in the commercial sector. However, Sense Time is still on its way to breaking through industry barriers. In addition to its high cost of AI technology research and the fierce competition among peers have almost put Sense Time in the dilemma of continuous losses and bankruptcy. It is fairly difficult for Sense Time to stand out from the crowd.

**Keywords:** sense time, artificial intelligence, high-tech commerce

## 1. Introduction

### 1.1. Research Background

First, from the social environment, today's Internet world information is extremely fragmented. When people face scattered information, it is often difficult to analyze it, so in order to improve the efficiency of data analysis and reduce the cost of manual data collection and analysis of data, the research and development of artificial intelligence technology is on the agenda.

Secondly, from the perspective of the industry environment, nowadays, technology update iteration develops rapidly, and the competition between peers is fierce as well. In addition, by virtue of the fact that the research and development of new technologies require high R&D costs, high-precision talents, cutting-edge technology, and a large investment in time, if Sense Time cannot maximize the rational use of R&D costs and continuously improve its self-R&D and innovation capabilities, the company will fall into the dilemma of continuous losses and inability to make ends meet. The company can stand out only by learning to maximize the rational use of R&D costs.

Under the continuous upgrading of the current industrial structure, how can self-research and development capabilities be improved? How can AI technology be applied to the business field cheaply and efficiently, so the company can profit instead of consistently losing money? Many issues remain

to be solved urgently. In order to solve the above problems and achieve good development of enterprises, it is necessary to improve their own innovation capabilities, and research and development capabilities, and effectively manage resources.

## **1.2. The Significance and Purpose of the Research**

From the actuality point of view, this article will benefit enterprise R&D applied to the business field of AI technology by inspiring and following suit Sense Time of the R&D model. By taking the strengths of others and making up for the weaknesses of others, the company can maximize the costs of R&D while achieving high efficiency reducing unnecessary expenses, and reducing the risk of continuous losses.

From a practical point of view, visualization technology has greatly benefited people. For instance, PetroChina's "Little Iron Man" is a technician who uses data visualization, RPA, mobile Internet, and other technologies to realize the simulation display of travel trajectory and mobile intelligent travel so that employees can apply for business trips and other projects more conveniently. They don't have to submit applications layer by layer or spend more time waiting for leaders' approval. In addition, the probability of incidents in which employees falsify invoices, vouchers, etc., can be greatly reduced. It can be seen that AI technology can not only facilitate the financial management system but also make the control accurate and the process simple.

## **2. Review of Concepts and Literature**

### **2.1. Overview of the Overall Status Quo of AI Technology Application**

#### **2.1.1. Application of Visualization Technology in the Business Field**

Visualization technology refers to a theory, method, and technology that displays data on the screen in the form of graphics or images through computer graphics and image processing technology and then interacts with them. In today's environment, visualization technology is very profitable for the accounting industry and is often used in medicine and other aspects. By virtue of the fact that visualization technology can allow people to analyze better and control data, visualization technology, especially data visualization, has been widely used in the accounting industry, mainly reflected in the following three aspects:

- (1) Enterprise report, the most traditional visual display of a conventional report.
- (2) The data analysis of business departments often uses two tools (BI analysis or dashboard) to present the visual display of data analysis and mining results.
- (3) The large-screen display of the global operation of the enterprise and the monitoring of the core business in this kind of data visualization is mainly used in the production equipment operation, urban traffic control center, trading floor, etc., for the operation monitoring digital large-screen scenarios.

#### **2.1.2. Pros and Cons of Applying AI-Tech Technology**

Artificial intelligence technology can enable reporters and recipients to improve the communication efficiency of data visualization, making it easier to digest intuitive data content. In addition, visualization technology can also improve the efficiency of data analysis to better trace the cause from the results and help enterprises make operational decisions.

As for the drawbacks, initially, the tools used in AI technology have high requirements for users, generally IT industry personnel, so if enterprises want to improve the level of research and development, the demand for high-precision talent is very great. The required talent costs (including salary,

various types of welfare subsidies, training costs, etc.) and the cost of research and development are also huge. Secondly, switching to BI is relatively easier for the average employee if the users don't use such technology, but users need to pay for this tool [1].

Comprehensively weighing the pros and cons of applying AI technology, the application of AI technology still has more benefits than disadvantages to the smart business field.

## **2.2. Existing Problems**

### **2.2.1. AI Competition Pressure in the Field of Smart Business**

First of all, as far as the current situation of the smart business field is concerned, AI technical High R&D and administrative costs, coupled with fierce peer competition. As a result, Sense Time faced continuous losses with extremely high gross profit margins and was difficult to recover. Since many companies are still in the dilemma of burning money but never making money, even if their development prospects are bright, it is not easy for companies in the AI track to obtain financing and high valuations. Whether Sense Time can successfully survive the continuous loss after receiving the "blood transfusion" of the listing still needs to be considered. Furthermore, AI in The smart business field remains Difficult to break through technical barriers. Businesses and individuals with this capability are also rare. In the current environment, only the key core technology to be in AI Technology goes further, but there are very few companies with core technologies.

### **2.2.2. High Cost**

AI Technology research and development is doomed to high R&D, time, and personnel costs. Enterprises need to hire professional and technical personnel who understand the market and have high education to conduct research and development. Similarly, in order to improve self-research and development capabilities, enterprises It is necessary to give employees sufficient motivation for research and development and prevent employees due to pay treatment Question and turn other companies, again ensure Employees are able to catch up with the trend of the technological era, keeping abreast of technological innovation makes it indispensable to pay personnel and training costs. The high cost makes many companies interested in AI Technology a deterrent, or face persistent losses, so solving this problem is critical to profitability.

## **3. Current Situation of Sense Time's Smart Business Field**

### **3.1. The Reason Why Sense Time Could Succeed**

Sense Time has a deep academic accumulation and ranks high in the Chinese intelligence software and application market. The company's current business can be divided into four parts: high-tech business, high-tech city, high-tech life, and high-tech car [2]. Among them, the main profit part is the high-tech business and the high-tech city, the cumulative number of cities served by its high-tech city is as high as 155, and the number of high-tech business customers exceeds 510,000! In the field of high-tech business, Sense Time focuses on the digital transformation of the power industry [3]. They found the opportunity of the "metaverse" business and proposed to achieve the goals of high efficiency, low cost, and scale through AI intelligent infrastructure [4].

By partnering with cutting-edge technology companies such as Honda, Sense Time has enhanced its self-research capabilities and created the AIGC application, which is expected to create industry barriers. AIGC technology relies on super-large models and computing power clusters. Sense Time can modify various parameters and develop customized and unique applications through this tech-

nical modification to meet various needs of the production and innovation of AIGC content for different customers. In addition, Sense Time attaches great importance to investing in the underlying hardware infrastructure. The self-built AIDC computing power cluster has a total computing power scale of more than 2,500 petaflops, which greatly compresses the training time of the application model and improves efficiency.

For the application of AIGC technology in the field of smart business, Sense Time has long been taken into account. Online social APP applications, offline metaverse space construction, and some AIGC pilot application projects are the main directions of AIGC commercialization. By actively exploring various AIGC business models (such as platform development service fees, SDK license fees, and digital collection sales), Sense Time has rich practical experience in business implementation in the industry. Let its smart business field have core technology to have enough confidence to participate in the industry competition in the smart business field.

### 3.2. The Way Sense Time Solve the Problems

Sense Time's Chairman and CEO mentioned that Sense Time would promote AI products to ordinary consumer households for the first time through intelligent robots to "accompanying children and elders, building emotional bridges with technology, and bridging the digital divide". Some people also interpret this behavior as Sense Time seeking new business and profit growth points in this way and enhancing the confidence of the capital market to seek development for itself. For example, the invention of the robot "Meta Radish Sense Robot", let the children who have never been exposed to Wei qi learning improve their Weiqi level step by step in a game of Weiqi battle with robots and learn Weiqi-related knowledge and the history of the Weiqi. But some people are worried that the invention of Weiqi robots will reduce the joy of Weiqi battles [5]. Sense Time solves this problem by applying technology to Go without losing interest and allowing children who do not have the conditions to learn Go to cultivate interest and develop themselves [6].

With the continuous advancement of AI technology and digital technology, as well as the giants' competition to develop layouts in new and old territories, the consumer AI robot market is showing a broad market space [6]. Sense Time makes profits from developing AI robots in ordinary consumer households, makes the role of commercial robots daily and routinely improves the public's acceptance of AI technology, and seeks new development directions through the innovation and promotion of robot products. This just shows the correct direction of Sense Time's travel and indicates the broad prospects of Sense Time.

The advent of the AI era requires the support of the financial industry. Only under the role of financial capital can the maturity of technology be overgrown to industrial maturity [7]. Many AI-self-developed enterprises have not yet successfully completed this step. Still, Sense Time has established a positive trend in the field of smart business and can be said to be one of the enterprises at the forefront of industrial maturity. Sense Time's robot "Metaradish" needs to use a large SensCore device. Take the vision system algorithm as an example; from scratch, research and development, the manpower and technology required are huge. Sense Time only used a few algorithm researchers to complete the development of the first version of the robot, "Yuan Radish" in a short period of time [8].

## 4. Recommendations

First of all, from the three perspectives of technology productization, landing scale, and scene diversification, in order to stand out from competitors, it is recommended to take the following solutions: First, from the perspective of technology commercialization and improving self-research and development capabilities, a breakthrough in core technology is a challenge from scratch, so there must be

corresponding products as carriers when monetizing it commercially. Second, in terms of landing scale, in order for a technology to form a large enough influence, it needs to have the ability to scale. Only by achieving technology scale can the audience become wide and the technology be used more extensively. Third, scene diversification, the scene diversification of technology, will be one of the core elements of AI landing. It can be used to integrate various technologies to form a new technology [9].

Secondly, in order to rationally plan costs, reducing unnecessary expenses can reduce time costs, reduce personnel costs, and reduce R&D costs; three aspects to consider: First, reduce time costs: improve employee work efficiency and reduce overtime; It is also possible to give subsidy benefits to employees who complete projects or tasks first to increase employees' enthusiasm for work. Second, reduce personnel costs: encourage employees to learn together, compete with each other, acquire new knowledge, and pay attention to the current situation of AI technology in the field of smart business; It can also be regularly evaluated, and rewards and subsidies will be given to those who are at the top, so as to encourage those who lag, cultivate enthusiasm for work and study, and resist unhealthy tendencies; Communicate with sister companies regularly, learn from each other's strengths, complement their own weaknesses, and improve the capabilities of employees. Third, reduce R&D costs: cooperate with other enterprises with superior technical capabilities, share technical convenience, gather the strengths of hundreds of companies, and jointly study problems. For example, Sense Time's automotive business is due to the 2016 year. Global TOP50EM chose to cooperate with Sense Time to accumulate strength in R&D continuously; In addition, it signed a long-term cooperation agreement with Honda and has achieved great results in autonomous driving. It can be seen that cooperation with excellent companies can not only reduce R&D costs but also improve self-capabilities, which can be described as killing two birds with one stone [2].

## 5. Conclusion

### 5.1. Findings

First of all, there is no doubt that smart businesses will inevitably develop with the assistance of AI technology. Nowadays, the application scenarios of AI are becoming more and more diversified, and the demand for AI technology in different industries is increasing as well, so devoting it to the research and development of AI technology is the correct choice. Secondly, Sense Time's circulation plate is small, so its valuation has a lot of space for appreciation. Suppose Sense Time wants to break down industry barriers and achieve the goals of high quality, fast output, and high iteration goals. In that case, its self-developed AI infrastructure (AIGC technology) will be helpful. Sense Time and its focus on AIGC's commercialization exploration have launched online social APP applications and offline metaverse space construction. They have begun to launch a series of AIGC pilot application projects, which explore various AIGC business models such as SDK license fees, platform development service fees, and digital collection sales, and they have rich practical experience in commercial implementation in the industry.

### 5.2. Limitations and Future Studies

AI is definitely changing the way companies interact with their teams and customers in business functions. These are not the only business applications, as AI enhances optimization, data management, marketing, quality assurance and control, and many other functions. As IBM's survey shows, AI development companies are continuing to advance and meet industry, sector, and niche-specific business needs, while more industry areas are planning or already adopting AI technologies. Owing to the fact that there is no systematic learning of professional knowledge, some ideas that are too in-depth may not be explained deeply enough. It is also the first time to create a paper, so there may be

some problems with the structure and layout of the paper. In addition, the sources of reference materials in this article are not very rich, some of the content may not be comprehensive enough, and the main information comes from recent newspapers and published papers. Hence, for the future, Sense Time only has reference value but cannot be a word; the conclusion, such as the development of the prospects of Sense Time mentioned in this article, is only based on the reference data to make a prediction, not absolute. This article is for informational purposes only.

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