

# The Effect of Baidu's AI Robots on Human Life Analysis

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**Abstract.** AI robots are widely used and constantly changing people's lives from various perspectives. The time that people spend with AI is increasing. Among all the companies that produce AI robots and models, Baidu is the most prominent one. It can be applied on any device with internet access. It allows people to interact with it. People can use it in various ways, such as entertaining, chatting, and controlling household electric devices. It could be beneficial in people's daily lives. On the other hand, there are also some drawbacks to overusing AI products. For instance, if people use fewer AI products, they might retain the ability to think. People must refrain from inventing new things. Moreover, society might be polarized with rich people having better products and others owning regular social resources. This is not a good trend. This article also has some suggestions for Baidu products, such as doing more market research and inventing new functions.

**Keywords:** AI robots, old people, market research.

## 1. Introduction

With the fast development of science and technology, more and more Artificial Intelligence (AI) robots and models have been designed and invented. Almost all companies are trying to make their own robot to make people's lives more relaxing and convenient. Xiaodu, an AI model designed and created by Baidu, stands out from the pack of all models and is favored by most users in China. Its strong and useful functions are still attracting more customers. In this essay, this article will introduce the applications of this product, how it will affect people's lives, the limitations of overusing of AI products, and some suggestions this article could provide for the products.

### 1.1. The History of Baidu

Based on search engines, Baidu has evolved artificial intelligence technologies such as speech, image, knowledge graph and natural language processing. In the past 10 years, Baidu has continued to invest in cutting-edge fields such as deep learning, conversational artificial intelligence operating systems, autonomous driving, and AI chips, making Baidu a leading AI company with a strong Internet foundation. The Chinese company Baidu is a company that has a strong basis in artificial intelligence. The slogan of Baidu is: To be a top global technology company that best understands users' needs and enables their growth. The company's founder is Li Yanhong, who discovered the great potential of Chinese internet and artificial intelligence and decided to return to China with his hyperchain analysis technology. He then started Baidu in 2001 in Zhongguancun. This also made China the fourth country with the core search engine technology besides Russia, South Korea, and America. Now, Baidu responds to billions of search requests from more than 100 countries and regions every day, and it is the primary method for billions of Internet users all over the world to obtain Chinese information and services [1]. Baidu owns many subsidiary corporations, such as Baidu Map, Baidu Nuomi, Aiqiyi, Baidu Translate, and Baidu AI. All the products and services make Baidu 123.675 billion yuan every year. In March 2023, Baidu published an AI language model, the ERNIE bot [2]. It has functions that are similar to ChatGPT. It also gets better results than ChatGPT in some tests. The ERNIE bot might change people's lives in various ways in the future.

### 1.2. Development of Xiaodu

Xiaodu is an AI robot designed and produced by Baidu. With hardware as an essential carrier and cross-scene layout, Xiaodu aims to provide public users with more accurate, convenient, and

diversified intelligent services in different scenarios. As Xiaodu iterated to version 7.0, it is committed to “weaving” content and services from the digital world into the physical world, allowing artificial intelligence to surround users at all times, respond in time when needed, and hide into the environment when not required, bringing a new experience of “surround intelligence”. Xiaodu Assistant has become China’s most extensive conversational artificial intelligence operating system; the devices equipped with Xiaodu Assistant have 7.1 billion voice interactions per month, and the connected IoT smart home devices have exceeded 200 million, covering more than 70 categories. Xiao Du Assistant has an open cooperation ecosystem and developer community, with more than 1,500 well-known enterprise partners, and ranks first in the home, hotel real estate, vehicle, and portable scene. Developers on the Xiaodu Assistant ecosystem platform provide more than 5,200 kinds of skill support, including games, efficiency tools, Internet radio, live broadcasting, children’s education, and smart home, to jointly explore more possibilities for developing Xiaodu Assistant technical capabilities. In terms of intelligent hardware, Xiaodu’s innovative hardware has covered many categories such as smart screen/smart speaker, brilliant camera TV, intelligent fitness mirror, smart dictionary pen, smart learning tablet, smart earphone, smart screen, friend machine, Xiaodu Qinghe learning mobile phone and internet of things (IoT). According to the latest authoritative data agency IDC Report 2022, Xiaodu ranked first in the market share of China’s smart speakers, learning tablets, and fitness goggles. At the same time, the Xiaodu assistant also extensively enabled second - and third-party hardware.

### **1.3. How Do People Use Xiaodu**

According to the texts above, Xiaodu can be used in various hardware to provide people with multiple services. Let’s take the example of the Baidu map. People using other map apps, such as Google Maps, might need their fingers to type what they want with keyboards on people’s screens. On the other hand, if people use Baidu maps in their cars, what they should do is just say “Xiaodu xiaodu” and tell him the name of the people’s destination. If people get bored driving, they can ask Xiaodu to sing a song or tell a story. This would effectively prevent accidents caused by fatigue driving or accidents caused by modifying air conditioning or maps.

## **2. The Places That Xiaodu Can be Installed**

### **2.1. Xiaodu on Vehicles**

DuerOS for Apollo can be utilized on the monitor in the middle of people’s car. It has various functions to feed people’s needs and wishes. The main screen has four buttons. All these buttons look simple and people can clearly know what these buttons mean from their outlooks. People who want to visit somewhere but do not know the directions can ask Xiaodu to open the map. Also, if people would like to record this trip, they can tell Xiaodu to open the camera and take a picture of where they are staying. When the map is too complicated to understand, people could open reality navigation, and it would tell people where to go. When people would like to buy something (such as a movie ticket), people could ask Xiaodu to pay for it [3]. When people are too dull when driving, they can tell Xiaodu to broadcast something. If it is too cold or hot inside the car, people could ask Xiaodu to increase or decrease the temperature of the AC. It also supports driverless driving, which leads vehicles into a new era [4]. All of these things require no hands but only people’s sound. Baidu, through its products DuerOS for Apollo, Xiaodu, and Map, gets its permission to supply the products to leading car brands.

### **2.2. Xiaodu on Phones**

Phones that installed Xiaodu App can use Xiaodu, which gives Xiaodu some limitations. Currently, Baidu has invented the Xiaodu Qinghe learning phone [5]. It is the kind of phone designed and produced specifically for children. With the rapid progress of the internet and phones, children can view things, play games, and do something they are not supposed to do on the internet with their

phones. Under such circumstances, most parents think buying their children's phones is improper because doing this may lead their children on a road of no return. Now, Xiaodu Qinghe's learning phone can ideally eliminate this concern. The minimum price of 1499 yuan makes it affordable for most people worldwide. The phone owns all the aspects except the Apps can only be installed on their parents' phones. This helps the parents to prevent their children from playing games. Xiaodu Qinghe Learning phone, like its name, is famous for its vital learning functions. Xiaodu could help students do many things, such as marking their homework, reciting poems, and practicing English speaking. The phone also provides students with 3000 lectures for all subjects and 7000 knowledge frequently tested in current years. These functions make Xiaodu Qinghe's learning phone an outstanding product for students. With this kind of phone, students can break the limitations of place and time. They could learn wherever and whenever they would like to know.

### **2.3. Xiaodu on Earphones**

Xiaodu smart earphone is also a strong product. It was released on August 18, 2022, at the Baidu World Congress. It is a wireless Bluetooth cellphone. It carries Bluetooth 5.2, strengthening the connection in a more extended range. Xiaodu smart earphone also brings Xiaodu. When people want to do something or know something, just let Xiaodu know, and all these things will be realized. When people feel the world is too noisy, just put on the earphones; these earphones would produce a sound wave in the opposite direction. It can counteract the noise that surrounds people. When talking to others, change people's earphones to another mode, and they can hear what others say. When people cannot find their earphones, they can let them produce a sound and find their earphones according to the sound. When someone steals people's earphones, they can see their earphones' position on their smartphone. The most spectacular function of it is the translation mode. It allows people who speak different languages to communicate with each other with no barriers.

## **3. The Ways That Xiaodu Changes Lives**

### **3.1. People Interact with It**

Nowadays, as the competition among humans increases, more and more students and adults are trying their best to study and work. They have many essays to write and reports to do. Doing this requires not only people's ability to write but also their capacity to search, process, and organize information. All of these would be difficult for people new to writing these things. When people are facing problems like this, Xiaodu could help. Xiaodu can understand people's requests and provide them with corresponding services. In other words, people can tell Xiaodu what people's problem is and what people would like to find on the internet; he would try his best to search for the thing people are asking on the internet and give people his response in several seconds. The answers people get from him would be more accurate and comprehensive than the ones people find on the internet. This would also save people much time.

This function of communication can also be applied in other circumstances. People in this generation are always busy working and have minimal time to care for their children and parents (older adults). Xiaodu's bright screen can also accompany children and older people. When the users of Xiaodu are kids, people can change it into children mode. In this way, Xiaodu will tell some stories and answer questions from kids. If the user is old, people can adjust the setting to elder mode [6].

People who are above the age of 60 can be defined as older adults. As they become older, their bodily functions will be decreasingly sensitive. They cannot hear, see, smell, or taste things. They cannot attend to the knocking sound and the talking sound of their families. They cannot see things clearly because they suffer from presbyopia. They cannot tell whether the food goes bad and whether there is a leakage of harmful gas. Their memories are also getting worse. Because of the phenomenon above, older adults would be sad and anxious [7]. In this case, older adults should exercise more and think constantly to prevent their brains from aging. This is why older adults necessarily use these AI products. Older adults might find it difficult to read paper books. Older adults can use their brains

actively by talking to Xiaodu and asking it to broadcast news and books. When someone is knocking on their door or talking to him, Xiaodu could make the voice louder to let these people hear them. Xiaodu could encourage and supervise them to do exercise. People can set goals for their parents and let them finish these goals. Most older adults like dancing in the square. This activity requires a loudspeaker. Xiaodu makes the process easier by finding the correct song and making the sound louder so everyone in the court can hear the rhythm. In the future, Xiaodu could also detect if there's a harmful gas or severe disaster. In this way, older adults are safer at home.

For people working outside and leaving their parents at home, Xiaodu could also help. Monitor that is utilized by AI could be applied to the houses where these older adults are staying [8]. They could know what these older adults are doing and stop their dangerous actions on time. When they are doing complicated things, people can talk to their parents through the speaker on the monitor. As a result, many serious accidents can be avoided.

### **3.2. People Use and Play with It**

Xiaodu can also be used as a remote control for many devices. Baidu has produced some products to protect its users. For example, the door locks or monitors would alert the owner if someone else is trying to enter the house. Besides, Xiaodu can also control home appliances ranging from televisions, washing machines, and air conditioners to curtains, lamps, and mirrors. If people want to turn on a television, people can say, "Xiaodu Xiaodu, turn on the television". People can also tell him which movie or TV series they would like to enjoy [9]. This product could completely free people's hands. People would never worry about people who cannot find their controller.

Xiaodu can provide people with various means of entertainment. When people are bored, they can watch movies, sing songs, play games, and chat with their friends through products that could support Xiaodu. Through interaction with Xiaodu, people can be more relaxed when using Xiaodu. No one would ever feel bored when they are staying home alone [10].

### **3.3. It Cares People's Health**

Xiaodu also cares about people's health. With watches or other devices utilized with Xiaodu, people's heartbeat, blood oxygen, and blood fat can be monitored. When people's bodies are not in good condition, their devices warn people about what they need to care about. Also, when people exercise, their device records the data. If people are running, it would record their running speed and how far they ran. This function allows people to modify themselves constantly and continuously improve themselves.

Xiaodu can also be utilized on fitness mirrors. These mirrors can show themselves and enable people to watch videos. People can play videos ranging from movies to educational videos if they want. They could tell people whether they are moving correctly. When their movements do not fit the standard, they could modify them by themselves according to the suggestions provided by Xiaodu.

## **4. Disadvantages of AI Technology**

AI might be very useful and convenient in people's daily lives. However, the overuse of AI robots and models might cause personal information leakage. Take DuerOS for Apollo as an example. They are designed for "face swiping" to use some functions. However, many services, such as taking money from banks, also require face swiping. If the facial data are stolen and illegally used by the hackers, all their money could be stolen. Accordingly, doing this might be harmful to people [11].

AI is developing to replace something that people can do, such as online customer services, workers, and white-collar. People need to be more careful with AI robots and models so the unemployment problem could be severe. In other words, many people might lose their jobs and have no source of income because of AI. They may need a place to live and food to eat. The crime rate will be unprecedentedly high, and many people will be infected by some diseases and die. This is not a good trend.

The AI technology that is used in driverless vehicles can also be dangerous. Since robots run all the programs, hackers can easily change the code of these vehicles and cause damage to the city and its citizens. In addition, even if hackers are not attacking the systems of these vehicles, the system might get some problems when they are running and, therefore, cause damage to society.

People can quickly get access to information through AI models. People will love this process because it does not require them to think. As a result, they might lose the ability to think profoundly and dig into the questions. They need help finding new ways to solve problems. They may not invent new things and creations. Under this circumstance, people may stop evolving, and society might stop progressing.

If AI products are widely applied in people's lives, people's society might be polarized. To illustrate, better AI models require more money to buy or produce. That is to say, only a few people can access better AI robots. In this case, compared with people using everyday AI products, these people can have better resources and enjoy a higher-class life. People with simple AI products might be poor and lack money. The world population might decrease.

## 5. Suggestions for Xiaodu AI Robots and Products

Increase the parts that are provided for people to do individuation. Do more market research on what customers would like to buy and get to know what customers want and need. Take the colors for Xiaodu products as an example. Almost all Xiaodu products have a limited number of colors for users. People who know Xiaodu for the first time may buy products from other companies because they prefer something different than the colors supplied by Baidu. Therefore, Baidu needs to create more colors for the users.

Many of the Baidu products can only be used when they are charging. Take Xiaodu Smart Screen as an example. Xiaodu Smart Screen allows people to watch movies or play games. It can also be used for playing music. However, when people would like to take them outdoors, they cannot be used because they must be plugged in to be used, which gives the product many limitations.

Xiaodu, although very smart, can only provide people service by having a limited number of conversations. When people ask about things that are truly difficult or unpopular, they may not understand them. Therefore, Xiaodu needs to improve its database and make it a better product.

## 6. Conclusion

Overall, Xiaodu influences people in various ways. For instance, it could help people take care of children and old people, entertain them, and help people do research. Though AI products benefit human beings, they also have many drawbacks. Overusing AI products may make people stop thinking deeply and constantly. They may stop finding the basis and truth of all subjects. As a result, they might lose their innovative ability and the development of human society will stagnate. There are also some suggestions for Xiaodu products. It would be better for Xiaodu to research more and increase potential customers. They may do more individualization to attract more customers.

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