

The Perspectives of E-Commerce System and Innovation Economic Product Development: Mathematical and Computer Modeling Strategies Based on Virtual Reality Technology and Medical Diagnostics

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Abstract: Developing the e-commerce system as a product of health economics is the research team's research task. We performed computer modeling strategy analysis using virtual reality technology principles and clinical diagnostics. We tried to put forward a computer model for solving the problem of remote medical care and carried out the necessary feasibility analysis. I put forward a strategy in light of the key knowledge of cross-specialties, and carried out reports and expositions to address the technical difficulties of the present.

Keywords: E-Commerce; Economics; Virtual Reality Technology; Clinical Diagnostics; Computer Science; Mathematical Model

1. Background

E-commerce typically refers to a new business-operating model of consumer shopping, online trading and online electronic payments, as well as a variety of business activities, transactions, financial activities, and related integrated service activities, based on browser-to-server usage in an Internet-based environment across a wide range of business and trade activities worldwide.

Market trading is a value-based exchange between participants on the basis of equality, freedom, and mutual benefit. Online trading also follows these principles. As an integral part of the transaction, two types of information are exchanged between the two sides of the transaction, and an equivalent exchange between the two sides. When it comes to online transactions, information is communicated through digital information channels, first and foremost on the premise that both parties must have information-technology tools to use information-technology-based communication channels. And to ensure that it can be traded through the Internet, businesses, organizations, and consumers must be connected to the Internet, lest it be used. Dealing online, the two parties are spatially separated, and, in order to ensure equivalent exchange between the two parties, they must provide the means of delivery and payment settlement. The distribution of goods remains dependent on traditional logistics channels, which can be used both in traditional ways and in sophisticated online payments. Moreover, to ensure that businesses, organizations, and consumers can use digital communication channels to distribute and pay transactions smoothly, intermediaries – e-commerce service providers – need to participate.

Telemedicine refers to the use of computer technology, remote sensing, telemetry, remote control technology to give full play to the medical technology and equipment advantages of large hospitals or specialized medical centers for long-distance diagnosis, treatment, and counseling of injured and ill people in remote areas with poor medical conditions, at sea or onboard ships.

It aims to improve the level of diagnosis and health care, to lower health-care expenditures, and to meet the general public's health needs as a novel medical service. Already, telemedicine technology has evolved from initial television monitoring and telediagnosis to high-speed networks for integrated digital, image, and speech delivery, as well as real-time communication of speech and high-resolution images, providing broader space for the development of modern medicine.

Foreign development in this area has been going on for more than 40 years, and china has only gained prominence and development in recent years.

2. Design of method

First, it has reduced to some extent china's ultra-unbalanced distribution of expert resources and china's population. While 80 percent of china's population is located in areas with less developed county and county health resources, 80 percent of china's health care resources are in large and medium cities, the level of health care development is uneven, and tertiary hospitals and high, precision and cutting-edge medical equipment are also distributed in large cities. Even in large cities, patients wish to be treated by specialists at tertiary hospitals, resulting in hospital admissions to primary hospitals, increasing the burden of city-level hospitals, resulting in bed-stressing, and idle primary beds, resulting in uneven distribution and waste of medical resources. The use of a remote consultation system may allow patients in less developed regions to also receive specialists from large hospitals. In addition, measures such as distance education have been shown to improve the quality of small and medium-sized hospital physicians to some extent. Virtual reality is the synthesis of multiple technologies, including real-time 3D computer graphics, wide-angle (wide-field) stereotactic display technology, tracking technique for the head, eye, and hand, and tactile/dynamic feedback, stereotactics, network transmission, and speech input output technology. These techniques are illustrated in the following paragraphs. It is not too difficult to use computer models to generate graphic images compared to real-time 3D computer graphics. With enough accurate models and plenty of time, we can generate precise images of various objects under different light conditions, but the key here is real time. For example, in a flight mimicry system, image brushing is important, and image quality is highly demanding. Add to that a complex virtual environment, and the problem becomes very difficult. VR art is an emerging, independent art class that has come along with the advent of the "virtual reality era." In general, VR art is an interactive form of art based on a new type of human-machine dialogue, the greatest strength of which is to construct a dialogue between objects and participants to reveal the process of meaning through dialogue. The application of VRs in medicine is of great practical importance. In a virtual environment, virtual models of the human body can be created, with the help of tracking bulbs, HMD, and sensory gloves, so that students can understand the structures of the human body's internal organs easily, much more efficiently than is available in textbooks. In the early 1990s, Pieper and Satara et al developed a virtual surgical exercise machine based on two SGI workstations for leg and abdominal surgical simulation. This virtual environment includes virtual operating table and operating light, virtual surgical tools (such as scalpels, syringes, forceps, etc.), virtual body models and organs. With the help of HMD and sensory gloves, the virtual human model can be operated on. But the system needs to be further improved, such as by improving environmental fidelity and network functionality, enabling it to train multiple users simultaneously, or working with experts in the field. VR technology is of great importance in predicting the outcome of surgery and improving the lives of people with disabilities, as well as in the development of new drugs. Big data refer to the vast amount of data that has been generated during the run of health-care-related industries, which assembles multiple features of the industries themselves and is of great research significance for the development of smart medicine. Thanks to the development of big data technology, hospital information systems are generating large amounts of data to add value through visualized analysis and data algorithms, which, together with Big Data mining and artificial intelligence technology, have the potential to facilitate refinement, facilitation, and intelligent acquisition of routine work in complex and complex health-care industries, based on the efficient use of these data. For example, with the launch of the Big Data Age, the development of new diagnostic and therapeutic technologies, such as online consultation, online appointment, and telemedicine, has disrupted the spatial dispersion of health care, optimizing the integration of health-care resources and information-sharing.

The use of artificial intelligence plus big data to systematically document patients, manage health care, and assist in diagnosis can be effective in relieving inadequate clinical care resources. Based on massive amounts of data in the biomedical pharmaceutical industry, the increasing computational capacity of models and the diffusion of large data sets, with the use of machine learning and artificial intelligence, can effectively relieve the pain spots in traditional drug development that are

time consuming, costly, risky, and yield low returns, help to achieve breakthroughs in research in drug development, accelerate the development and marketing of drugs, and generate significant social and economic value.

3. Discussion

Economic Value Analysis: My national hospital development policy has evolved from a lack of strong support in the early years to a clear strengthening of support today, and the latest policy has increasingly supported public health-care provision, creating a policy environment conducive to social forces' access to health care. ^{[1][2][3]}

As it stands, public hospitals still dominate the health-care market, but the 12th Five-Year Plan of China has introduced a series of health-care-industry policies that have made the growth of private hospitals so rapid. As of the end of June 2017, there were 30000 hospitals, including 12,566 public and 17,153 private hospitals, according to data released by the National Health Care and Prevention Commission. Compared with the end of June 2016, there were 392 fewer public and 1,850 more private hospitals. The rapid growth of private hospitals has been attributed on one hand to frequent policy dividends and, on the other hand, to much more capital for interventional hospital investments than in the past. We believe that investment in clinical diagnostic modeling software has substantial market value in China. Our product design should focus on differential sales between private and public hospitals. ^{[4][5]}

4. Strategic analysis and conclusion

In addition to improving research technology, smart health care is essential to meet the health needs of users if it is to achieve sustainable health development. Intelligent care should be assessed by the user according to unique characteristics of the user and the intelligent medical profession. 2. Intelligent care should be dynamically adjusted to meet the user's needs based on the user's evaluation. For public goods, governments have incorporated user reviews into performance reviews of relevant institutions, enabling R&D institutions to create good platforms that benefit their citizens' lives. 3. Smart medicine is indeed a "revolutionary upgrade" of traditional health care and informationization, which not only improves the overall technical capacity and service level in the medical field but will also be the driving force in the building of a healthy China. The trend toward more applications in smart health is becoming increasingly apparent, as technology improves to the point that it creates a better life. This, of course, deserves more confidence, because it is the future of human health care and the new answer to human health.

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