



"Cherry" posture glow -AR technology to help farmers

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Abstract. In the context of "Internet +" widely used in the direct marketing of crop origin, for the elderly who are not around and out of touch with The Times, it is difficult to flexibly use smart phones and the Internet to make high-quality cherries difficult to enter the national market. This paper builds an information exchange platform for buyers, sellers (children and the elderly) and logistics to help the elderly complete the information operation, so that cherries can be displayed in the public vision and promote sales. This paper introduces the combination of AR glasses and information technology to solve agricultural problems together. [1]This paper analyzes the problems of the sale of agricultural products in our country, puts forward the point of view of using science and technology to solve the problems, and draws the conclusion that we should apply the new generation of information technology knowledge to solve the real problems in the digital countryside.

Keywords: digital countryside, AR technology, agricultural product sales, information technology, agricultural aid.

1 Introduction

Digital countryside is the strategic direction of rural revitalization and an important part of the construction of digital China, which aims to promote the development of agriculture, rural areas and farmers through information and digital technology. In the past, for a long period of time, limited by information transmission, transportation and other factors, the rural economy has relied heavily on basic agriculture and township enterprises, while digital information technology has broken the pattern of rural news blocking, especially with the continuous expansion of modern logistics coverage, e-commerce has become a new driving force for rural economic development, and the vitality of rural economy has been significantly improved.[2] In the current social environment, young people are generally eager to develop in big cities, and most of the people who stay in the countryside are old people. The elderly have poor learning ability, weak acceptance of the Internet, lack of mastery of smart phones and information technology, and it is difficult to independently complete a series of complex information operations such as the sale of agricultural products through the

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e-commerce platform, so they cannot catch the fast bus of digital village construction to achieve output value growth. In the case of a family, two elderly people were planting cherries at home without their children. [3]We envision the use of AR glasses remote collaboration, practical training, intelligent inspection, exhibition and other functions to achieve information exchange between the elderly, children and buyers, so as to achieve quality control of cherries. Then collect buyer information through the order platform, associate the order platform with the speed printing platform, and realize the batch import of order information in the order platform into the speed printing platform. After manual review, the correct order information is sent to SF Express in batches, so as to realize the information exchange between children and express. The information operation in the whole process can be completed remotely by the children, and the elderly only need to carry out their familiar picking and packing work.

2 Background of AR glasses

At present, the optical performance of AR glasses is well developed, and the pixels configured with hardware functions have been able to meet the needs of clear image acquisition. At the same time, the "small body" of AR glasses has been able to carry the "large computing power" needs, access Ali Cloud "shadowless architecture" in AR glasses, and use cloud computing power, you can chat with people and work in the virtual reality picture in front of you, and also do 3D rendering, big data programming and other complex work. 5G mobile phones connected to AR glasses can meet the needs of real-time information transmission. The elderly wear AR glasses and observe the real scene through the glasses, and the real scene information of cherry picking and packaging is projected to the glasses, and the collected images can be transmitted to the 5G mobile phone of their children in real time with the support of cloud computing power. The elderly wearing AR glasses can also have global voice interaction with their children, so as to realize the idea of remote control of cherry quality by their children.

3 Domestic research status of similar research work

At present, China's agricultural products are in the passive waiting stage, and sometimes what comes is not traders, but the news that many agricultural products are not interested. Now, the Internet has been basically popularized, as an agricultural producer, must keep up with the trend of The Times, in order to profit in agriculture. The use of e-commerce to sell agricultural products can not only broaden the sales channels of products, but also allow products to directly face consumers and sell at a higher price. At present, AR technology can use cameras, sensors, real-time computing and matching technology to superimpose the real environment and virtual objects into the same picture or space in real time and simultaneously exist. Users can feel the "immersive" fidelity experienced in the objective physical world through the virtual reality system, but also break through space, time and other objective restrictions, and feel the experience that cannot be experienced in the real world. At present, information technologies such as cloud computing, the Internet of Things, and artificial intelligence

can be used to solve the difficulties faced by China's agricultural development and help agricultural development. [4]This project combines AR glasses with information technology to solve agricultural problems.

4 Existing problems and research significance

Existing issues:

(1)In the current society, it is common for children in rural areas to stay away from their hometowns, and elderly people at home cannot use smartphones, making it difficult to accurately and quickly input delivery information into mini programs.

(2)Nowadays, most people over the age of 60 are managing cherry orchards. Due to their age, they have weak eyesight, making it difficult to ensure the quality of cherry picking during the selection process.

(3)For sudden order changes (such as changes, refunds, etc.), elderly people in the village do not use smartphones and their phones cannot be connected, resulting in delayed information transmission.

Research significance:

(4)Through a mature online shopping market and a developed logistics industry, we help elderly people who do not know how to use smartphones to handle the information gap between them, buyers, and logistics. We can successfully sell agricultural products, not only helping farmers, but also allowing buyers to taste fresh and high-quality agricultural products.

(4)Promote the integration of e-commerce sales, express logistics, and production ends, build production and sales bridges through multiple channels, effectively help large farmers solve problems, and help solve agricultural problems.

(5)As consumers, we can directly understand agricultural products through their place of origin, and gain a more intuitive and specific understanding of characteristic agricultural products to obtain more reassuring and green products. The problem of elderly people not being good at using the internet can be solved through this project.

(6)Reduce transaction costs. Due to industry characteristics, agricultural information has the characteristics of dispersion, complexity, and comprehensiveness. The traditional way of information exchange is relatively slow and difficult, and the cost of obtaining information is high. By implementing online marketing for agricultural products, producers can communicate with consumers, reduce the circulation links of agricultural products, and shorten the circulation chain. In addition, due to the transparency, real-time, and highly interactive nature of information between the supply and demand sides, costs have significantly decreased. Information technology innovation point.

5 Innovation points in information technology

(1) The introduction of AR glasses in agriculture enables double control of cherry quality. The innovative use of AR glasses as a new technology to solve the problems encountered in the actual situation, the development of AR glasses new use scenarios.

(2) The seller can live broadcast the cherry picking, packing and other processes on the lower platform or other short video platforms through the field of view shared by AR glasses, so that buyers can feel the quality of cherries more intuitively and clearly.

(3) Rely on more convenient AR glasses technology to achieve remote control of young people, make the close connection between the two Spaces possible, and solve the problem that the elderly are difficult to skillfully use the Internet.

(4) By connecting the purchase platform with the logistics company through a small program, the buyer information on the next single platform can be imported to SF Express information center with one click, simplifying the manual operation in the past.

(5) Through the functions provided by the platform, children can quickly establish direct contact with consumers through wechat, reducing the elderly's difficulty in operating smart phones and reducing distribution channels and sales costs.

(6) As a consumer, you can directly understand agricultural products through the origin, more intuitive and specific understanding of characteristic agricultural products, and obtain more assured, greener and healthier agricultural products.

(7) Make an independent cherry purchase platform, so that buyers can place orders in the exclusive mini program, realize the quick and unified collection of buyers' order information, and avoid the confusion and errors caused by too many orders.

(8) Users do not need to download software, and can place orders in wechat mini programs, which will broaden the existing online shopping channels and change the original online shopping methods.

6 Popularization and application

(1) wechat graphic

We can insert pictures and texts in each public number of wechat, the title and pictures should be set around "AR" and "cherry", which should be attractive enough to arouse the curiosity of users, so that they are willing to click on the detailed reading. To continue, uninterrupted sharing of high-quality graphics, can increase the loyalty of existing fans, and can continue to bring more attention, so as to achieve the effect of AR technology to the public vision.

(2) Circle of friends + wechat forwarding

Wechat has a strong social ecosystem, and it is easier to gain the trust of users by promoting this acquaintance promotion model through wechat groups and friend circles. Businesses can push some marketing activities in wechat group and circle of friends from time to time, so that everyone can share and split more users, by sending wechat public number link to users, generating fission posters, users share fission posters to friends, friends scan the wechat group QR code in the poster, pull 3 users into the group, and then send the screenshot to wechat public number customer service. You can get a coupon to buy cherries. This not only attracts new and old customers to buy cherries by issuing coupons, but also promotes the new AR technology to help farmers.

(3) Shopping mall publicity

With the continuous improvement of human life quality, the scale of shopping malls is growing. We can put up posters and illustrations about "AR technology for agri-

culture" on the wall of the entrance and exit of the mall or the underpass to attract people from all walks of life to pay attention to the help of AR technology for agriculture. Promotional videos can also be made in advance and played on the mall's screens.

(4) Set up stalls for publicity

We can set up a stall in some places with large traffic, so that everyone can taste cherries for free, the first can promote the quality of cherries, so that everyone can rest assured to buy. Second, we can promote AR technology by attracting people, let everyone try it on, show the imaging clarity of glasses through mobile phones, arouse their curiosity and interest, and let more people participate in the popularization of AR technology.

(5) Campus publicity

Write a few radio drafts on "AR technology to help agriculture" into the radio station, to achieve real-time updates, bring this new type of agricultural technology to the public's vision, and appeal to interested college students to join our team.

(6) Contact farmers

Want to get cherry production up, AR glasses go out, you can also contact the farmers market. Farmers' market is a place where producers and consumers of agricultural and sideline products buy and sell directly. The city has a large population, and there will be customers entering the market during the morning and evening peak. Therefore, the farmers' market can ensure stable sales of cherries, and there will not be a cold situation. If the AR glasses are promoted in the farmers' market, people will exchange greetings while buying vegetables, and the emerging technology of AR glasses to help farmers will be discussed, playing the role of human-to-human publicity.

(7) Promotion through short video platforms

During the investigation in Cherry Peach Garden, we can shoot some novel promotional videos such as picking cherries and transmitting information with AR glasses in advance, and disseminate them through short video platforms such as Douyin, Kuaishou and bilibili.[5]As mobile phones become more and more intelligent and people use them more and more frequently, the forwarding rate and forwarding platform of short videos have become diversified, and a short video shot well can form a publicity effect on multiple platforms. Compared with the graphic publicity method, short videos are more interesting and intuitive, and the interaction is very obvious, which can better attract and retain users.

(8) Sponsor cherry fruit tea shop

In modern life, drinks have taken a large proportion in people's dietary life. In many beverage stores there will be LED display in front of the counter, we can negotiate with the business in advance, fruit farmers can provide a large number of raw materials for the beverage store cherries to let the business make fruit tea, but the business also has to use our AR glasses to help farmers advertise and cherry origin projected on the screen. Merchants can use the raw materials for free, and we can promote the new technology of AR glasses, and let customers taste the quality of cherries when they buy drinks. This achieves "win-win cooperation" between businesses and fruit farmers, which can be described as killing three birds with one stone.

7 Conclusion

To sum up, when picking cherries, the elderly can wear AR glasses, and the children can watch the cherry picking situation and control the cherry quality through the Internet in real time. [6] At the same time, the children can use AR glasses to enable the elderly who lack Internet experience to communicate with their children at a distance, and use the ordering platform and the ultra-fast printing platform to achieve information exchange between the buyer, seller and logistics, and ultimately enable the elderly to obtain additional income and agricultural products to go all over the country.

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