The Application of Big Data in the Fashion Industry

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Abstract. Smart wardrobe is a new concept designed to bring about virtual apparel management through computers and the Internet. With convenient apparel, convenient apparel replacement, intuitive live-action simulation, combined with the stylish messages, design companies, brand companies, and fashion consumers for the apparel industry, it will provide for goods resolving plans and fashion consulting services.

Introduction

In September 2015, the State Council issued the "Action Outline for Big Data Development" approved by the Prime Minister and systematically deployed the development of big data to meet the new opportunities and challenges brought by the big data technology revolution.

In the field of fashion, smart wardrobe can be used not only for matching management of personal consumer clothing, it can also be used to grasp the fashion trends, product planning, new product promotion, Internet marketing and so on. In personal use, by collecting the latest big data of fashion information, according to different customer's personality characteristics, smart wardrobe can provide clothing image design, and record the customer's body. It will back up each customer's clothing product data in accordance with different needs, and provide clothing with image design, guidance and links. Intelligent wardrobe provides senior consultant services for high-end customers to—wardrobe consultants, and provides users with closet management, clothing match design, personal image design and other one-on-one service. Besides, it will provide users with fashion information, nurture fashion taste, and stimulate fashion sensitivity from the inside out to enhance the user's fashion style.

Thesis

In business services, with the help of big data, smart wardrobe through timely updates of popular information for the brand apparel products provides guidance and an intuitive visual window in the brand marketing for the development of new products and for the brand planning. It may also play an obvious role in brand enterprise promotion, including:

In the stage of product planning, the concept design can be formed by the designers according to the fashion trend. Then, the product combination in the new season can be visually confirmed through the combination and virtual display of the products in the smart wardrobe system, which can not only save the design time, but also be conducive to communication between staff and departments. And policymakers can also see the visual results to avoid making mistakes.

In the product promotion stage, the display, product matching and virtual show can be previewed through the smart wardrobe, so that the product can be more easily communicated to the customers and the cost can be reduced at the same time.

In the field of e-commerce, as the network technology matures, garment enterprises pay more and more attention to e-commerce. One of the constraints of e-commerce for apparel products is that customers cannot see the visual effects of the products and that also causes some obstacles. Intelligent wardrobe system can solve this problem.

Smart wardrobe's features mainly include online personal customer service and business services, and you can create value by the following business model:

Online Trading Platform of the Apparel Industry

As the smart wardrobe system achieve the network interconnection between the users and clothing manufacturers, it can be used as online trading platform, regardless of B2C, C2C mode, and can be achieved by the smart wardrobe. As the system integrates a large number of professional apparel industry resources and it achieves the clothing-specific features, compared to other network platform, it has a higher degree of professional authority and user experience, creating a great business value.

Clothing and Fashion-Related Social Networking Platform

The intelligent wardrobe can not only realize the virtual try on clothing and apparel management of personal costumes, but also the related calculation is completed in the cloud system. Due to its network platform, the users can easily communicate and compare with each other. This enables smart closet systems to achieve web-based social networking and virtual community functions, becoming a internet social platform opening up for the common users and enterprises with professional level.

Big Data Consulting and Trading in Apparel Industry

When the smart wardrobe system to obtain a considerable amount of users, the system can get massive personal data, group statistics, industry data analysis, and these data and analysis reports can be used for trading. At present, our country is exploring the mode of B2B big data exchange with "national team" nature. February 20, 2014, the first domestic data-oriented industrial organization - Zhongguancun Big Data Trade Industry Alliance was established. At the same day, Zhongguancun data trading platform started, positioning the big data trading service platform. With the relevant technical standards and platforms gradually mature, such business can create a considerable business value.

Clothing Industry Cloud Service Platform and SAAS Services

Data acquisition, analysis and management techniques, as well as related business management information services, can create tremendous value for garment enterprises. Modern garment enterprises urgently need such services, but the cost for the establishment and maintenance of such systems far exceeds the scope of small and medium garment enterprises. Shandong Red Collar Group's "red collar suit personalized customization (RCMTM)", data-driven operations, composed of more than 20 subsystems, costing 260 million and 10 years to establish, has become the basis for mass customization platform. Its capital and time costs cannot be accepted by small and medium garment enterprises.

System calculations for smart wardrobes, including data mining, data cleaning, are all implemented in the cloud and are compatible with third-party software and plug-ins. Therefore, the intelligent wardrobe system can provide a cheap cloud solution and SAAS service for SMEs to analyze massive data.

Advertising and Product Promotion

Based on the smart wardrobe trading platform, "Advertising and Product Promotion" is also a very important business model, as well as a very important competitive mode for e-commerce enterprises. Under the situation of rich data, product-recommended analytics will be more accurate.

In fact, this is the most important business model for Internet companies, which has created its main business revenue.

System Equipment and Services

Because intelligent wardrobe systems need to acquire and manage a vast array of types of data, including measurements of personal body size, 3d-editionapparel, and RFID management, etc. This involves a large amount of hardware equipment and system software for the users, and their procurement and deployment involve huge business value.

The above 6 points outlines the major business models of smart wardrobe systems, demonstrating

that the system is commercially viable for value creation. The application of big data in the fashion industry has also penetrated into all aspects - data collection and management, multi-dimensional insight and analysis on the selling of goods, brands and consumers using huge amounts of data. The application of big data has become a great power to promote the development of the fashion industry, affecting the entire industrial chain including fashion industry's production, inventory, promotion, site selection, sales and so on.

The Current Application and Prospects of Big Data in the Fashion Industry

The application of big data in the field of consumption and popularity, Internet marketing is the quickest way to spawn big data. With the maturity of online shopping platforms, well-known online platforms have started to make use of big data for consumers and businesses. January 20, 2016, Amazon China (Z.cn) released a big data report of annual fashion consumer. The report combines Amazon's own local and Amazon "overseas shopping" store data, covering clothing, shoes, bags, jewelry, watches and other full-time fashion category. Besides, it also has a comprehensive interpretation on China's fashion consumption big data in 2015, and quickens to release the 2016 trend. Similarly, Taobao and CBUF jointly released "China Consumer Trends Report 2015", which explores the consumption status quo and behavior of 386 million Taobao customers over the past five years and uses a business data report to interpret the Chinese consumer upgrade Trend. These analyzes not only explain the consumer behavior, but also allow businesses to see what's behind the numbers, so as to build an entirely new business logic with big data collection, analytics and decision making.

Big Data Changes the Business Model of the Traditional Fashion Industry

People are becoming more and more willing to expose all their actions on the Internet in we-media age. All these contents can be transferred out at any time, and there is no privacy under the big data. It is absolutely a good news for businesses that internet users do not have privacy. By collecting every move of consumers, and getting consumer preferences from the big data, we can predict the market trend. At the same time, improving the design of the product will also guide the consumer's following trend. In the business of electronic platforms, collecting and analyzing user data is a very important aspect of big data applications. In addition to structural data, there is also a great deal of mining of unstructured data. For example, many hot topics in the online community will always release news preceded by some popular trend to effectively grasp and analyze these comments and even to play full of the greatest value.

The impact of big data for offline physical stores is also very clear. Some advanced clothing stores can already make all clothes affixed with RFID barcode labels. By analyzing the detailed focus data information of the consumers about clothes, apparel companies have made the exact direction in product development, design or purchase.

With the penetration of "Internet + Concept", the fashion industry is gradually reshaping the traditional industrial economy model by consolidating the advantages of big data both online and offline. "Internet +" thinking opens up every aspect of the apparel industry chain, including the opening of the production of intelligence, information and data transformation, innovates product marketing model, opens up online and offline sales so as to achieve a tight connections between the brands and consumers. That shows that the fashion industry has inevitably accessed to the Internet thinking. "Internet +" makes the fashion industry have more tentacles to achieve diversified development and the industry form a more extensive state of extension.

Big Data Promotes the Industrialization and Information Integration of Fashion Industry

In the process of upgrading and developing the fashion industry, big data will gradually promote the updating of production methods, production equipment and production processes. In recent years, the Shandong Red Collar Group is a demonstration enterprise integrating the industrialization and informalization of the fashion industry. The enterprise can put different styles of clothes on the production line, and all the clothes on the line belong to the customers. The form has changed the traditional mode of production and management, reducing the inventory, and also meeting the

individual needs of customers. What's more, the basis for its realization is inseparable from the big data of the body size and clothing model.

Summary

In the clothing fashion industry, network customization has become a research hotspot in recent years. By means of three-dimensional measurement or other computer vision technologies, consumer human data can be quickly obtained and a rich human body type database can be established. Meanwhile, the gradual maturity and commercialization of the three-dimensional virtual dressing technology have facilitated the design of the network and the remote interaction. In the past two years, with the gradual commercialization of virtual reality VR technology, fashion design and marketing are also facing subversive changes. Therefore, in the field of apparel, the mass customized production mode of personalized fashion service will gradually replace the standard model of mass production in the past, which will accelerate the wide range of promotion of informational and intellectual parks based on the global cloud computing and cloud service.

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