PERSONALIZATION AND FORECASTING BASED ON BIG DATA IN E-COMMERCE

Rakhmonova Maftuna Nabijan qizi
Tashkent University of Information Technology named after
Muhammad al-Khwarizmi, Student

Sultanov Kamoliddin Muxiddin o'g'li
Student of Tashkent University of Information Technologies named after
Muhammad al-Khwarizmi

Saida Safibullaevna Beknazarova
Tashkent University of Information Technology named after
Muhammad al-Khwarizmi, Professor

ABSTRACT

The term "ecommerce personalization" relates to the set of practices in which an online store displays dynamic content based on customer data, such as demographics, intent, preferences, browsing history, previous purchases, and device usage - for instance, whether the customer is shopping on a mobile, tablet, or even a smartwatch. Catering to a customer's needs is not just a present-state issue. E-commerce depends on stocking the correct inventory for the future. Big data can help companies prepare for emerging trends, slow or potentially booming parts of the year, or plan marketing campaigns around large events. E-commerce companies compile huge datasets. By evaluating data from previous years, e-retailers can plan inventory accordingly, stock up to anticipate peak periods, streamline overall business operations, and forecast demand. For instance, e-commerce sites can advertise large markdowns on social media during peak shopping times to get rid of excess product. To optimize pricing decisions, e-commerce sites can also give extremely limited-time discounts. Understanding when to offer discounts, how long discounts should last, and what discounted price to offer is much more accurate and precise with big data anlytics and machine learning.

Why is personalization important in ecommerce?

Personalization ensures that the offers presented to your customers are relevant. Consumers have indicated time and time again that personalization is very important to them, with data from Epsilon showing that when brands provide them with personalized experiences, 80% of customers are more likely to make a purchase. Not to mention the fact that the opposite is also true. When brands fail to deliver personalized experiences to their customers then these customers are likely to want to choose a competitor that does a better job of tailoring their experience.

Benefits of Ecommerce Personalization

1. Better Sales Conversions. When a customer visits an ecommerce store and is going to decide if they're going to make a purchase, they don't want to be greeted by the same experience as

everyone else. Ecommerce personalization can increase conversion rates by showing customers exactly what they're looking for before they buy.

2. Improved Brand Engagement. If you know where your customers want to shop and the types of products they are more likely to buy then you can improve engagement and the way they choose to interact with your brand. Personalization entices customers to want to interact with your brand because you showcase the products they want to see in the way they want to see them. Increased Customer Loyalty Ecommerce personalization makes your customers more loyal. By showing them that you consistently know what is expected of your brand and how to provide the experiences they want, they are more likely to show their loyalty and continue shopping with your brand vs the competition.

3. Enhanced Customer Experience. Personalization provides an enhanced customer experience because it helps your brand to better cater to customer needs and make their time shopping with you more enjoyable.

4. Better Understanding of Customers. Ecommerce personalization doesn't just help you improve the customer's experience, it helps you to understand them better. Personalization requires brands to collect customer information to provide a better experience. When used correctly brands can discover where their customers are located, the types of products they enjoy buying and also the ones they don't. This information can be used to determine which products to continue making and which ones to stop selling.

5. Competitive Advantage. If your competition isn't using ecommerce personalization then chances are that you will have an advantage over them. Personalization provides an opportunity for your brand to differentiate itself from others and endear itself to your customers.

Usages of Big Data in Ecommerce

The growth of big data analytics (or BDA) is the new frontier of innovation and competition in the giant spectrum of the ecommerce landscape. Big data has thrown up new challenges and opportunities, which have been forged by the information revolution.

Predict Trends. Every online retailer wants to know the next best-selling product before their competitors, and there are few better strategies than using employing big data to predict trends.

Optimize Pricing. Before the explosion of big data and innovative pricing systems, many businesses would rely on comparative pricing with competitors, and benchmark the value of their own product or service to come up with the best pricing strategy. The issue with this manual approach is that it becomes unmanageable for larger eCommerce businesses that stock thousands of items. The perfect scenario would be for each product to have its own strategy, and big data makes this possible.

Optimize Customer Service. Exceptional customer service is vital for both customer satisfaction and retention in the retail industry. Successfully implementing a well-defined customer service strategy can no longer be an afterthought. Big data allows businesses to optimize their customer service and provide an enhanced customer service experience.

Generate More Sales. Big data can play a pivotal role in generating more sales for any eCommerce business. With literally trillions of dollars forfeited to cart abandonment, big data analytics can be used to deliver a customer experience that cannot be ignored.

CONCLUSION

In the past, common practices of companies was mass production, consumption, and marketing. Nowadays, companies focus on niche markets, customization, and personalization. Catering to individual's needs has become so common that customers expect companies to meet their specific needs and get frustrated if they don't. The Personalization tool satisfies this rising need of individualization. Personalization in e-commerce is the real-time tailoring of online customer experience to each specific shopper.

REFERENCES

1. Ecommerce personalization using Big Data and challenges. Mir Saleem Department of Computer Sciences, J&K Institute of Mathematical Sciences, Srinagar, J&K (India)
2. Communications of the ACM, August 2000 Special Issue on Personalization.
3. https://www.talend.com
4. https://www.bigcommerce.com