

Predictive Analytics in Retail Industry



From the past two decades, a massive change has been found in the Retail industry. People are indulging more and more in shopping these days. Long term cycles of shopping are frequently taking place. This growth in the shopping trends has created not only more channels to buy it; but also has created a competition among the manufacturers and the suppliers. Emergence of new big stores like Wal-Mart, Big – Market and Development of Ecommerce portals like Amazon, Flipkart &EBay has created a boom in the retail industry. Availability of more options to shop has created a huge impact on competition among the sellers. To sell more and more, Sellers are promoting attractive packages to pull the customers.

# # How Predictive Analytics can help in Retail industry?

Predictive Analytics is a variety of statistical tool and technique to analyse the present and historical facts to make predictions about the future. Successful companies have applied it in the order to maximize their success in various aspects of their business. We can see the application of predictive analytics in 3 different domains:

Merchandising

Marketing

• Supply Chain



Need & Demand of the customers are increasing day by day to satisfy this; various new products are coming into the market. Merchandisers must keep useful products to maximize the profit. Predictive analytics help them in two ways:

Store Layout Planning: It increases the visibility of the product sales and provides customer satisfaction. Data helps the retailers to create effective store layout by answering several questions:

- a. Which department will attract maximum traffic?
- b. Which two departments should be adjoining?
- c. Where the seasonal products should be placed?
- d. How is the navigation of the store?

Planogram Design: Shelf space is the most valuable resource available with retail stores and with the help of predictive analytics. Retail stores can maximize space utilization to maximise the profits. Also, it helps to get the answers to the following questions:

- a. Which brand / SKU is driving the maximise profit?
- b. Cannibalization of two SKU?
- c. Maximizing profits by combining two products?



To increase the sales of a product, marketing plays a vital role. By using predictive analytics, we become aware about the type of marketing which is required to achieve sales. Predictive Analytics helps marketing in the following areas:

Consumer Intelligence: Retailers accumulate the consumer's data based on the Loyalty programs & their purchasing behaviour. Now, using these predictive analytics which is based on the shopping database of the consumers, retailers can segment it and offer a personalized service.

Market Basket Analysis: Using MBA, retailers analyse the purchasing behaviour of the consumer. This analysis helps to get the answer to the following questions:

- a. Which products are purchased together?
- b. What are the most profitable baskets?

Pricing Analysis: Predictive analytics on transactional data and seasonal sales database helps to get the answer to the following problems:



- a. Identifying the Price Elasticity of different products.
- b. Forecasting the Impact of change in price.
- c. Offering right price at the right time to the right consumer.

Promotion Analysis: Detailed analysis of promotions can help retailers to get the answer to the following questions:

- a. Best promotion(s) for different customer segment(s)
- b. Optimal number of per year?
- c. Overall lift in sales during promotion?
- d. Promotions on few products or on whole category?



# Supply Chain

Merchandiser needs to keep a record of their sales and the availability of Inventory in their store. Loss in inventory creates a negative impact on the consumer and market. Predictive analytics help supply chain in the following areas:

Sales Forecasting: Demand forecasting is essential for optimizing the business decision. Accuracy in forecast helps the retailer to optimize the inventory, minimize excess stock and out of stock problems.

Inventory Optimization: Using advance predictive models, retailers are now dealing with Stock- Out conditions, Seasonal Demand and Managing vendors. Supply chain data helps to identity the performance of vendors like fulfilment rate and On- time delivery during various time points.

## CONCLUSION

Retail domain is drastically changing and the retailers are applying analytics into their operations. Predictive analytics in retail helps us to gain hidden actionable insights. Incorporating analytics with the business helps the retailers to get a complete picture of their business in future.



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