



PROJECT-2

Customer Retention

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INTRODUCION

Customer retention means the process of maintaining or keeping customers once you have acquired them. It's all the activities that a company must do in order to keep their customers around. The goal is to build a long-lasting relationship between the brand and consumers. Once a customer becomes loyal to your brand, not only will he/she buy more from you than a normal customer but he'll spread good words about your business, increase your reputation.

Customer retention is most important for every business, but it's especially significant for ecommerce organizations. After all, with an online business, you lack the opportunity to connect with customers. This inability to build face-to-face relationships can cause customer churn. When we come to know about online shopping we know that nowadays it's a part of human life. Due to online shopping people can buy anything by sitting at their home. Due to rapid growth of technology, business organizations have switched over from the traditional method of selling goods to the electronic method of selling goods. Business organizations use the internet as a main vehicle to conduct commercial transactions.

There are few popular online shopping websites mentioned below:

- Amazon
- Myntra
- Paytm
- Snapdeal
- Flipkart
- Big Basket

There is a good reason for why people prefer online shopping instead of shopping from the outdoors.

- Saves time and effort.
- Convenience of shopping at home.
- Wide variety and range of products are available.
- Good discounts and lower prices.
- Get detailed information about the product.
- We can compare various models and brands.

There are many disadvantages:-

- Shipping Problems & Delay.
- Risk of Fraud.
- Less Contact with Your Community.
- Spending Too Much Time Online.
- lack of shopping experience lack of close examination in online shopping

ANALYTICAL PROBLEM:-

I have got a project on **Customer Retention**. It all depends upon Online Shopping Websites which are used all over the world. Now, I am going to analyze the detailed review of every online shopping website which is used for shopping. I have given data in xsl format. Firstly I have converted it into csv format and saved it with the name customer retention. Next, I have some imported libraries like numpy imported for numerical computing, pandas imported for data manipulation and matplotlib and seaborn imported for Visualizations and warning imported to avoid any warnings.

After importing the dataset, I found that there are 71 columns and 269 rows in the dataset.

After that I saw that there are too lengthy columns & there is a lot of punctuation and space. So, I have started pre-processing.

Preprocessing-Pipeline:-

I have removed all the punctuations which were present in the dataset by using the replace method. After the removal of punctuations, data looks in a stable way & easy to understand. Now I have checked the shape and info about the dataset. After checking the shape and info I found that there are no null values present in the dataset. And also I found 25 categorical columns and 46 numerical column data. And last I have removed the gap between the names of columns because in some situations I am getting errors.

After finishing the data preprocessing I saw a lot of variations in the data set like correlation, univariate analysis, bivariate analysis, multivariate analysis, outliers.

Let's explain below:

CORRELATION:-

When I checked the correlation I found that columns are mostly negatively correlated to each other and for better understanding I have plotted the graph as well.

UNIVARIATE ANALYSIS:-

This data consists of **only one variable**. Here I have analyzed all the categorical and numerical dataset. In this one function to explore all columns.

BIVARIATE ANALYSIS:-

This data involves **two different variables**. The analysis of this type of data deals with causes and relationships and the analysis is done to find out the relationship among the two variables.

MULTIVARIATE ANALYSIS:-

Now I have multivariate plotting and I have used a violin plot to plot the graph. In x-axis I have used the categorical columns and in y-axis I have used numerical columns and in hue columns described with gender

CHECKING SKEWNESS:-

After checking the skewness we can find here lots of skewed data present in the dataset and I have plotted the graph here to understand the skewness. Then I treated the skewness with square root and cube root method then checked the skewness again.

CONVERT CATEGORICAL COLUMN INTO NUMERICAL COLUMN:-

I have around 25 columns that are categorical columns then converted into numerical columns.

CHECKING OUTLIERS:-

Now I have checked the outliers of a few columns using a box plot and I found that outliers are present in the dataset.

TREATING OUTLIERS:-

Here I have treated the outliers using the IQR method.

CONCLUSION:-

E-Commerce is not just about conducting business transactions via the Internet. Its impact will be far-reaching and more prominent than we know currently. This is because the revolution in information technology is happening simultaneously with other developments, especially the globalization of the business. The new age of global e-commerce is creating an entirely new economy that will tremendously change our lives, will reshape the competition in various industries, and alter the economy globally. As companies are gaining high profits, more and more other companies are developing their websites to increase their profits. Since more businesses are being held online resulting in high economic development and emergence of a more innovative and advanced technology. From the inception of the Internet and e-commerce, the possibilities have become endless for both businesses and consumers. Creating more opportunities for profit and advancements for businesses, while creating more options for consumers. However, just like anything else, ecommerce has its disadvantages including consumer uncertainties, but nothing that cannot be resolved or avoided by good decision-making and business practices. In our project we have seen the website is growing day by day people mostly prefer which website.