

CUSTOMER RETENTION

PROJECT REPORT

ACKNOWLEDGMENT

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INTRODUCTION

Problem Statement: Customer satisfaction has emerged as one of the most important factors that guarantee the success of online store; it has been posited as a key stimulant of purchase, repurchase intentions and customer loyalty. A comprehensive review of the literature, theories and models have been carried out to propose the models for customer activation and customer retention. Five major factors that contributed to the success of an e-commerce store have been identified as: service quality, system quality, information quality, trust and net benefit. The research furthermore investigated the factors that influence the online customers repeat purchase intention. The combination of both utilitarian value and hedonistic values are needed to affect the repeat purchase intention (loyalty) positively. The data is collected from the Indian online shoppers. Results indicate the e-retail success factors, which are very much critical for customer satisfaction.

Conceptual Background of the Domain Problem: The problem statement examined how customers form expectations on technology based self-service quality and suggested five main attributes of ecommerce store quality, that are service quality, system quality, information quality, trust and net benefit. The result of the study shows that, ease of use and enjoyment were also significant determinants of service quality, while speed of delivery and reliability had positive impact on service quality.

Many businesses focus on customer loyalty programs to remain competitive in today's marketplaces and explore innovative ways to keep their existing customers engaged. Customer retention is a simple concept. Yet, it often requires effort from every department to improve the customer experience and build lasting trust. So, now we will discuss about what is customer retention and why it is so important.

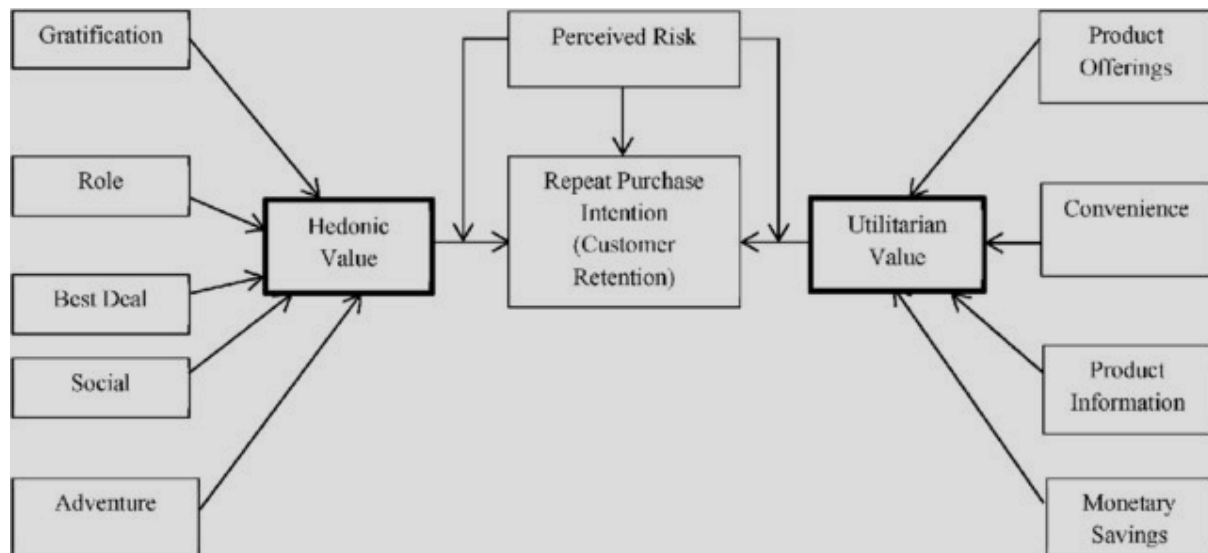
What is Customer Retention?

The customer retention is the process of engaging existing customers to continue buying products or services from their business. The goal of customer retention is retaining as many as customer as possible in the company. One of the best ways to understand customer retention is to explore how to calculate customer retention rate for a given period.

Why is Customer Retention Important?

Customer retention is an express route to a business' financial success. It allows the companies to build long term, meaningful relationships with customers. It empowers customers to share feedback with the company team. It helps you understand how loyal and satisfied your customers are, how strong your customer service is, and your products are really worth their money or not. It enhances the brand reputation and understands future needs of the customers.

Let's see the diagram:



In the use case diagram above, you can see that the intent of repeated purchases is basically based on a customer retention strategy based on pleasure value and utilitarian value. We also find that the perceived risks affect your purchase and repurchase intent. Pleasure value is made up of five key components: satisfaction, role, best offer, social aspects, and adventurous standards. In terms of utility value, we have product offerings, convenience, product information, and money savings.

Motivation for the Problem Undertaken: The main objective behind this problem is to help the ecommerce websites to find the e-retail factors for customers activation and retention. The online shopping was considered by almost everyone to be convenient. The store is always open and it is easy, less stress and time saving to shop from home. Participants also seemed to agree that internet shopping gives access to a large range of stores and products from the entire world and offers best price to their consumers. So, in this project we will be analysing how these online stores attracts the customers and whether the customers satisfied by their products or not.

Data Sources and their formats: The data is collected from the Indian online shoppers. Results indicate the e-retail success factors, which are very much critical for customer satisfaction. There are two excel sheets one is detailed datasheet and other one is encoded datasheet. I have used detailed datasheet for the processing. The dataset contains 269 rows and 71 columns which is comprised of categorical columns. All the features contain object data type except the feature Pin code.

While describing the data I found skewness and outliers presenting the columns. Since all the columns are categorical so I haven't removed outliers and skewness.

Dataset Details: First, we have to imported all the necessary libraries and dependencies to create a detailed data analysis in Python.

Importing Libraries

```
In [1]: import numpy as np
import pandas as pd
import matplotlib.pyplot as plt
import seaborn as sns
import warnings
warnings.filterwarnings('ignore')
```

Importing Dataset

```
In [2]: path = '/Users/aerryjoop/Downloads/Customer_retention_dataset/customer_retention_dataset.xlsx'

In [3]: df = pd.read_excel(path)
pd.set_option("display.max_columns",None)

In [4]: df
```

Exploratory Data Analysis (EDA): Exploratory Data Analysis is an important step in any Data Analysis or Data Science project. Exploratory Data Analysis is the process of investigating the dataset to discover patterns and form hypotheses based on our understanding of the dataset.

```
In [15]: df.nunique().to_frame('Numbers of unique value')
```

The above help to find the unique values that might have been present in the given dataset.

```
In [16]: df.isnull().sum()

In [17]: df.isnull().sum().sum()
```

This help us to find any kind of missing values or null that might have been present in given dataset.

```
In [25]: for i in df.columns:
print(df[i].value_counts())
print('_____*10)
```

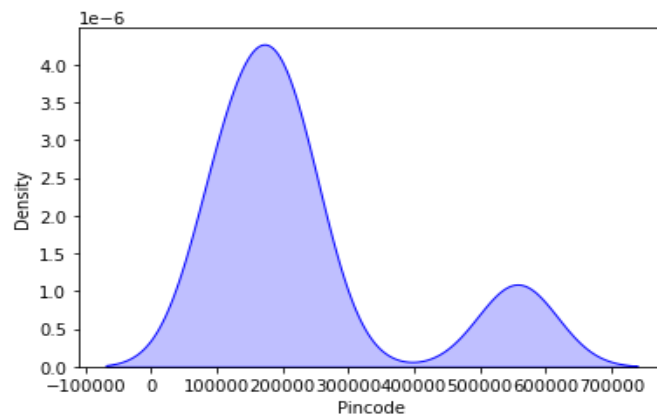
Here we can also use for loop to check all the unique values present in the categorical columns of the given dataset.

Visualization: Data visualization is defined as a graphical representation that contains the information and the data. Data visualization is another technique of visual art that grabs our interest and keeps our main focus on the message captured with the help of eyes.

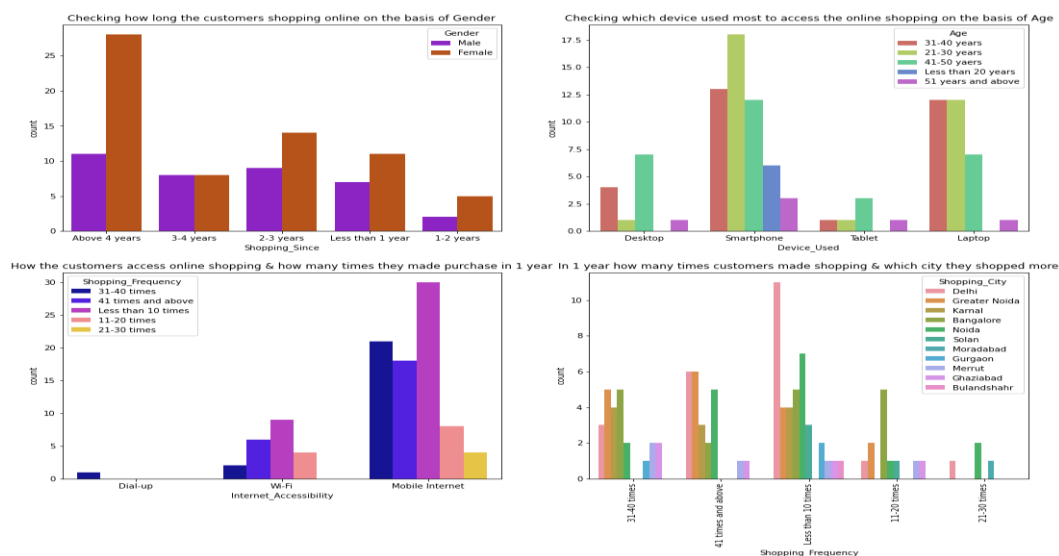
We have performed both univariate and bivariate analysis to visualize the data. In univariate analysis I have used pie plots, count plots and distribution plot and in bivariate analysis we have used count plot, factor plot and boxplots.



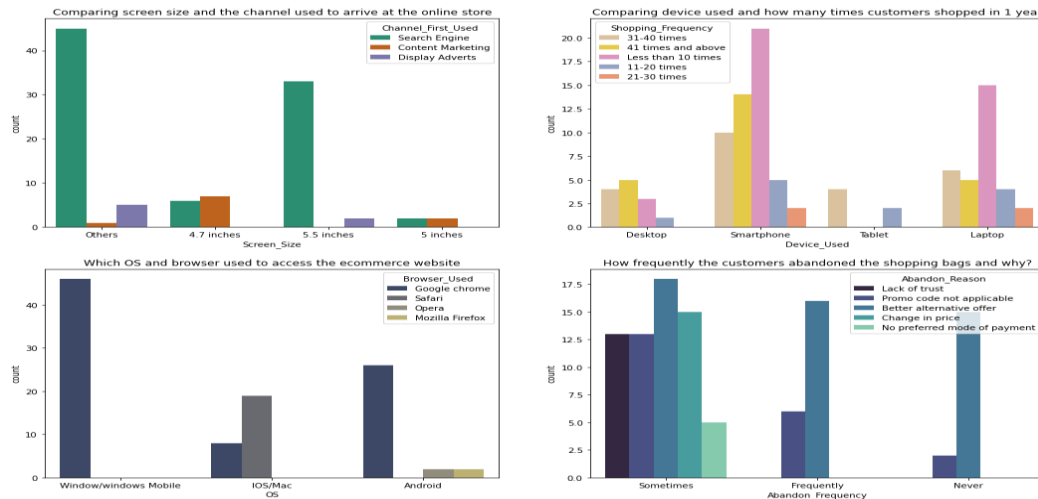
Here after observations we can say that Females are more attracted towards online shopping or may be the data is more focused on Females. Young and old age people are not much attracted toward online shopping. Youth are more included in online shopping. Delhi, Greater Noida, Bangalore, Noida and Karnal like shopping cities have more online customers rather than other shopping cities. Cities with less online customers may be due to faith, quality or maybe not there is no facility to deliver the product exact on customer address. It usually happens in state of Himachal Pradesh. Only few pin code have highest online customers. A lot of customers doing shopping since 4 years. Most of the customer used Mobile Internet for the online shopping because nowadays everyone has a handset so in this way with the help of mobile internet interested customers can do shop online. Smartphone and are mostly used for online shopping.



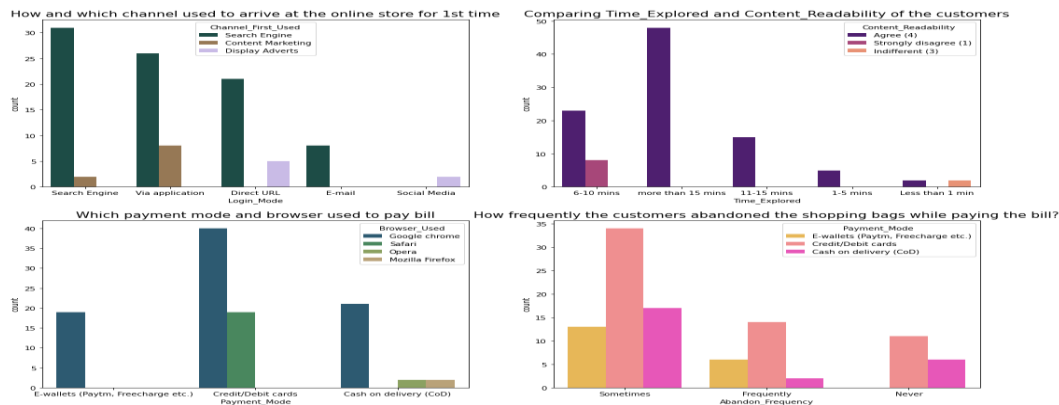
The data is not normally distributed in this column and there is skewness present in the data, it is almost skewed to right. Since all the columns contain categorical data, so we will visualize the data using both pie plots and count plots.



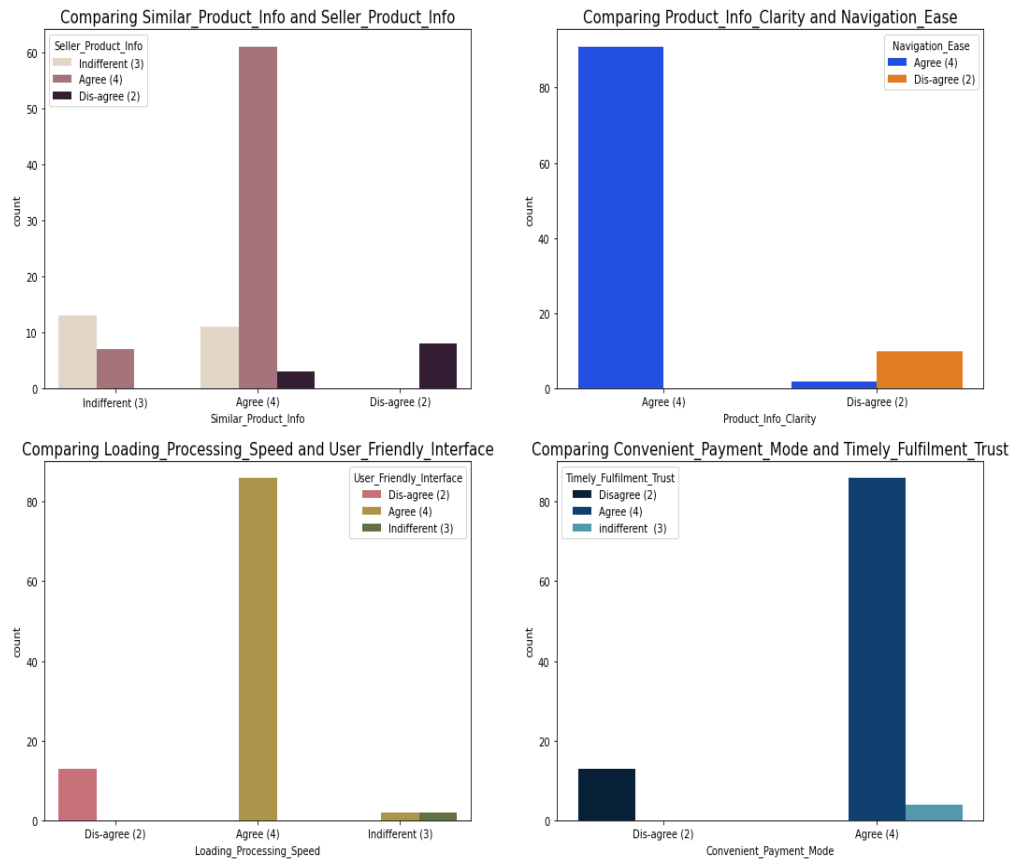
Female customers are more interested to buy products from the online shopping websites rather than male customers. As you can easily see in the above fig Female customers shopped online more as compared to male customers basis on the years. According to age factors most common Device Used is Smartphone as compared to other device. All age groups have used smartphone. Customers are using their smartphone for shopping. Most of the customers used ecommerce websites less than 10 times in a year from the city Delhi to shop the products.



The customers with mobile screen size as Others have followed search engine channel to arrive at their favourite online store for the first time. Also the customers who have their screen size 5.5 inches also used search engine channel to access the online shopping store. Most of the customers used Smartphones 31-40 times in an year to access the ecommerce websites to shop the products. Many customers having windows operating system in their device ran Google chrome to access the ecommerce shopping websites and some of the customers having IOS/Mac operating system used Google chrome as well as Safari to reach the online shopping store. Due to Lack of trust on the ecommerce websites, sometimes most of the customers abandoned the websites and some of the customers abandoned the shopping website due to the promo code not applicable. So it is important for the ecommerce companies to create discount price, offers, coupon codes to retain the customers.



Most of the customers agreed that the content on the website is easy to read and understand also they explored more than 15 mins before making the purchase decision and some of the customers strongly disagreed that the content is not good and they explored 6-10 mins before making the purchase decision. So ecommerce websites should enable some images and it should contain clear structure, so that the customers can easily read and understand the content of the product. Most of the customers used google chrome to reach the websites and they preferred to pay their product price using Credit/Debit cards and only few of the customers used Safari browser to reach the e-retail websites. Sometimes the customers used to abandon their selected items and wants to leave without making payment and most of them making the payment using E-wallets methods.



Most of the customers agreed that the information on similar product to the one highlighted is important for product comparison and also Complete information on listed seller and product being offered is important for purchase decision. In order to buy a product, the ecommerce website must give the complete information about the product and seller information then only the customers can compare the product costs and its details in different websites and they tend to buy that particular product in a particular website. Around 90% of the customers agreed that they should be able to navigate the website easily and the products information in the website must be clearly stated their uses, lifetime, benefits etc. Then only more customers tend to buy those products and can shop easily. Most of the customers agreed with the user friendly interface of the websites which can be easily loaded and processed also these websites' loading and processing capacity is very fast so that the customers like to shop in ecommerce websites. If these websites do not have this much of loading and processing speed then customers don't want to buy the products in this website and they tend to other websites or other options rather than this. Most of the customers agree to the trust that the online retail stores will fulfil its part of the transaction at the stipulated time also most of them very happy with the convenient payment modes given by the websites. In other words, the websites must provide all the possible ways of payment methods then only the customers shop frequently all the time the mode of the payment for customers may not possible sometimes they may choose cash on delivery.

CONSEQUENCE

The results that were interpreted from the visualization are as follows: From the survey we found that the customers agreed with certain things like ecommerce websites have empathy towards them, content must be easy to read and understand, similar products should be highlighted for product comparison, payment convenience, trustworthy and they felt gratified while shopping etc. The respondents were asked to give ratings and feedback regarding certain statements that may be used to describe their ideal online store. We have found answers from customers like which websites among listed sites they are familiar with, they find easy to use, reliable, secured, about their delivery, change in web design, etc. From the visualization we have found Amazon.in was the most used and favourite websites for the customers and Flip Kart was the second favourite webapp while snapdeal.com and Paytm.com were the least used websites by the customers.

CONCLUSION

In this project we have investigated ecommerce quality in online businesses and develop new knowledge to understand the most important dimensions of E-retail factor for customer activation and retention. This project aimed to enhance prior understanding of how ecommerce websites affected customer satisfaction, customer trust, and customer behaviour, i.e., repurchase intention, customer loyalty, and site revisit. The dimensions like information about the products, convenient payment mode, Trust, Fulfilment, website design change, security/privacy and many others had a positive impact on the ecommerce websites for customers. Thus, a company needs to pay attention to these dimensions more specifically and seek breakthroughs that can improve its performance and e-service quality.

Based upon the findings and analysis, the following assumptions are presented for the online sellers to make online shopping more popular, convenient, reliable and trustworthy. Transaction security and consumers data safety are principal concerns of online customers purchasing products or services online. Therefore, online vendors can assure their consumers' by offering personal information privacy, protection policy and guarantee for transaction security by improving their technological systems. Retailers should be careful about the annoying factors of online shopping such as being unable to access the website, inconsistencies in the items available online, mistakes in filling orders, and the hassle of returning goods. Online sellers can be more concerned about delivery times, delivery charge and product return policies. They can make it easier, quicker and reliable, so that consumers can enjoy the online shopping experience and they likes to shop in the particular websites regularly.