

# CUSTOMER RETENTION ANALYSIS

*For Indian e-commerce websites*

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# *Introduction :*

*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.*

## CUSTOMER RETENTION :

*In today's challenging economy and competitive business world, retaining their customer base is critical to organization success. If the company doesn't give their customer some good reason to stay, organization's competitors will give the customer a reason to leave. Customer retention and customer satisfaction drive profits. It's far less expensive to cultivate organization existing customer base and sell more service to the customer than it to seek new, single-transaction customers. Most surveys across industries shows that keeping one existing customer is five to seven times more profitable than attracting one new customer. A customer-focused approach among its employees is still not present. In this era of intense competition .it is very important for any service company to understand that merely acquiring customer is not sufficient because there is a direct link between customer retention over time and profitability & growth. Customer retention to a great extent depends on service quality and customer satisfaction. Complaints are natural part of any service activity as mistakes are an unavoidable feature of all human endeavor and thus also of service recovery. Service recovery is the process of putting things right after something goes wrong in the service delivery. Customer retention is the maintenance of continuous trading relationships with customers over the long term. Customer retention is the mirror image of customer defection . High retention is equivalent to low defection.*

*In an industry where there are a multiple purchases over the years, organization's entire team should be very focused on retaining those customers:*

- i. Delivering service that's consistent with your value proposition and brand*
- ii. Cross-selling, up-selling and asking for referrals from existing customers*
- iii. Developing programs to increase customer loyalty and decrease turnover*
- iv. Prioritizing retention as a major focus in your annual marketing plan.*
- v. Knowing the lifetime value for different segments and using that data to improve the marketing.*

*Studies say it costs ten times more to generate a new customer than to maintain an existing one. If organization has a small number of customers, losing a few could cripple company. Even if there are a large number of customers, a small increase in the rate should dramatically increase profits. The maintenance of the patronage of people who have purchased a company's goods or services once and the gaining of repeat purchases. Customer retention occurs when a customer is loyal to a company, brand, or to a specific product or service, expressing long-term commitment and refusing to purchase from competitors. Of critical importance to such strategies are the wider concepts of customer service, customer relations, and relationship marketing. Companies can build loyalty and retention through the use of a number of techniques, including database marketing, the issue of loyalty cards, redeemable against a variety of goods or service, preferential discounts, free gifts, special promotions, newsletters or magazines, members' clubs or customized products in limited editions.*



# ADVANTAGES OF CUSTOMER RETENTION POSSIBILITY OF REPEAT BUSINESS:



*This is probably the most obvious advantage of customer retention. Effective services that lead to customer satisfaction will make customer coming back to again, thus giving repeat business. Repeat business is a win-win proposition for the business or service and the customer. The business reduces the cost of customer acquisition, while the customer reduces the cost of finding a reliable vendor and thus also saves on costs associated with switching vendors.*

## REDUCED COSTS FOR CUSTOMER ACQUISITION

*Acquiring a customer has certain associated costs. These include the costs associated with advertising, following up, sales demos, travel and meeting cost etc. having a repeat customer means that the customer means that the customer is already aware of your processes and can predict certain quality of output, thus minimizing the cost involved in new customer acquisition. Having a repeat customer also has the potential to open up another channel to advertise your business word of mouth. Word of mouth advertising recommendations are perhaps the most important outcome of having a satisfied customer.*

## *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.*

# *Problem Understanding :*

*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 he will buy more from you than a normal customer but he'll spread good words about your business, increase your reputation.*

*Here we have to analyse the affect of different feature on customer retention.*



# Importing the necessary libraries and Collecting the data :



## Importing the required libraries:

```
In [1]: import pandas as pd
import numpy as np
import seaborn as sns
import matplotlib.pyplot as plt
%matplotlib inline
```

## Data Collection:

```
In [2]: customer_retention_data = pd.read_excel("customer_retention_dataset.xlsx")
```

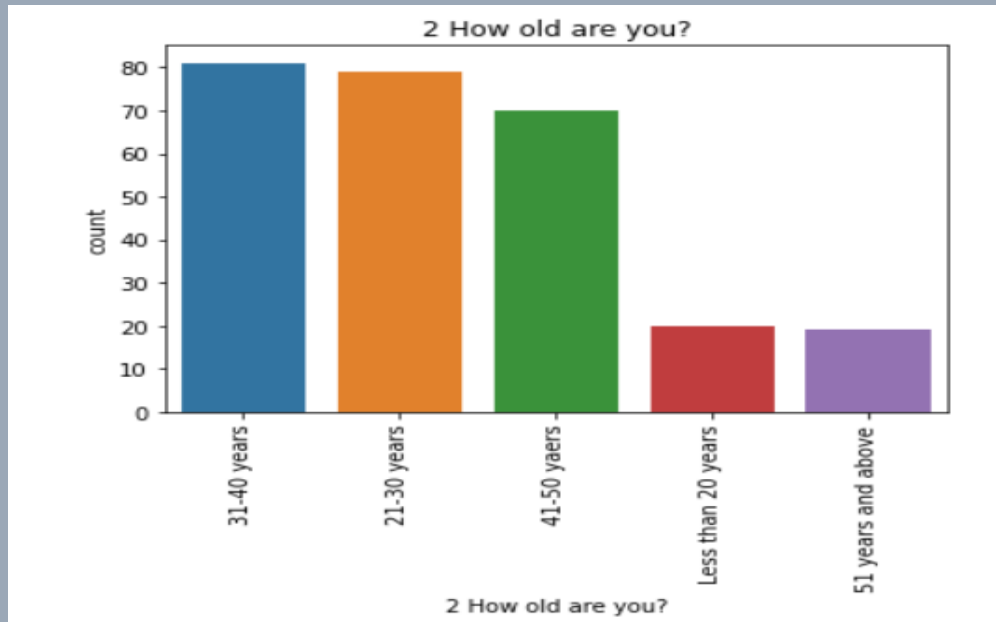
```
In [3]: customer_retention_data.head()
```

Out[3]:

	1 Gender of respondent	2 How old are you?	3 Which city do you shop online from?	4 What is the Pin Code of where you shop online from?	5 Since How Long You are Shopping Online ?	6 How many times you have made an online purchase in the past 1 year?	7 How do you access the internet while shopping on-line?	8 Which device do you use to access the online shopping?	9 What is the screen size of your mobile device? (inches)	10 What is the operating system (OS) of your device? (Windows/Mac/Android)	Longer time to get logged in (promotion, sales period)	Longer time in displaying graphics and photos (promotion, sales period)	Late declaration of price (promotion, sales period)
0	Male	31-40 years	Delhi	110009	Above 4 years	31-40 times	Dial-up	Desktop	Others	Window/windows Mobile	Amazon.in	Amazon.in	Flipkart.com
1	Female	21-30 years	Delhi	110030	Above 4 years	41 times and above	Wi-Fi	Smartphone	4.7 inches	IOS/Mac	Amazon.in, Flipkart.com	Myntra.com	snapdeal.com
2	Female	21-30 years	Greater Noida	201308	3-4 years	41 times and above	Mobile Internet	Smartphone	5.5 inches	Android	Myntra.com	Myntra.com	Myntra.com
3	Male	21-30 years	Karnal	132001	3-4 years	Less than 10 times	Mobile Internet	Smartphone	5.5 inches	IOS/Mac	Snapdeal.com	Myntra.com, Snapdeal.com	Myntra.com
4	Female	21-30 years	Bangalore	530068	2-3 years	11-20 times	Wi-Fi	Smartphone	4.7 inches	IOS/Mac	Flipkart.com, Paytm.com	Paytm.com	Paytm.com

# Graphical Analyzation :

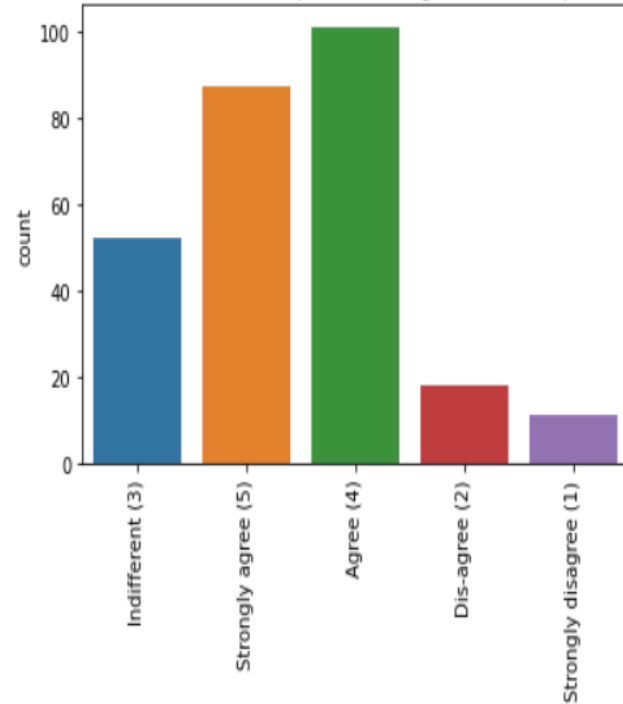
## Univariate Analysis :



## Observation :

Observation: 1) Here we can see that the column "How old are you?" has the highest count for "3 years old" and followed by "2 years old" and we can observe that "1 and 5 years old" are with similar count.

20 Complete information on listed seller and product being offered is important for purchase decision.

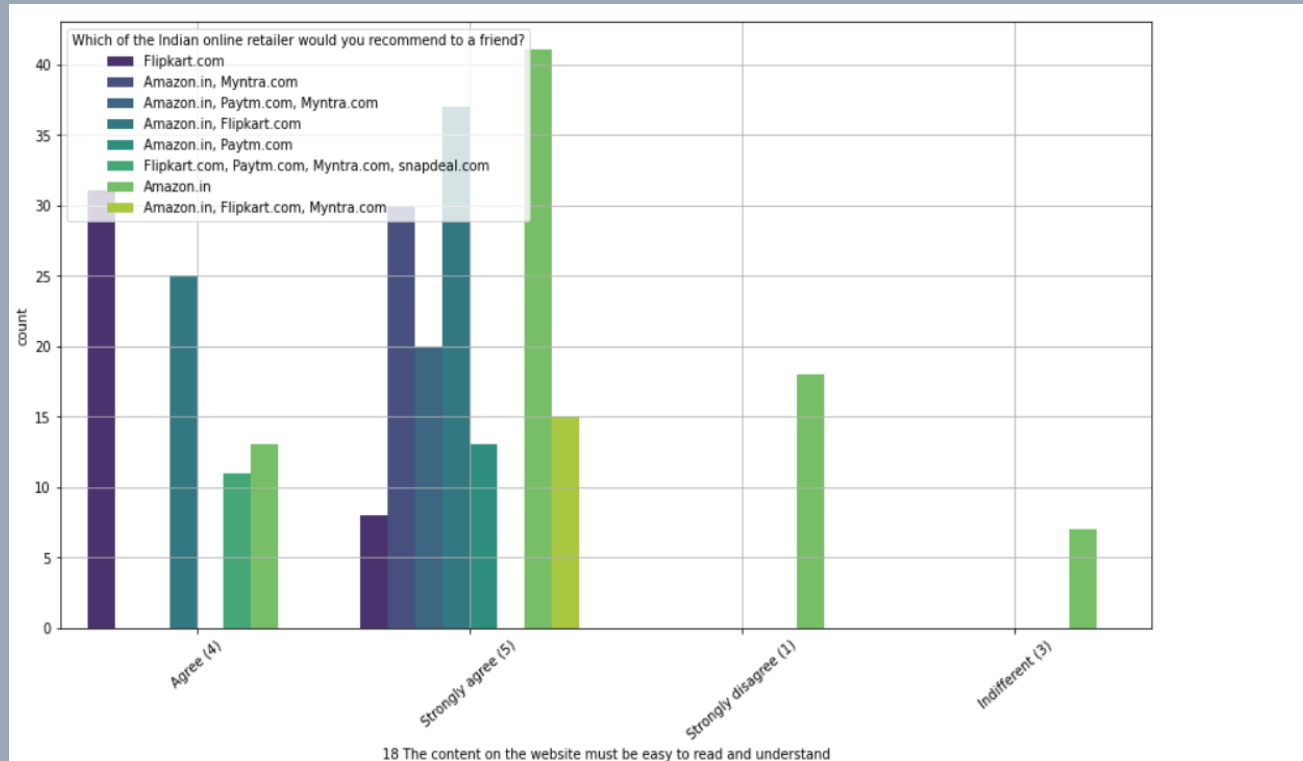


20 Complete information on listed seller and product being offered is important for purchase decision.

## Observation :

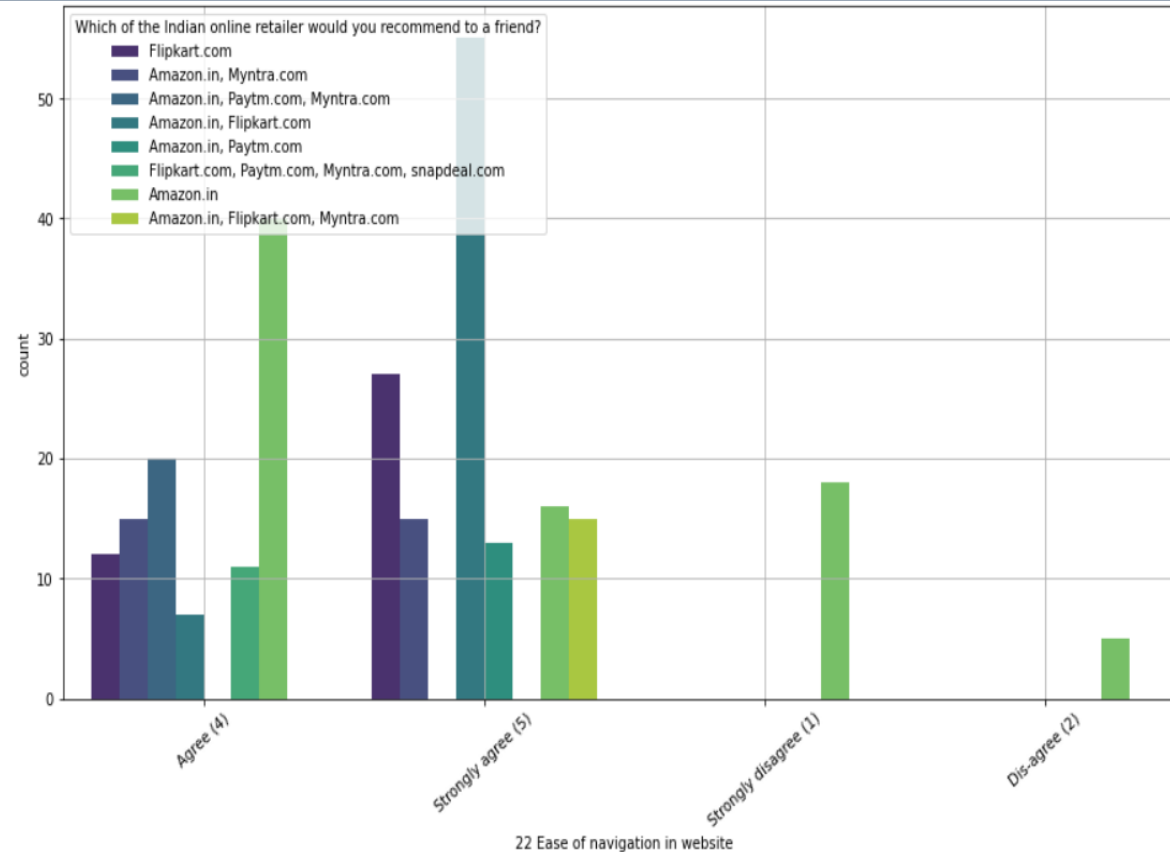
We can see that the column "Complete Information on listed seller and product being offered is important for purchase decision" has the highest count for the category "Agree" followed by "Strongly Agree" and "Strongly disagree".

# Bivariate Analysis :



## Observation :

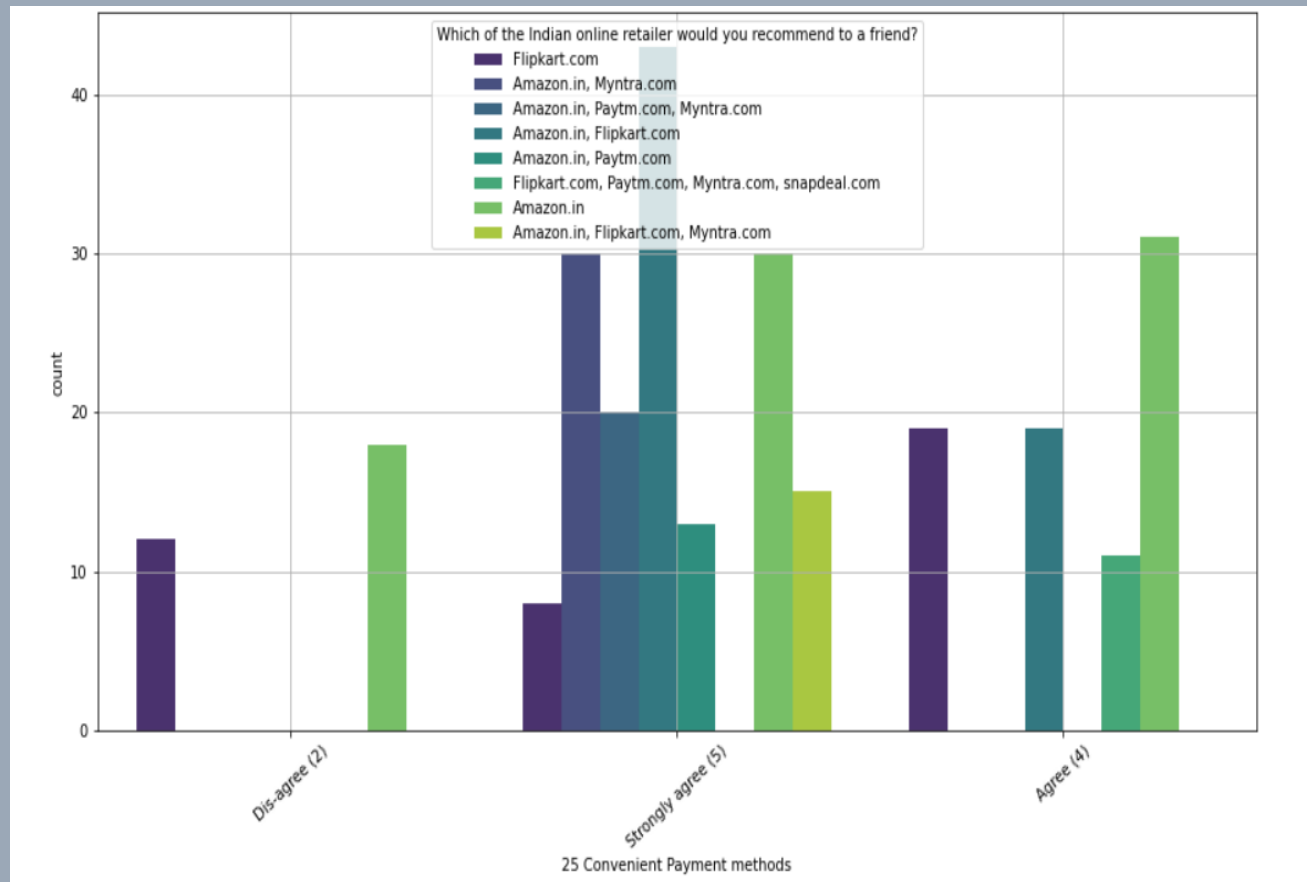
Observation: Among all the other websites based on recommending to the friend here the website which is easier to read and understand is "Amazon.in".



## Observation :

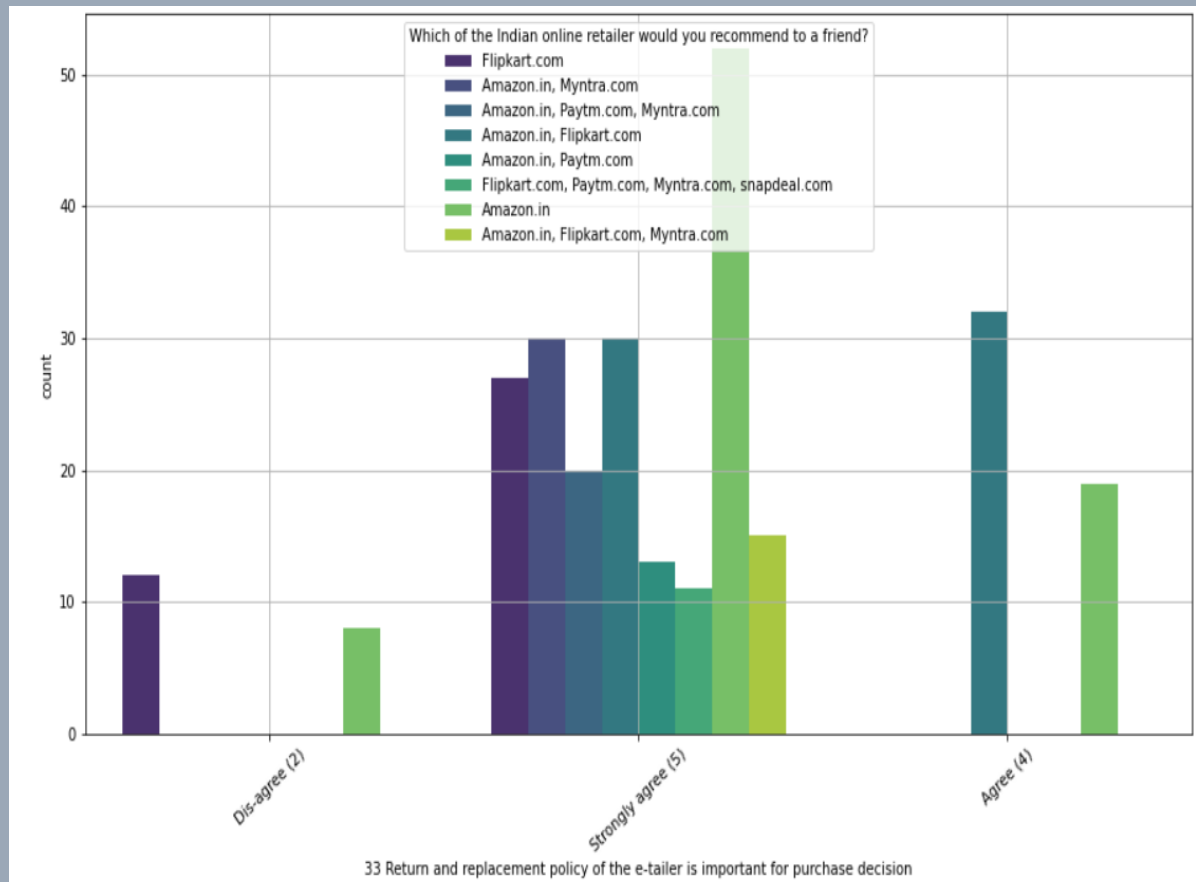
Observation: Here we can see that based on recommending an online retailer to a friend, the website which is easier and comfortable in navigation is "Amazon.in, Flipkart.com".





## Observation :

Observation: Here we can see that based on recommending an online retailer to a friend, the website which is with convenient payment methods is "Amazon.in and Flipkart.com".



## Observation :

Observation: Here we can see that based on recommending an online retailer to a friend, the website with good return and replacement policy for the purchased product is "Amazon.in".

# Multivariate Analysis :

Used Label Encoder here to convert categorical columns into numerical columns :-

```
[48]: from sklearn.preprocessing import LabelEncoder
```

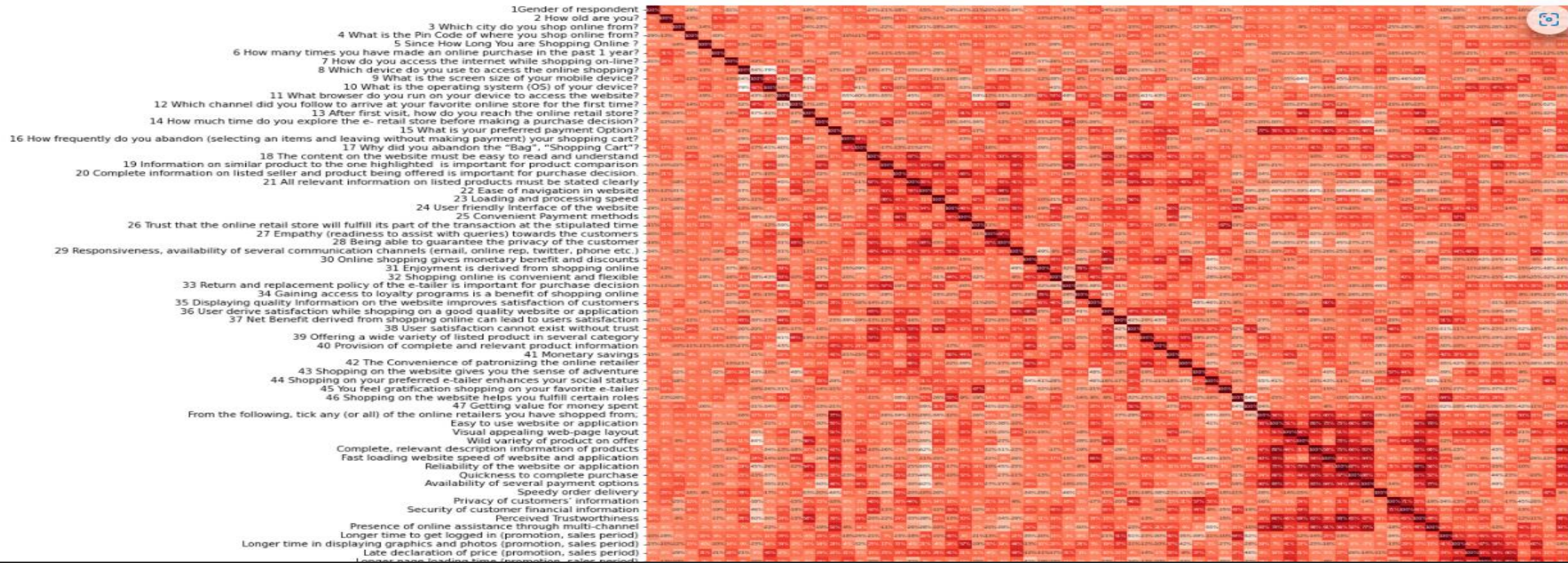
```
[49]: for column in customer_retention_data.columns:  
    if customer_retention_data[column].dtype == np.number:  
        continue  
    customer_retention_data[column] = LabelEncoder().fit_transform(customer_retention_data[column])
```

customer\_retention\_data.head()

	1 Gender of respondent	2 How old are you?	3 Which city do you shop online from?	4 What is the Pin Code of where you shop online from?	5 Since How Long You are Shopping Online ?	6 How many times you have made an online purchase in the past 1 year?	7 How do you access the internet while shopping on-line?	8 Which device do you use to access the online shopping?	9 What is the screen size of your mobile device?	10 What is the operating system (OS) of your device?	11 What browser do you run on your device to access the website?	12 Which channel did you follow to arrive at your favorite online store for the first time?	13 After first visit, how do you reach the online retail store?	14 How much time do you explore the e-retail store before making a purchase decision?	15 What is your preferred payment Option?	16 How frequently do you abandon (selecting an item: and leaving without making payment you shopping cart?
0	1	1	2	1	3	2	0	0	3	2	0	2	2	2	2	2
1	0	0	2	5	3	3	3	2	0	1	0	2	4	4	1	2
2	0	0	4	23	2	3	1	2	2	0	0	2	4	1	2	2
3	1	0	6	11	2	5	1	2	2	1	3	2	2	2	1	2
4	0	0	0	31	1	0	3	2	0	1	3	0	4	4	1	2

# Correlation plot between the attributes :

```
plt.figure(figsize =(15,25))  
sns.heatmap(corr_data,annot = True,fmt = ".0%",cbar = False,square = True,annot_kws = {'size':5}, cmap = 'Reds')  
plt.show()
```



## *Statistics used to validate the above correlation statements:*

I used chi2 test on most important variables that contributed for website recommendation to a friend, which we initially considered that is the major factor that determines whether the buyer is retained with the experience provided. □ In this chi-squared test, the alpha value considered was 0.05 (5%). □ For every 2 categorical variable test the Null Hypothesis assumption was the variables were independent of the variable “Website recommended to a friend”. □ And the Alternate hypothesis was the variables tested were actually dependent on the “Website recommended to a friend”. The results of the chi2 test clearly pointed that the p value for all the variables were less than the alpha value (0.05) confirming the dependency of the variables over the “Website recommended to a friend”

$$\chi^2 = \sum \frac{(\text{Observed value} - \text{Expected value})^2}{\text{Expected value}}$$



# *The main factors that drives customer satisfaction:*

*Easy to read and understandable content*

*Relevant information on all the products*

*Easier website design and navigation*

*User friendly Interface*

*Convenience in payment methods*

*Trust and On-Time Delivery.*

*Better Customer Service*

*Secure and offers complete privacy to their customers*

*Discounts and Monetary Benefits*

*Wide range of options and product selections*

*Flexibility in their offers and services*

*Return and Replacement policies*

*Quality information on websites*

*Website Quality*

*Value for the money spent*

## *Limitations and Scope for the future :*

*The data used to analyse the customer retention was very less  
The answers towards the e-commerce sites were combination of two or more e-commerce sites, the survey answers should have been limited to maximum 2 websites in order to understand the retention rates better.  
It would have been beneficial to include a question asking that “ Which website would you purchase from again?”*

# Conclusion :

- a. From the above analysis, I can say that the companies with highest retention and customer satisfaction rates are Amazon.in and Flipkart.com because their positives are in line with the buyer preferences and they are most likely to use this websites for purchases in future.*
- b. The company with moderate retention rate is Myntra.com*
- c. Further, the company with very low retention rate and customer satisfaction is with Paytm and Snapdeal because most of the factors are not in line with the customer preferences and they are less likely to use this website again for online purchase.*
- d. Customer satisfaction plays a major role in retention, A company should first understand what customers expects while purchasing online (e-commerce) and build a better buying experience which will in turn retain the customer. An unforgettable experience is what drives customers to buy again and again*

Thank  
you