



Customer Retention

Hardware and Software Requirements and Tools Used in Jupyter Notebook for the detailed description through visualization for understanding the data in a better way.

```
#Importing necessary libraries for this project  
  
import pandas as pd  
import numpy as np  
import seaborn as sns  
import matplotlib.pyplot as plt  
  
import warnings  
warnings.filterwarnings("ignore")
```

Pandas is an open-source python library providing highperformance data analysis tool by its powerful data structures.

It helps to shorten the procedure of handling the data with extensive set of features.

NumPy is most used package for scientific computing, and it is mostly used for multi-dimensional array of objects.

NumPy is mostly compatible with Python packages, Pandas, matplotlib.

Seaborn and matplotlib are the 2 python data visualization libraries which provides a stunning plot for visualizing the data in a plot.

Use warnings. filterwarnings() to ignore deprecation warnings

ACKNOWLEDGMENT

This includes mentioning of all the references, research papers, data sources, professionals and other resources that helped you and guided you in completion of the project.

INTRODUCTION

- **Business Problem Framing**

Customer satisfaction is one of the important key factors to get success in online shopping.

It includes a wide variety of products and its quality and price and return/ replacement policy and delivery speed etc.

It makes the customer to re-visit or re-purchase the E-commerce shopping site for purchase the products from the store.

Generally, It is the process of engaging the existing customers to buy products from the store.

Analytical Problem Framing

- **Data Sources and their formats**

The given task is here to provide a analysis on this topic, I can see that there are so many columns which indicates a different factors regarding customer shopping on E-commerce site.

```
In [4]: #read the coulumns which columns we have
df.columns
```

[illegible]

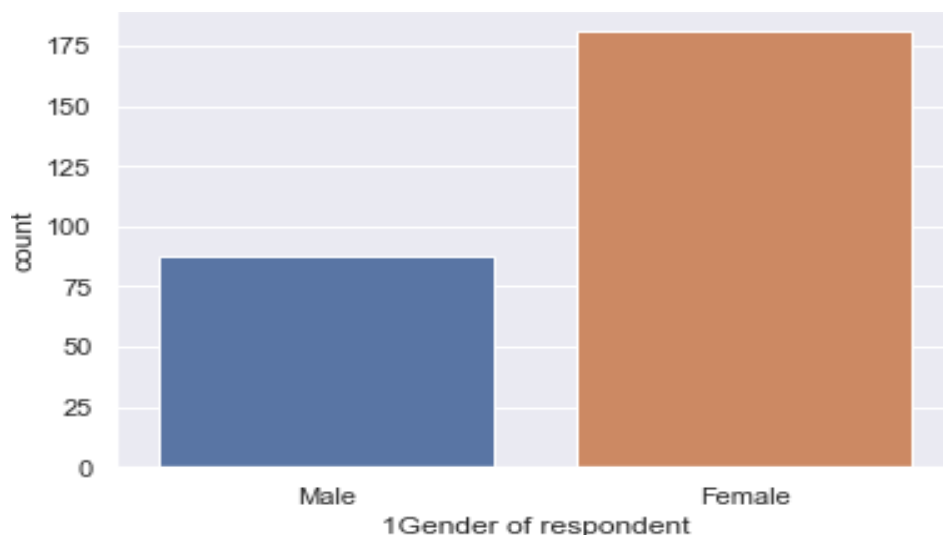
```

'30 Online shopping gives monetary benefit and discounts',
'31 Enjoyment is derived from shopping online',
'32 Shopping online is convenient and flexible',
'33 Return and replacement policy of the e-tailer is important for purchase decision',
'34 Gaining access to loyalty programs is a benefit of shopping online',
'35 Displaying quality Information on the website improves satisfaction of customers',
'36 User derive satisfaction while shopping on a good quality website or application',
'37 Net Benefit derived from shopping online can lead to users satisfaction',
'38 User satisfaction cannot exist without trust',
'39 Offering a wide variety of listed product in several category',
'40 Provision of complete and relevant product information',
'41 Monetary savings',
'42 The Convenience of patronizing the online retailer',
'43 Shopping on the website gives you the sense of adventure',
'44 Shopping on your preferred e-tailer enhances your social status',
'45 You feel gratification shopping on your favorite e-tailer',
'46 Shopping on the website helps you fulfill certain roles',
'47 Getting value for money spent',
'From the following, tick any (or all) of the online retailers you have shopped from;

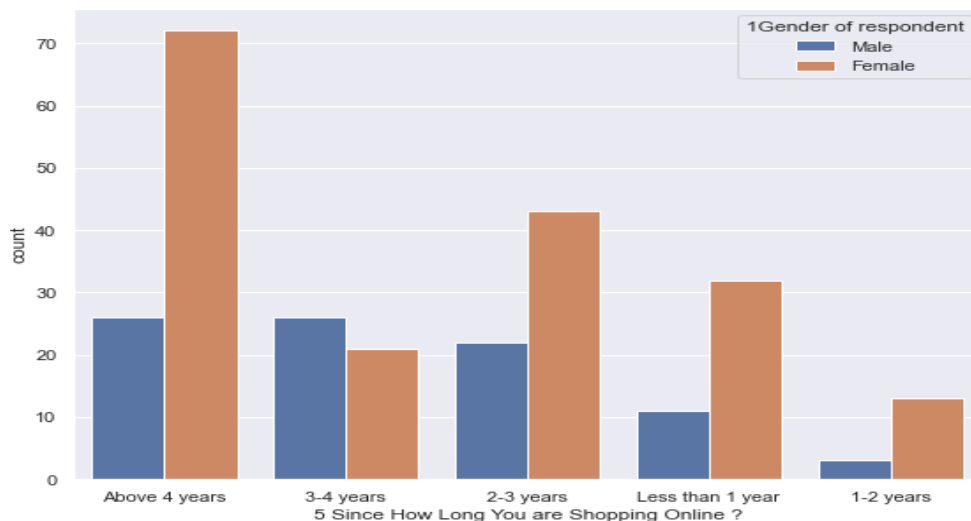
'Easy to use website or application',
'Visual appealing web-page layout', 'Wild variety of product on offer',
'Complete, relevant description information of products',
'Fast loading website speed of website and application',
'Reliability of the website or application',
'Quickness to complete purchase',
'Availability of several payment options', 'Speedy order delivery ',
'Privacy of customers information',
'Security of customer financial information',
'Perceived Trustworthiness',
'Presence of online assistance through multi-channel',
'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)',
'Longer page loading time (promotion, sales period)',
'Limited mode of payment on most products (promotion, sales period)',
'Longer delivery period', 'Change in website/Application design',
'Frequent disruption when moving from one page to another',
'Website is as efficient as before',
'Which of the Indian online retailer would you recommend to a friend?'],
dtype='object')

```

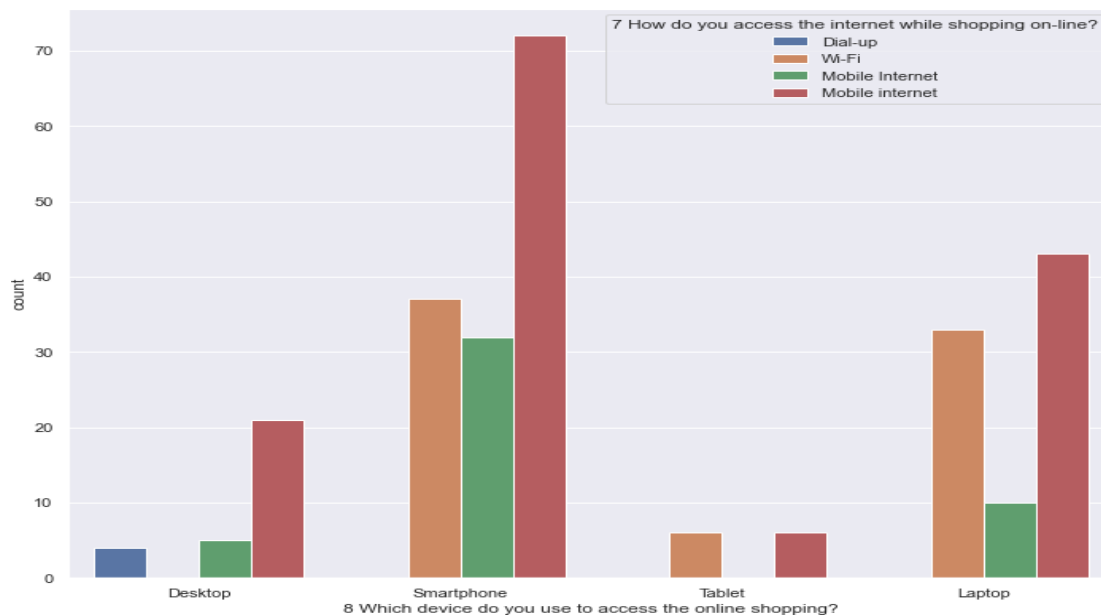
Most of the customers who do online shopping are **Females** than males in terms of Gender.



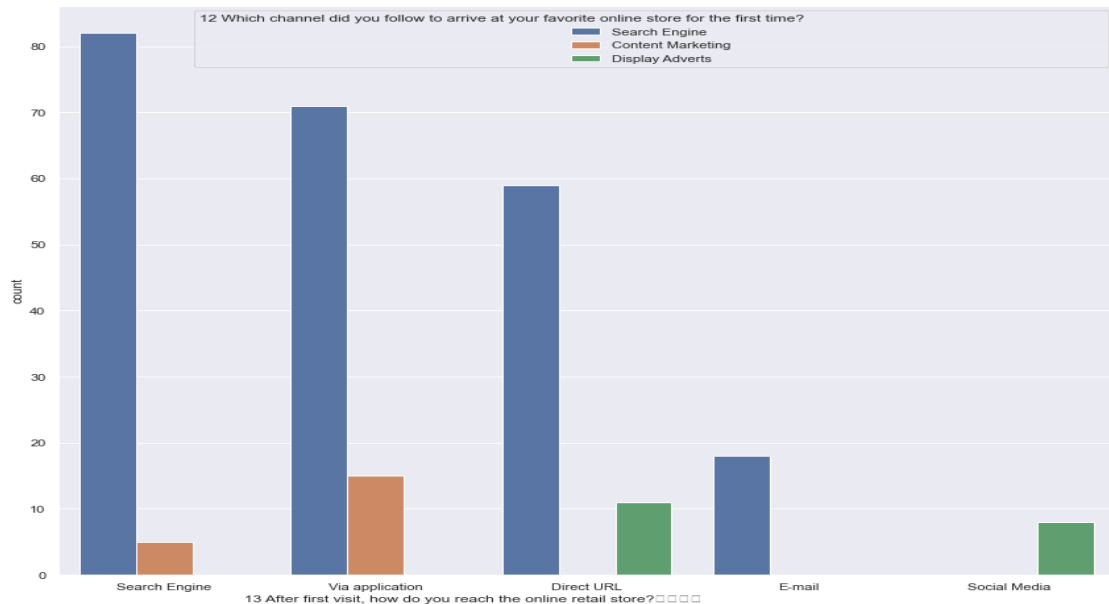
As online shopping is in trends from last 6-7 years, it used totake time for the people to get familiar on the site especiallytrust on the site which is very important. So, as they are getting used to it, the plot shows that most of the customersare actively using online shopping for >4 years.



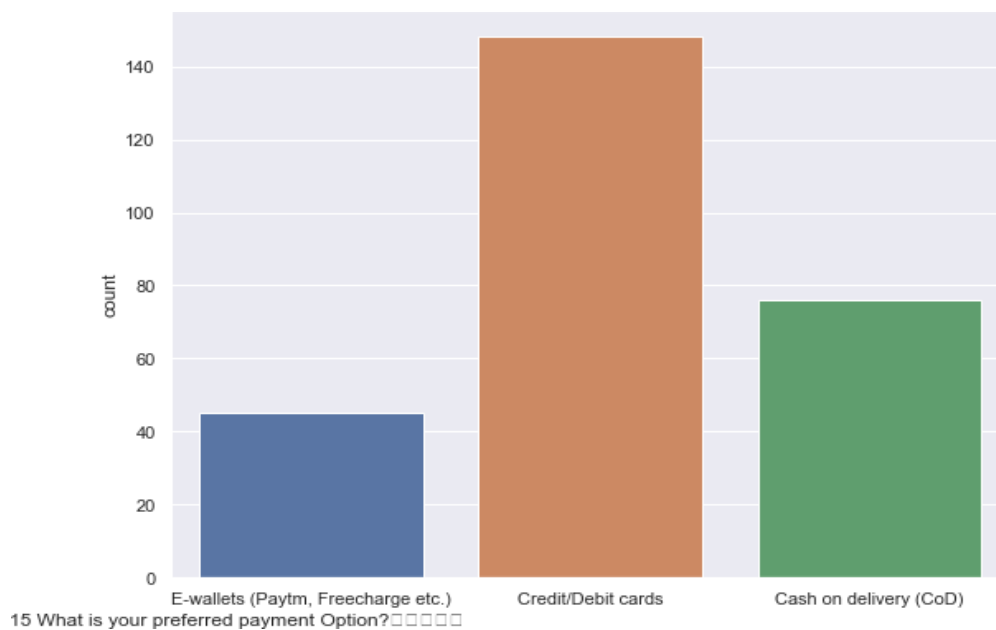
Customers prefer to use smartphones than desktop or laptop for online shopping as it is easy to carry and flexible and userfriendly.



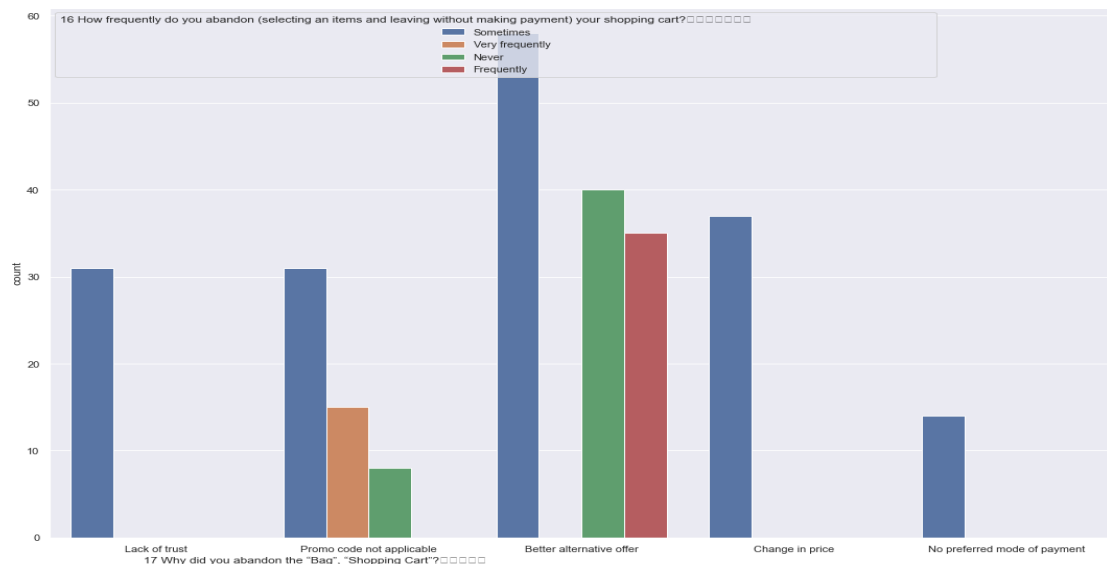
While visiting the store, Customers are using searchengine more than content and AD's.



Important thing is about payment and most of the customers preferred to pay online through credit /debitcards and safe transaction as well and COD as well.

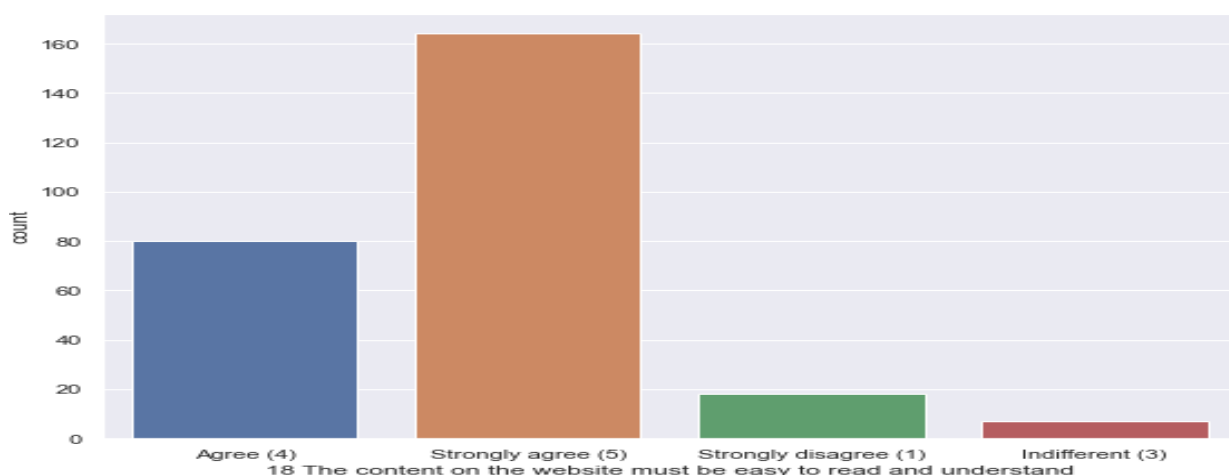


Most customers are expecting a good offer with good quality of products. If not, then they are abandoning the shopping cart and going for alternative offer where the needs of the customers are getting satisfied which is making the website to lose its customer.



- What and all we can do to make the customers to come back or make them stay?

1) Website should be easy to read and understand and it should be easily accessible but without data leakage like transactions.



2) Website loading and processing should be speed and site should be user-friendly for the customers.

3) Customer's satisfaction is more important in terms of purchasing from Online shopping.

4) Some customer's felt that Return/replacement policy from the e-retailer is important for purchasing the products.

5) Site should offer a wide variety of products in – order to retain a customer to the site.

CONCLUSION

Key Findings and Conclusions of the Study

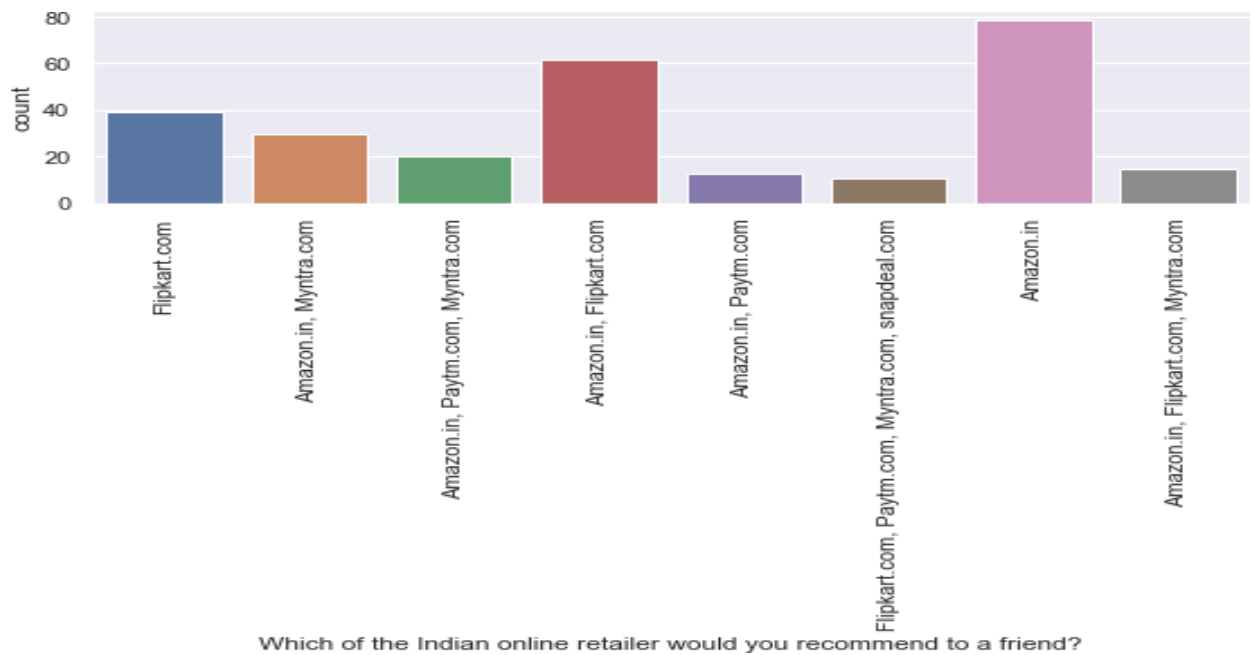
In-order to retain the customer to back to the site, Websites should have easily accessible and limiting the process in Login/Register.

As most of the customers are females, Websites can spend a quality time on analytics to see what the customers has purchased often and their recently viewing items and how many items they have viewed that products etc.

Also, to attract a male customer, Website can give specific discount or offers to customers to retain them back.

Trust is an important factor which plays between customer's and website, transaction details can be encrypted safely to avoid data leakage.

Also, customer's prefer mode of payment is through CARDS and so website can give the option to users and the encrypted transaction details for secure checkout process in Online Shopping.



On comparing with many sites, most of the customers are happy with service of Amazon and Flipkart in terms of offer, speed delivery, return/replacements, user-friendly site and wide range of collections andso on.