



## Customer Retention Analysis



Submitted by:

Rajashri Sadafule Darveshi

## **ACKNOWLEDGMENT**

I would like to express my special thanks of gratitude to the sources Medium, Analytics Vidhya, TowardsDataScience, Data Training Projects and youtube channel's which helped me to for this project. I would like to thank FlipRobo for giving me this opportunity to develop and accomplish this project.

## INTRODUCTION

### **Problem Statement:**

- The combination of both utilitarian value and hedonistic values are needed to affect the repeat purchase intention (loyalty) positively .
- The objective was to perform extensive data analysis on a given dataset and produce valuable insights that will help in customer retention.
- The dataset consist of 71 features and 269 rows

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.

### **Business Problem Framing**

The objective was to perform extensive data analysis on a given dataset and produce valuable insights that will help in customer retention

### **Review Of Literature**

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 endeavoured 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 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.

### **Customer Retention: Statistics**

- Acquiring new customer can cost five times more than satisfying and retaining current customers.
- 2% increase in customer retention has same effect on profits as cutting costs by 10%.
- The average company loses 10% of its customer each year.
- 5% reduction in the customer defection rate can increase profits by 25-125%, depending on the industries.
- The customer profitability rate tends to increase over the life of a retained customer.
- Companies can boost profits anywhere from 25 to 125% by retaining merely 5% more existing customers.

### **Data Sources:**

The training data and testind data for this project are available in excel file.

### **About the data:** Details of dataset are as follows

**1. Number of data points in dataset:269**

**2. Number of features in dataset : 71**

### **Exploratory Data Analysis:**

- ✓ Importing required libraries.
- ✓ Imported both the datasets which were in csv format.

### **Data Preprocessing :**

After loading all the required libraries we loaded the data into our jupyter notebook.

```
import pandas as pd
import numpy as np
import matplotlib.pyplot as plt
%matplotlib inline
import seaborn as sns
from plotly.subplots import make_subplots
import warnings
warnings.filterwarnings("ignore")

# Let's Load the dataset
data = pd.read_excel(r'C:\Rajashri\Internship\Task7 Project\Customer_retention_dataset_1\Customer_retention_dataset\customer_rete
```

## Replace long column names with short names

Gender of respondent :: <b>(Sex)</b>	All relevant information on listed products must be stated clearly :: <b>(ProductInfo)</b>
How old are you? :: <b>(Age)</b>	Ease of navigation in website :: <b>(EasyNavigation)</b>
Which city do you shop online from? :: <b>(City)</b>	Loading and processing speed :: <b>(LoadProcessingSpeed)</b>
What is the Pin Code of where you shop online from? :: <b>(PinCode)</b>	User friendly Interface of the website :: <b>(UserFriendlyInterface)</b>
Since How Long You are Shopping Online ? :: <b>(ShoppingTime)</b>	Convenient Payment methods :: <b>(ConveninetPaymentMode)</b>
How many times you have made an online purchase in the past 1 year? :: <b>(FrequencyofShopping)</b>	Trust that the online retail store will fulfill its part of the transaction at the stipulated time :: <b>(TransactionTrust)</b>
How do you access the internet while shopping on-line? :: <b>(InternetOnline)</b>	Empathy (readiness to assist with queries) in towards the customers :: <b>(CustSupportResponse)</b>
Which device do you use to access the online shopping? :: <b>(DeviceUsed)</b>	Being able to guarantee the privacy of the customer :: <b>(CustPrivacy)</b>
What is the screen size of your mobile device? :: <b>(ScreenSize)</b>	Responsiveness, availability of several communication channels (email, online rep, twitter, phone etc.) :: :: <b>(VariousChannelResponses)</b>
What is the operating system ( <b>OS</b> ) in your device? :: <b>(OS)</b>	Online shopping gives monetary benefit and discounts :: <b>(BenefitandDiscounts)</b>
What browser do you run on your device to access the website? :: <b>(BrowserName)</b>	Enjoyment is derived from shopping online :: <b>(Enjoyment)</b>
Which channel did you follow to arrive at your favorite online store for the first time? :: <b>(ChannelName)</b>	Shopping online is convenient and flexible :: <b>(Convenience)</b>
After first visit, how do you reach the online retail store? :: <b>(loginMode)</b>	Return and replacement policy of the e-tailer is important for purchase decision :: <b>(ReturnReplacementPolicy)</b>
How much time do you explore the e- retail store before making a purchase decision? :: <b>(TimetoDecide)</b>	Gaining access to loyalty programs is a benefit of shopping online :: <b>(LoyaltyProgramsAccess)</b>
What is your preferred payment Option? :: <b>(PaymentMode)</b>	Displaying quality information on the website improves satisfaction of customers :: <b>(CustomersSatisfaction)</b>
How frequently do you abandon ( <b>selecting an items and leaving without making payment</b> ) in your shopping cart?--- ) <b>InNotPurchase</b>	User derive satisfaction while shopping on a good quality website or application :: <b>(SiteSatisfaction)</b>
Why did you abandon the "Bag", "Shopping Cart"? :: <b>(NotPurchaseReason)</b>	Net Benefit derived from shopping online can lead to users satisfaction :: <b>(NetBenefitSatisfaction)</b>
The content on the website must be easy to read and understand :: <b>(WebsiteLook)</b>	User satisfaction cannot exist without trust :: <b>(Usersatisfaction)</b>
Information on similar product to the one highlighted is important for product comparison :: <b>(SameProductInfo)</b>	Offering a wide variety of listed product in several category :: <b>(productSeveralCategory)</b>
Complete information on listed seller and product being offered is important for purchase decision. :: <b>(sellerProductInfo)</b>	Provision of complete and relevant product information :: <b>(RelevantProductInfo)</b>
	Monetary savings :: <b>(MonetarySavings)</b>

The Convenience of patronizing the online retailer :: (PatronizingConvenience)	
Shopping on the website gives you the sense of adventure :: (SenseofAdventure)	
Shopping on your preferred e-tailer enhances your social status :: (SocialStatus)	
You feel gratification shopping on your favorite e-tailer :: (Gratification)	
Shopping on the website helps you fulfill certain roles :: (RoleFulfilment)	Longer time to get logged in (promotion, sales period) :: (LongLoginTime)
Getting value for money spent :: (MoneyWorthy)	Longer time in displaying graphics and photos (promotion, sales period) :: (LongDisplayTime)
From the following, tick any (or all) of the online retailers you have shopped from :: (ShoppedFromRetailers)	Late declaration of price (promotion, sales period) :: LatePriceDeclare
Easy to use website or application :: (EasyApp)	Longer page loading time (promotion, sales period) :: (LongLoadingTime)
Visual appealing web-page layout :: (LookGoodWebApp)	Limited mode of payment on most products (promotion, sales period) :: (LimitedPaymentMode)
Wild variety of product on offer:: (ProductVariety)	Longer delivery period :: (LongerDelivery)
Complete, relevant description information of products :: (CompleteProductInfo)	Change in website/Application design :: (WebAppDesign)
Fast loading website speed of website and application :: (fastWebApp)	Frequent disruption when moving from one page to another :: (DisruptionofPage)
Reliability of the website or application :: (reliableWebApp)	Website is as efficient as before :: (WebAppEfficiency)
Quickness to complete purchase :: (quickPurchase)	Which of the Indian online retailer would you recommend to a friend? :: (RetailerRecommendation)
Availability of several payment options :: (paymentOptionsAvailability)	
Speedy order delivery :: (fastDelivery)	
Privacy of customers information :: (custInfoPrivacy)	
Security of customer financial information :: (finInfoSecurity)	
Perceived Trustworthiness :: (perceivedTrustworthiness)	
Presence of online assistance through multi-channel :: (multiChannelAssistance)	
Longer time to get logged in (promotion, sales period) :: (LongLoginTime)	

Now dataset looks like

data.head()													
	Sex	Age	City	PinCode	ShoppingTime	FrequencyofShopping	internetOnline	DeviceUsed	ScreenSize	OS	...	LongLoginTime	Long[
0	Male	31-40 years	Delhi	110009	Above 4 years	31-40 times	Dial-up	Desktop	Others	Window/windows Mobile	...	Amazon.in	
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	
2	Female	21-30 years	Greater Noida	201308	3-4 years	41 times and above	Mobile Internet	Smartphone	5.5 inches	Android	...	Mynta.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	Si
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	

5 rows x 71 columns

## Exploratory Data Analysis:

Dataset contains Categorical and Numerical type data.

Above details features details we get the datatypes of features. This gives the information about the dataset which includes indexing type, column type, contains null values and memory usage.

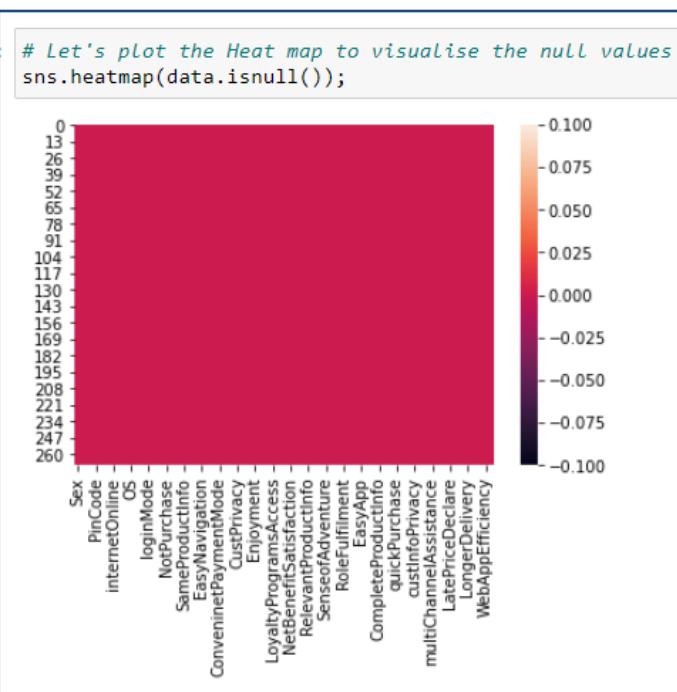
```
# Let's check the general information from the dataset
data.info()

<class 'pandas.core.frame.DataFrame'>
RangeIndex: 269 entries, 0 to 268
Data columns (total 71 columns):
 #   Column           Non-Null Count  Dtype  
--- 
 0   Sex              269 non-null    object  
 1   Age              269 non-null    object  
 2   City             269 non-null    object  
 3   PinCode          269 non-null    int64  
 4   ShoppingTime     269 non-null    object  
 5   FrequencyofShopping 269 non-null    object  
 6   internetOnline   269 non-null    object  
 7   DeviceUsed       269 non-null    object  
 8   ScreenSize        269 non-null    object  
 9   OS               269 non-null    object  
 10  BrowserName      269 non-null    object  
 11  ChannelName      269 non-null    object  
 12  loginMode         269 non-null    object  
 13  TimetoDecide     269 non-null    object  
 14  PaymentMode       269 non-null    object  
 15  NotPurchase       269 non-null    object  
 16  NotPurchaseReason 269 non-null    object  
 17  WebsiteLook       269 non-null    object  
 18  SameProductInfo   269 non-null    object  
 19  sellerProductInfo 269 non-null    object  
 20  ProductInfo        269 non-null    object  
 21  EasyNavigation    269 non-null    object  
 22  LoadProcessingSpeed 269 non-null    object  
 23  UserFrienlyInterface 269 non-null    object  
 24  ConvenientPaymentMode 269 non-null    object  
 25  TransactionTrust   269 non-null    object  
 26  CustSupportResponse 269 non-null    object  
 27  CustPrivacy        269 non-null    object  
 28  VariousChannelResponses 269 non-null    object  
 29  BenefitandDiscounts 269 non-null    object  
 30  Enjoyment          269 non-null    object  
 31  Convenience         269 non-null    object  
 32  ReturnnReplacementPolicy 269 non-null    object  
 33  LoyaltyProgramsAccess 269 non-null    object  
 34  CustomersSatisfaction 269 non-null    object  
 35  SiteSatisfaction   269 non-null    object  
 36  NetBenefitSatisfaction 269 non-null    object  
 37  Usersatisfaction   269 non-null    object  
 38  productSeveralCategory 269 non-null    object  
 39  RelevantProductInfo 269 non-null    object  
 40  MonetarySavings    269 non-null    object  
 41  PatronizingConvenience 269 non-null    object  
 42  SenseofAdventure    269 non-null    object  
 43  SocialStatus         269 non-null    object  
 44  Gratification        269 non-null    object  
 45  RoleFulfilment      269 non-null    object  
 46  MoneyWorthy          269 non-null    object  
 47  ShoppedFromRetailers 269 non-null    object  
 48  EasyApp              269 non-null    object  
 49  LookGoodWebApp       269 non-null    object  
 50  ProductVariety       269 non-null    object  
 51  CompleteProductInfo  269 non-null    object  
 52  fastWebApp           269 non-null    object  
 53  reliableWebApp       269 non-null    object  
 54  quickPurchase         269 non-null    object  
 55  paymentOptionsAvailability 269 non-null    object  
 56  fastDelivery          269 non-null    object  
 57  custInfoPrivacy        269 non-null    object  
 58  finInfoSecurity        269 non-null    object  
 59  perceivedTrustworthiness 269 non-null    object  
 60  multiChannelAssistance 269 non-null    object  
 61  LongLoginTime          269 non-null    object  
 62  LongDisplayTime        269 non-null    object  
 63  LatePriceDeclare        269 non-null    object  
 64  LongLoadingTime         269 non-null    object  
 65  LimitedPaymentMode     269 non-null    object  
 66  LongerDelivery          269 non-null    object  
 67  WebAppDesign            269 non-null    object  
 68  DisruptionofPage         269 non-null    object  
 69  WebAppEfficiency        269 non-null    object  
 70  RetailerRecommendation   269 non-null    object  
dtypes: int64(1), object(70)
memory usage: 149.3+ KB
```

## Detect the missing values:

The dataset has missing values we can see with isnull().sum() function and with heatmap graph.

Let's plot the Heat map to visualise the null values, we can observe no Null values present



## Statistical Analysis of dataset:

We will use describe() method for calculating some statistical data like percentile, mean and std of the numerical values of the Series or DataFrame.

- ✓ Statistical analysis like checking shape, nunique, value counts, info describe etc
- ✓ In the database only one numeral datatype rest all are categorical datatypes

```
# Let's check the statistical summary
```

```
data.describe()
```

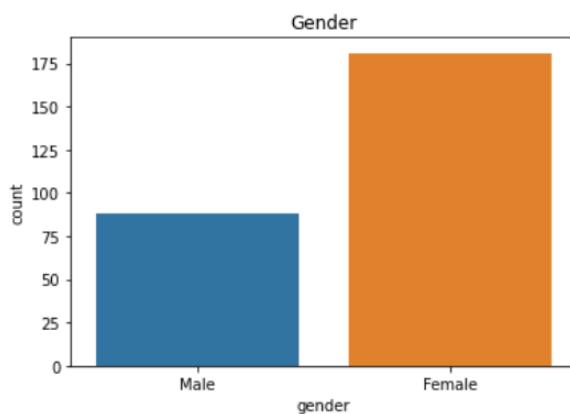
PinCode	
count	269.000000
mean	220465.747212
std	140524.341051
min	110008.000000
25%	122018.000000
50%	201303.000000
75%	201310.000000
max	560037.000000

## Data Visualization:

### UNIVARIATE ANALYSIS

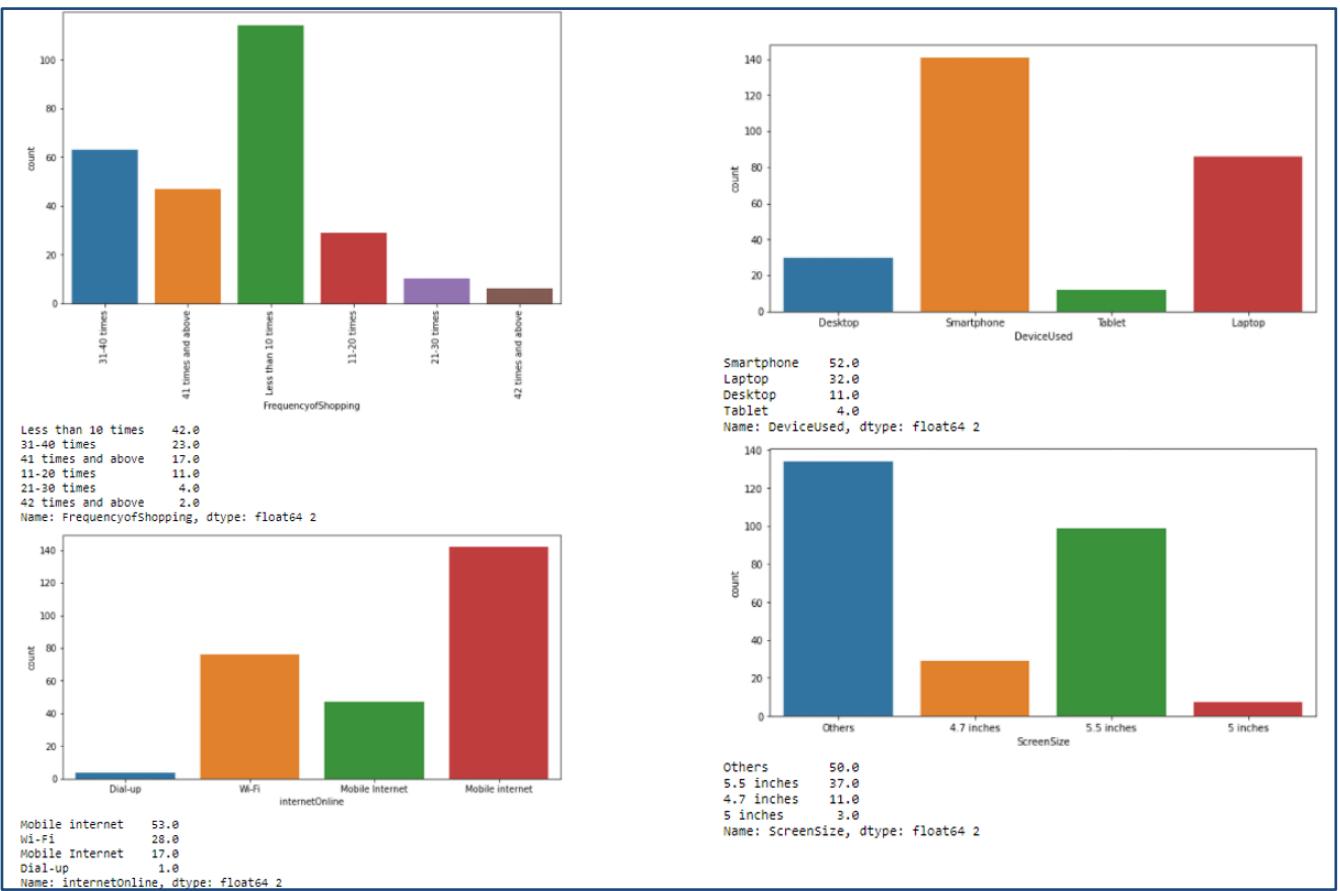
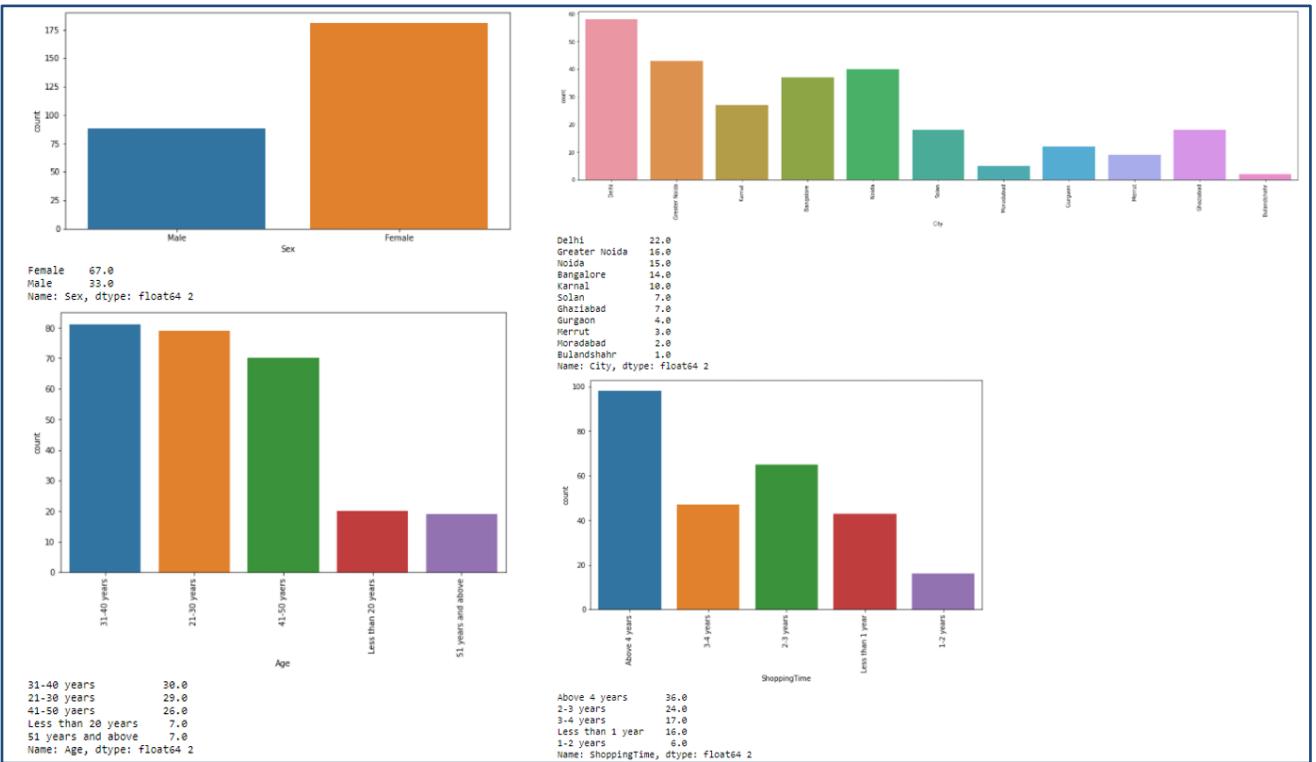
```
In [18]: sns.countplot(data['gender'])
plt.title('Gender')
print(round(data['gender'].value_counts()/269*100),2)
```

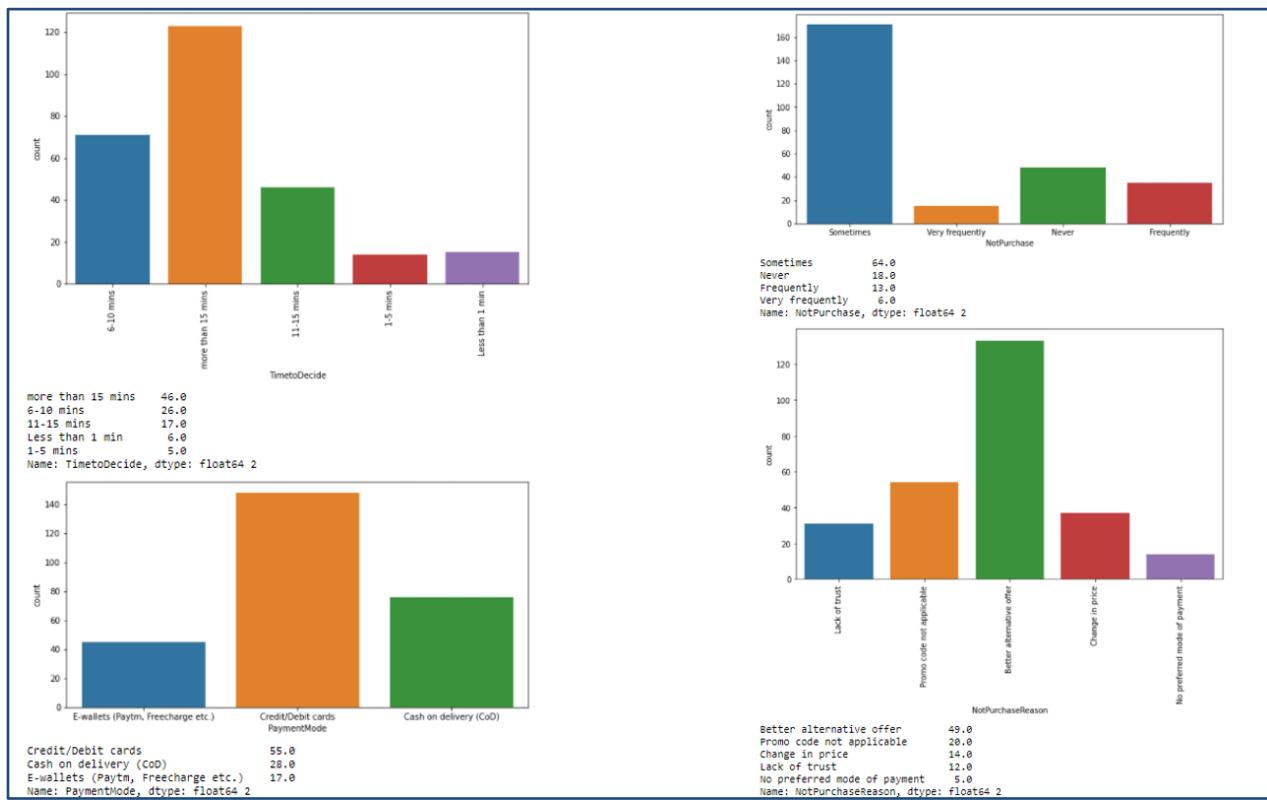
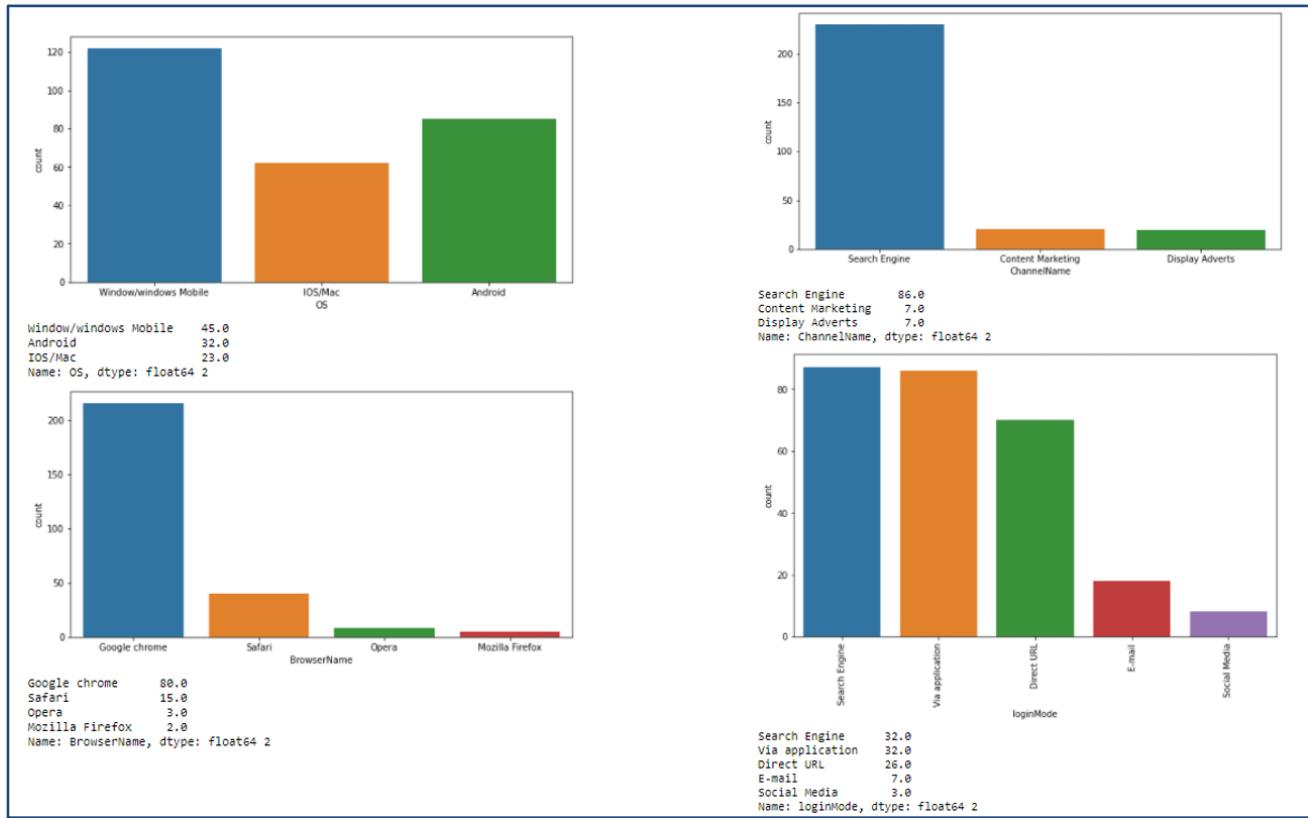
Female 67.0  
Male 33.0  
Name: gender, dtype: float64 2

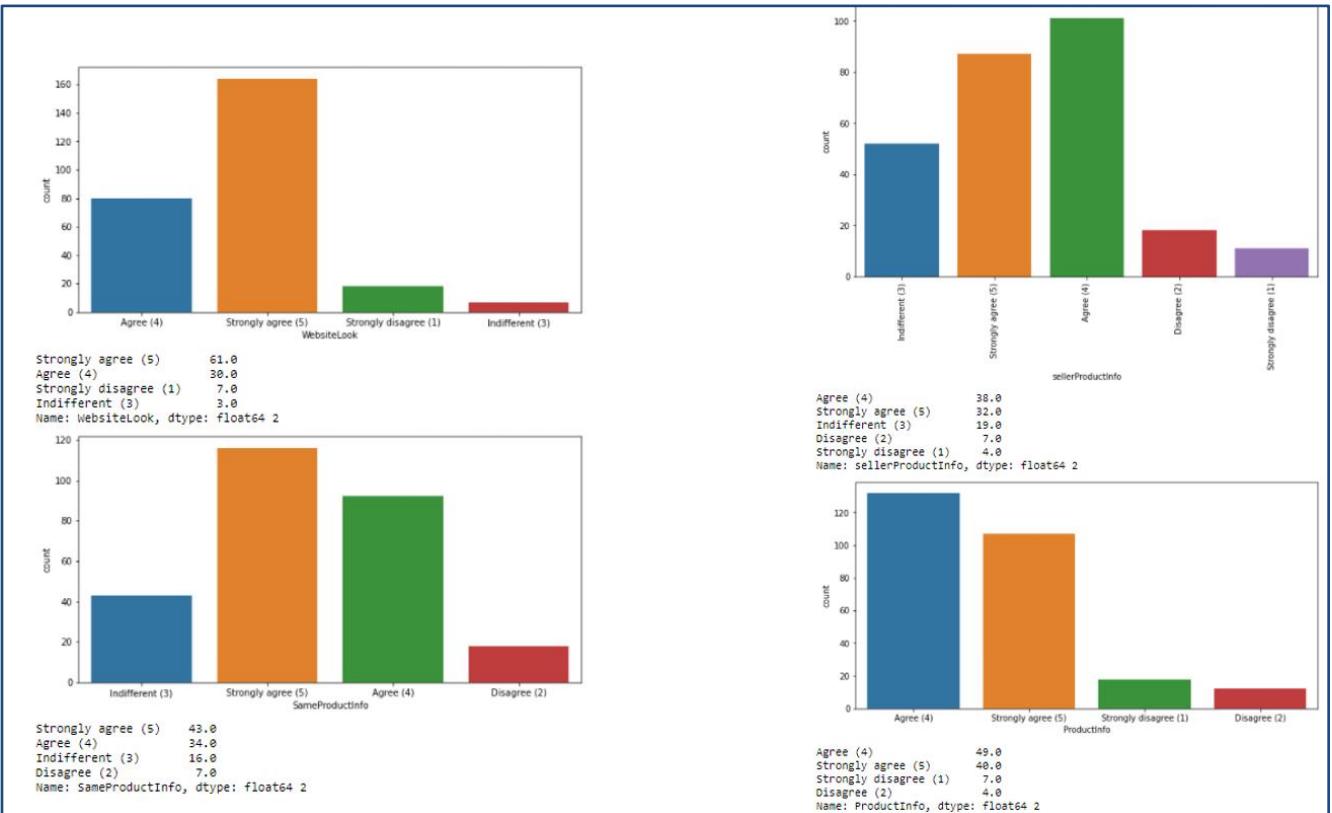


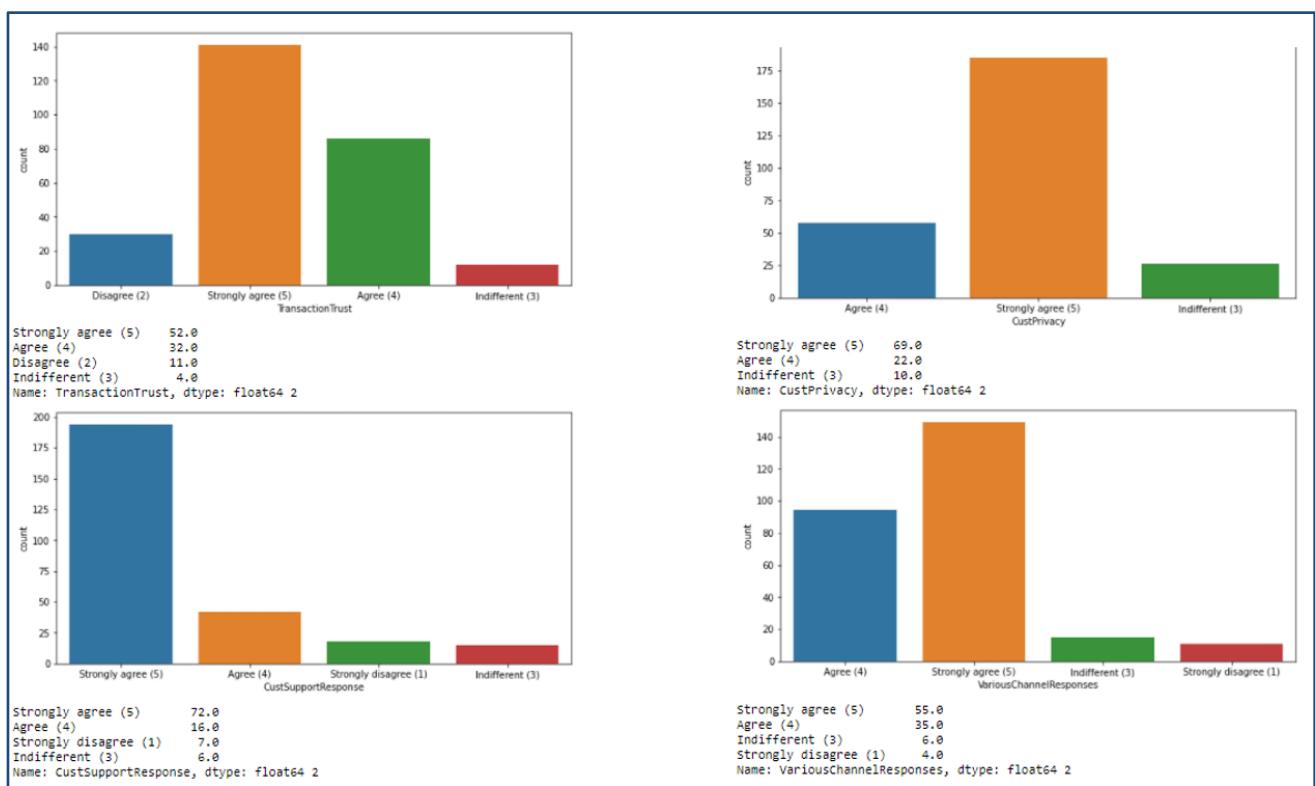
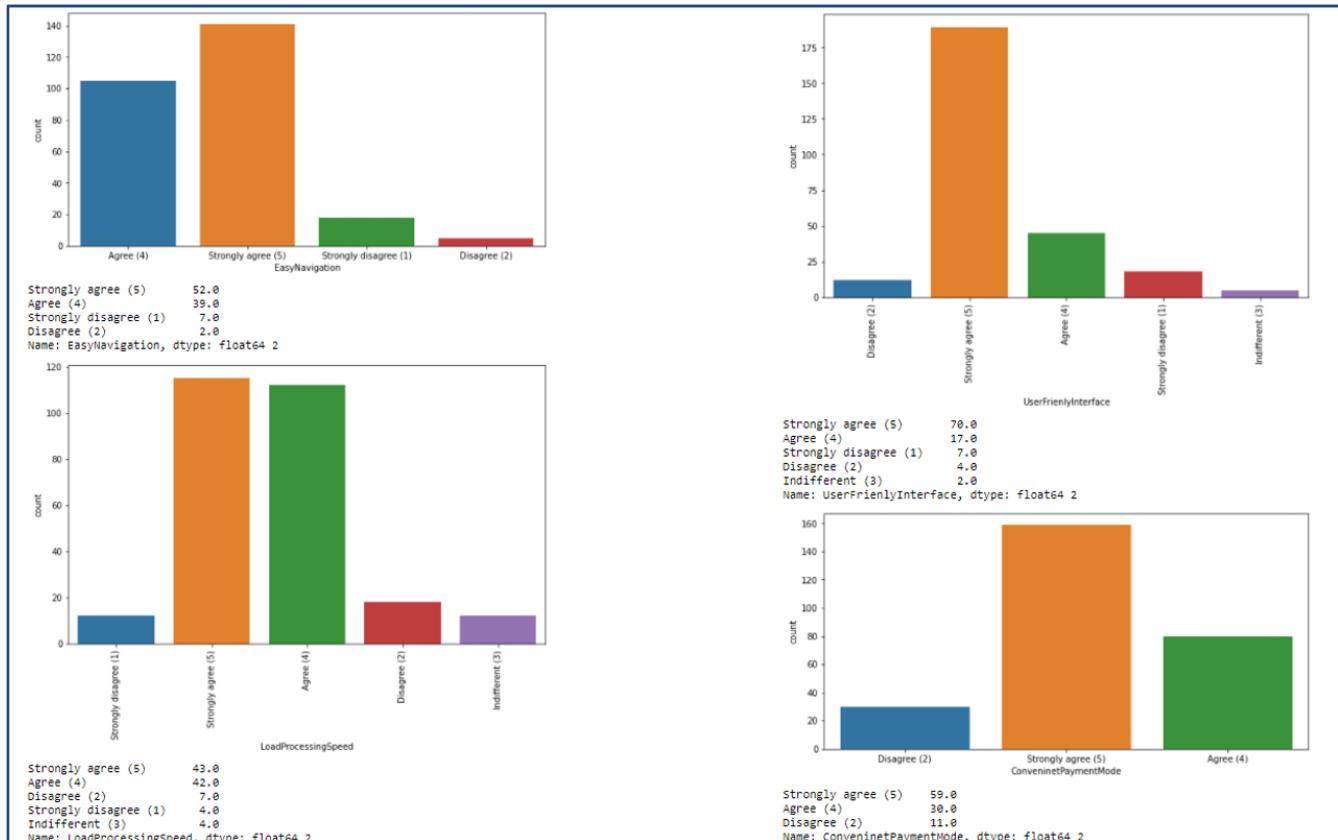
## Observation:

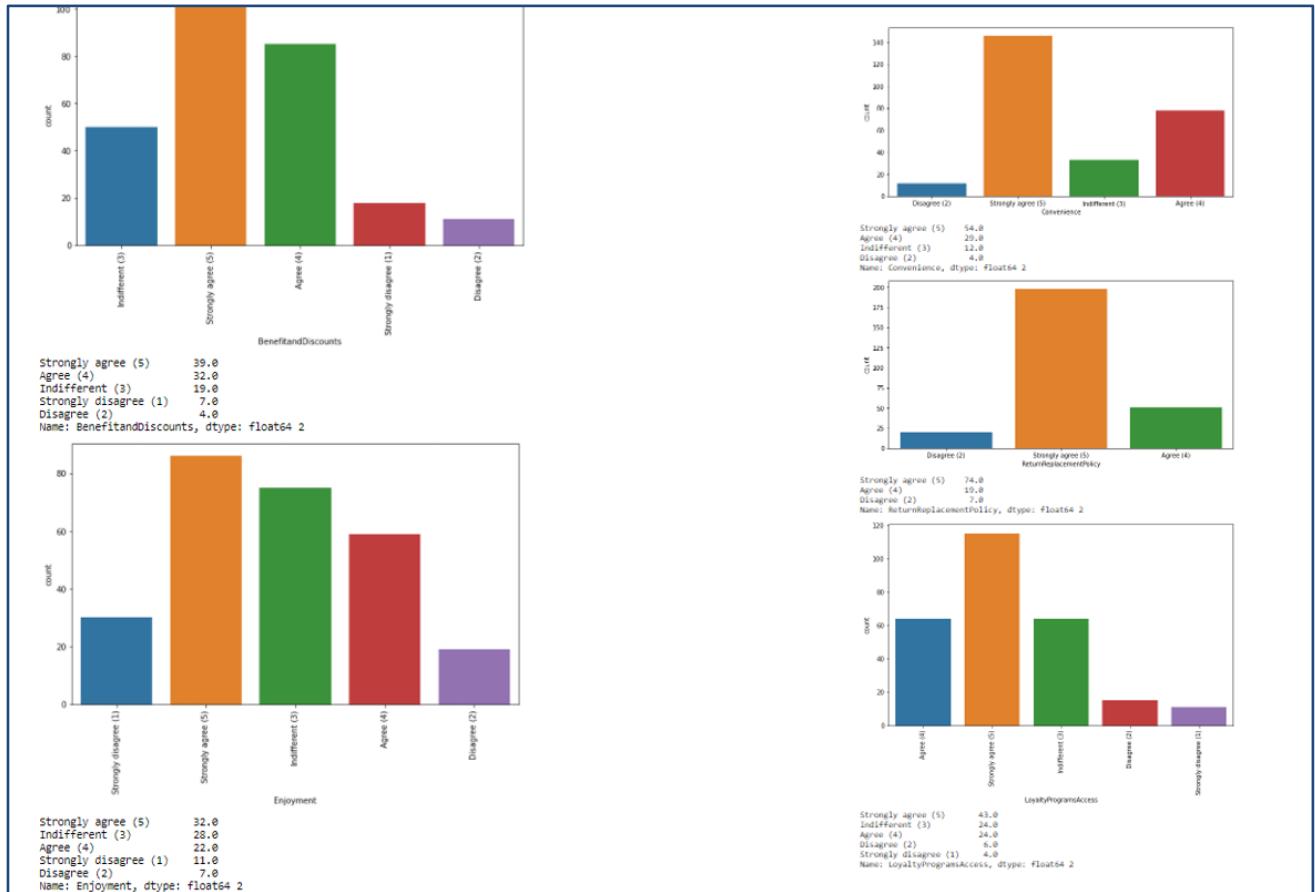
Out of the total, 33 % are male and 67% customer are female

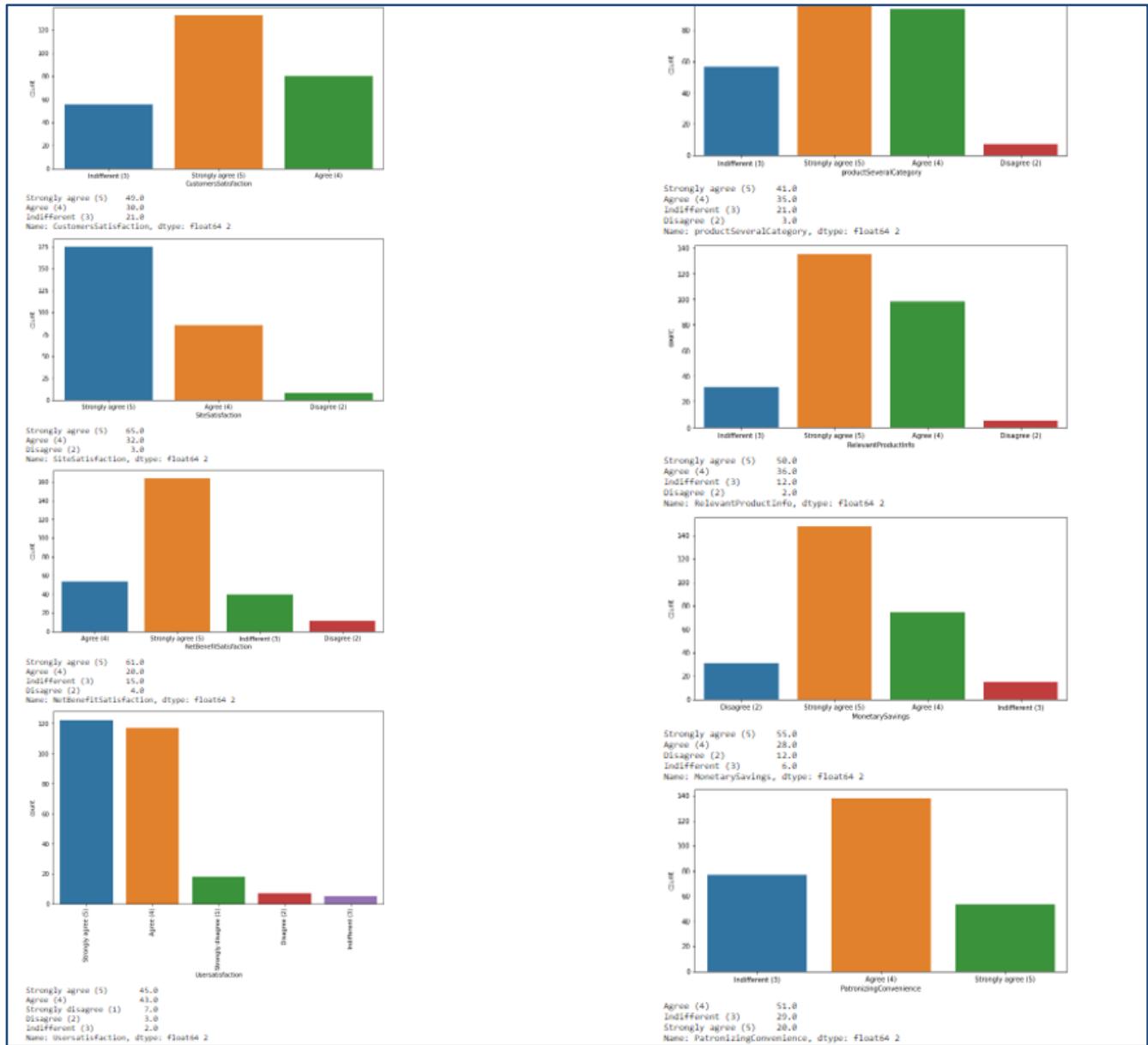


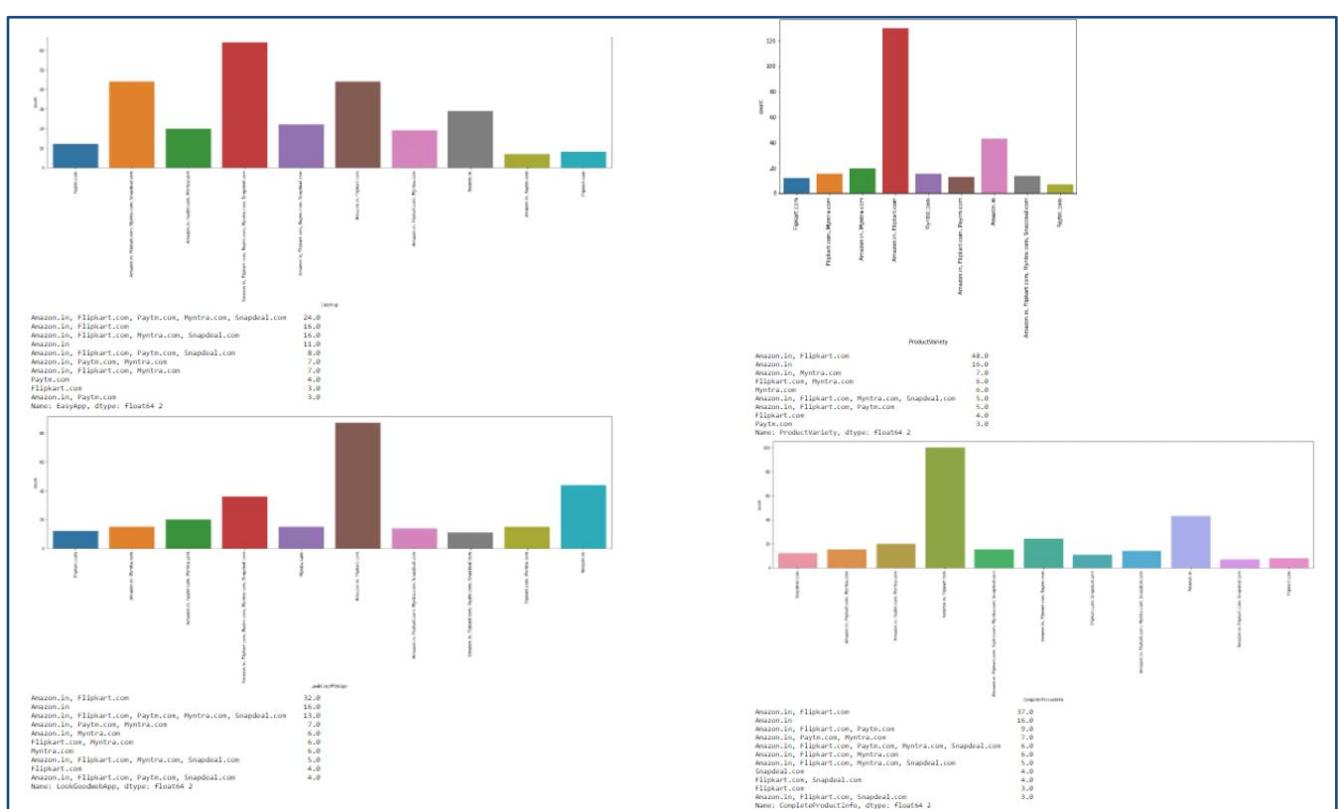
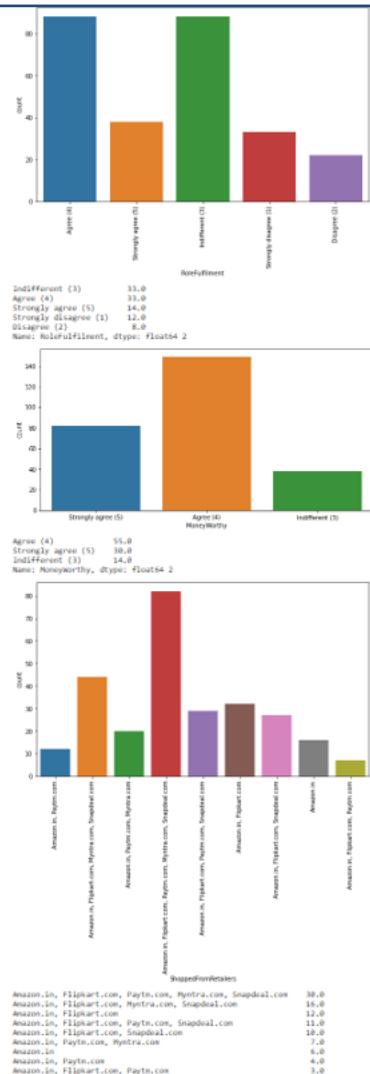
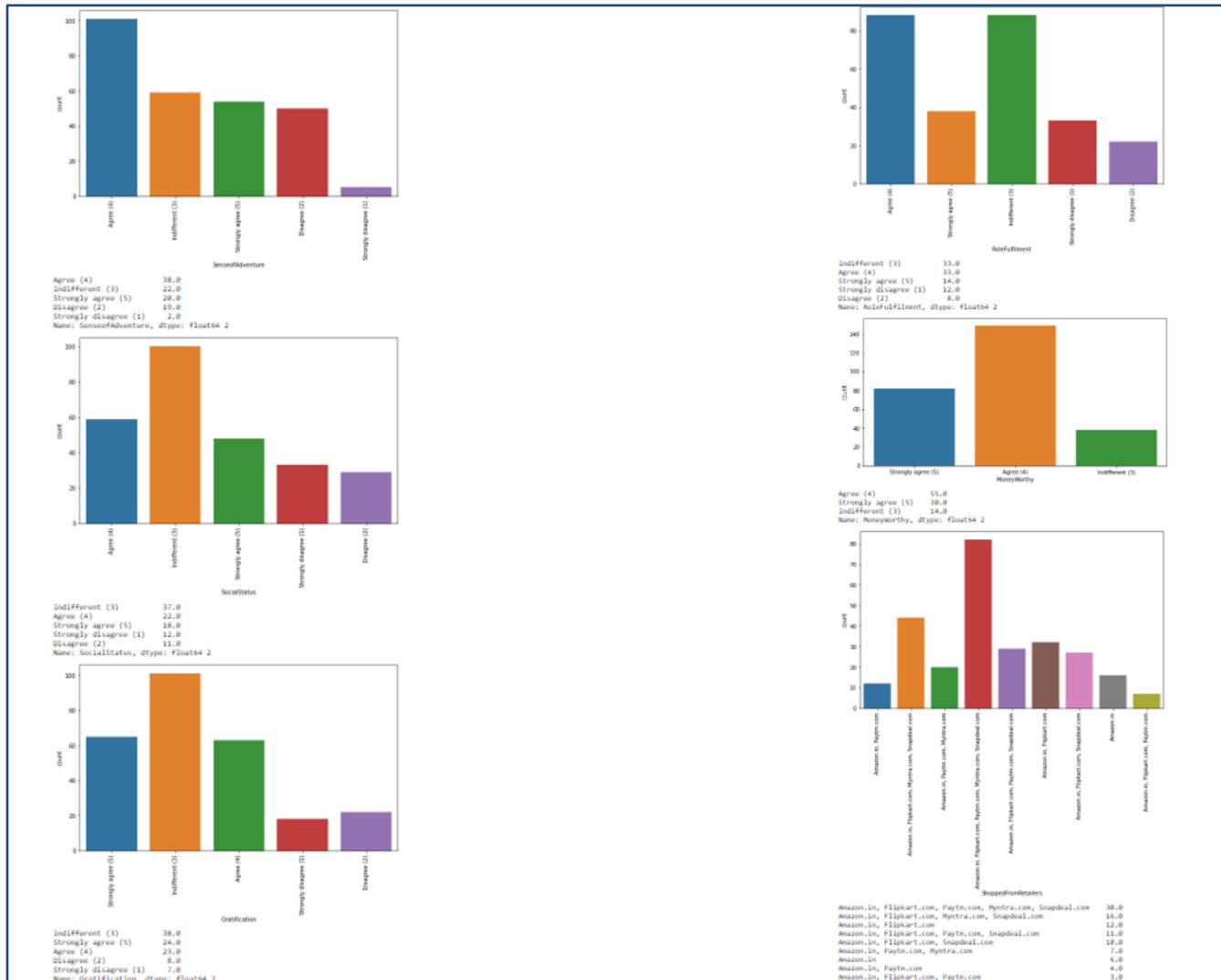


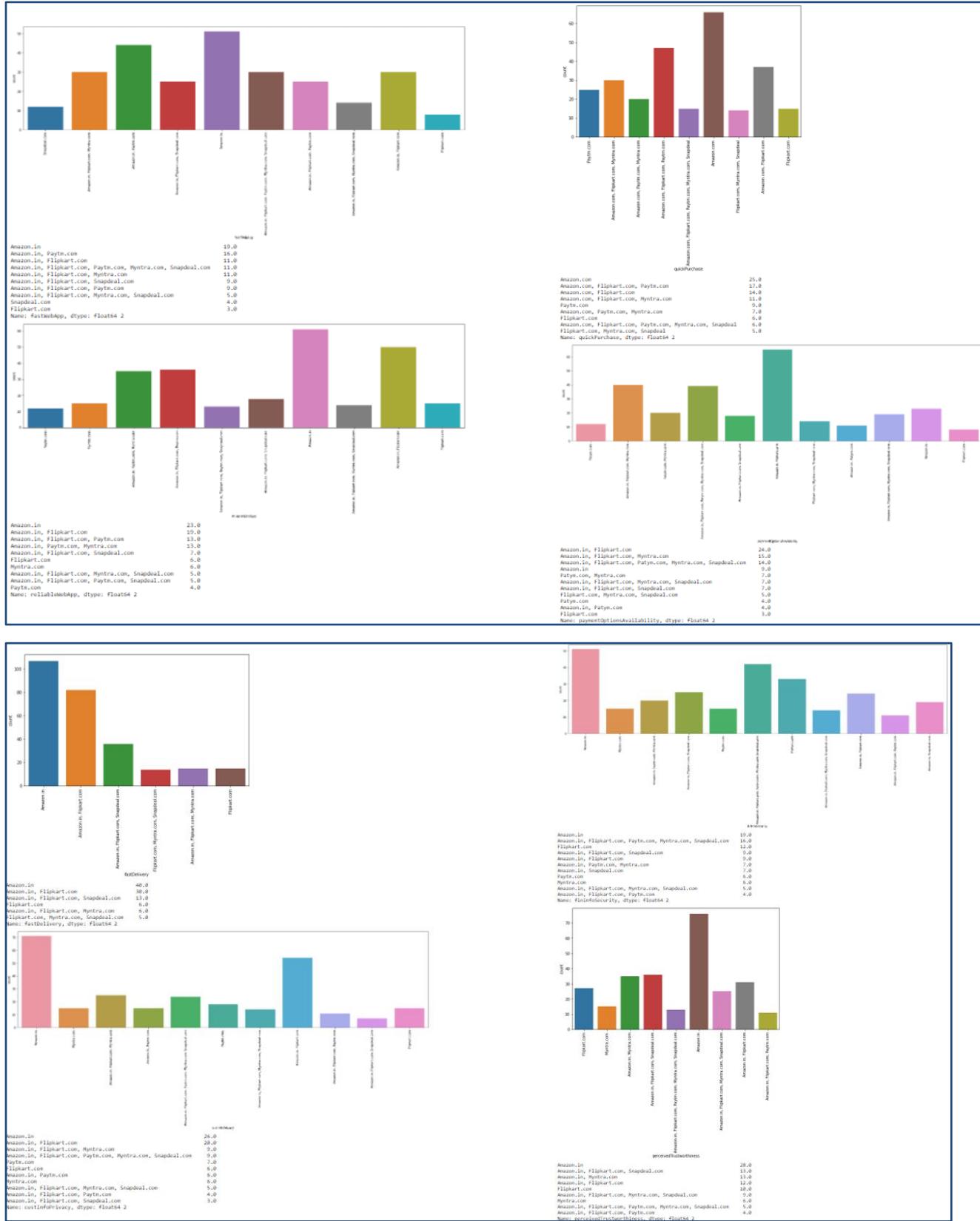


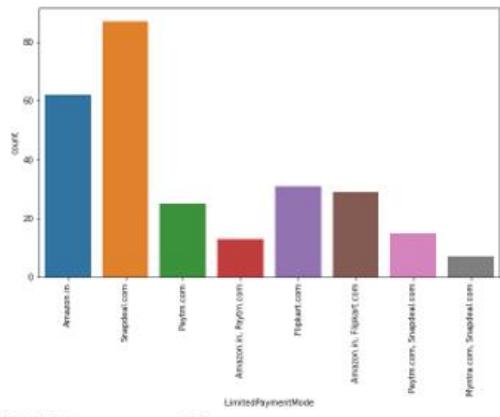




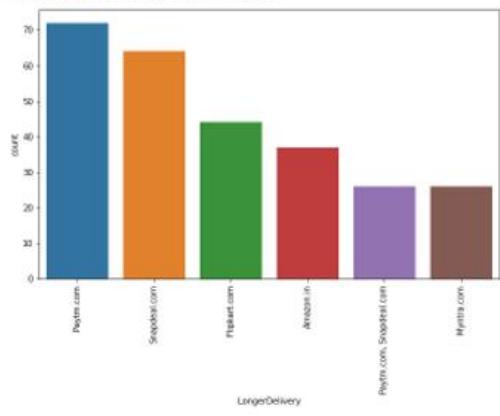




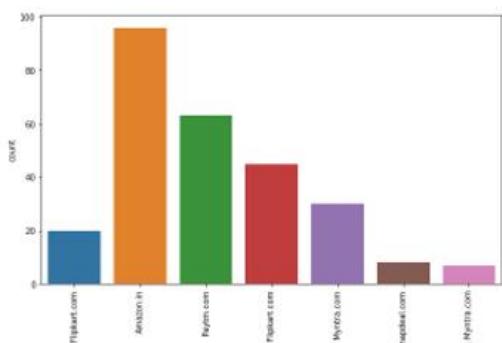




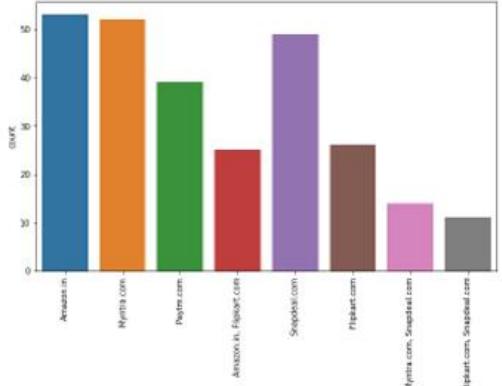
```
Name: LimitedPaymentMode, dtype: float64 2
```



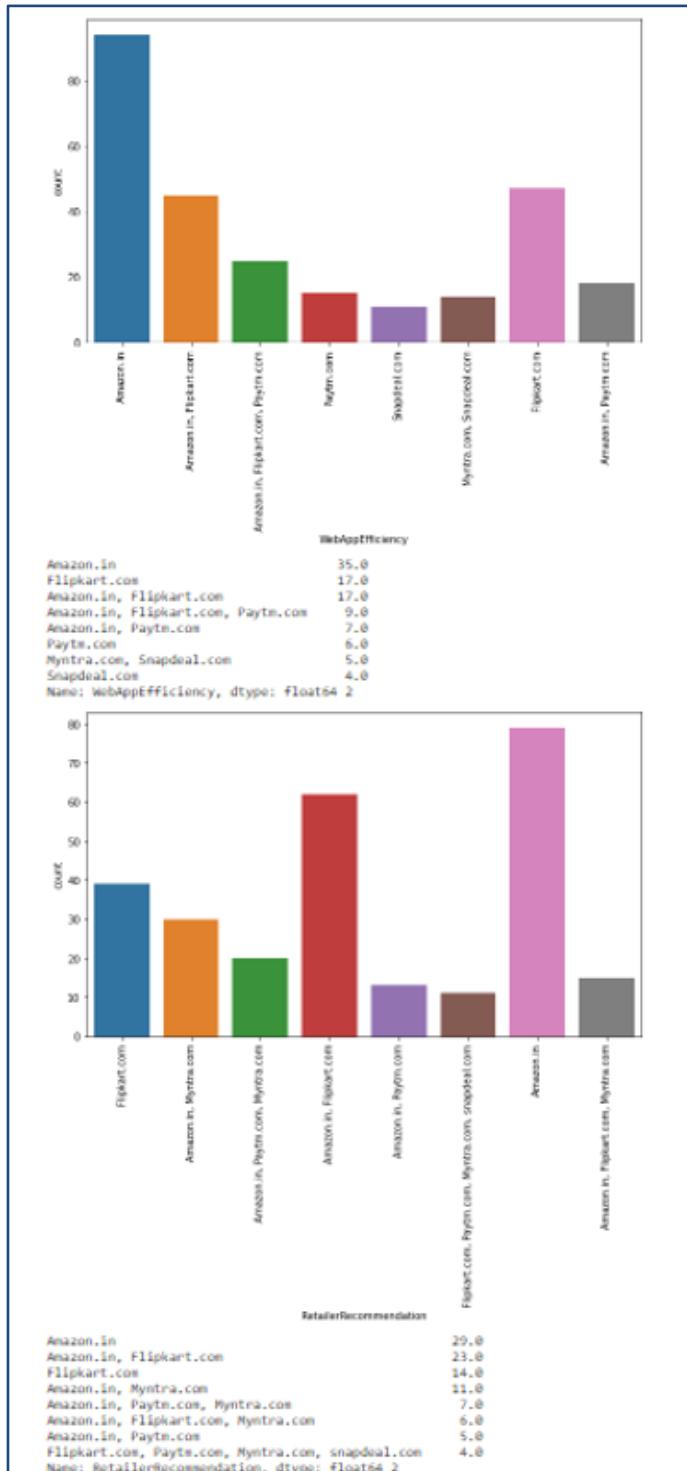
```
Name: LongerDelivery, dtype: float64 2
```



```
Name: WebAppDesign, dtype: float64 2
```



```
Name: DisruptionPage, dtype: float64 2
```



## Observation:

- 67.0% Female customers are more than 33 %male customers
- Customers between 20 to 50 years shopped more from the online store. 75 % of customers are between 20 to 50
- Delhi, Bangalore, Noida, karnal are the cities with high number of buyers
- 36% customers were found shopping online for more than 4 years
- Mobile internet 53 % of users present, 70% customers used mobile internet and wifi for online purchase
- 52% customers used Smartphone for online purchase, 32% used laptop least 4% used tablet
- 45% customers use Windows phone ,Android 32.0% and IOS/Mac 23.0%

- 80% customers used Google chrome for online purchase which is high
- 86% customers uses Search engine to reach their favorite online store
- 46% customers take at least 15 minutes before making a purchase, 26% take 6-10 minutes only
- 55% customers prefer Credit/Debit cards to make payments ,28% preferred COD and 17 % preferred Wallets
- 64% customers abandon their shopping cart sometimes, 19% abandon their cart frequently
- 49% customers abandon their bag due to better alternative offer, 20% abandon due to promo code not applicable
- 61% customers have strongly agreed to have easy website content which is easy to understand
- 43% customers agree that Information on similar product to the one highlighted is important for product comparison.
- 70% customers agree that Complete information on listed seller and product being offered is important for purchase decision
- 90% customers agree all relevant information on listed products must be stated clearly.
- 90% customers agreed that the website should be easily navigable
- 85% customers had no issues with the loading and processing speed
- 87% customers agree with user friendly website interface. The online stores should invest heavily in creating user friendly apps and websites, so that the customers do not have to work around much and the overall shopping experience is smooth.
- 59% customers strongly agree with the convenient paying methods. The reluctance to make online payments is gradually reducing. The acceptance has been built by addressing the trust issue over time by giving customers an option to pay online or to pay Cash On Delivery (COD)
- 52% customers trust that online store will fulfill its part of transaction at stipulated time
- 85% customers like the organization's readiness to assist with queries
- Being able to guarantee the privacy of the customer: This also got 69% strongly agree. Costumers are concerned about the unauthorized access to their data. Protecting user privacy will enable stores to drive more revenue and gain more customers
- Responsiveness, availability of several communication channels (email, online rep, twitter, phone etc.): 90% customers agreed to it. In case one channel is not available, customers can reach out to multiple channels which again is an important factor. Being able to communicate easily can make the difference in both their shopping experience as well as fulfill business goals of online store.
- 50% agree that online shopping gives monetary benefit and discounts to the customer: Most online shopping sites offer amazing round-the-year discounts. Banks and Digital Wallets have happily jumped on the online shopping bandwagon by providing Reward Points, and instant Cashback offers in addition to brand discounts, which will help to gain new customers
- 60% customers enjoys online shopping
- 84% customers agree that online shopping is convenient and flexible:

- 90% customers agree that return and replacement policy helps them making purchase decision. It is evident from the fact that people cannot actually try & touch the products, they are purchasing before it reaches home and they would want to return or replace in case of dissatisfaction. Online shopping websites should make strategies around easy return and replacement policy if they want to retain their customers.

- Around 50% customers agree that gaining access to loyalty program is a benefit of shopping online
- Displaying quality Information on the website improves satisfaction of customers: 80% customer agreed to it. It means displaying quality information have a significant association with customer satisfaction, and repurchase intentions

- 95% customers are satisfied while shopping on a good quality website
- Net Benefit derived from shopping online can lead to users satisfaction: 90% customers agreed
- User satisfaction cannot exist without trust: 85% customers agree that customer satisfaction cannot be built without trust. Trust is important factor to attract e-commerce buyers. So, it is important for companies to learn how to manage consumers' trust

- Offering a wide variety of listed product in several categories: 75% use agreed.
- 86% customers like to have complete and relevant information
- 80% customers agree to receive monetary savings while shopping online
- 50% agree with the convenience of patronizing the online retailer
- 50% customers agree that online shopping give the sense of adventure
- only 30% customers agree that online shopping enhances their social status
- 45% customers feel gratified while shopping with their favorite retailer
- 45% customers feel that shopping online helps them fulfill certain roles
- 85% customers agree they get value for their money while shopping online

Observations from Multiple Options based Questions i.e. related to company name specific parameters, after 47th rows

- Maximum people have shopped from these 5 companies - Amazon.in, Flipkart.com, Paytm.com, Myntra.com, and Snapdeal.com.
- 48% customers says flipkart, amazon shows wide variety of products
- 37% customers like flipkart and amazon in terms of displaying complete and relevant information of the products
- In terms of speed Amazon.in is liked by 90% customers , 60 % like Flipkart , 27% Myntra
- 78% customers trust Amazon to be reliable , 55% likes flipkart , 25% Myntra
- 80% customers likes Amazon's quickness to complete the purchase , 60% likes Flipart's, 30% likes Myntra's
- 86% likes Amazon's delivery speed , 56% likes Flipkart's , 5% likes Myntra's
- 82% customers trust amazon in terms of keeping the privacy of their data, 56% trust flipkart 20% trust Myntra , 12 % trust Snapdeal
- 70% trust amazon in terms of keeping their financial information secured, 56% Flipakrt, 34% Myntra , 21% Snapdeal , 22@ Paytm

- 84% customers believe Amazon perceived trustworthiness, 43% - Flipkart , 33% - Myntra ,Snapdeal 27% Snapdeal
- 86% customers like Amazon in terms of online assistance through multi-channel , 51% -Flipkart ,42% Myntra
- 50% customers agree that Amazon takes longer time to log them in while in sales period/promotions , 39% goes with flipkart, 13% goes with Myntra , 16% Snapdeal
- 46% customers says that amazon takes longer time in displaying photos in sales/promotion , 35%- flipkart, 21% Snapdeal, 14% Myntra, 11% Paytm
- In terms of late declaration of price in promotion/sales 28% goes with Myntra, 21% amazon , 16% flipkart , 18% Snapdeal, 23% Paytm
- In terms of longer page loading in promotion/sales 26% customer goes with Myntra, 23% flipkart, 23% amazon, 24% Snapdeal
- In terms of limited mode of payment on most products during sales period/promotions 41% goes with Snapdeal, 40% -amazon, 23% flipkart, 20% Paytm and only 3% Myntra. Hence Myntra gives most payment options during sales/promotion.
- In terms of time taken in product delivery Paytm has highest votes of 37%, Snapdeal 24%, flipkart 16%, amazon 14% and Snapdeal and Myntra 10%. Hence Snapdeal and Myntra take minimum time for delivery among all.
- 20% customers dislikes disruptions while moving to another page on amazon, 24% on Myntra, 27% Snapdeal, 14% Paytm, 23% Snapdeal
- 61% customers says that amazon website is as efficient as before, 43% for flipkart, 22% for Paytm, 9% for Snapdeal
- 81% customers would like to recommend amazon to a friend, 43% would like flipkart , 22% would like for Myntra , 9% for Paytm and least 4 % would like to recommend Snapdeal

## Data Visualization:

### BIVARIATE ANALYSIS

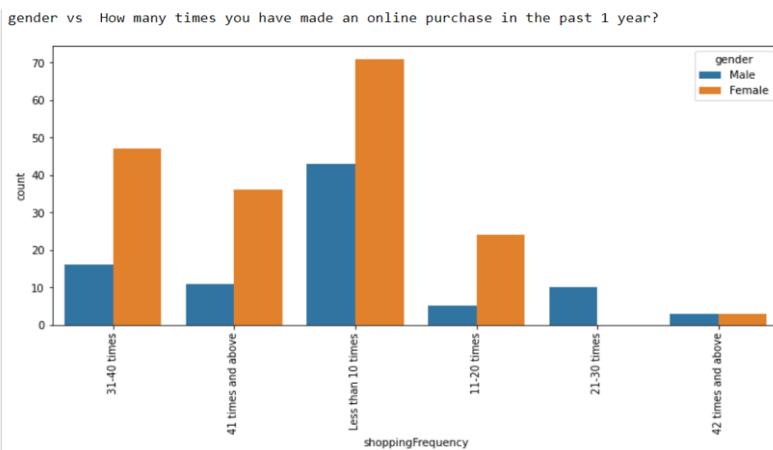
```
In [31]: data['shoppingFrequency'].value_counts()
```

```
Out[31]: Less than 10 times    114
31-40 times      63
41 times and above   47
11-20 times       29
21-30 times       10
42 times and above    6
Name: shoppingFrequency, dtype: int64
```

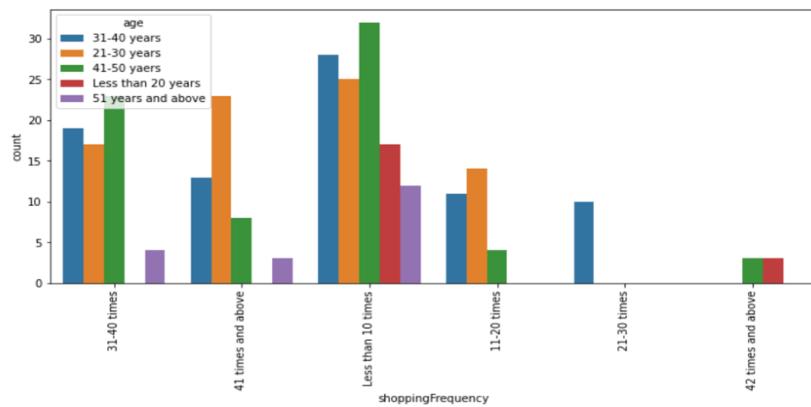
```
In [32]: data2=data.iloc[:,[0,1,2,4,5,13,14,16,26,31,32,34,37,38,46,47,48,49,50,51,52,53,54,55,56,57,58,59,60,61,62,63,64,65,66,67,68,69,:]
```

```
for i in data2:
    print(i,'vs How many times you have made an online purchase in the past 1 year?')
    plt.subplots(figsize=(12,5))
    sns.countplot(x='shoppingFrequency',hue=i,data=data2)
    plt.xticks(rotation=90)
    plt.show()
```

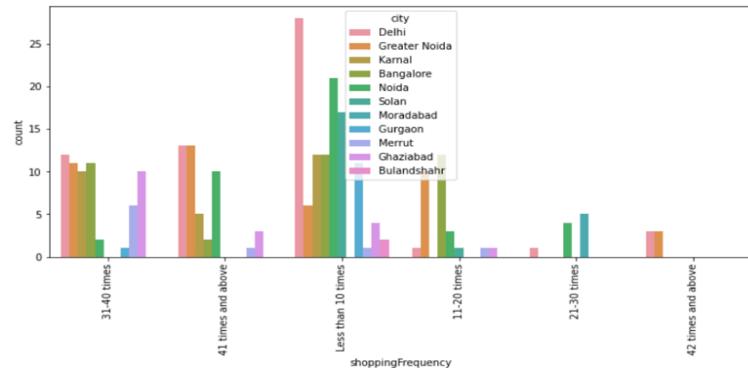
```
gender vs How many times you have made an online purchase in the past 1 year?
```



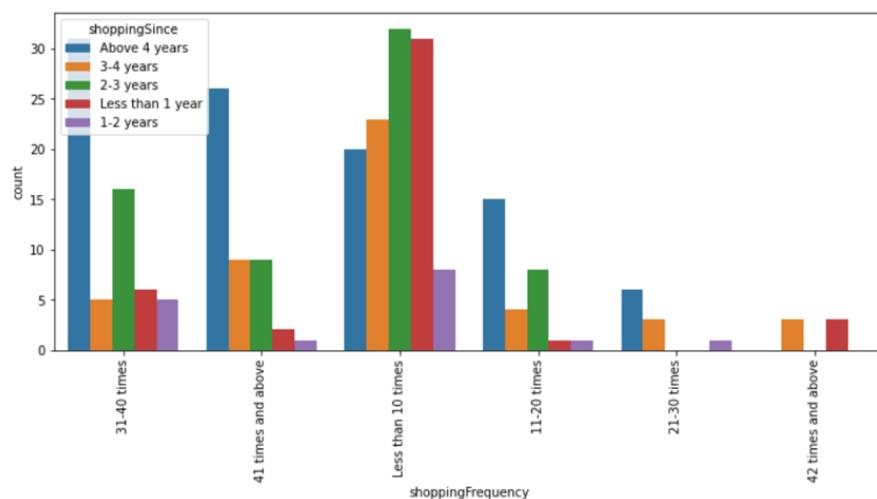
age vs How many times you have made an online purchase in the past 1 year?



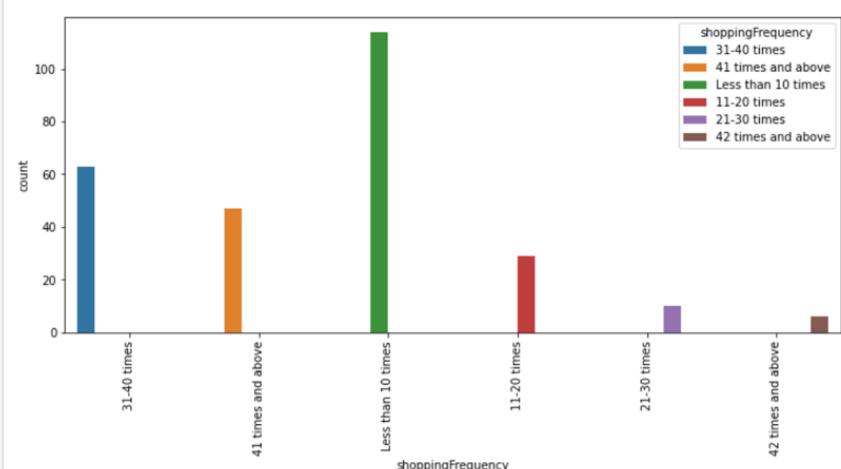
city vs How many times you have made an online purchase in the past 1 year?



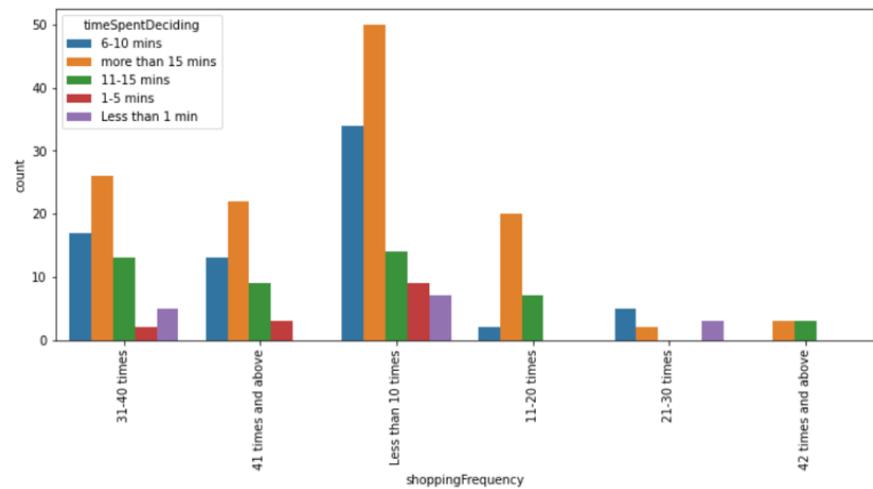
shoppingSince vs How many times you have made an online purchase in the past 1 year?



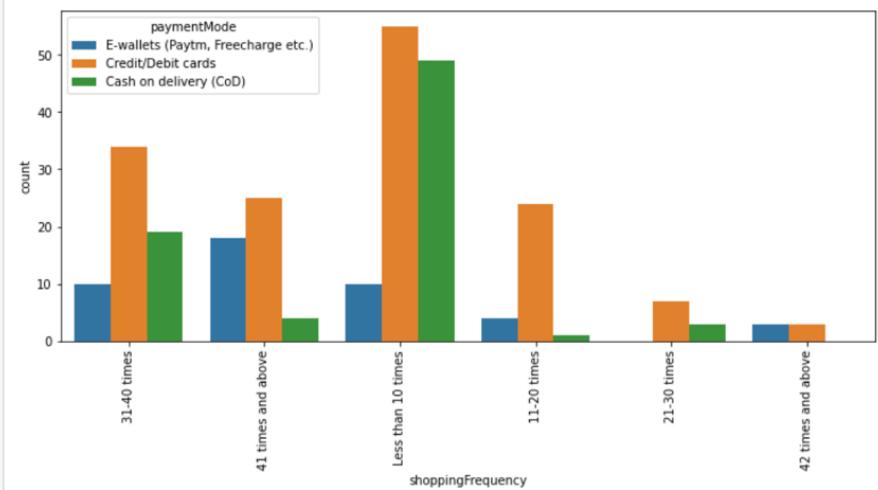
shoppingFrequency vs How many times you have made an online purchase in the past 1 year?



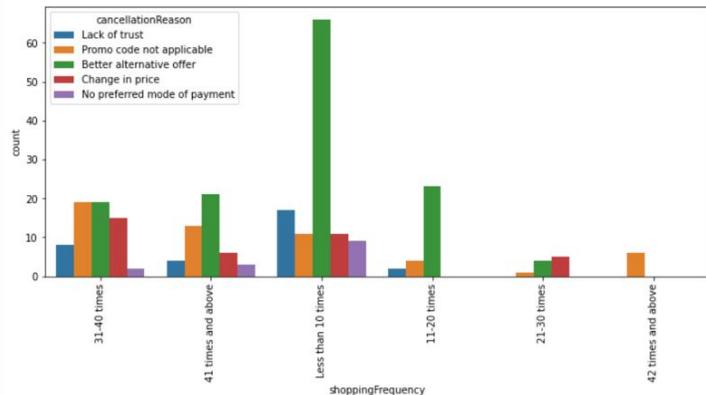
timeSpentDeciding vs How many times you have made an online purchase in the past 1 year?



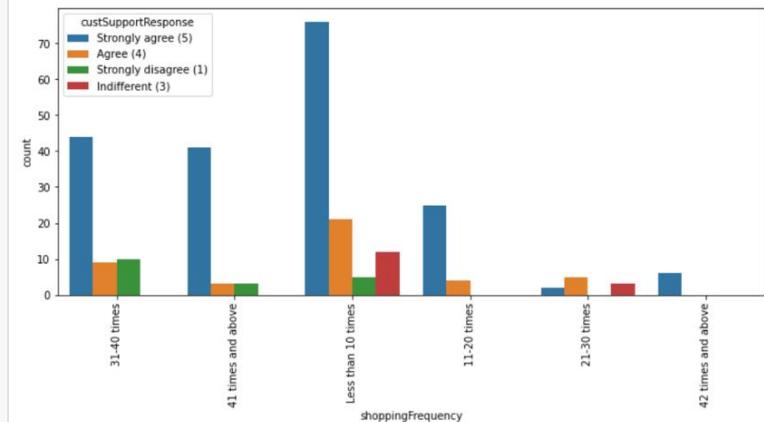
paymentMode vs How many times you have made an online purchase in the past 1 year?



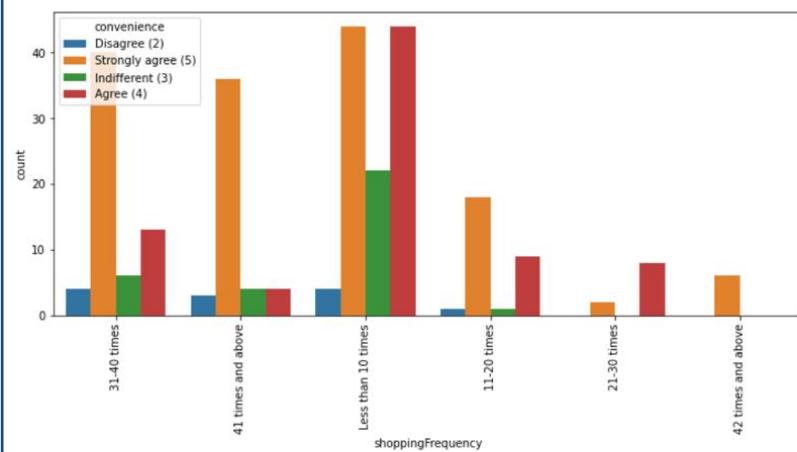
cancellationReason vs How many times you have made an online purchase in the past 1 year?



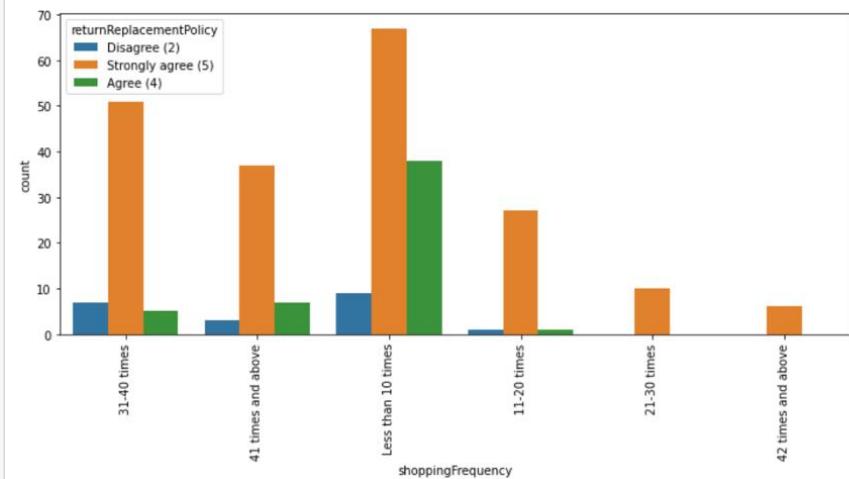
custSupportResponse vs How many times you have made an online purchase in the past 1 year?



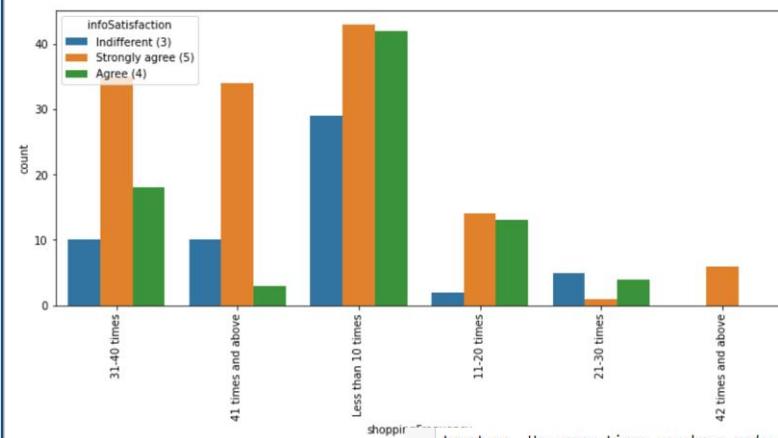
convenience vs How many times you have made an online purchase in the past 1 year?



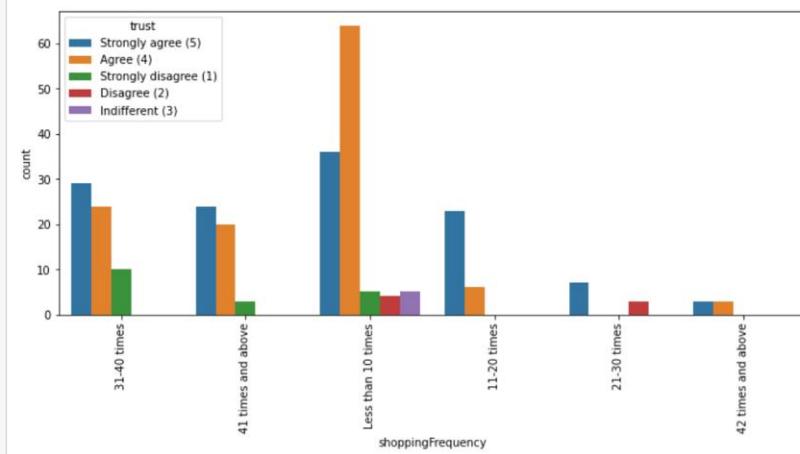
returnReplacementPolicy vs How many times you have made an online purchase in the past 1 year?

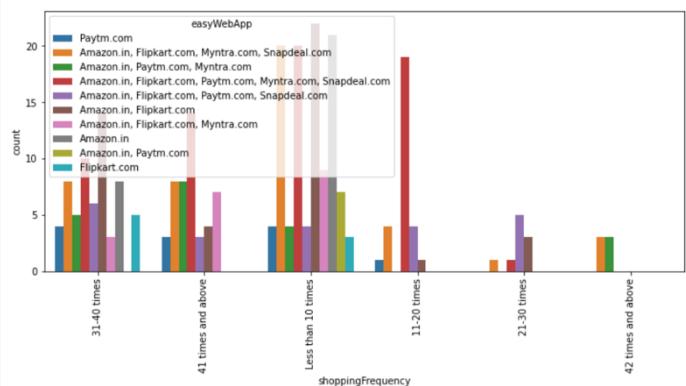
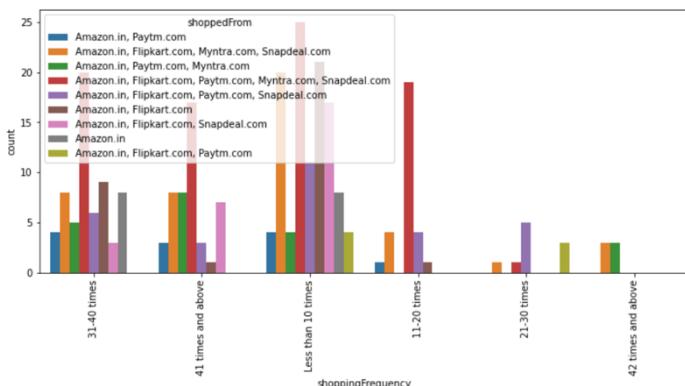
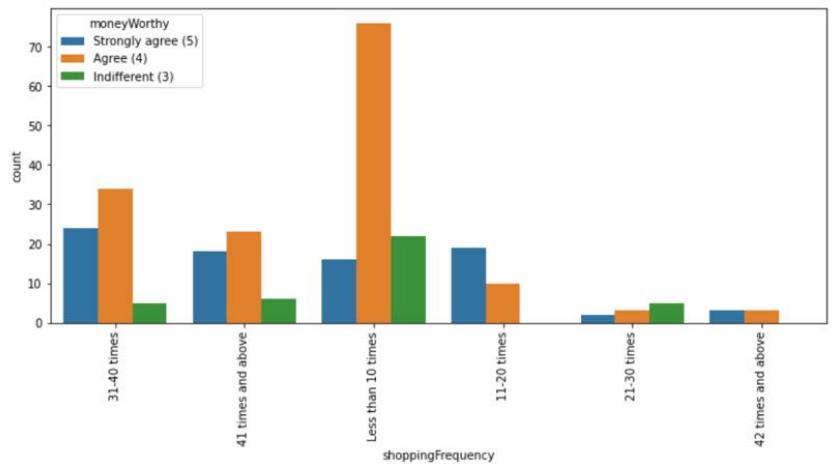
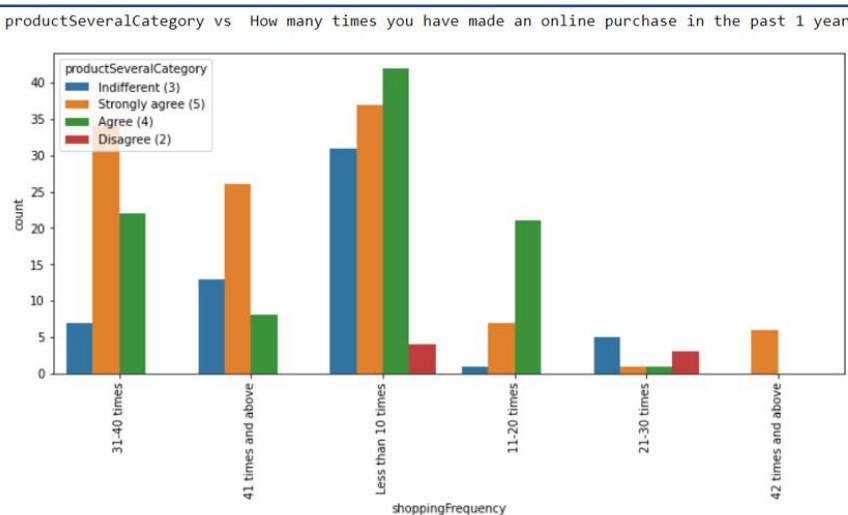


infoSatisfaction vs How many times you have made an online purchase in the past 1 year?

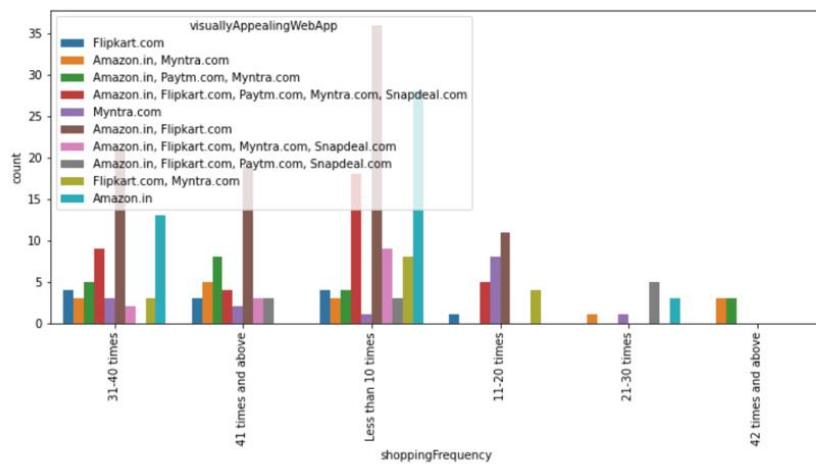


trust vs How many times you have made an online purchase in the past 1 year?

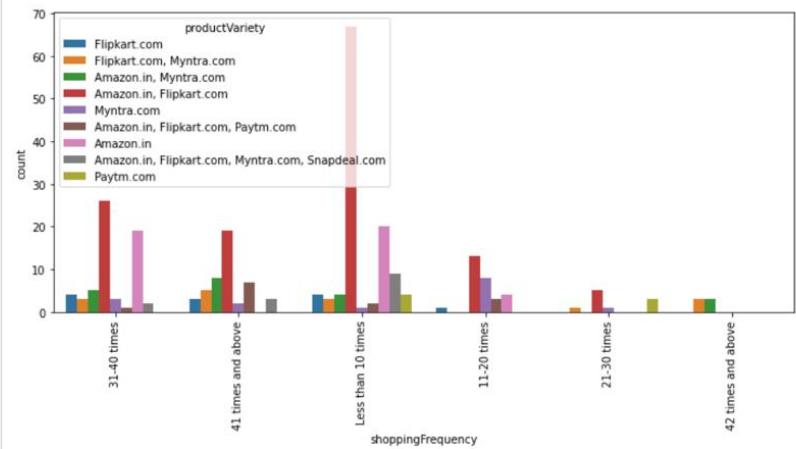




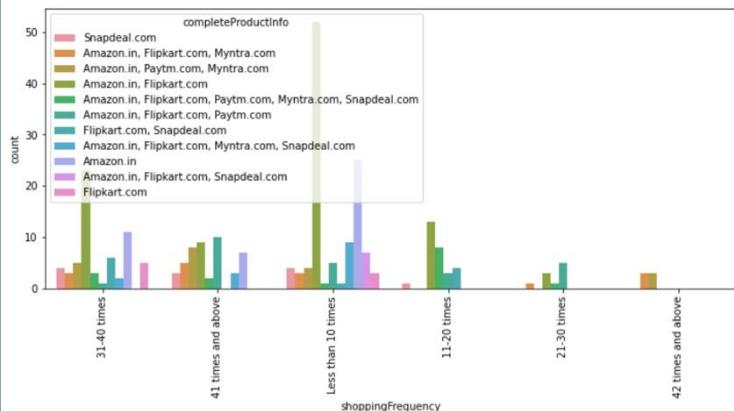
visuallyAppealingWebApp vs How many times you have made an online purchase in the past 1 year?



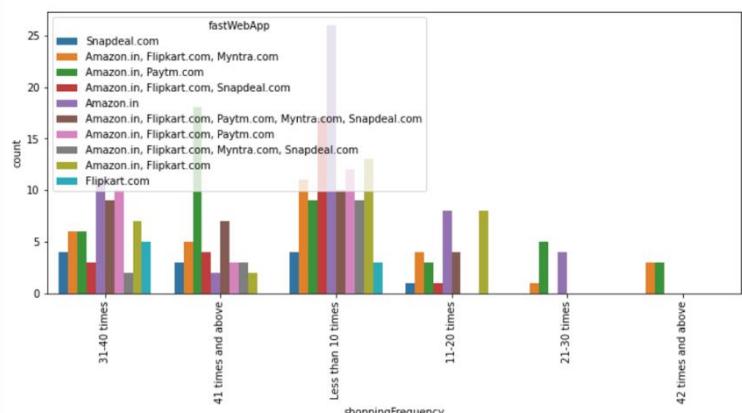
productVariety vs How many times you have made an online purchase in the past 1 year?



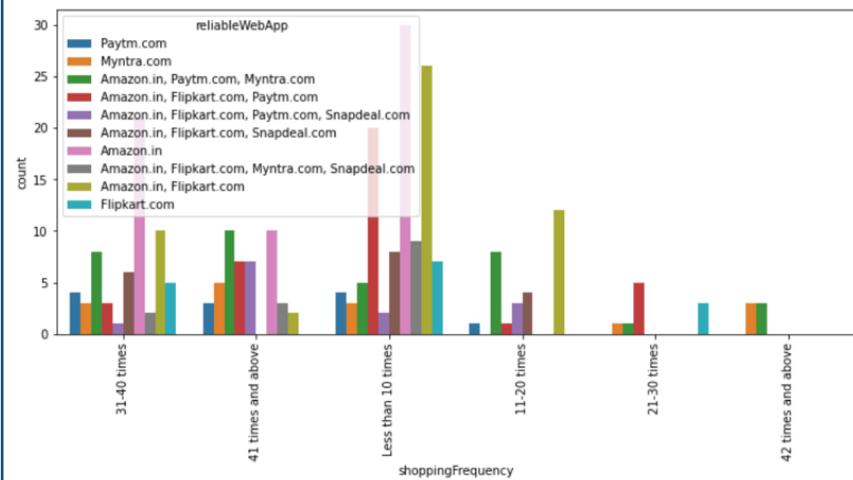
completeProductInfo vs How many times you have made an online purchase in the past 1 year?



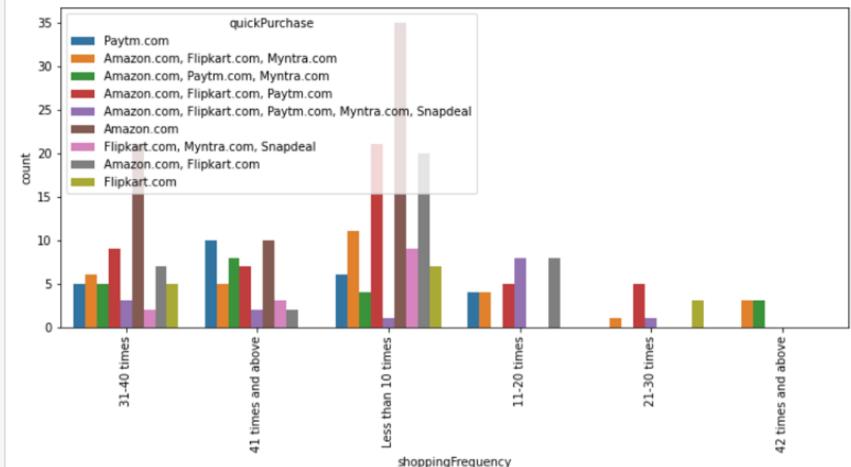
fastWebApp vs How many times you have made an online purchase in the past 1 year?



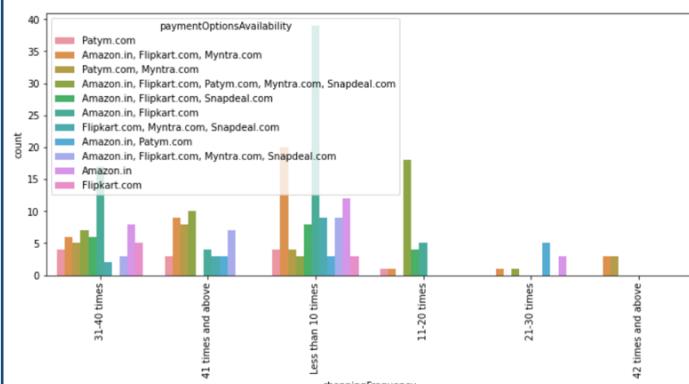
reliableWebApp vs How many times you have made an online purchase in the past 1 year?



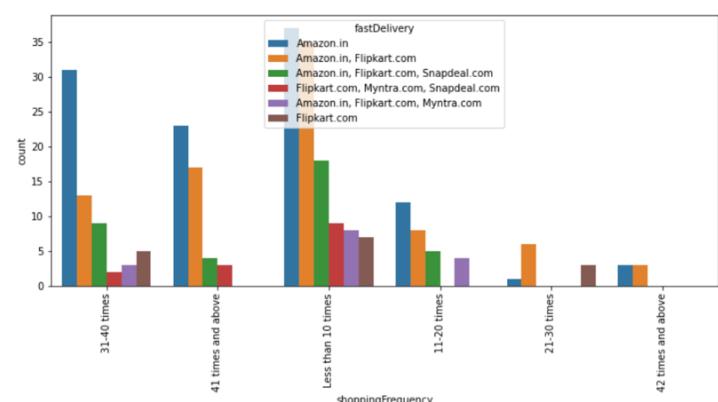
quickPurchase vs How many times you have made an online purchase in the past 1 year?

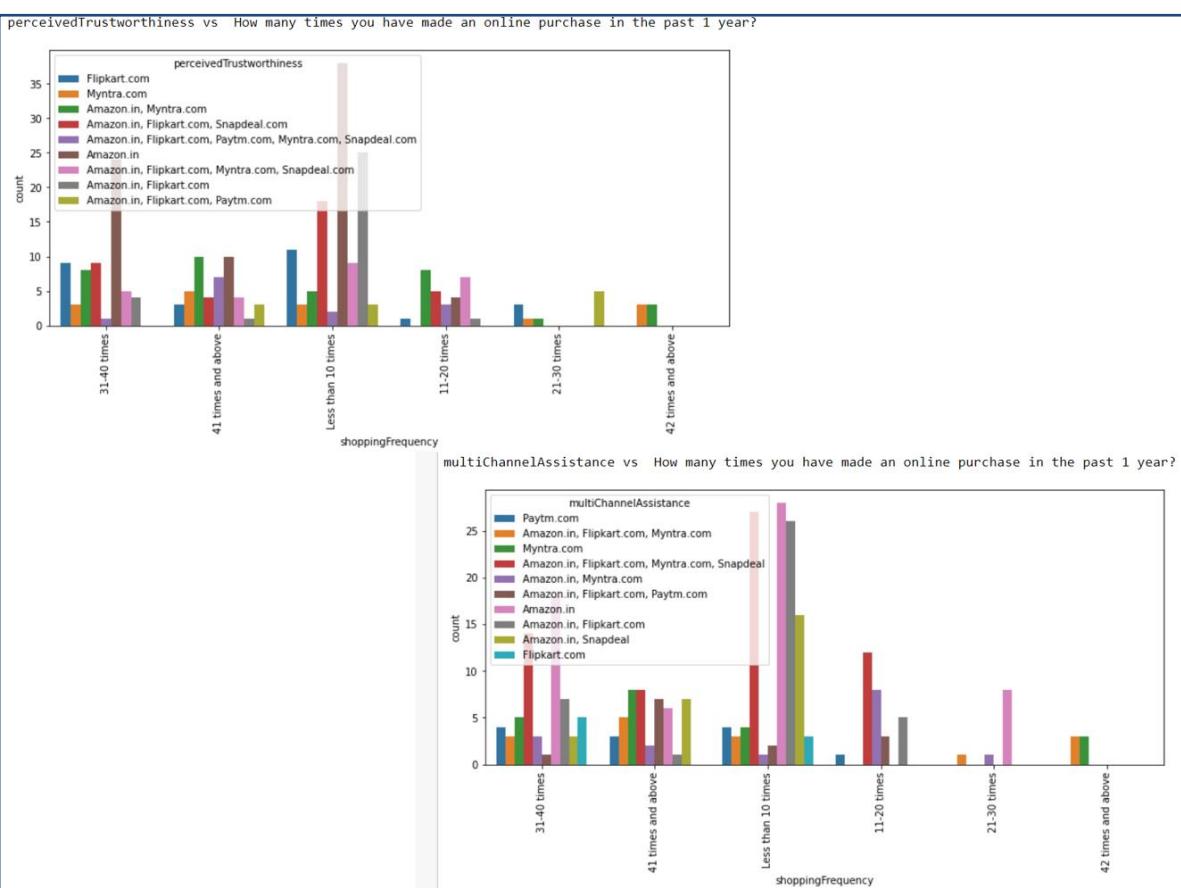
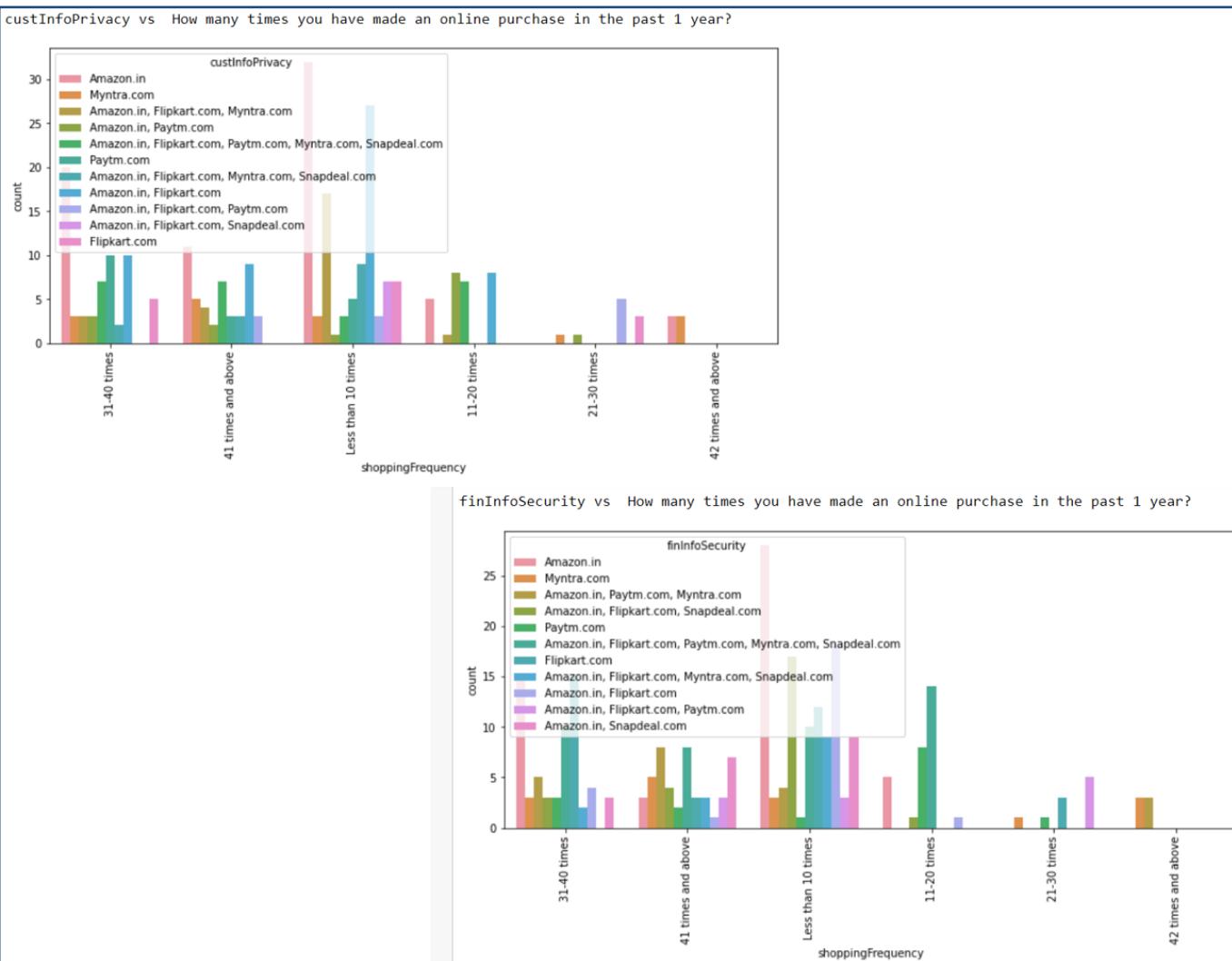


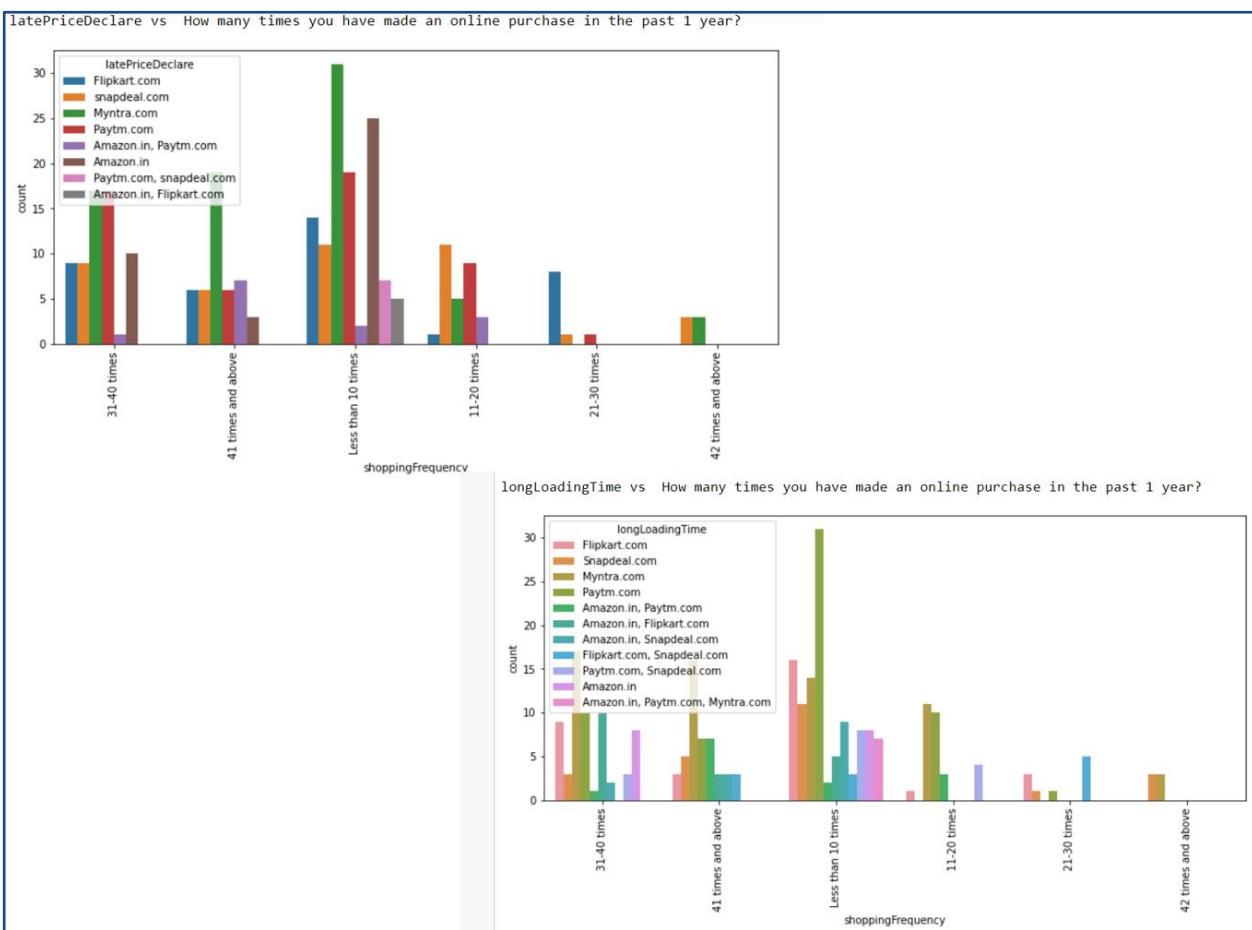
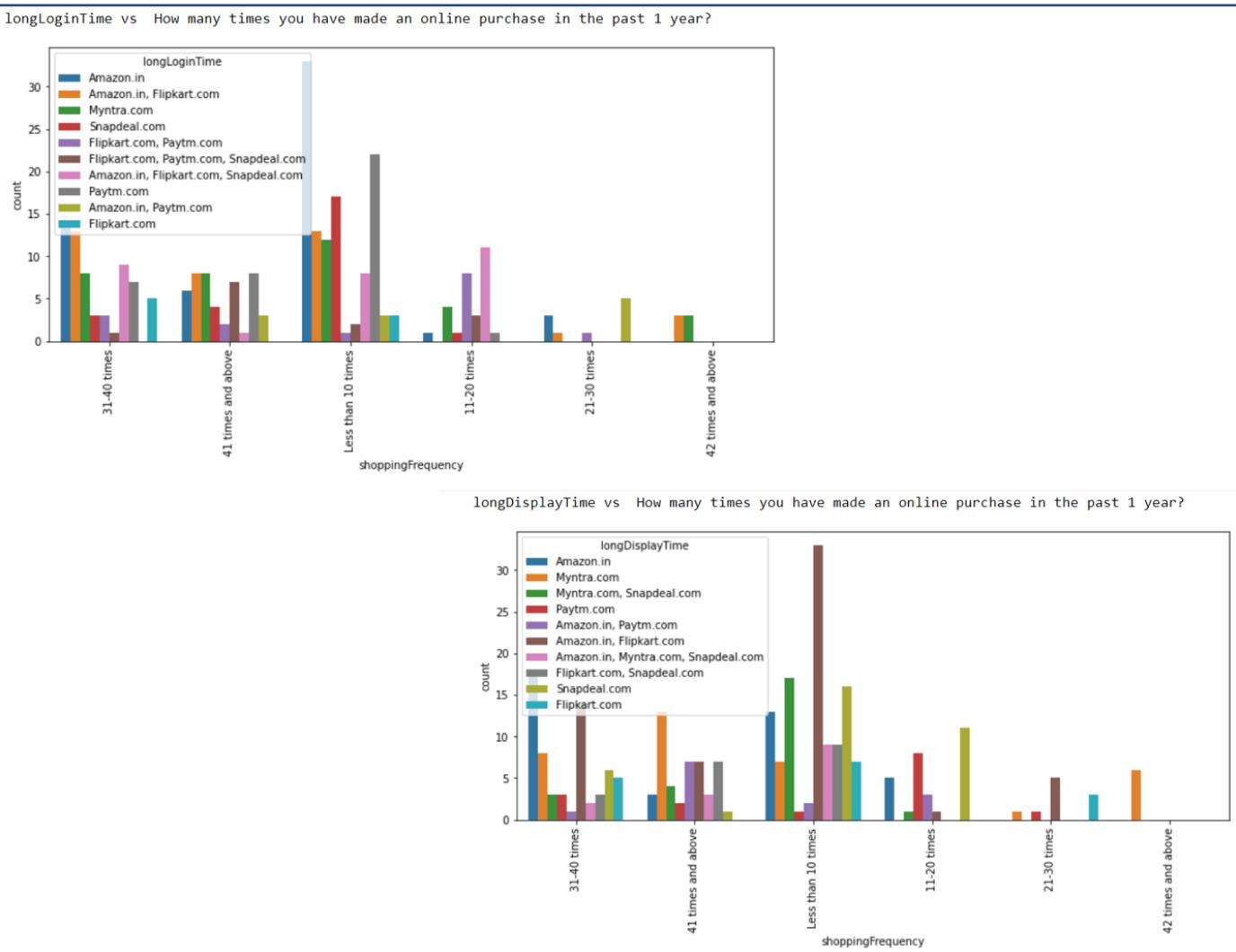
paymentOptionsAvailability vs How many times you have made an online purchase in the past 1 year?

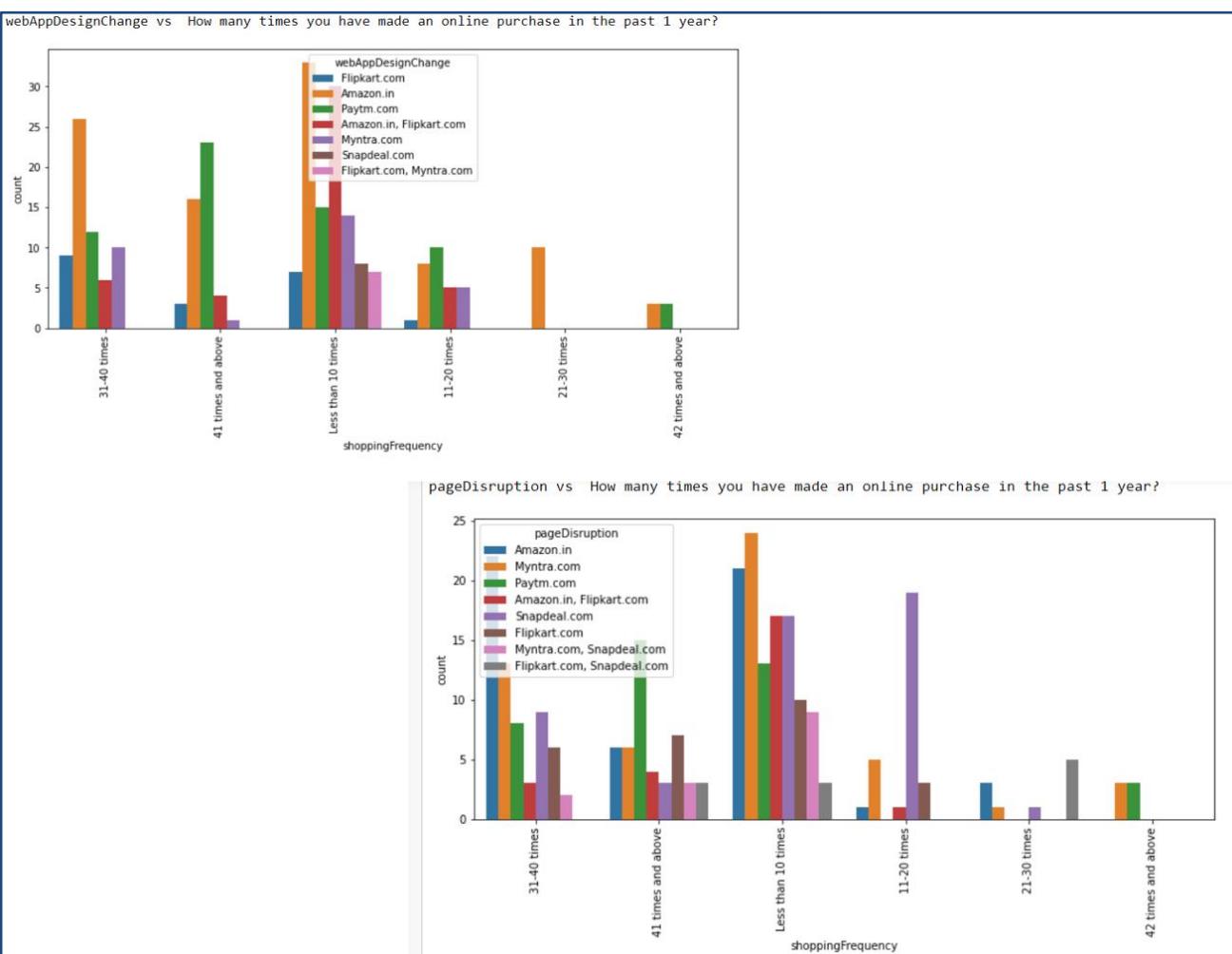
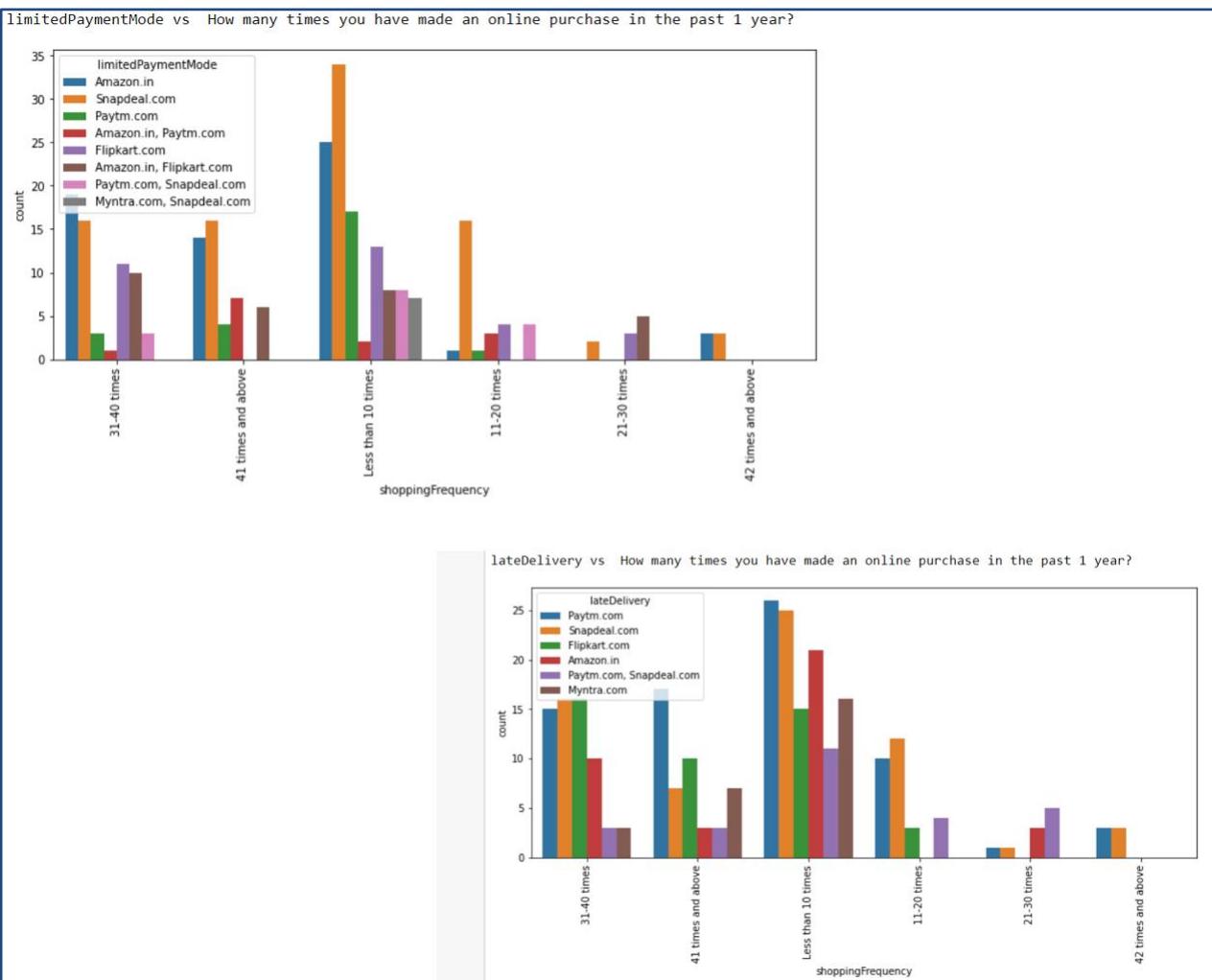


fastDelivery vs How many times you have made an online purchase in the past 1 year?

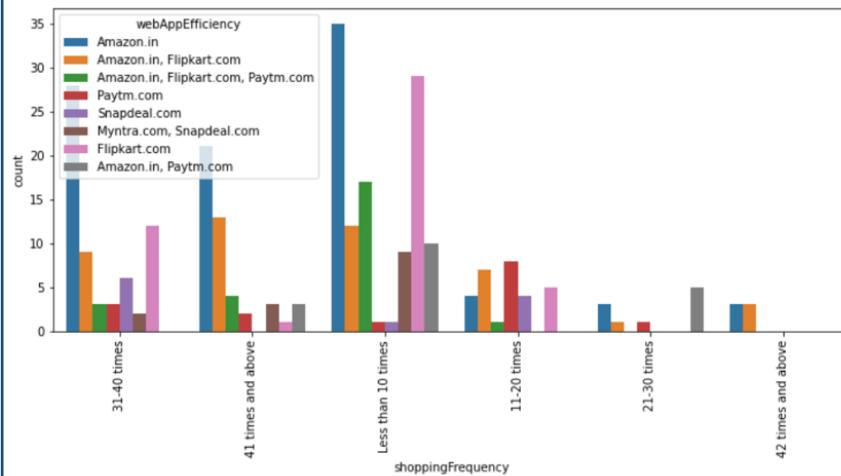




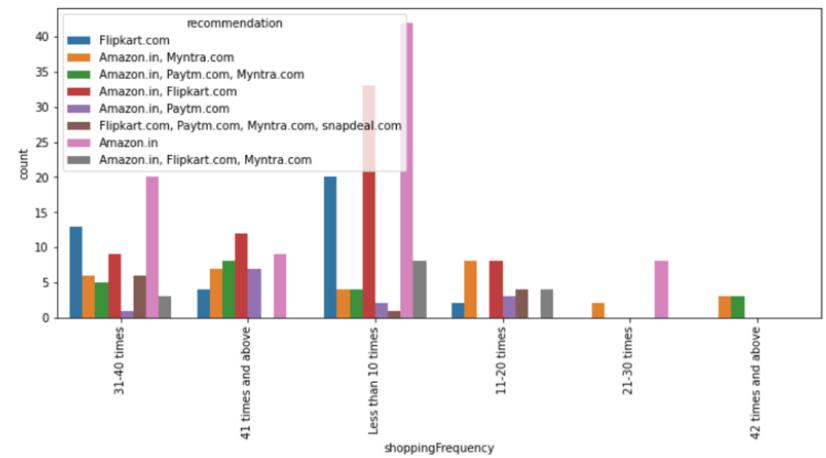




webAppEfficiency vs How many times you have made an online purchase in the past 1 year?



recommendation vs How many times you have made an online purchase in the past 1 year?



## Observations

- ✓ Highest number of customers like amazon, Paytm and Myntra web page layout
- ✓ Highest number of customers like amazon and flipkart in terms of variety of product offered
- ✓ Highest number of customers like amazon and flipkart in terms of relevant and complete description of products
- ✓ High proportion of high purchase frequency customers like amazon and Paytm in terms of website speed
- ✓ Highest reliability is obtained by amazon and flipkart
- ✓ Highest number of customers like Amazon in terms of quickness to complete purchase
- ✓ In terms of payment option Amazon, Flipkart and Myntra are liked most by the high purchase frequency customers
- ✓ Amazon stands apart in terms of speed of order delivery and privacy of customers information
- ✓ Most of customers like amazon in terms of online assistance through multichannel
- ✓ Most user claims flipkart to take maximum login time during sales/promotion
- ✓ Highest customers claims Myntra take maximum time in displaying graphics and photos

## Conclusion

Customer retention doesn't improve overnight. Customer retention is fickle when customer service is lacking. Few ways to improve customer retention can be as follows:

**Easily navigable :** Customers agreed that the website should be easily navigable. Website navigation is a key to the success of any e-commerce website.

**User-friendly websites:** Customers agree with user friendly website interface. It should focus on the user experience by providing shopping categories, filters, and comparison capabilities. User-friendliness requires that your website works on all browsers and devices

**Improve return & refund policy:** Return policies are an essential feature of any ecommerce website. This is another trust-building feature of online selling. ,which reassures buyers that if they are unhappy or just need a different size, the brand is there for them.

When customers are satisfied with a company or service, there is a high possibility that they will share their experience with other people Therefore it is crucial for E-commerce to take into account their customer satisfaction because this will retain customer loyalty as well as attract potential customers.

