

Flip Robo Technologies

Customer Retention Case Study

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ACKNOWLEDGMENT

It gives me immense pleasure to deliver this report. Working on this project was a great learning experience that helped me attain in-depth knowledge on data analysis process. Flip Robo Technologies (Bangalore) provided all of the necessary information and datasets, required for the completion of the project. I express my gratitude to my SME, **Gulshana Chaudhary**, for providing the dataset and directions for carrying out the case study procedure.

INTROUDCTION

- What is Customer Retention?

"The capacity of a corporation to turn consumers into repeat buyers and keep them from moving to a rival is referred to as customer retention."

- Why Customer Retention plays a vital role?

With the rapid global growth in electronic commerce (e-commerce), it is important to gain a competitive advantage by retaining the customers, customers retention depends on various factors, which is analysed based on the data obtained and why the customers prefer to shop in certain retail stores compared to others

Advantages of customers retention

1. Customers who have shopped in particular firm will promote their family members or friends to shop from that particular firm
2. Customers feel a sense of financial security, as they feel they can save some amount by shopping in that firm

3. Chance for dropping an item from purchasing is reduced drastically as the customers might feel as it as the right price
4. It is easy to maintain customers than trying to generate new customers

Customer Retention Strategies

1. Understanding the needs of the customers
2. Collect feedbacks and analyze where improvements are needed and implement it
3. Loyalty programs and gaining trust from customers

Problem Statement

Customers retention plays a vital role in determining the success or failure of online retail store. The study needs to find what are the factors that help in retaining the customers. The study then analyses few online retail stores and, infer the customers behavioral pattern and infer the requirements and needs, that helps to grow an insight as to why the customers prefer that particular store compared to others. Based on the above observation improvements can be adopted that help in improving the customer retention

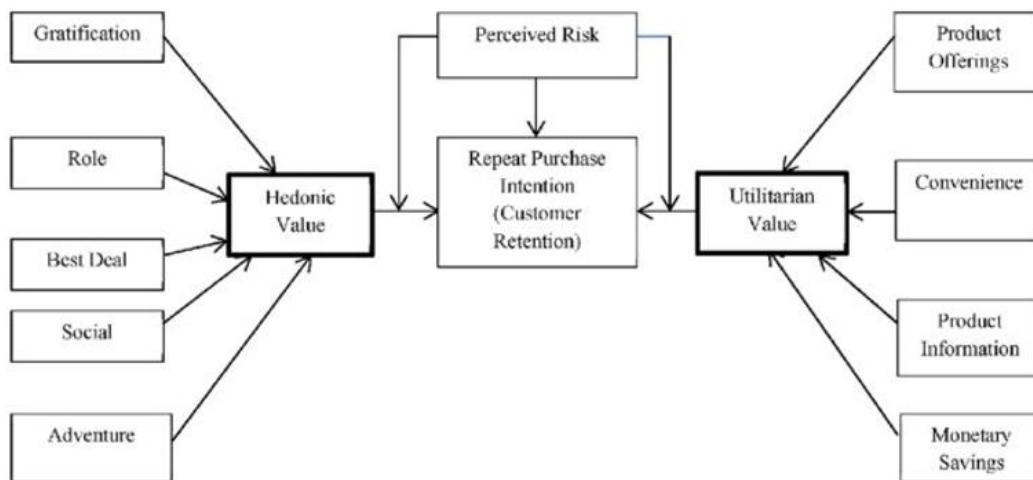


Fig 1.1 The problem statement represented in diagram

Utilitarian value: Utilitarian value is an objective value which provides some functional benefits to the consumers and helps consumers to accomplish practical tasks.

Hedonistic value: Hedonistic value is subjective (Psychological) value which provides an experiential satisfaction. In other words, the immediate psychological gratification that comes from experiencing some activity or from consumption of a product

Exploratory Data Analysis (EDA)

The dataset had 269 rows of data and 71 columns, the column names were simplified by giving another name.

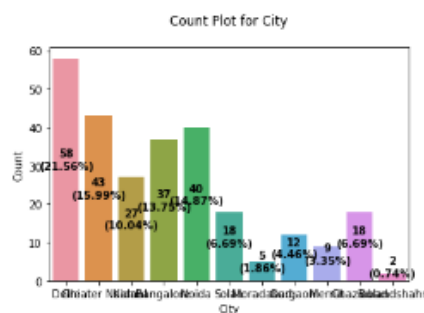
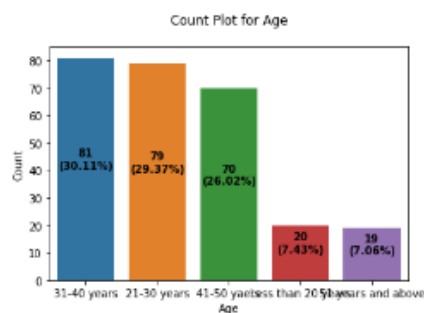
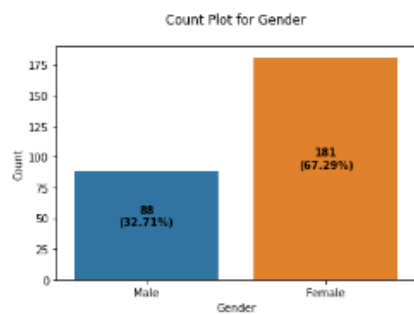
The following were observed in the dataset given

- No nulls were present

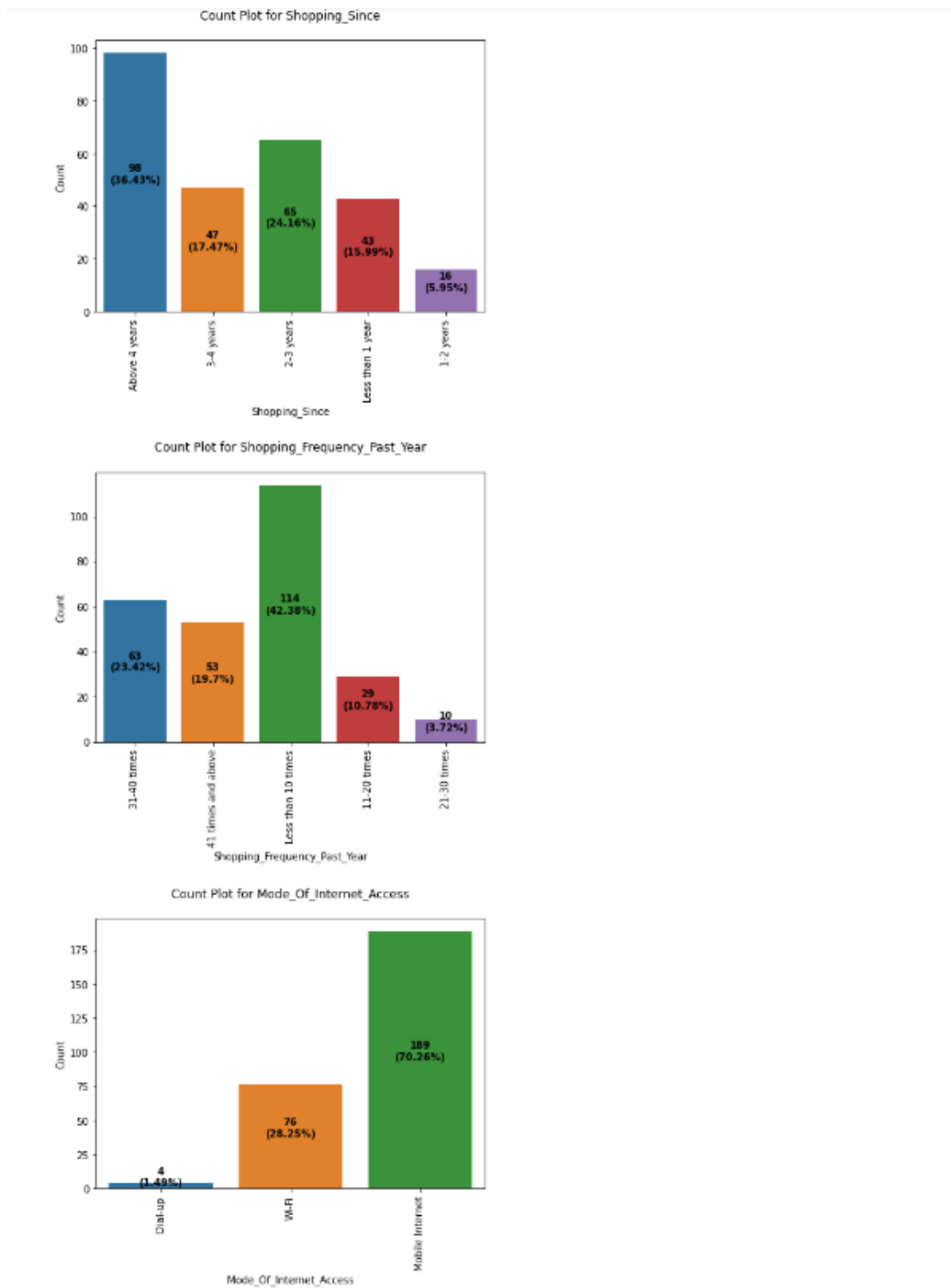
- It had 166 duplicate data's ie about 66% of total data's are duplicate value
- Except pin code all were object data types

Visualization

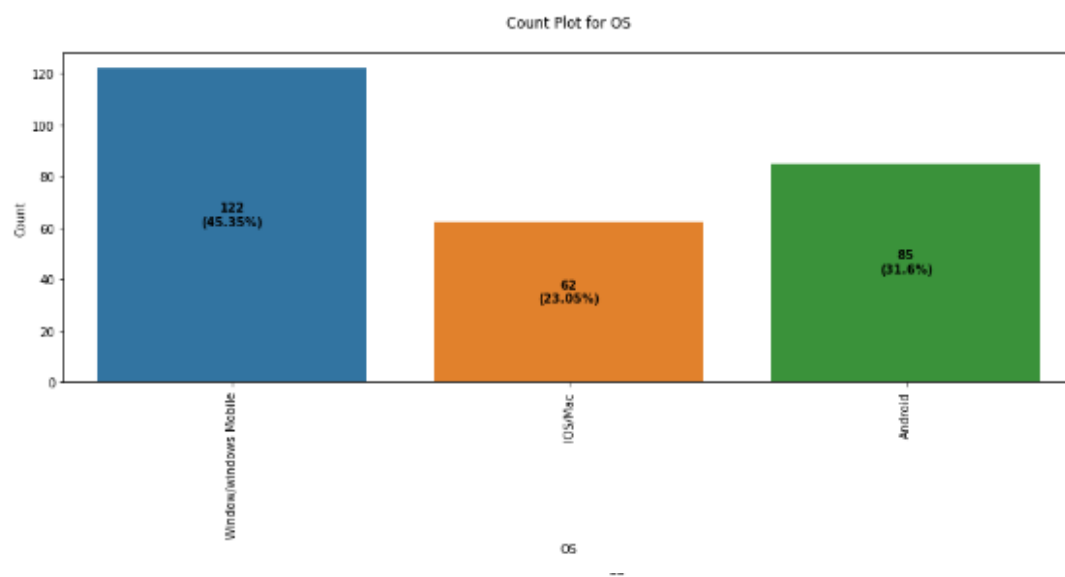
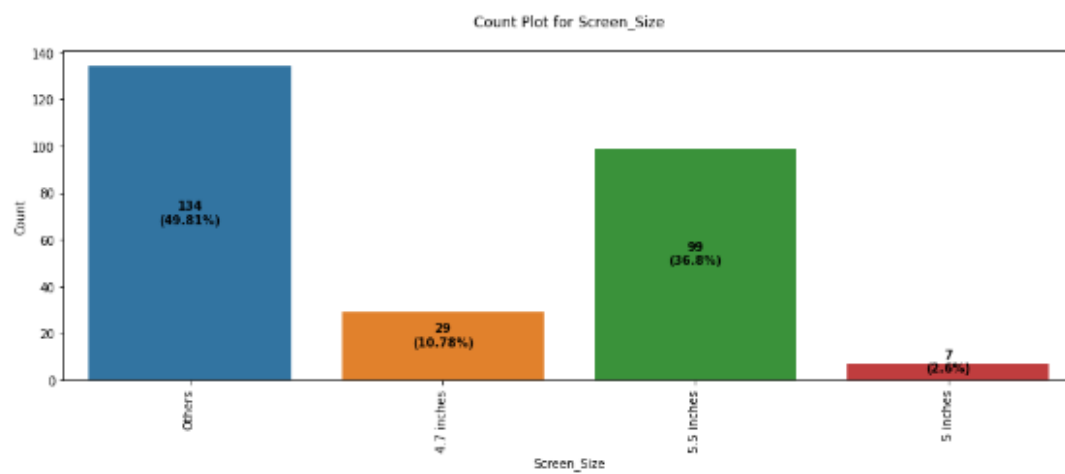
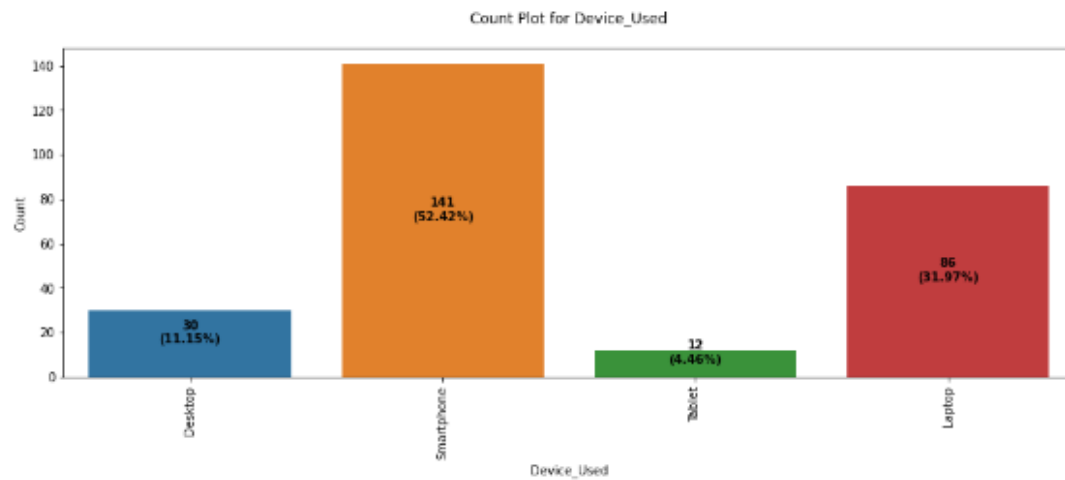
Univariate Analysis



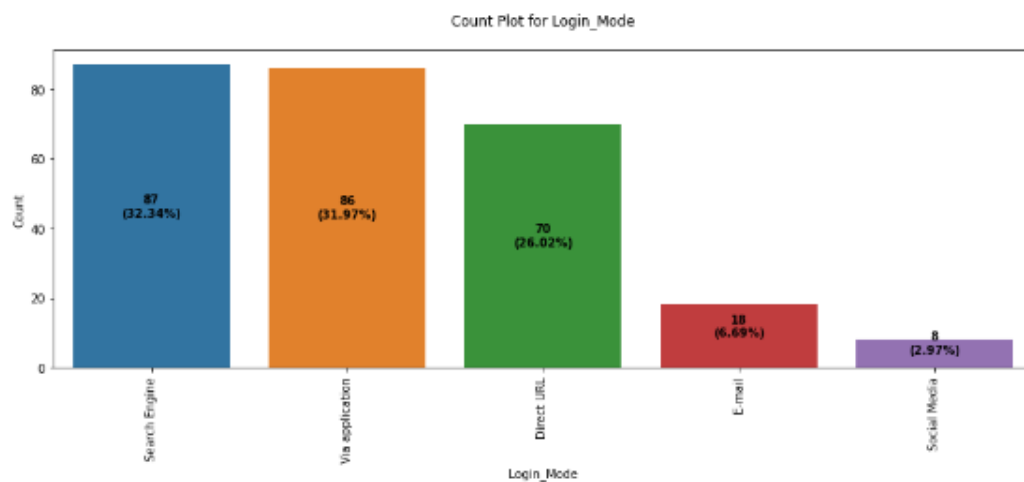
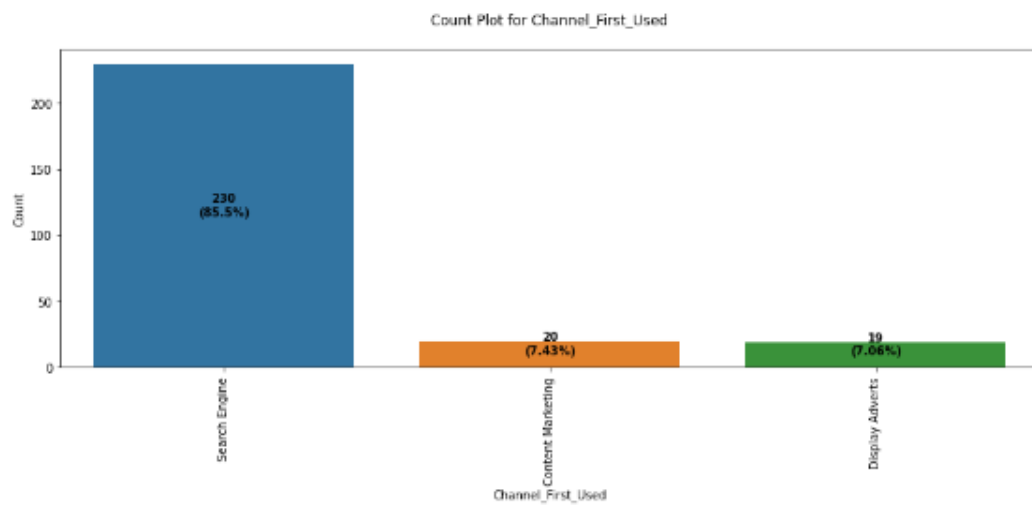
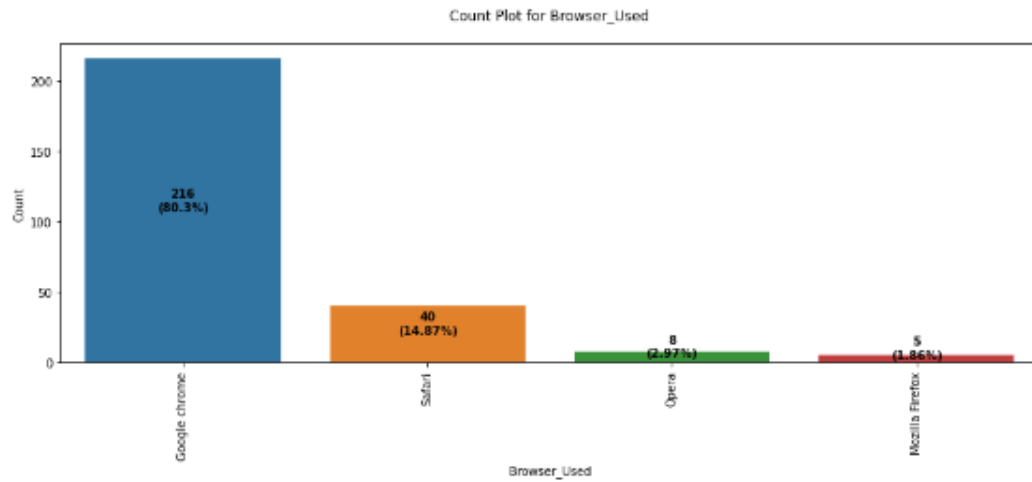
- Gender
 - most of the customers are female, almost double the ratio of male customers
- Age
 - the age group 31-40 has the most no of customers, followed by 21-30 age group
- City
 - majority of the customers reside in Delhi, followed by Greater Noida and Noida



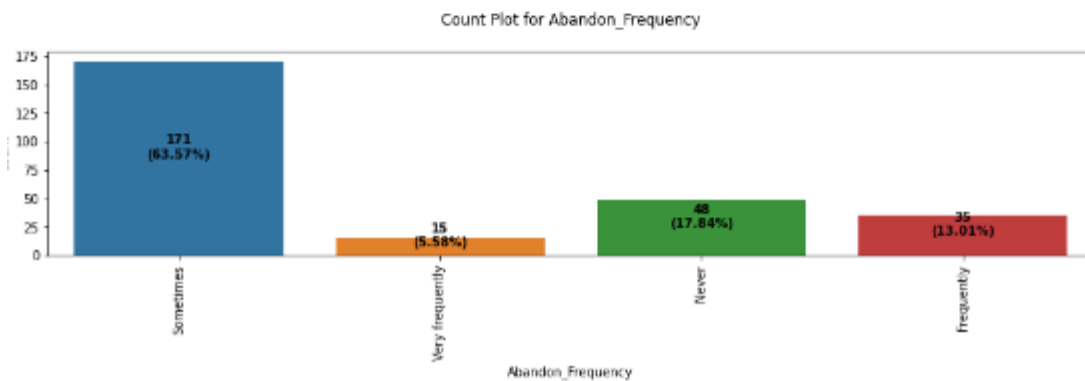
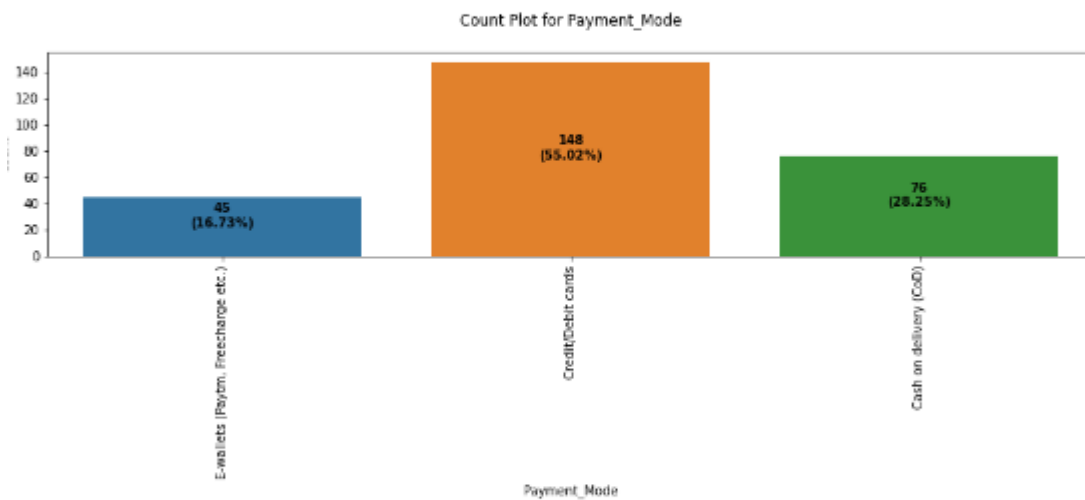
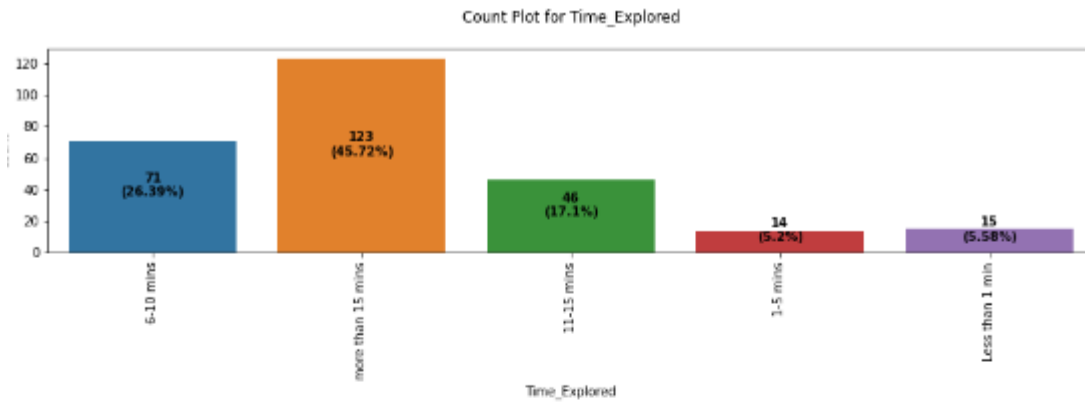
- **Shopping_Since**
 - most of the customers have been shopping from past 4 years or more
 - there are few customers who have been shopping for 1-2 years showing that people are gradually getting adjusted to online shopping platform
- **Shopping_Frequency_Past_Year**
 - most of the customers have shopped less than 10 times
 - but there is large no. of customers who have shopped for 31-40 times and 41 times and above
- **Mode_Of_Internet_Access**
 - most of the customers use mobile internet



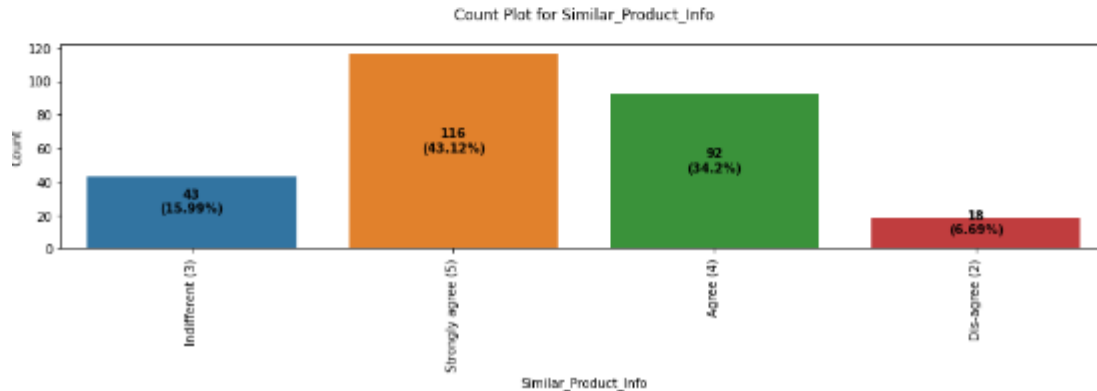
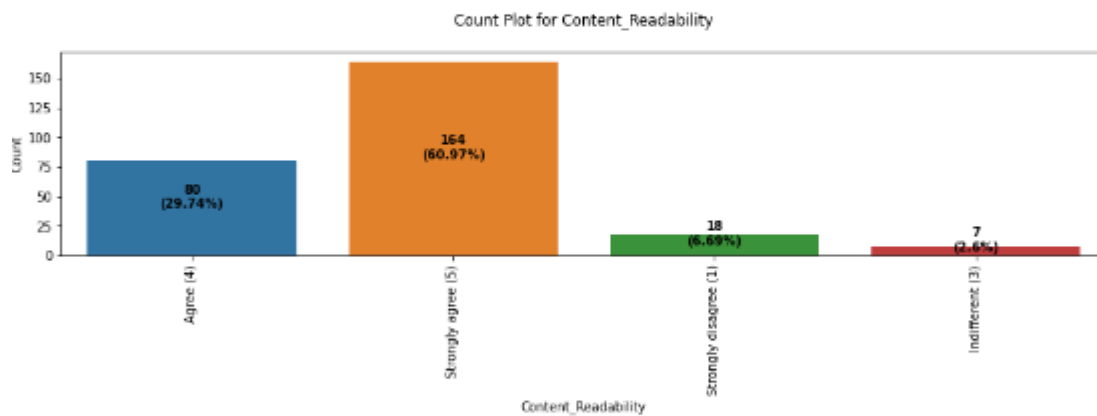
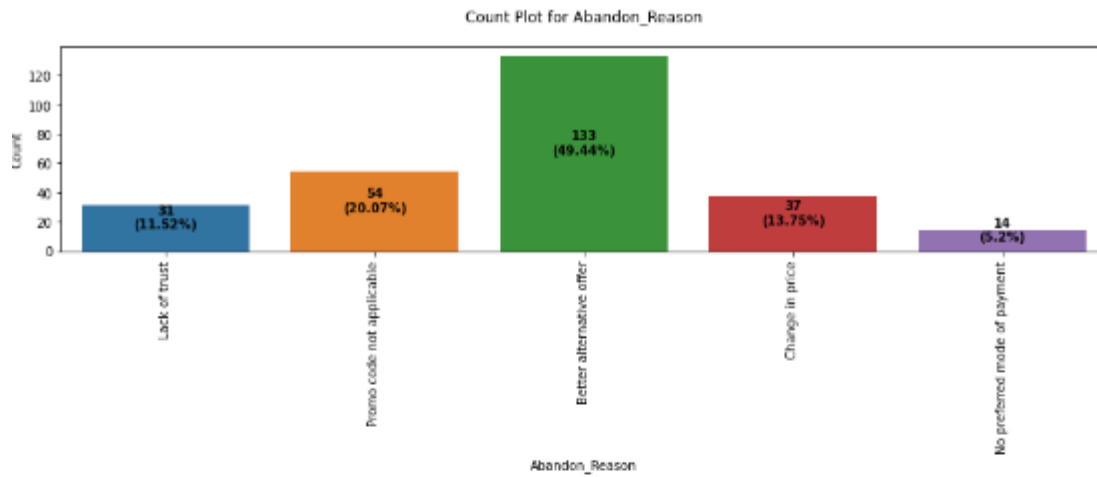
- **Device_Used**
 - most of the customers use Smartphone for their purchases, followed by Laptop
- **Screen_Size**
 - most of the customers have opted option others this could be taking into account the size of tablets desktop laptops and few mobile phones, followed by 5.5 inches screen size
- **OS**
 - most of the customers use Window/Windows Mobile followed by android



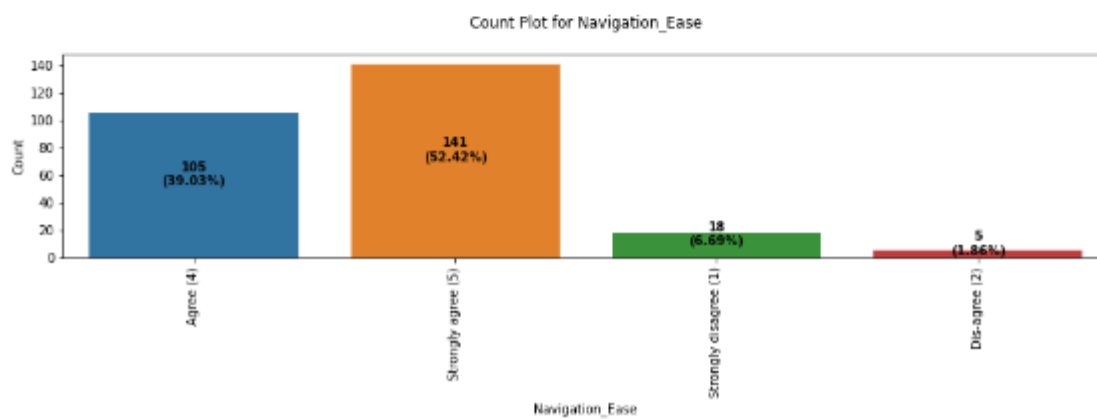
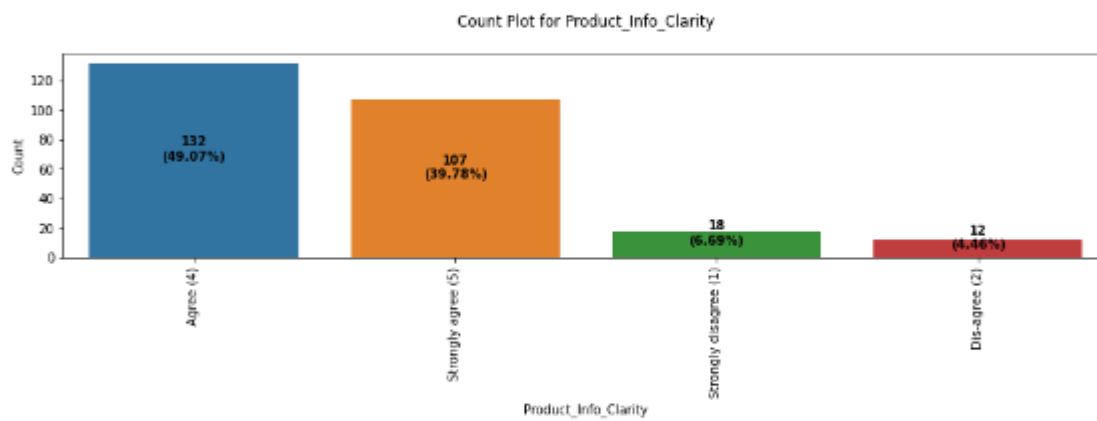
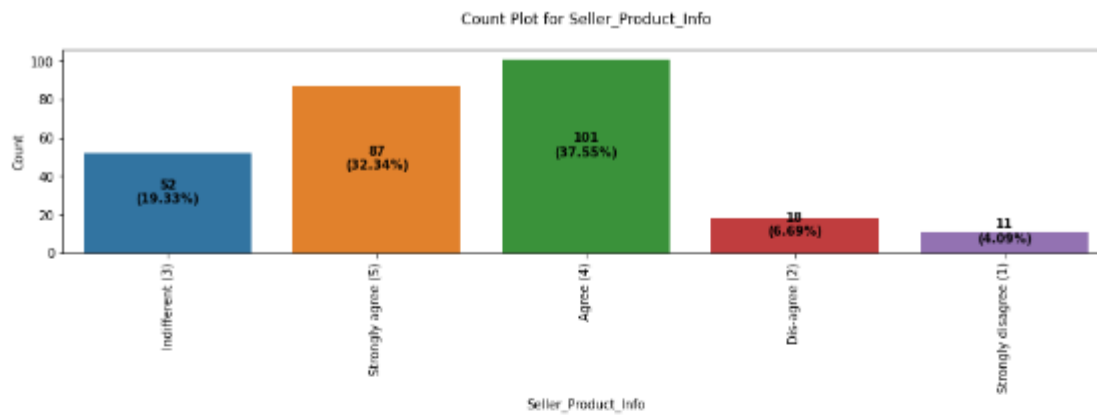
- **Browser_Used**
 - most of the customers use Google chrome, followed by Safari
- **Channel_First_Used**
 - most of the customers have used Search Engine to first come across online shopping platform, followed by Content Marketing
- **Login_Mode**
 - most of the customers use Search Engine to login followed by application



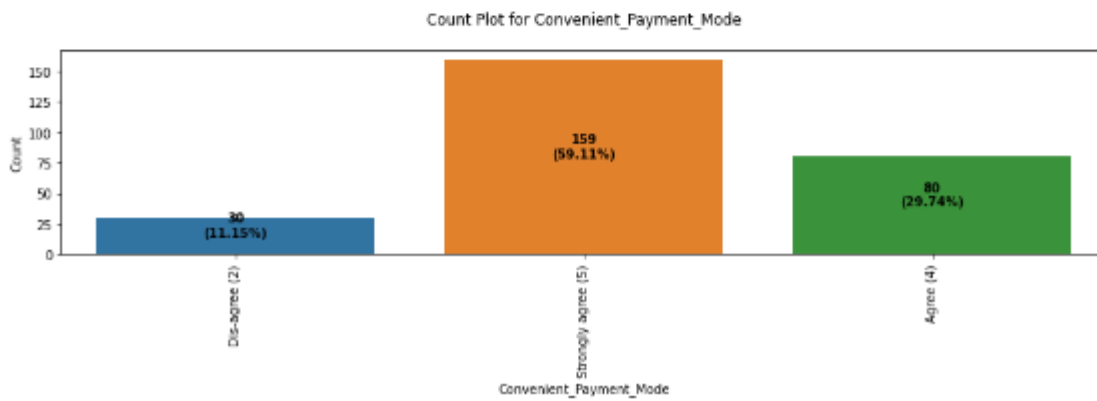
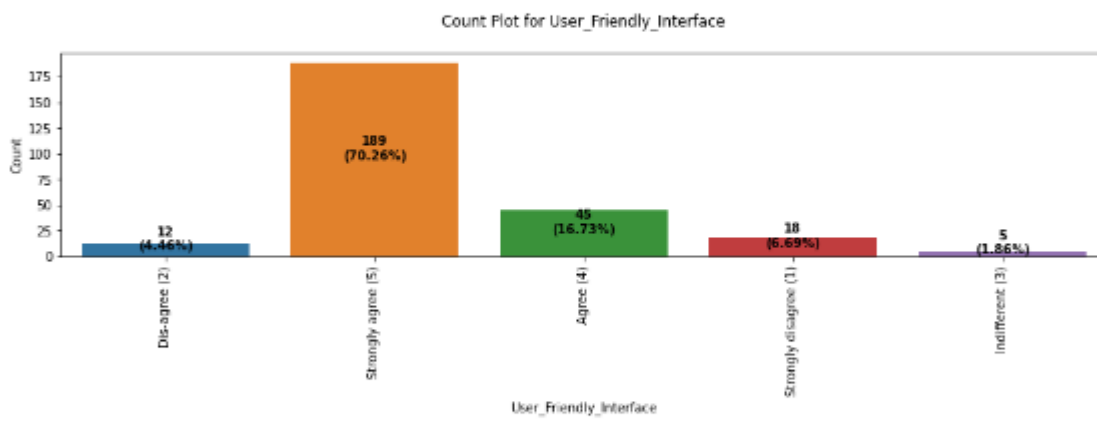
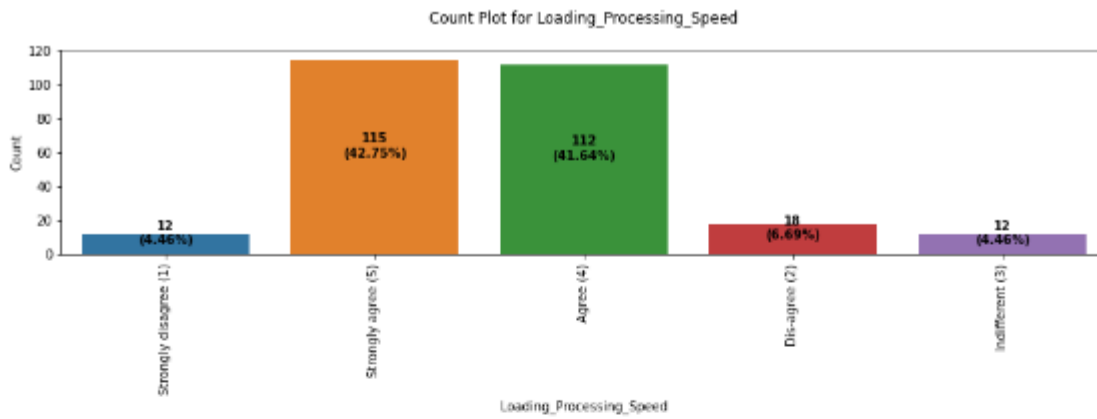
- **Time_Explored**
 - most of the customers have spend more than 15 min to explore for products followed by 8-10 min
- **Payment_Mode**
 - most of the customers prefer Credit/Debit cards as their payment options
- **Abandon_Frequency**
 - most of the customers have selected the option sometimes where they abandon the payment after selecting a product, followed by Never



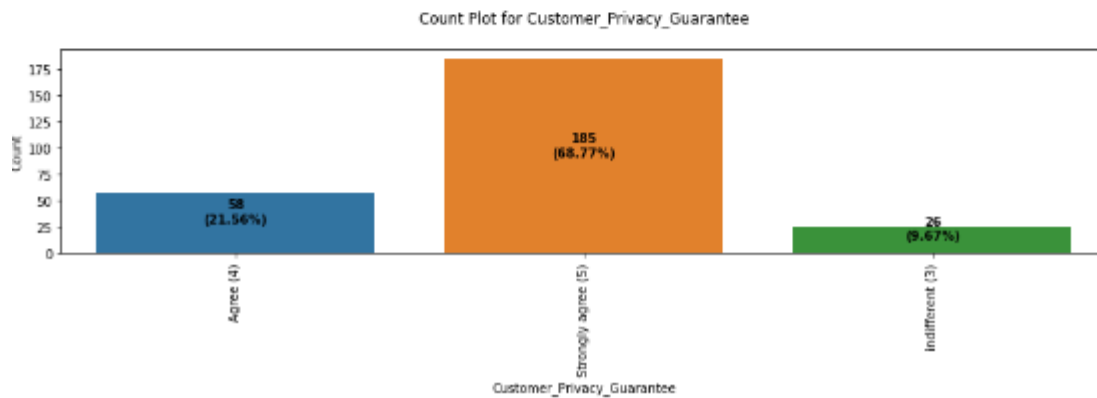
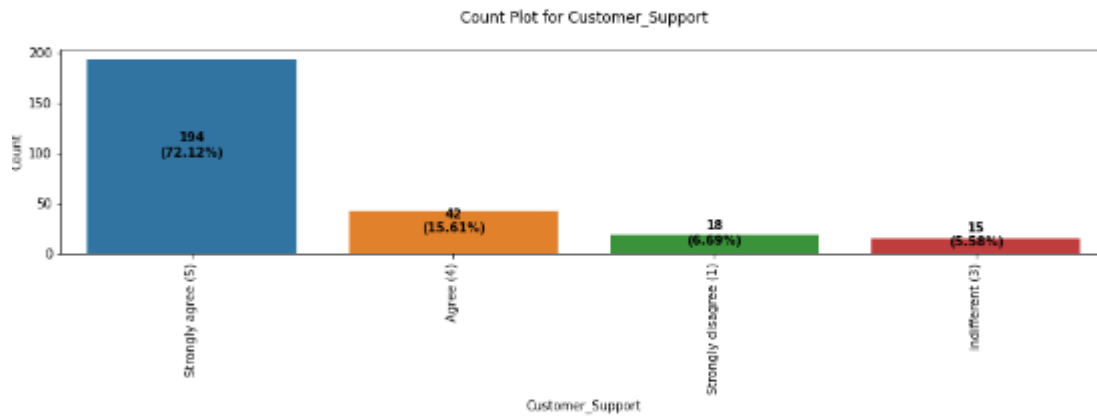
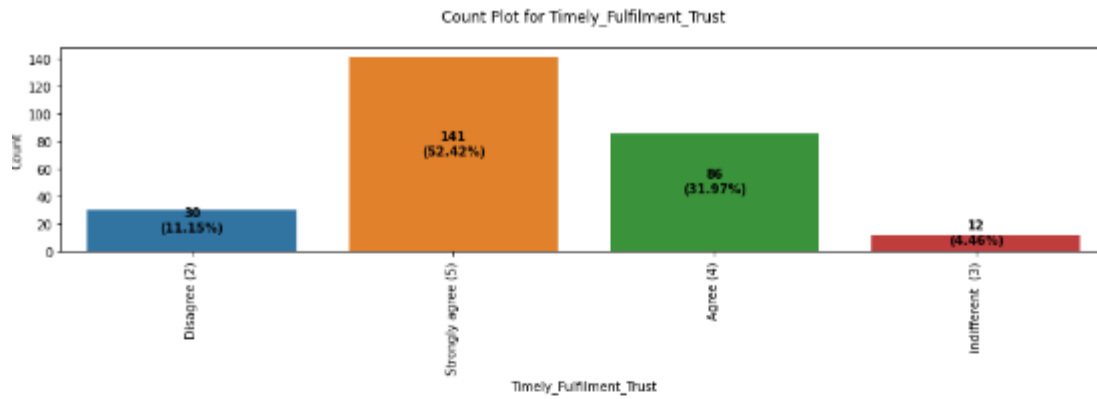
- Abandon_Reason
 - most of the customers have stated that they abandon the payment because they get better alternative offer, followed by promo code not applicable
- Content_Readability
 - most of the customers are able to read and understand the content easily as they have selected the option strongly agree
 - few customers have issues with understanding the content, hence looking at broader perspective the information provided is easy to understand and if possible can be further simplified
- Similar_Product_Info
 - most of the customers have selected the option strongly agree as they get similar product information
 - few customers have given the option of Dis-agree, shows the system is performing very well



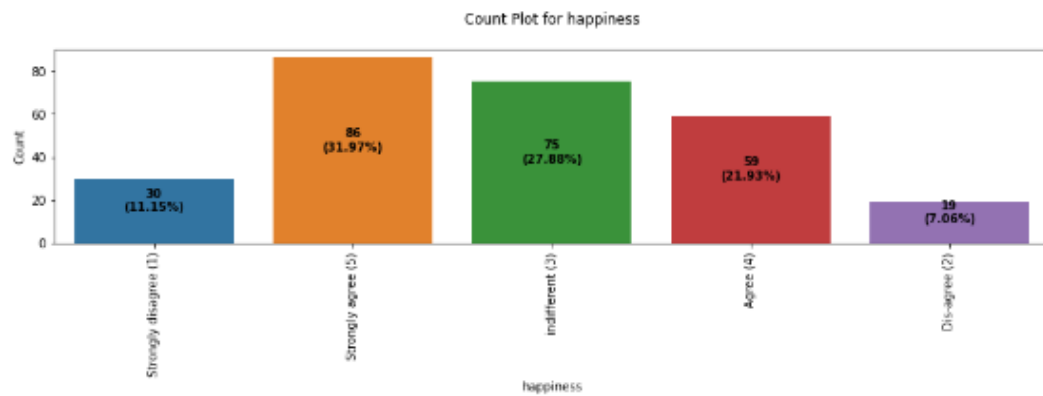
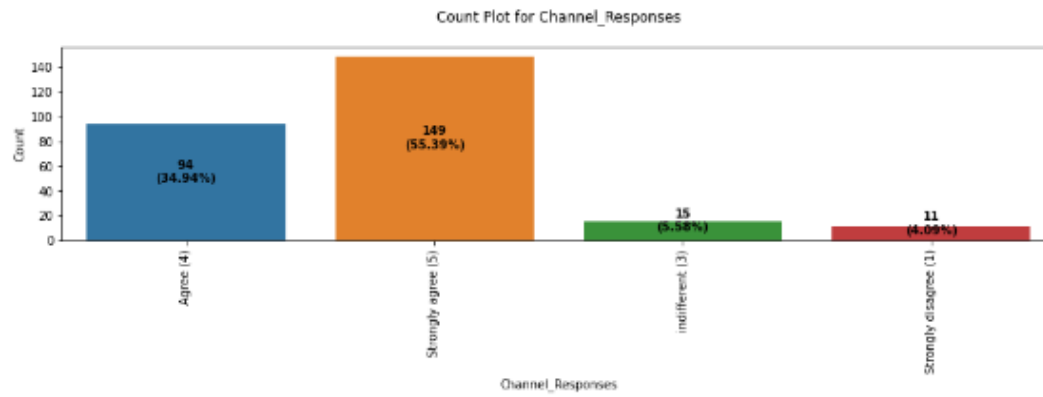
- **Seller_Product_Info**
 - most of the customers have stated that they need complete info on the product and sellers while making a purchase on the product
- **Product_Info_Clarity**
 - most of the customers have stated that they want all info regarding a product to be listed and easy to understand
- **Navigation_Ease**
 - most of the customers wants the web or app to navigate easily



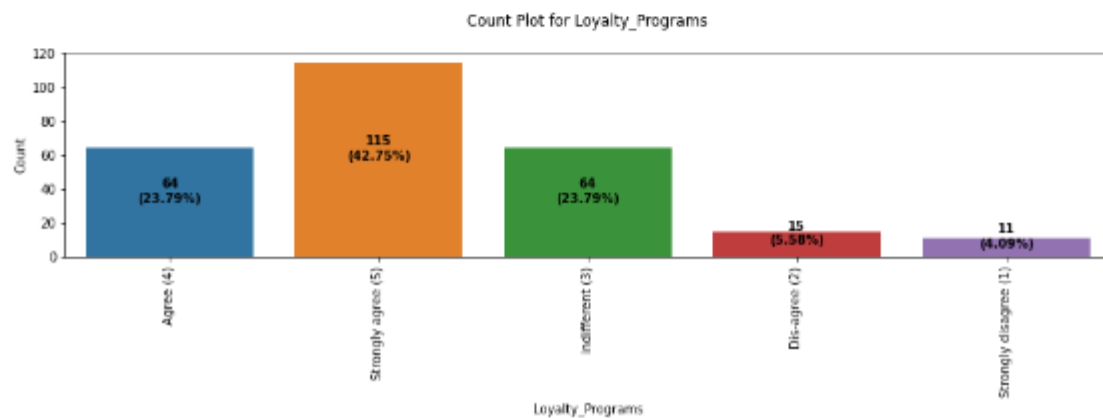
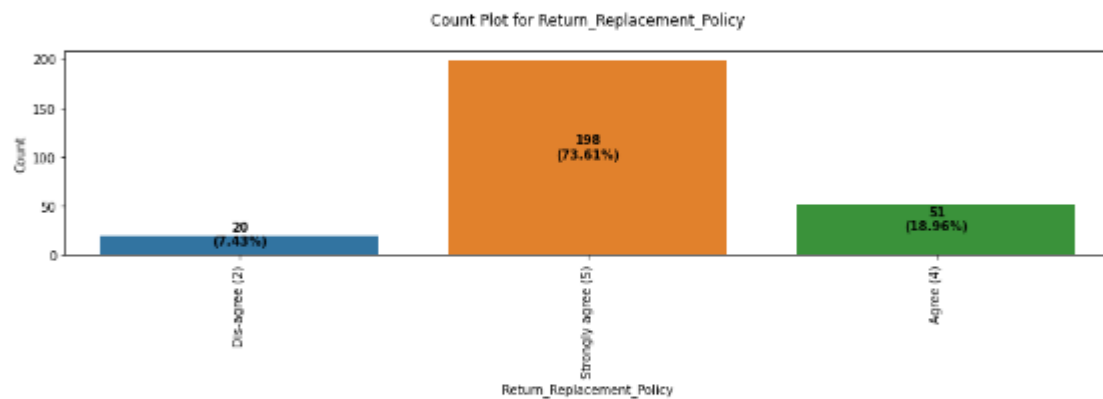
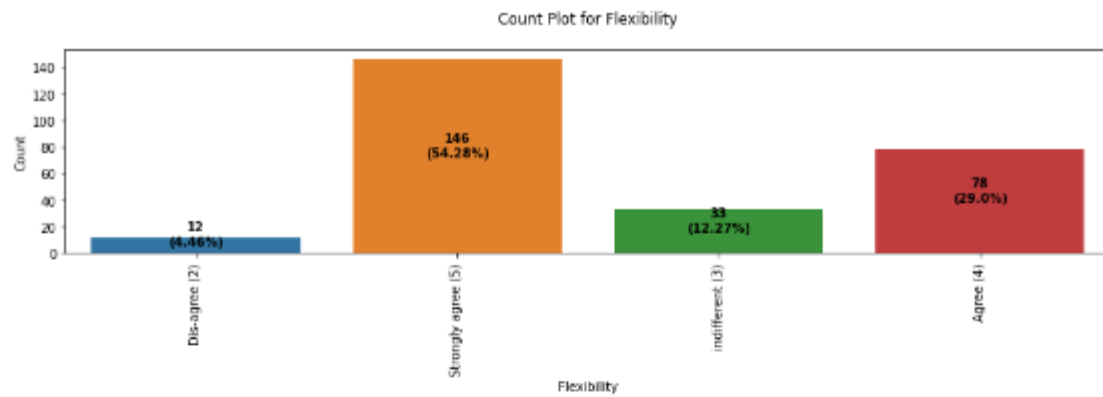
- Loading_Processing_Speed
 - most of the customers wants the web or app to load and process as fast as possible
- User_Friendly_Interface
 - most of the customers require userface to be very user friendly
- Convenient_Payment_Mode
 - most of the customers wants payment method to be as easy as possible



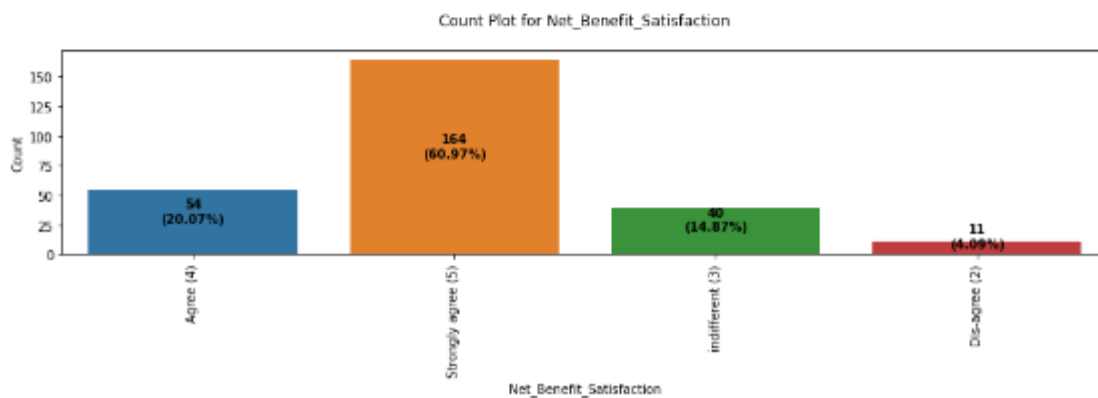
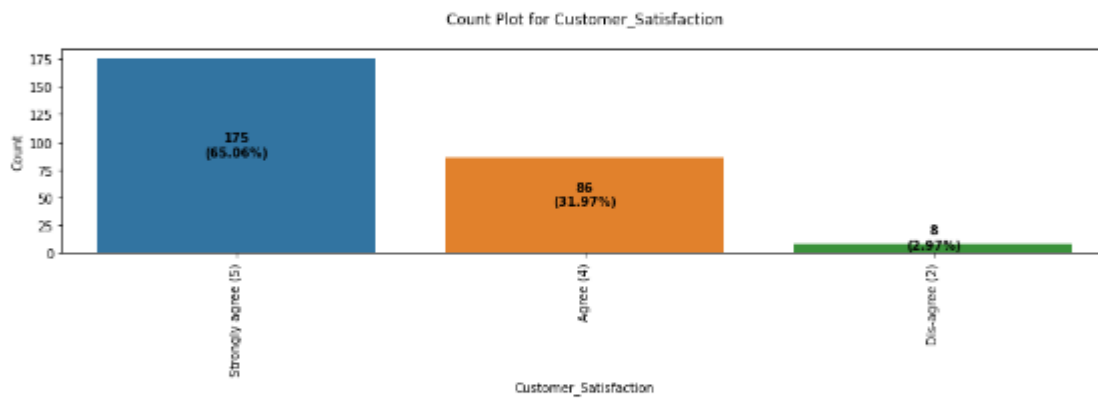
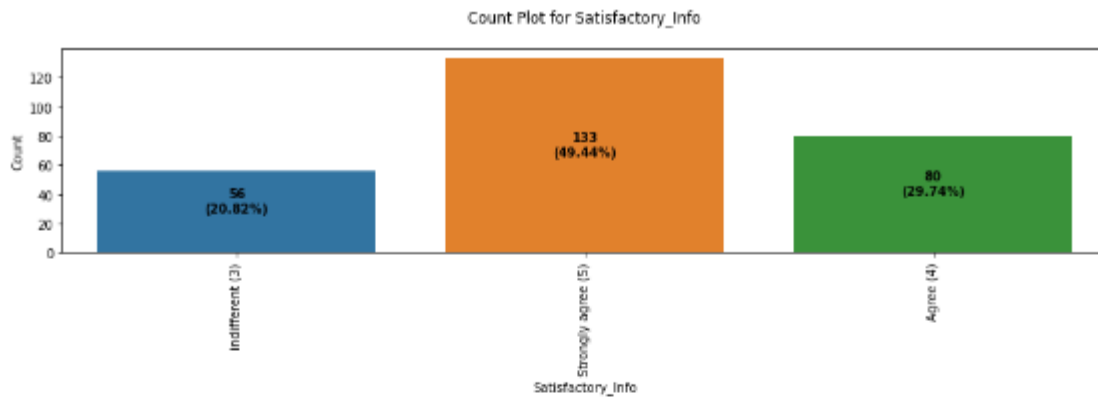
- **Timely_Fulfilment_Trust**
 - most of the customers wants their product to fulfill the transactions within the stipulated time
- **Customer_Support**
 - most of the customers require very strong customer support
- **Customer_Privacy_Guarantee**
 - most of the customers wants their privacy and prefer those web or app which guarantee it



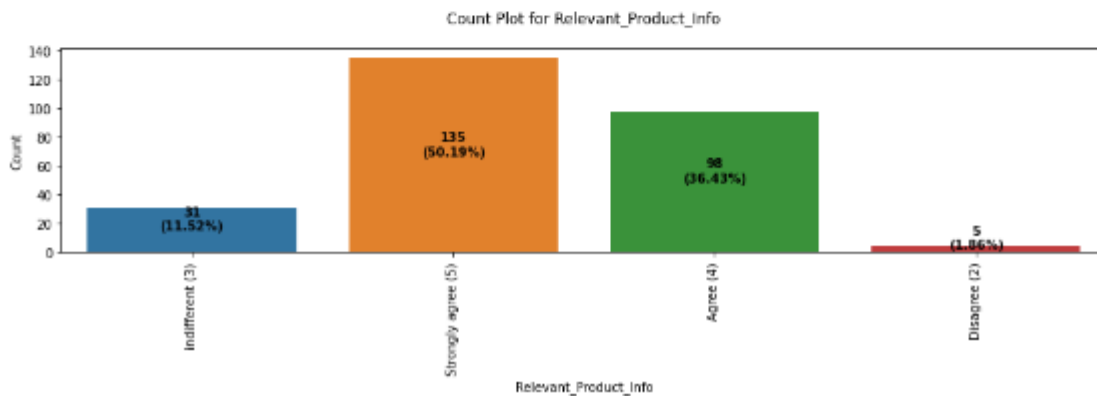
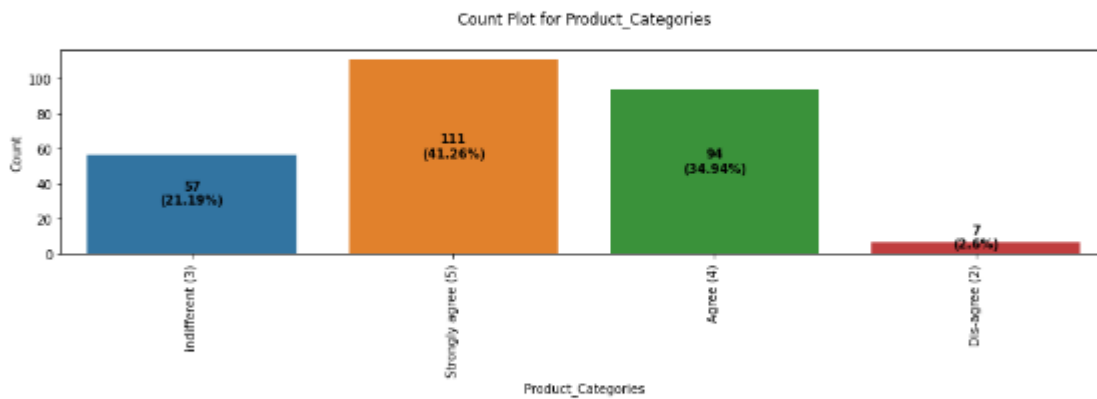
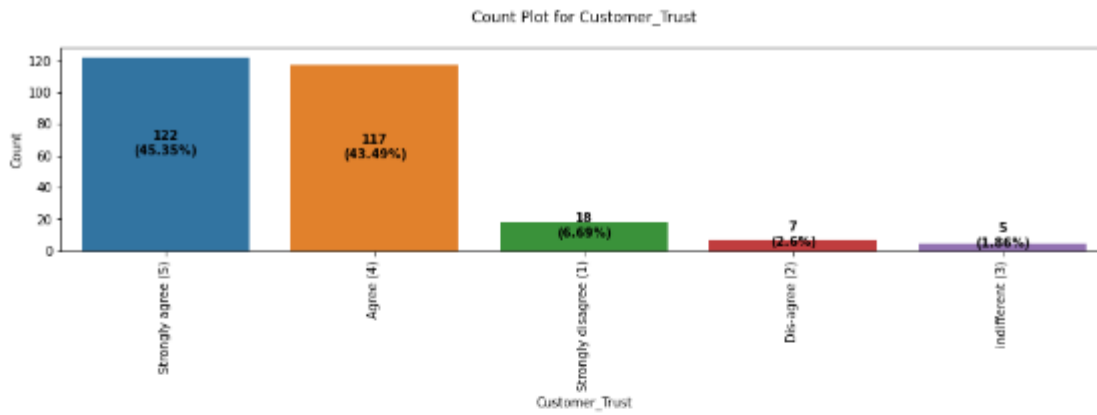
- Channel_Responses
 - most of the customers requires multiple channel responses
- Benefits
 - most of the customers require benefits and discounts for being their customers
- happiness
 - most of the customers get enjoyment by shopping online and only few customers dis-agree to this



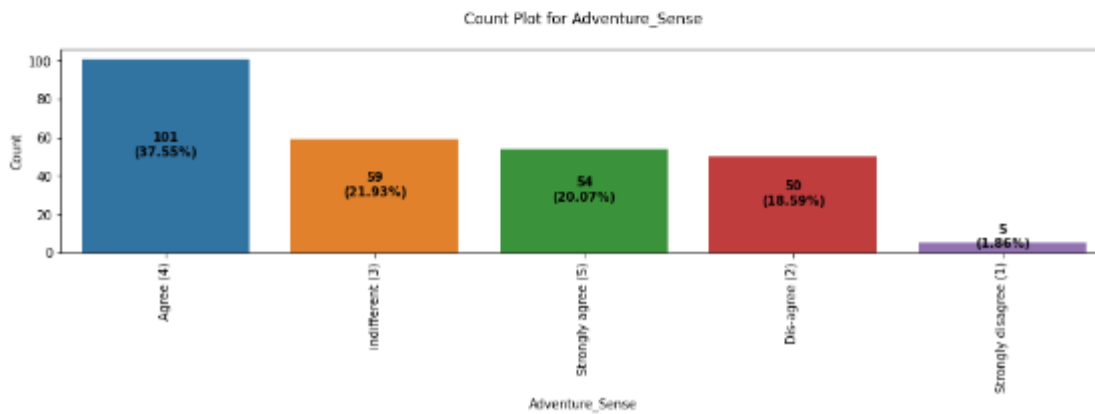
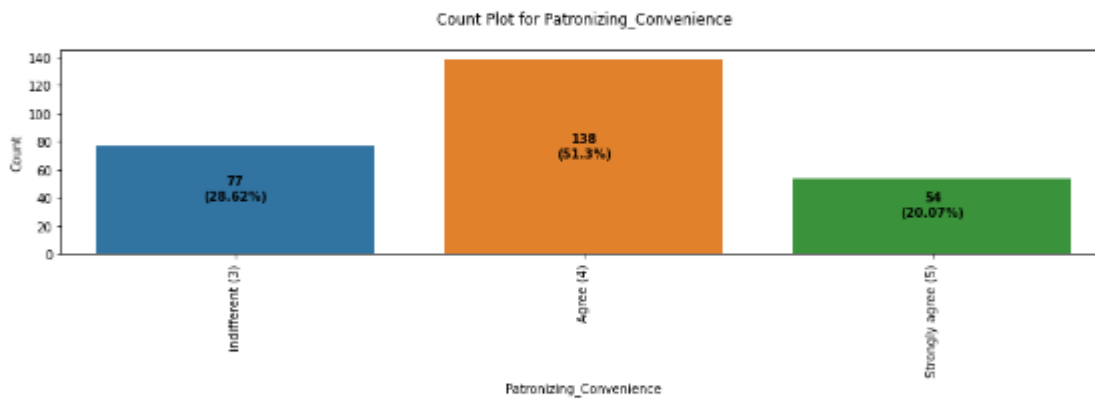
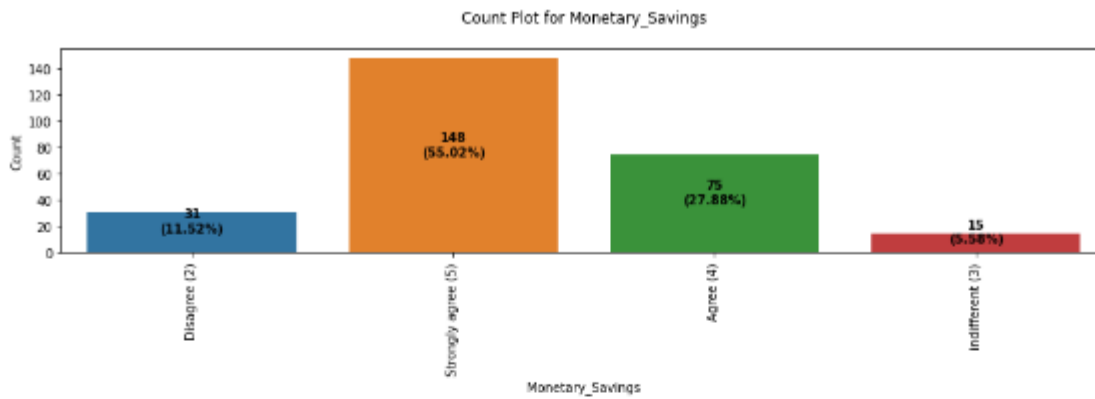
- Flexibility
 - most of the customers agree that online shopping is convenient and flexible
- Return_Replacement_Policy
 - most of the customers are intrested in purchasing products that have return policy
- Loyalty_Programs
 - most of the customers wants access to loyalty program



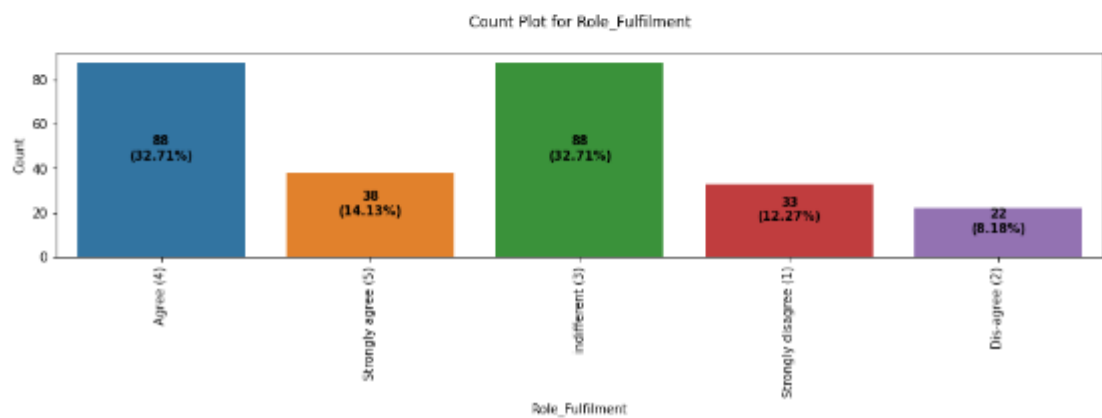
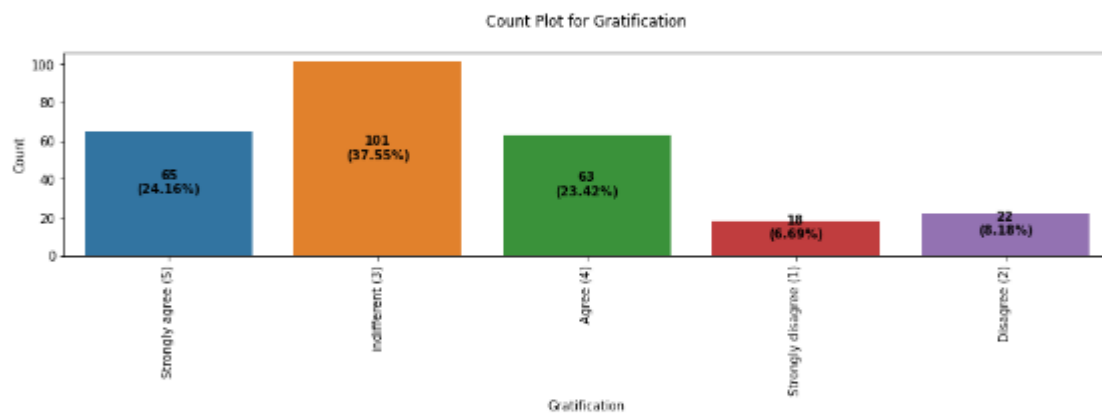
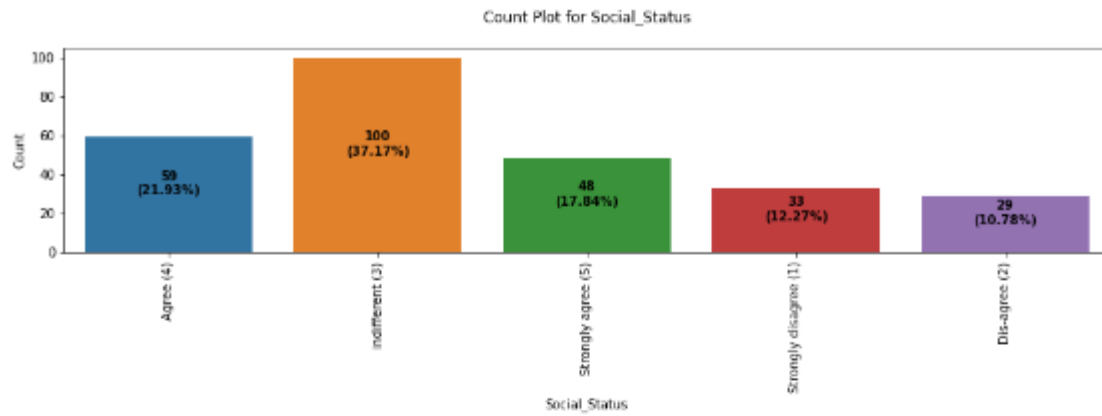
- Satisfactory_Info
 - most of the customers agree that product info is required to purchase the product, as the image of the product cannot explain all the aspects of the products
- Customer_Satisfaction
 - most of the customers are satisfied to shop on website that have good quality
- Net_Benefit_Satisfaction
 - most of the customers agree that benefit obtained from shopping online can lead to customer satisfaction



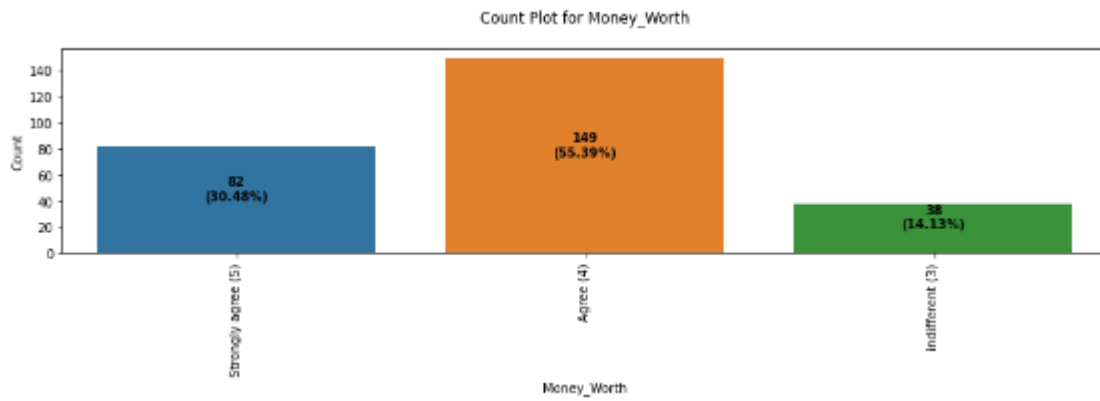
- Customer_Trust
 - most of the customers agree that, they donot prefer to buy from web or app where trust from the company is not obtained
- Product_Categories
 - most of the customers require the company to sell wide variety of products
- Relevant_Product_Info
 - most of the customers agree that company to give results of all relevant products info when customers search for the product



- **Monetary_Savings**
 - most of the customers agree that the customers would prefer to save their money, so in order for the customers to get attracted or interested in buying an item it should be offered a discount which the customer is comfortable at buying, by doing so the customer gains a sentimental attachment to the company their by increasing the trust and brand of the company, this is beneficial on the long run and cannot gain in short term basis
- **Patronizing_Convenience**
 - most of the customers agree Convenience of patronizing the online retailers
- **Adventure_Sense**
 - most of the customers agree there is a sense of adventure when buying online, the customers are now able to buy merchandise from different states and from different parts of the world which was not available before, hence they are able to buy their loved ones the things they want

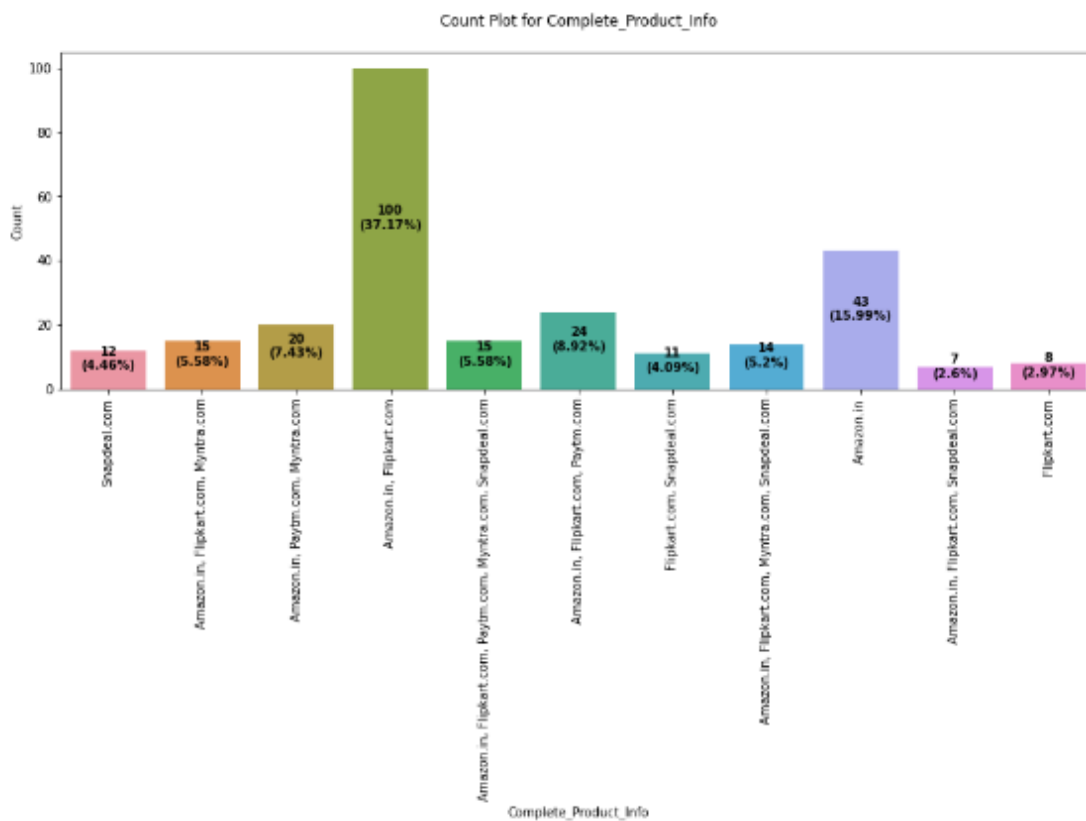


- **Social_Status**
 - most of the customers agreed that shopping on preferred e-tailer enhances the social status of the customers
 - followed by a feeling of indifferent
- **Gratification**
 - most of the customers agree they felt gratified while shopping on their favourite e-tailer
- **Role_Fulfilment**
 - most of the customers agree shopping on the website helps them fulfilling certain roles
 - followed by a feeling of indifferent

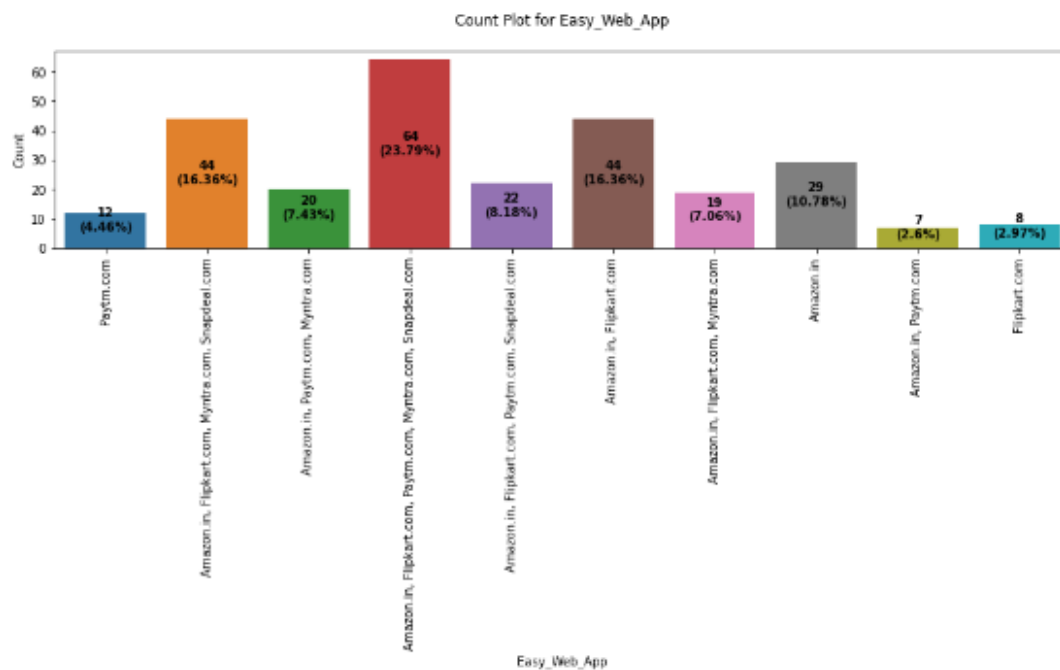
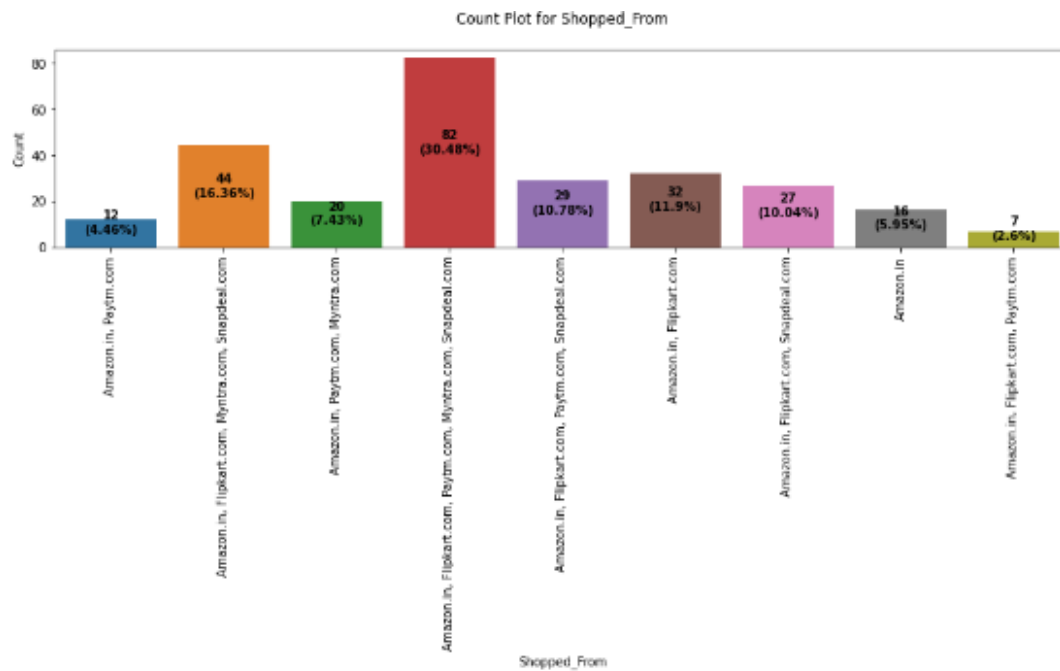


- Money_Worth
 - most of the customers agree that they are getting products worth their money and few of them seems to reject the idea

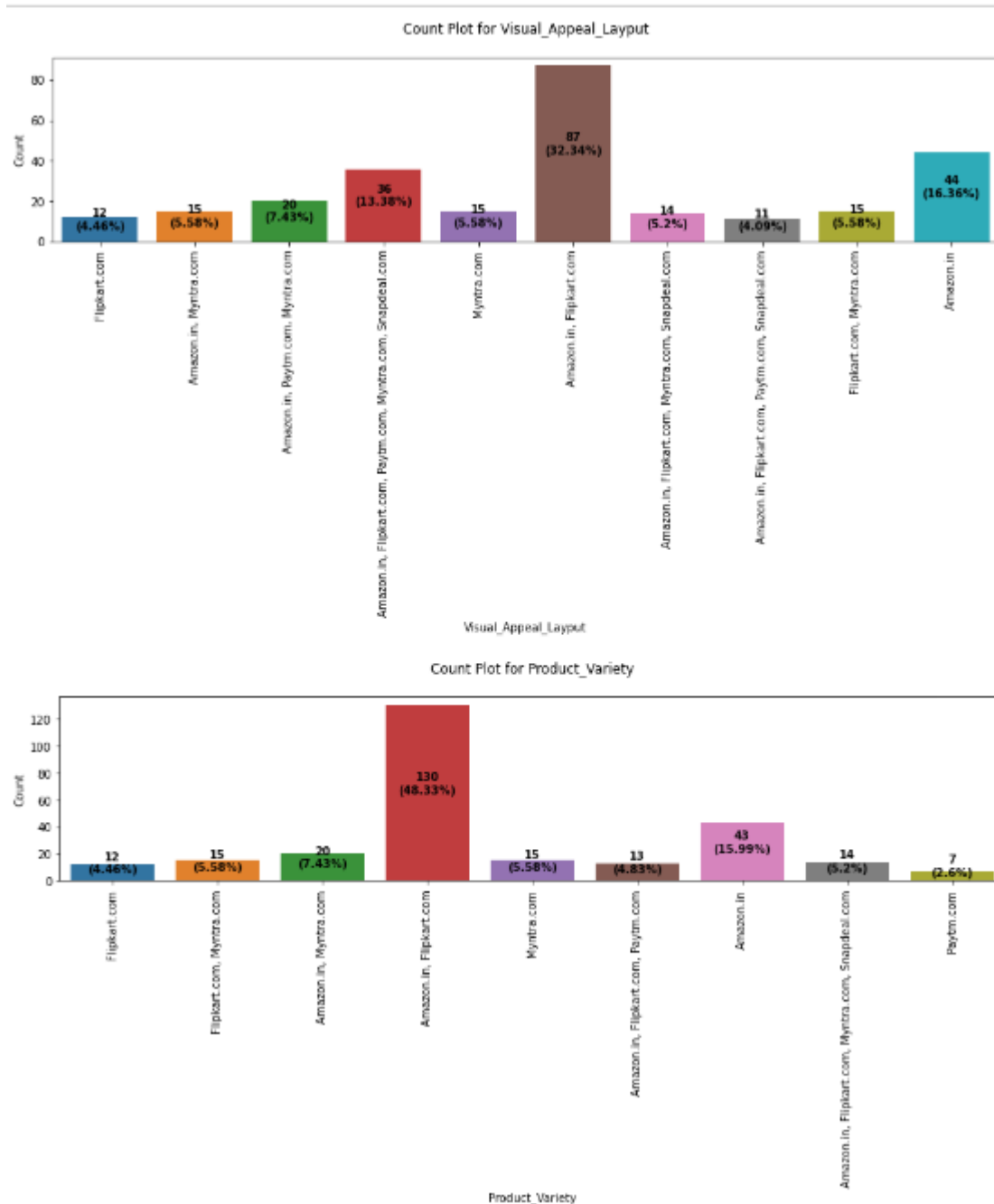
Comparison between different online shopping companies



- Complete_Product_Info
 - most of the customers opted for Amazon.in, Flipkart.com
 - individually
 - amazon provides complete product info, followed by flipkart
 - snap and paytm doesnt provide lot of complete info of product to ther customers



- **Shopped_From**
 - most of the customers have opted the option Amazon.in, Flipkart.com, Paytm.com, Mynta.com, Snapdeal.com
 - individually -customers prefer amazon, followed by flipkart from where customers shop
- **Easy_Web_App**
 - most of the customers have opted the option Amazon.in, Flipkart.com, Paytm.com, Mynta.com, Snapdeal.com
 - individually -customers feel that amazon is the easiest webpage to use, followed by flipkart

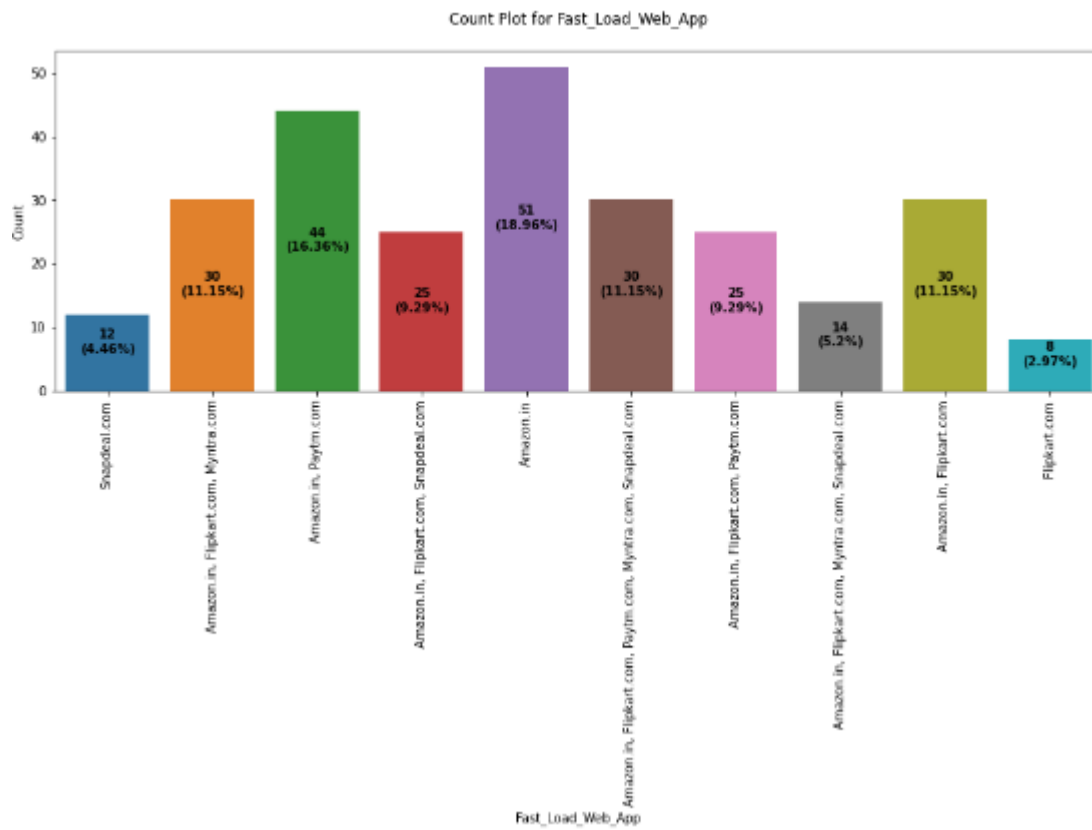


- **Visual_Appeal_Layput**

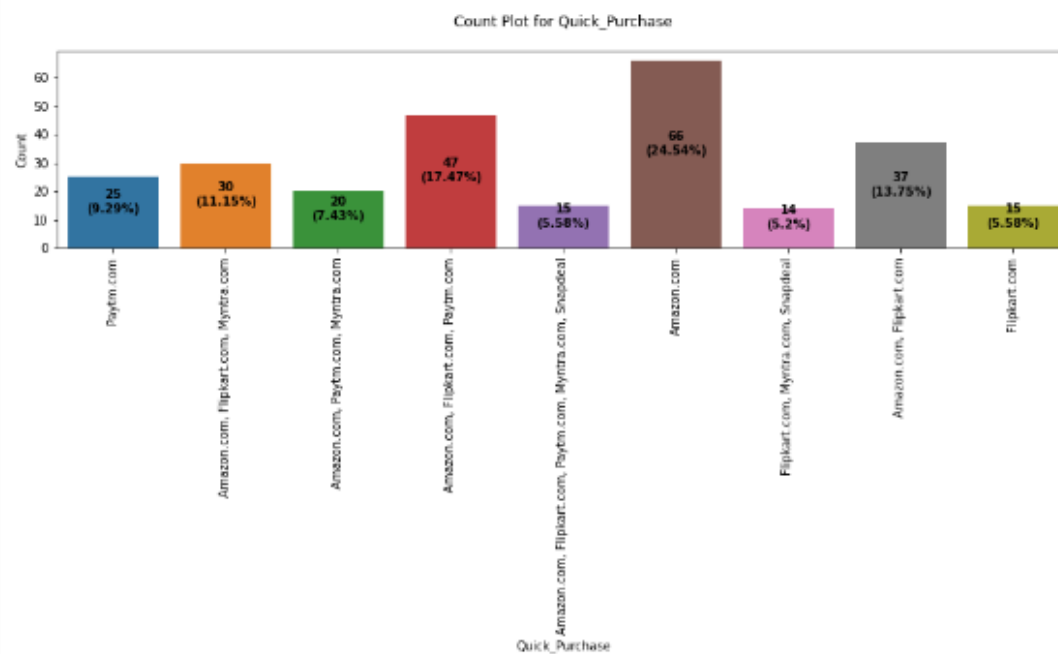
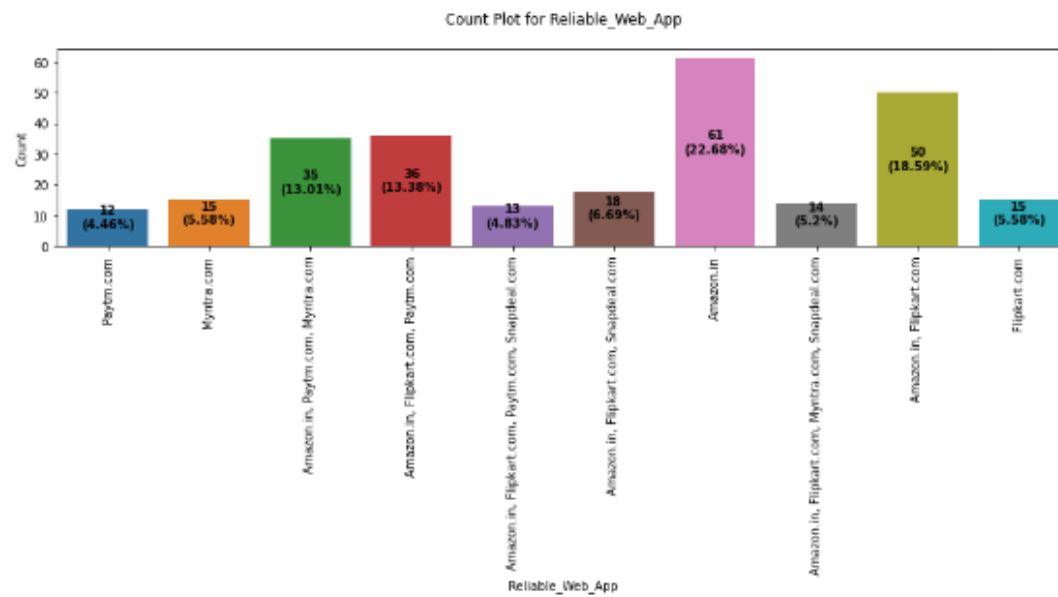
- most of the customers have opted the option Amazon.in, Flipkart.com
- individually
 - customers feel that amazon has highest visual appeal, followed by flipkart
 - snapdeal and paytm is least preferred by the customers by visual appeal

- **Product_Variety**

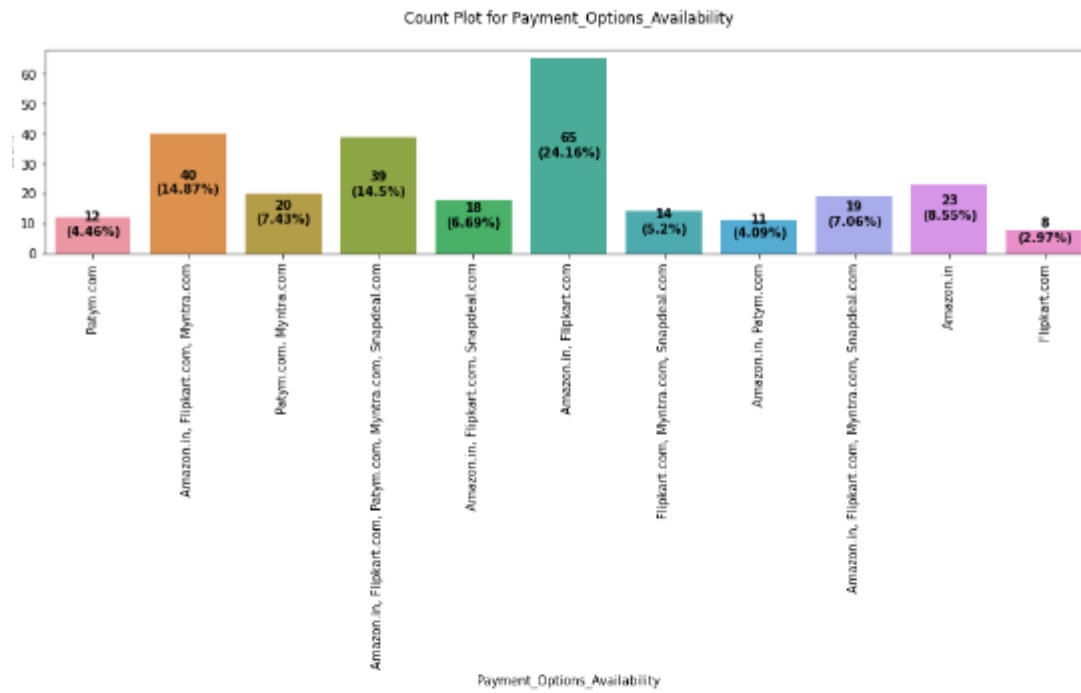
- most of the customers have opted the option Amazon.in, Flipkart.com
- individually
 - amazon provides a large variety of products followed by flipkart
 - snapdeal and paytm provides the least variety of products



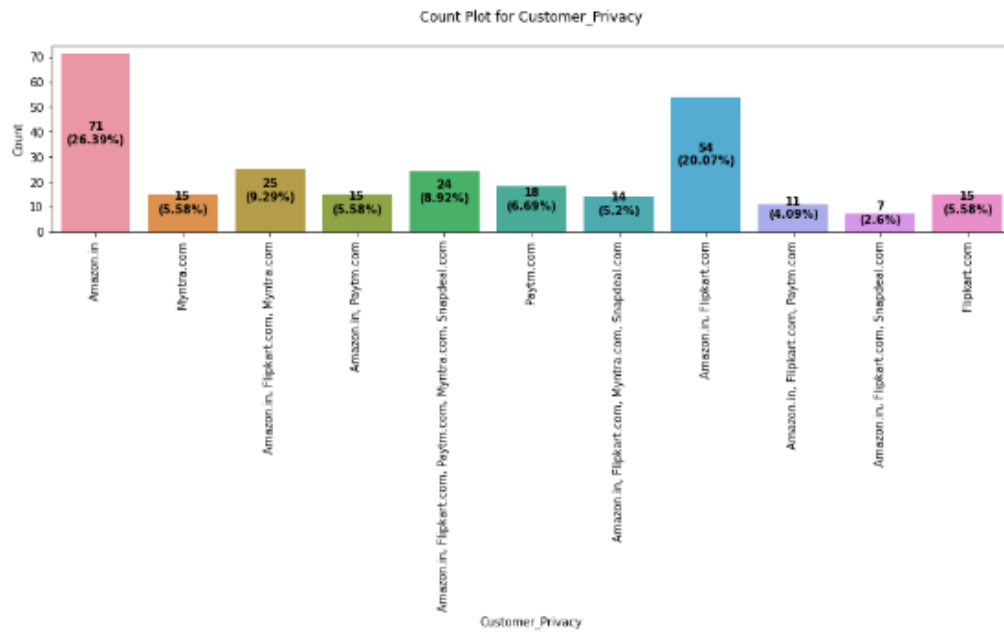
- most of the customer says that amazon loads fast, followed by flipkart
- the slowest among them is mynta followed by snapdeal



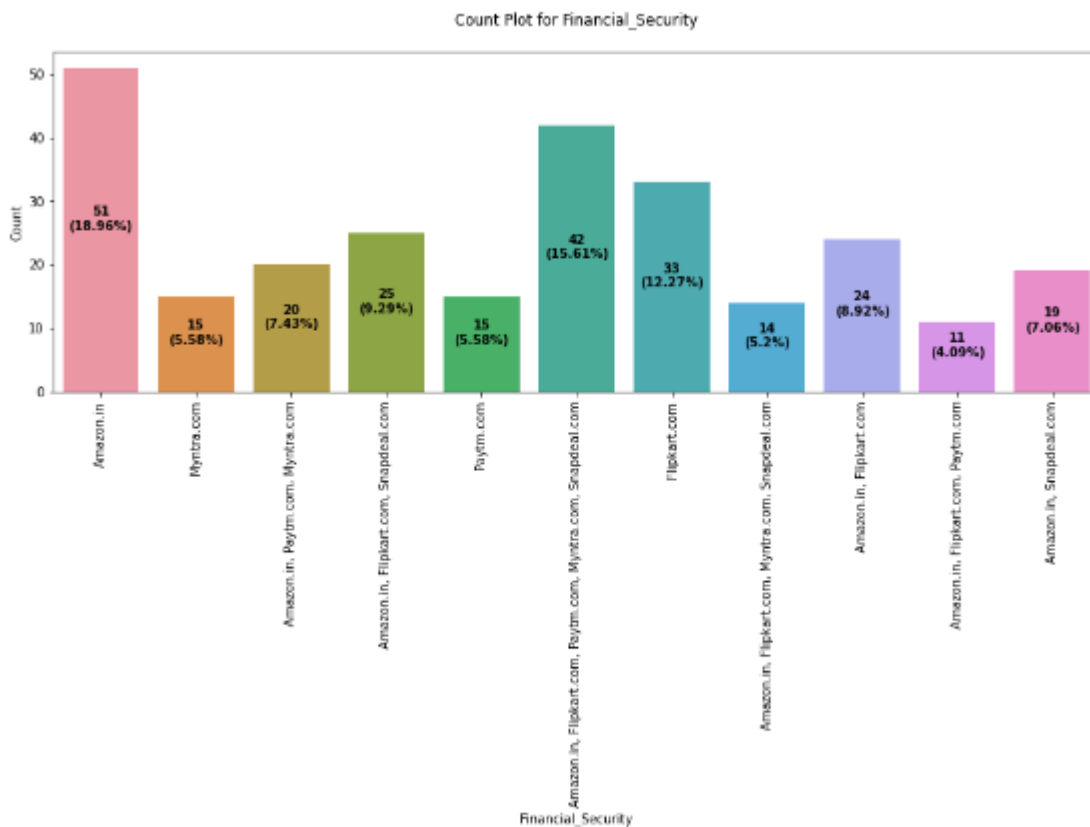
- **Reliable_Web_App**
 - according to the customers amazon is the most reliable, followed by flipkart
 - the least reliable is snapdeal followed by myntra
- **Quick_Purchase**
 - according to the customers amazon is easy for quick purchase, followed by flipkart
 - snapdeal is not easy for quick purchase followed by myntra



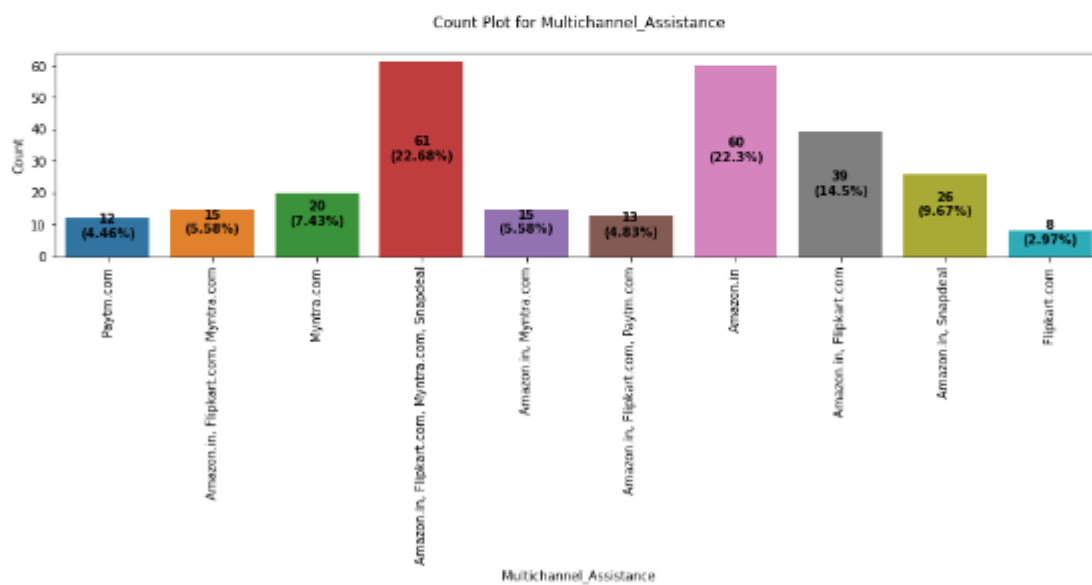
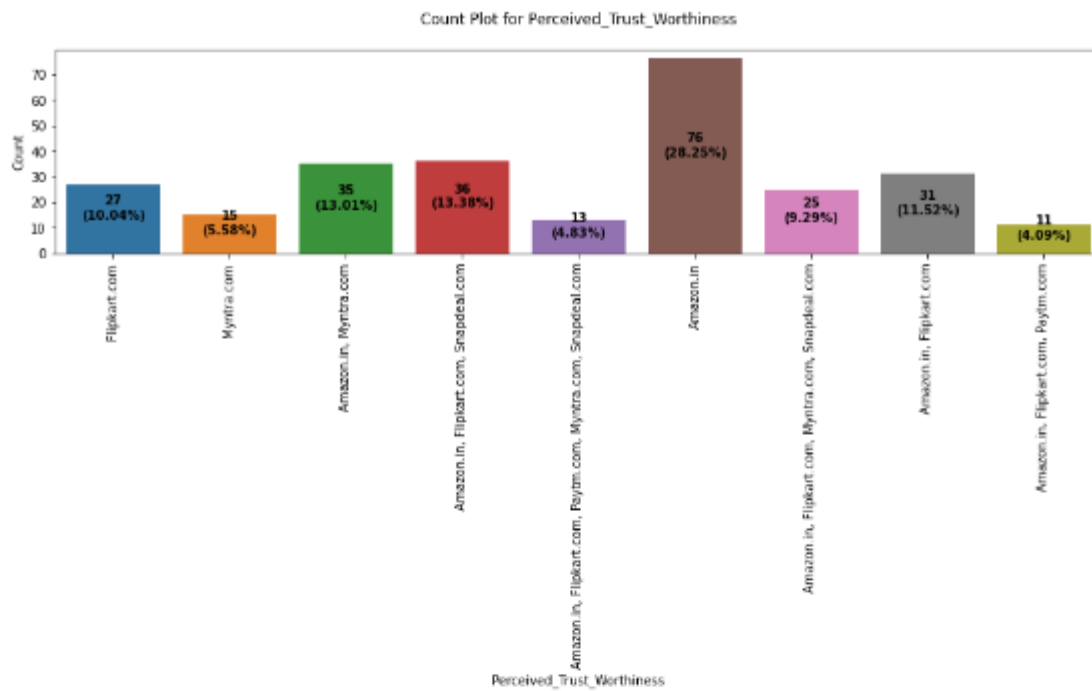
- Payment_Options_Availability
 - Amazon has more payment option available followed by flipkart
 - paytm has the least payment option followed by snapdeal
- Fast_Delivery
 - amazon has the fastest delivery followed by flipkart
 - no customer has opted for paytm
 - mynta is least preferred by customer for fast delivery followed by snapdeal



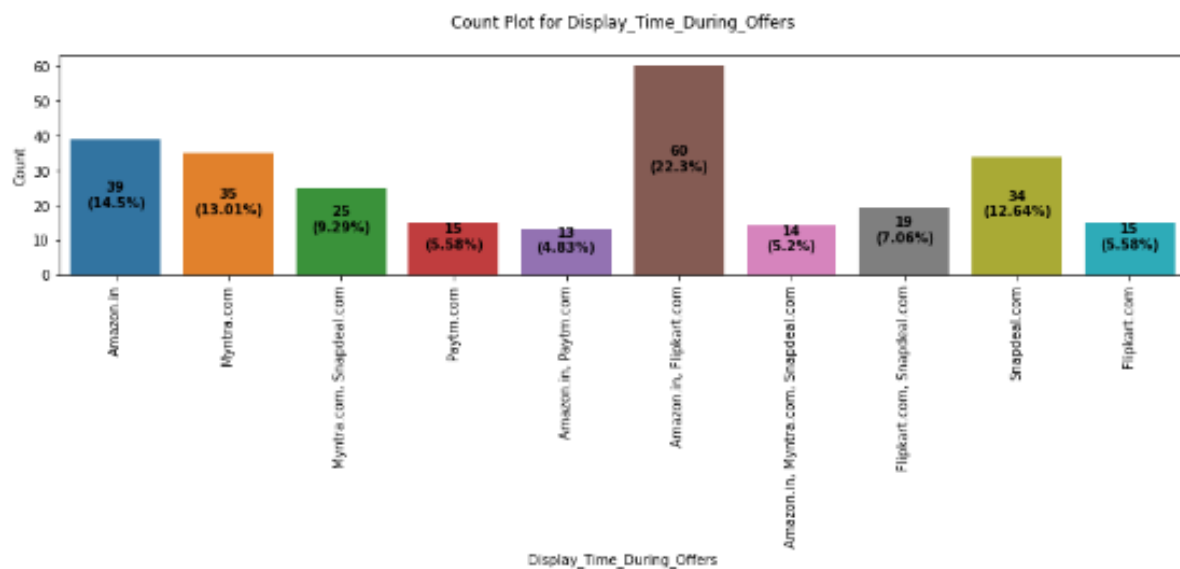
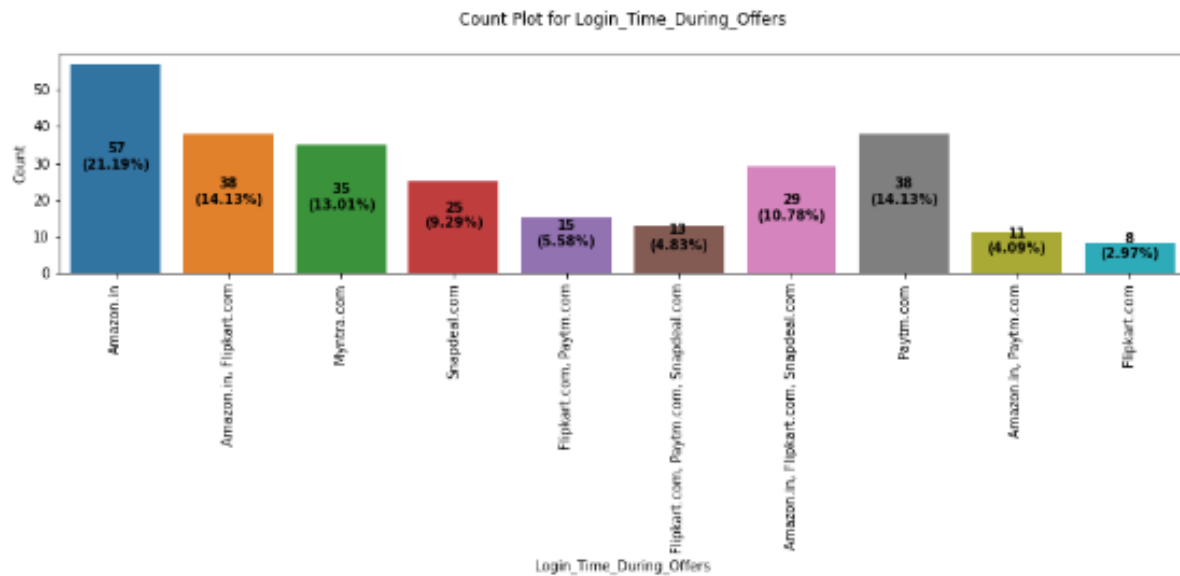
- Customer_Privacy
 - amazon provides high customer privacy, followed by flipkart
 - the least customer privacy according to the customer is in snapdeal followed by paytm



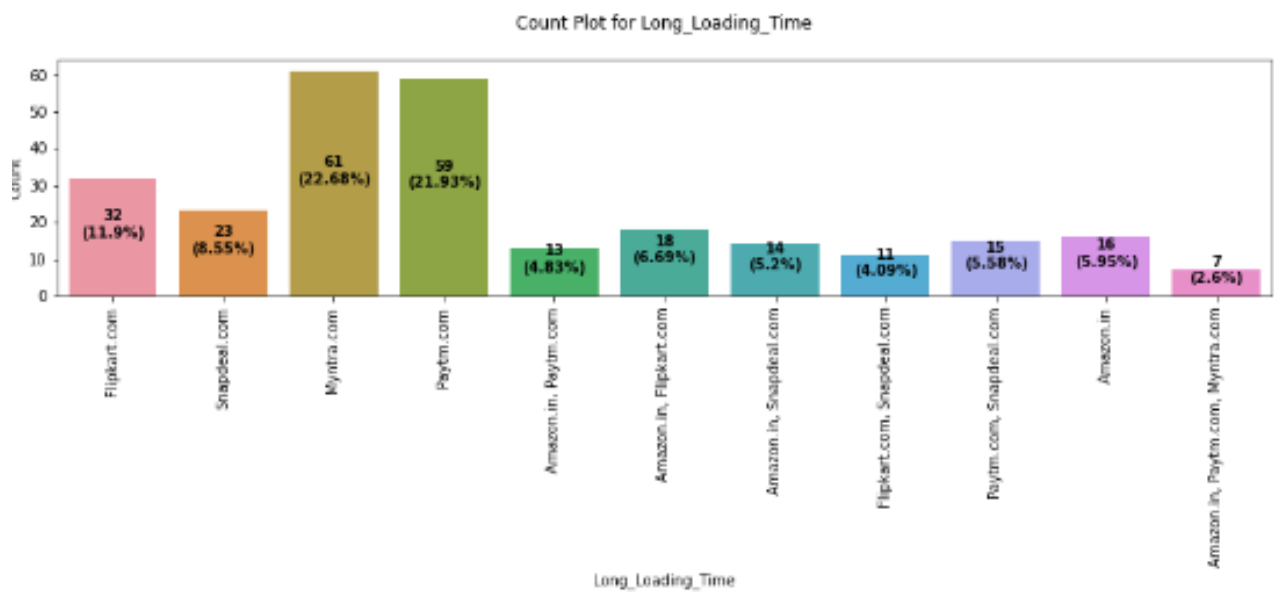
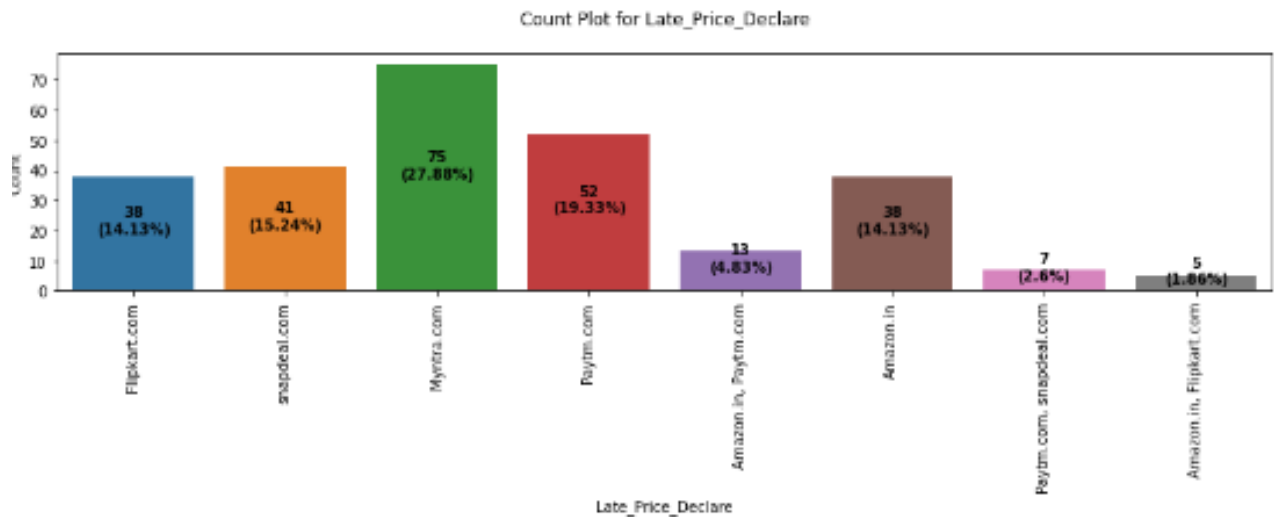
- Financial_Security
 - according to the customers amazon provides best financial security followed by flipkart
 - least provided by paytm



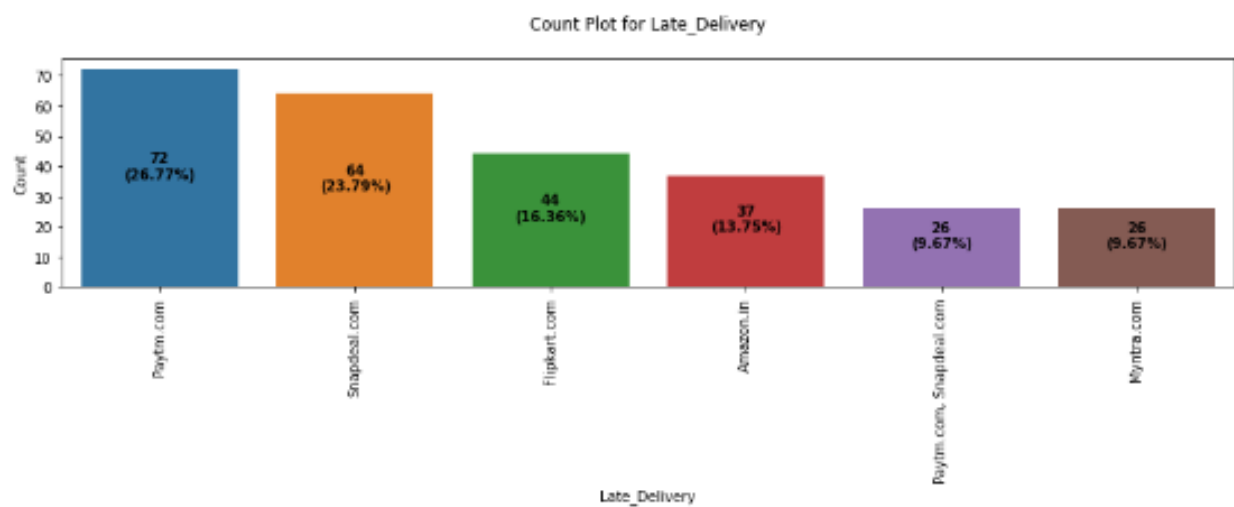
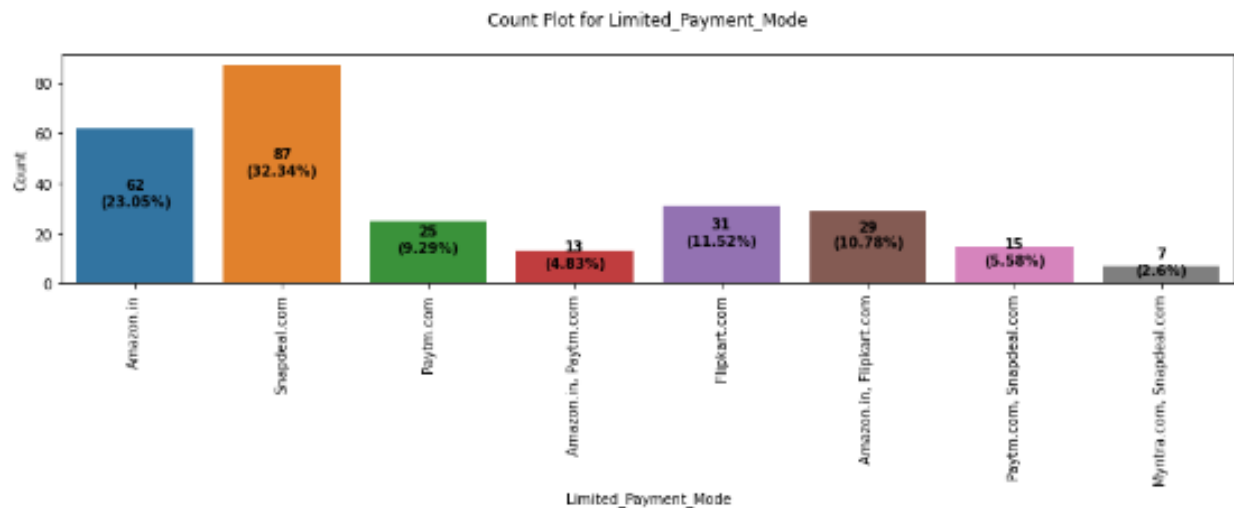
- **Perceived_Trust_Worthiness**
 - according to the customers amazon has the highest perceived trust worthiness followed by flipkart
 - least is by paytm followed by myntira
- **Multichannel_Assistance**
 - according to customers amazon provides better multichannel assistance followed by flipkart
 - least multichannel assistance is offered by paytm followed by snapdeal



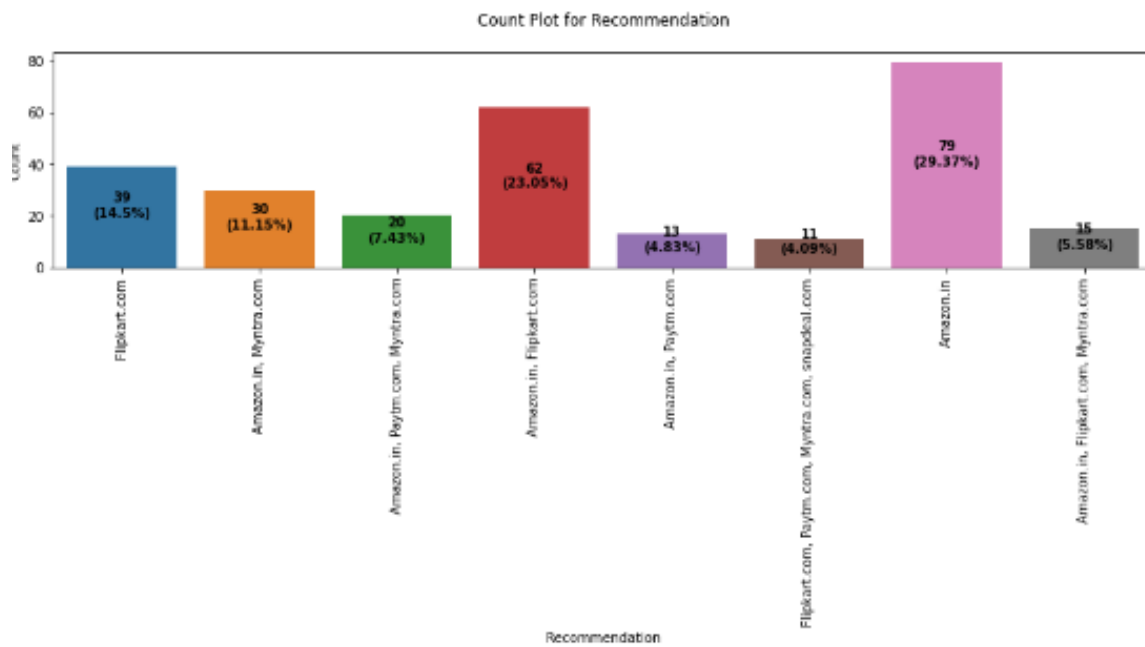
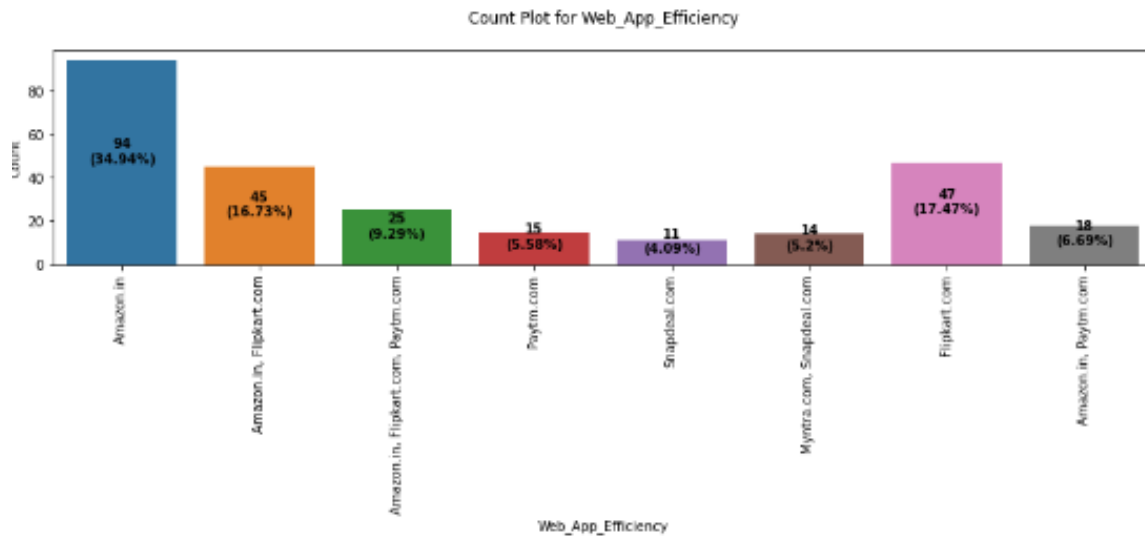
- Login_Time_During_Offers
 - according the customers login time during offers is less for myntra, followed by snapdeal
 - login time during offers is longer in amazon followed by flipkart
- Display_Time_During_Offers
 - paytm takes the least time for displaying products or loading webpage during offers, followed by myntra
 - amazon takes the lot of time for the webpage to load during offers followed by flipkart



- Late_Price_Declare
 - flipkart declares the prie as early as possible followed by snapdeal
 - myntra declares the price the last followed by paytm
- Long>Loading_Time
 - amazon and flipkart has the least loading time
 - paytm followed by myntra has the longer loading time

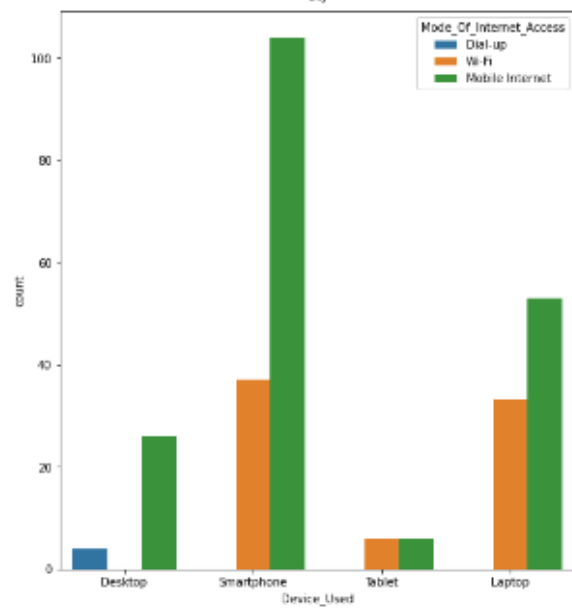
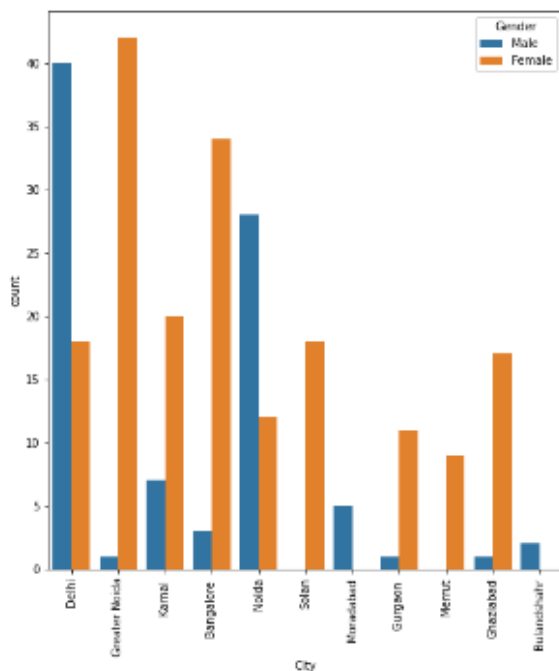
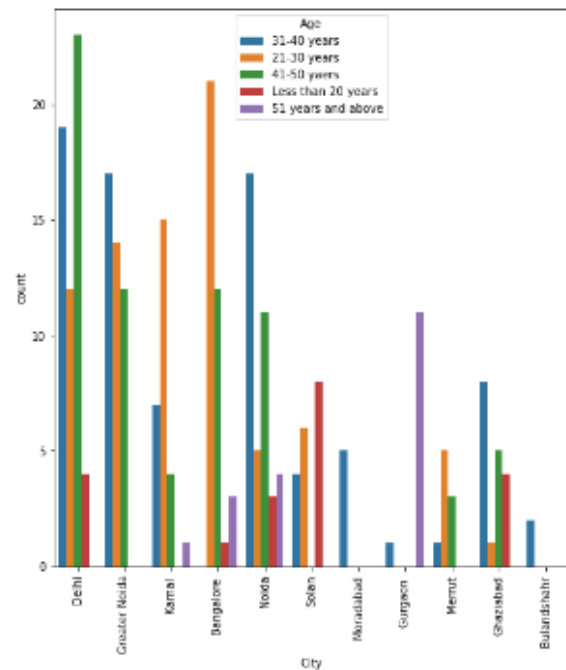
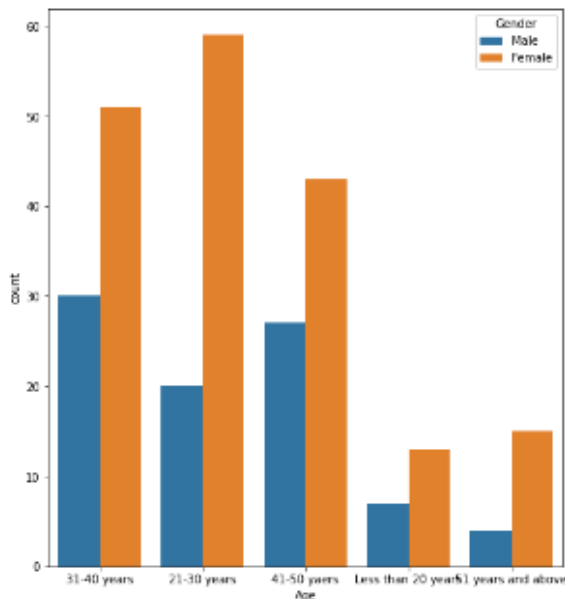


- Limited_Payment_Mode
 - mynta followed by paytm has very limited mode for payment
 - snapdeal followed by amazon provide wider payment mode
- Late_Delivery
 - most of the customer opted that paytm with late delivery, followed by snapdeal
 - mynta has the least late delivery followed by flipikart

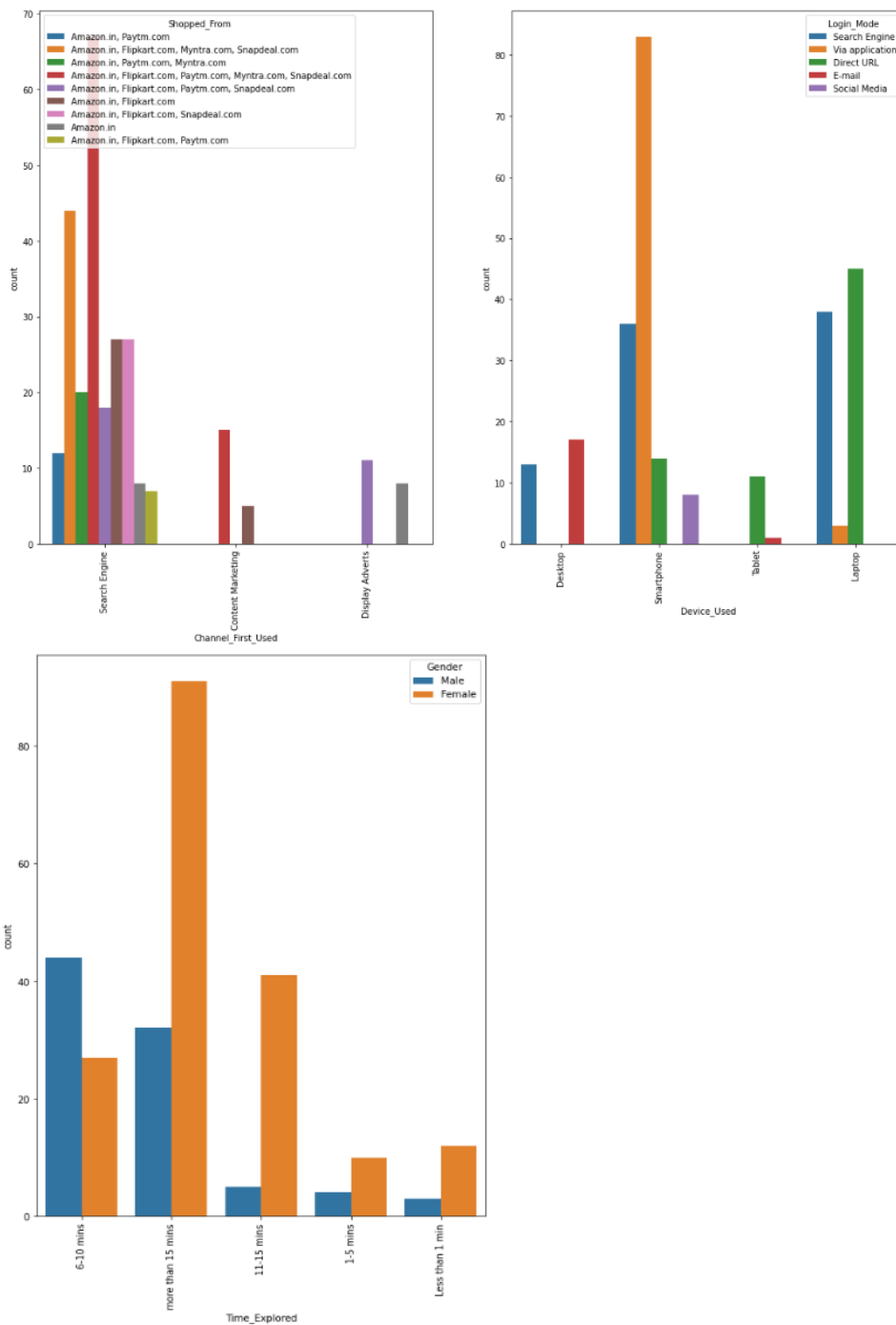


- Web_App_Efficiency
 - amazon has the best web or app efficiency, followed by flipkart
 - mynta has the least web or app efficiency followed by snapdeal
- Recommendation
 - amazon has the highest recommendation followed by flipkart
 - snapdeal has the least recommendation followed by paytm

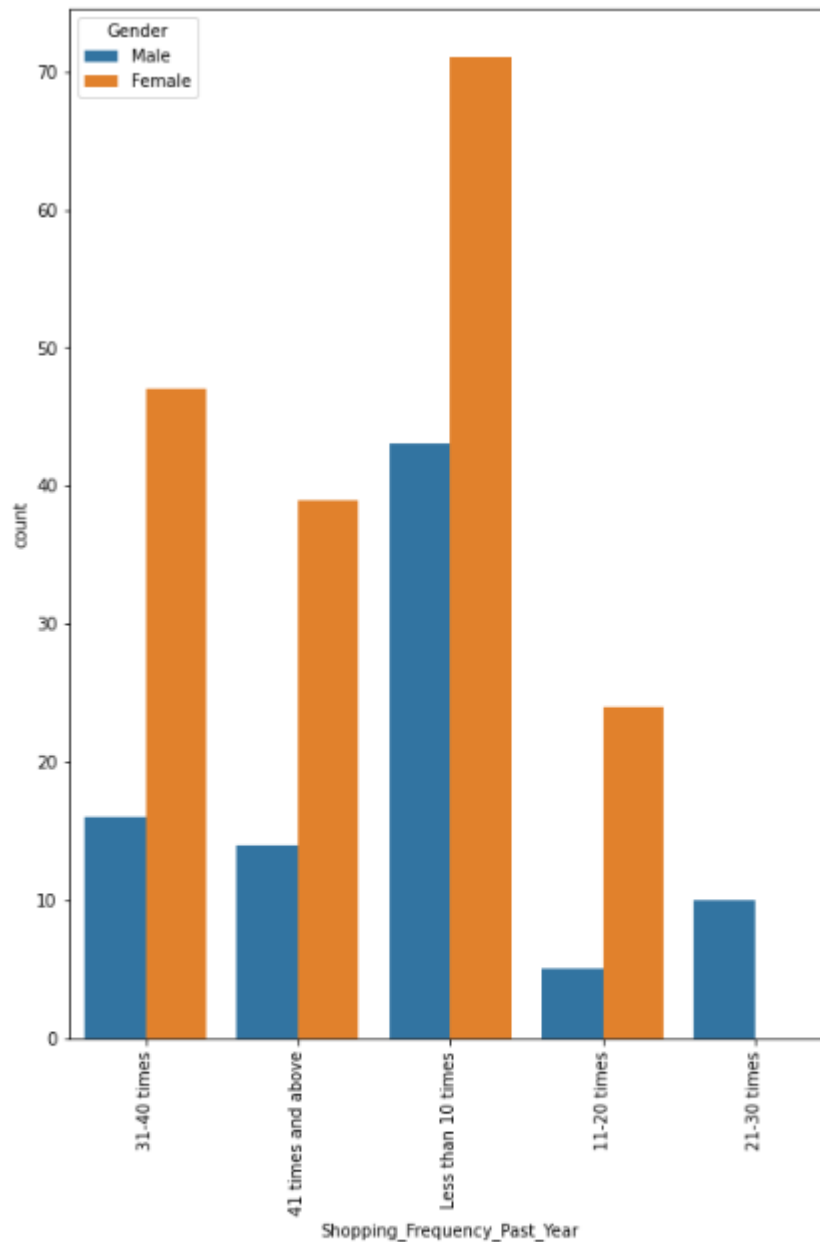
Bivariate Analysis



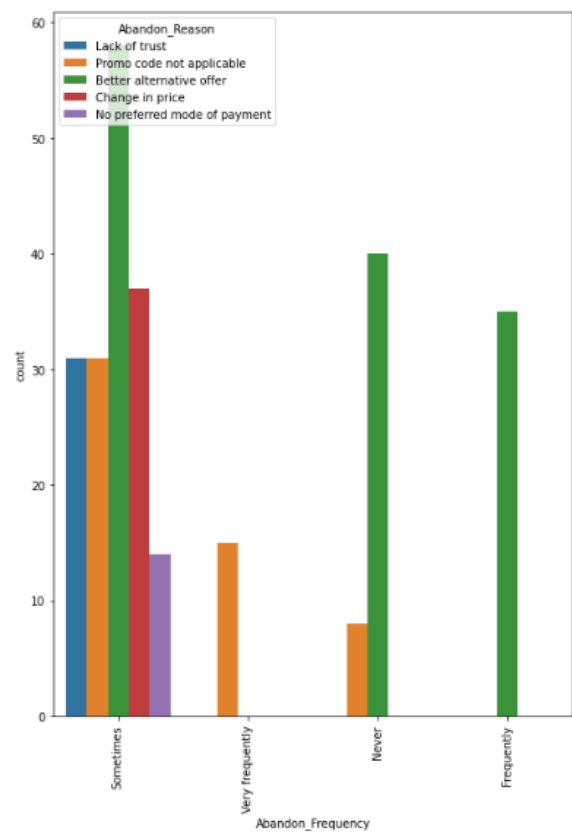
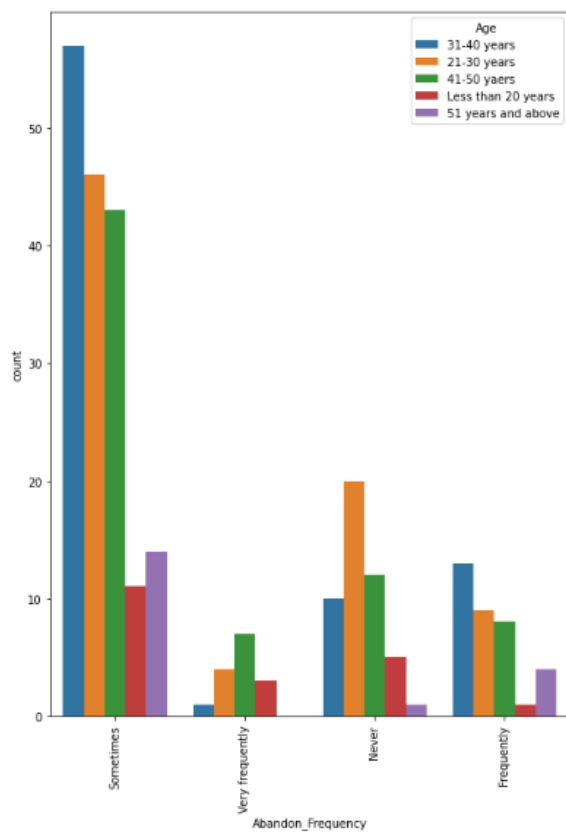
- Age and Gender
 - in all age group females were active participants for the survey
- Age and City
 - Delhi had customers belonging to 31-40 and 41-50 age group the most
 - Greater Noida had customers mostly in the age group 21-30 and 31-40 the most
 - Kamal had customers mostly in the age group 21-30
 - Bangalore had customers mostly in the age group 21-30
 - Noida had customers mostly in the age group 31-40
 - Solan had less no of people overall and had people belonging to less than 19 the most
 - Moradabad, Merrut, Ghazibad Gurgaon and Bulandshahr had very less people so an awareness about this should be spread in order to get more customers
- Gender and City
 - only delhi and moradabad has more no of men, Merrut there is no male customers
 - rest all are female dominant city and Moradabad has no female customers
- Device Used and mode of internet access
 - most of the people use smartphone with mobile data followed by using wifi
 - tablet and desktop is the least used for purchasing products on the websites



- Shopped from and channel first used
 - most of the customers used search engine so investments can be made in web browsers to provide adv regarding offers as people surf the net
 - content marketing and display adv has very little influence
- Device used and mode of login
 - most commonly used method is to login to app via smartphone, then using laptop to login via direct url or search engine
- Time explored and Gender
 - males explore only for 6-10 min
 - large amount of time is spend by female



- Shopping_Frequency_Past_Year and Gender
 - males have searched less than 10
 - females have searched alot compared to male



- Abandon_Frequency and Abandon_Reason
 - Sometimes option selected because of better alternative offers
 - Very frequently option selected as there is no promo code applicable
 - Frequently option selected as there is better alternative offers

Inferences

- Helped in understanding the expectation of the customers from the company in which they shop, based on these understanding a lot of changes can be incorporated to make best online shopping experience for the customers
- some of the areas where companies need to focus is on customer data privacy, providing customer satisfaction, customer loyalty etc
- Many customers are deeply frustrated when they are not able to purchase the desired products during offer days, and when loading time of webpage increases
- Customers are interested in buying products only if all the required details of the products are present and relevant seller info is provided
- Trust from customers can be gained in many ways, one way is to deliver the products on time, maintaining high customer data privacy and providing loyalty programmes, introducing wide variety of products
- There are few cities where customers are very low, in such cities people must have awareness class regarding it
- Most of the people have access to smart phone and mobile data, hence it's not difficult to get more customers, but don't purchase products frequently and the no. of times the customers search for products is also not high
- The sellers should ask for feedback from the customers in order to know further on how to improve, as there is always a chance for a mixup with delivery and can frustrate the customers
- Amazon is the most preferred online retailer in the current market followed by Flipkart

Inference for the companies analysed

1) Amazon

improvements needed

- Amazon struggles during offer period, customers face difficulty to login and for web page to load during offers
 - this is mainly because of high traffic which occurs because it has large no. of customers compared to other service providers
 - solution can be by increasing bandwidth or by further optimising the website
- Amazon should try to announce price for products during offers as early as possible this can further help the customers who shop in other websites to be slowly included, but there is another risk which should be taken into account that would be rival companies could try to sell the same product at a cheaper price so study should be done on when the price declaration should be done during offers

Amazon is preferred by most of the people and has one-sided dominance when compared with others

2) Flipkart

improvements needed

- struggles during offer period, customers face difficulty to login and for web page to load during offers
 - This is mainly because of high traffic which occurs because it has large no. of customers compared to other service providers
 - solution can be by increasing bandwidth or by further optimising the website
- should provide no. of options for payment

flipkart has the second largest no. of customers and it can be seen that its the second best service provider, it has lots of work to do in order to be at the top, in most of the cases it has rank 2 except for late price declaration where it declares its price as early as possible and got rank 1

3) Myntra

improvements needed

- it has problems with reliability with the website
- it doesn't have quick purchase option or needs to make changes so customers can buy the product by entering the details as less as possible
- it doesn't deliver product very fast so needs to work on logistics and provide training to personnel and automate some process to deliver the products within the delivery day and avoid late delivery
- customers don't trust myntra so it needs to work on how to get the trust from customers
- needs to provide multichannel assistance, because it can be frustrating when customers don't get their queries resolved within the stipulated time
- needs to declare prices during offers as early as possible to attract customers
- needs to work on their website to increase efficiency and decrease loading time

4) Snapdeal

improvements needed

- needs to work on introducing a wide variety of products and provide all the relevant info regarding the product
- website needs to be efficient, less loading time, needs to be more reliable
- needs to provide quick purchase options where customers have to enter the least amount of details to purchase an item
- needs to provide wide variety of payment options
- needs to work on customer privacy
- it doesn't deliver product very fast so needs to work on logistics and provide training to personnel and automate some process to deliver the products within the delivery day and avoid late delivery
- needs to provide multichannel assistance, because it can be frustrating when customers don't get their queries resolved within the stipulated time

during offers compared to others it's easier to login and website load faster

5) Paytm

improvements needed

- needs to work on introducing a wide variety of products and provide all the relevant info regarding the product
- website needs to be efficient, less loading time, needs to be more reliable, reduce the loading time
- needs to provide wide variety of payment options
- needs to offer a sense of financial security
- needs to provide multichannel assistance, because it can be frustrating when customers don't get their queries resolved within the stipulated time

Conclusion

Conclusion

- able to understand the customer behaviour to online shopping is positive as it is clear that the no of customers are slowly increasing
- amazon is the most preferred online retailer followed by flipkart
- consumers purchasing decisions were dependent on various factors
- most of the customers doesn't prefer online shopping this could be considering the fact of privacy and online transactions which makes the customers nervous

Future Work

- Need to scale data's, skewness check is not needed as all data's are categorical data's
- Unsupervised machine learning models can be used for clustering the customers according to their behaviours, which can later be used to target the customers and giving them some privileges, so they gain a sentimental attachment to the company