



PROJECT REPORT

Submitted By

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NAME OF THE PROJECT

Customer Retention

Acknowledgement:

- Primarily I would like to thank God to being able to complete this project with success. Then I would like to express my special thanks of gratitude to my SME,
- And I am thankful I am part of flip rob technology of employee, who given me the golden opportunity to do this wonderful project on the given topic which is also help me in doing a lot of research and I came to know about so many new things, I am really thankful to flip robo.
- Secondly, I am thankful to my husband to get me a moral support and guided me to complete this project on time.

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INTRODUCTION

Fierce competition in today's world markets, the introduction of products and services with shorter life cycles and the increased expectations of customers have forced all online business stores to invest in and pay attention on their customer relations.

In a typical business, the companies were not conscious about their customers. Now the market has become global and the competition is at its peak. Consequently, to reduce dissatisfactions and improve service levels, effective customer relation strategies at the various levels are to be implemented. Customer base and better services have always been a major issue in E-Commerce business but in an era of ever-increasing competition in the market.

Statement of the Problem.

In every business consumer is the king. It's not at all easy to make or attract new customers. Now days the business are more conscious about retaining the existing customers rather going for new set of customers. Therefore, proper strategies should be formulated and implemented to create value and loyalty among the customers. This paper analyzing what strategies the E-Commerce companies are using to retain their customers.

Objective of the study

- To review strategic Customer Retention approaches embraced by the E-Commerce companies.

Scope of the Study

The findings of this paper are deemed to be applied entirely in the Customer Retention strategies of E-Commerce in aid of rationalizing short and long-term

goals. Since the overriding philosophy of customer retention and relationship management (CRM) is to find and offer value to the customers as well as build a long-term relationship with the customer, the study is mirrored in a way that brought forth a clear understanding of best customer retention strategies which enhances company market performance.

Significance of the Study

This paper is intended to make a review on the customer retention strategies that are implemented by the E-Commerce companies. The scope of E-Commerce business is wide and several entrepreneurs are selecting E-Commerce platform to conduct their business. It is significant to invite the attention of those aspiring entrepreneurs to make them understand what strategies can be used to win the customers

Customer Relationship and Retention Tactics

It's a universal truth that we have heard time and again. Retaining existing customers is far less expensive than going for new ones. This is a fact for any business, especially in E-Commerce sector where advertisements, touches and conversions always seem to be enhancing the cost aspects, finding new customers is expensive. There are some strategies that are commonly implemented by the E-Commerce companies to maintain a strong relation with its customers.

WHY DELIVERY IS IMPORTANT

Delivery Channel Efficiency

Many companies are giving proper information about the delivery status and send messages to the respective customers.

Packaging

The packaging of products will create a wow factor among customers if it is packed in such a way to meet the expectation of the customers. It will indirectly add some value to the product and company. Those experiences will make them excited and they will suggest their friends also to try these services.

“We have always relied upon word-of-mouth recommendations from customers, so we add little gifts to orders provide a little extra service and try to surprise and delight our customers. This is the best form of marketing for us”.

Customer Expectations

How a company can meet the expectation and beat such expectations? The company can meet the expectation by providing quality products that will fit for the particular customer. Beating expectation is little bit tough because it's beyond the company control. Some additional feature that actually to expected by the customer will delight them a lot. The company has to focus on under-promising and then deliver such things in a better manner.

REGISTRATION AND REPEAT PURCHASES

Registration:

Making the customers registered to the store is always difficult. The company can pursue them to register without making any difficulties to the purchases. It will add value to the company and the customers will feel comfortable. After some purchases, they will automatically register, if they are satisfied. Registration will provide enough data about the customers including order placements, special offers given, delivery payment information, etc.

Customer Accounts Management

E-Commerce companies are having millions of customer accounts throughout the country. It can be a double-edged sword. In a way the accounts can make the repurchasing of products and services easier by providing an easy access to the past information including order placement, date of delivery, shipment information, tracking information, etc. On the other hand, it may be used by more number of new customers and will choose to checkout as a guest if it's possible. The effective management of the customer accounts can be done by providing the option to create an account only after an order has been placed. If the accounts are optional, the companies can send direct invitations to them encouraging creation of new accounts

Repeat Purchases

Amazon provides one-click payments to the customers and it is considered to be one of the successful factors in online business. It enables the users for easy and repeat purchases. The user-friendly interface of the companies will act as a platform of repeat visits. The procedures should be minimized for purchases and make customers comfortable

CUSTOMER SERVICES

Customer Service through social media

Social media can be used for providing the customer services. It is now helping in building relationships. The people who „like“ or „follow“ the company tend to do that for a reason. It may be the brand name or the public image. The loyal customers are always brand ambassadors. They would like to know about the company regularly, new products and promotional activities. It's the duty of the company to reach its customers and update them regularly with the latest information

The social media giant Facebook only shows the posts to more than 5% of the company's total customers. The suggestions and criticisms will come and how far the company has reached in the market will be reflected by such social media indicators.

DISCOUNTS AND REWARDS

Reward Valuable Customers

The valuable and loyal customers are to be retained in the business. The company can find out such valuable persons in their business and can be given special consideration to those to make them branded. The special considerations like speed dispatch of the orders, special discounts, gifts, first choice of products, exclusive previews, etc.

Customer Loyalty Program

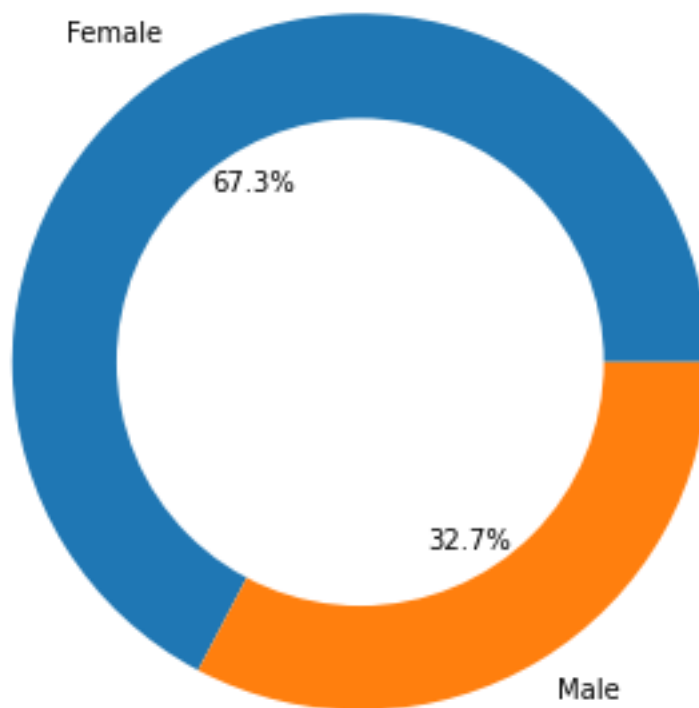
Recognizing loyal customers by the way of additional benefits and rewards will add value to the relationship. Loyal membership groups can be created to

enhance the conversations from those customers and encourage them for repeat purchases. If the customer feels that they add some value to the company and the company recognizing them, it's an added advantage for the business.

coding

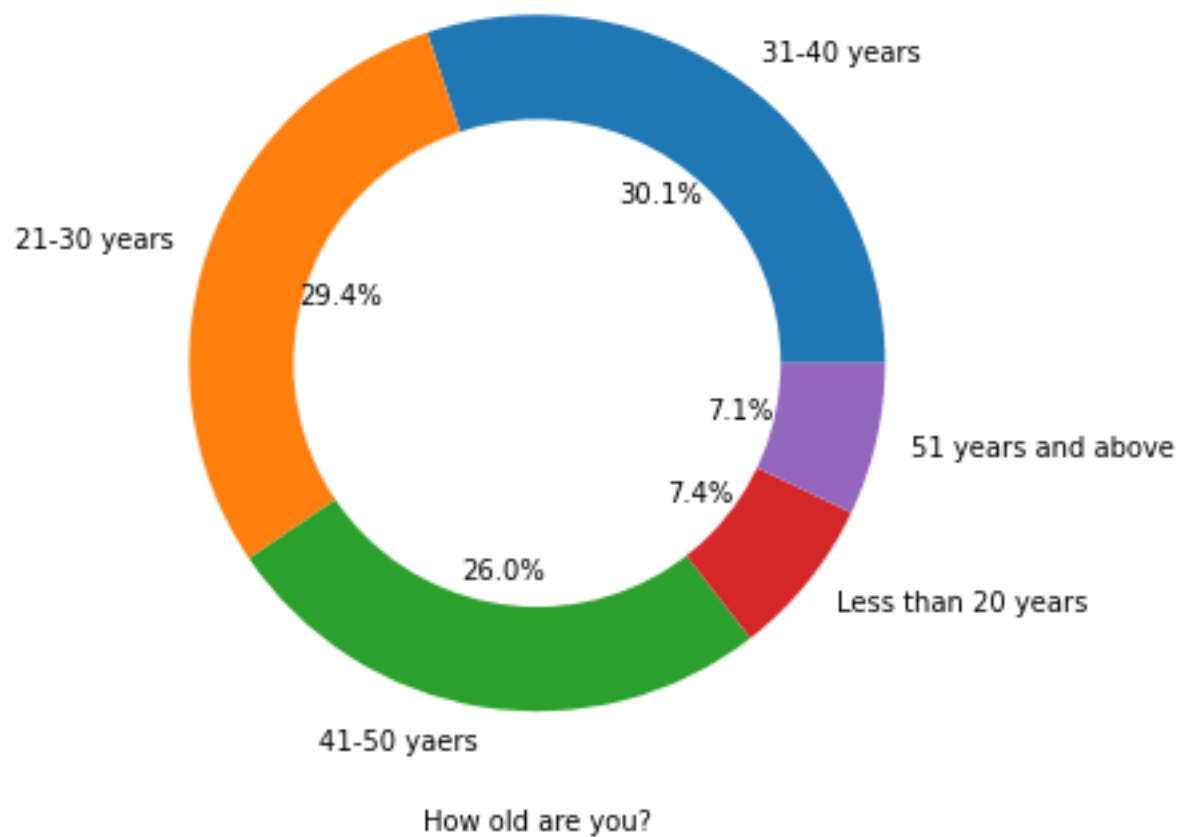
Pre-processing the columns names

Personal Info chart

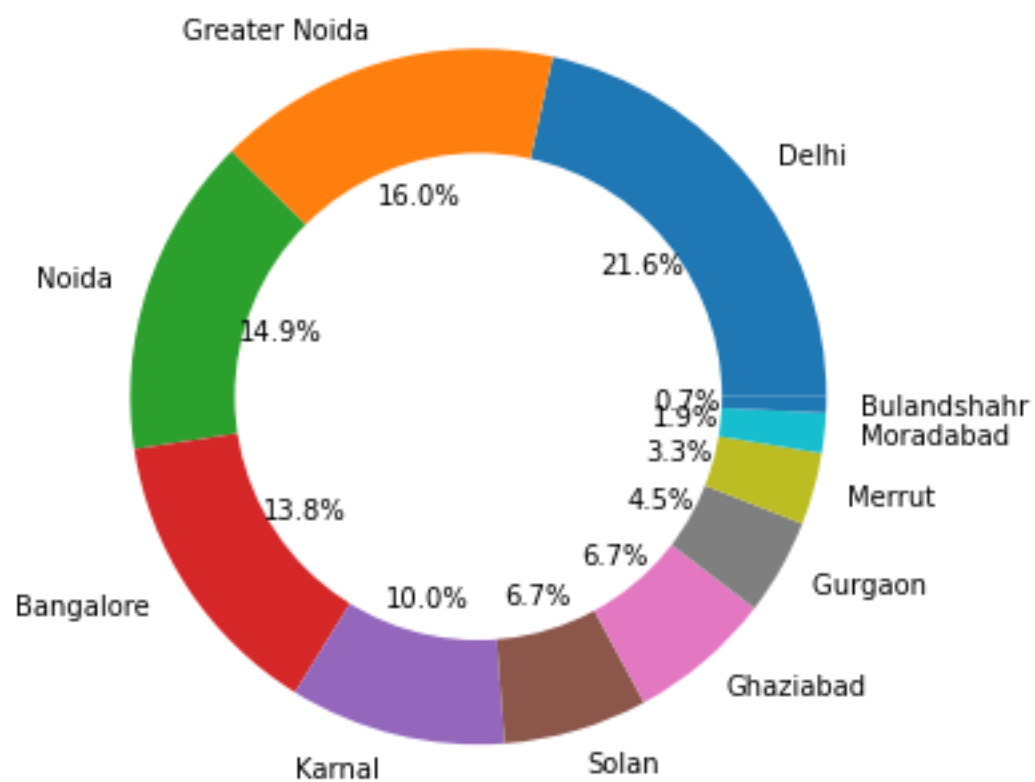


Gender of respondent

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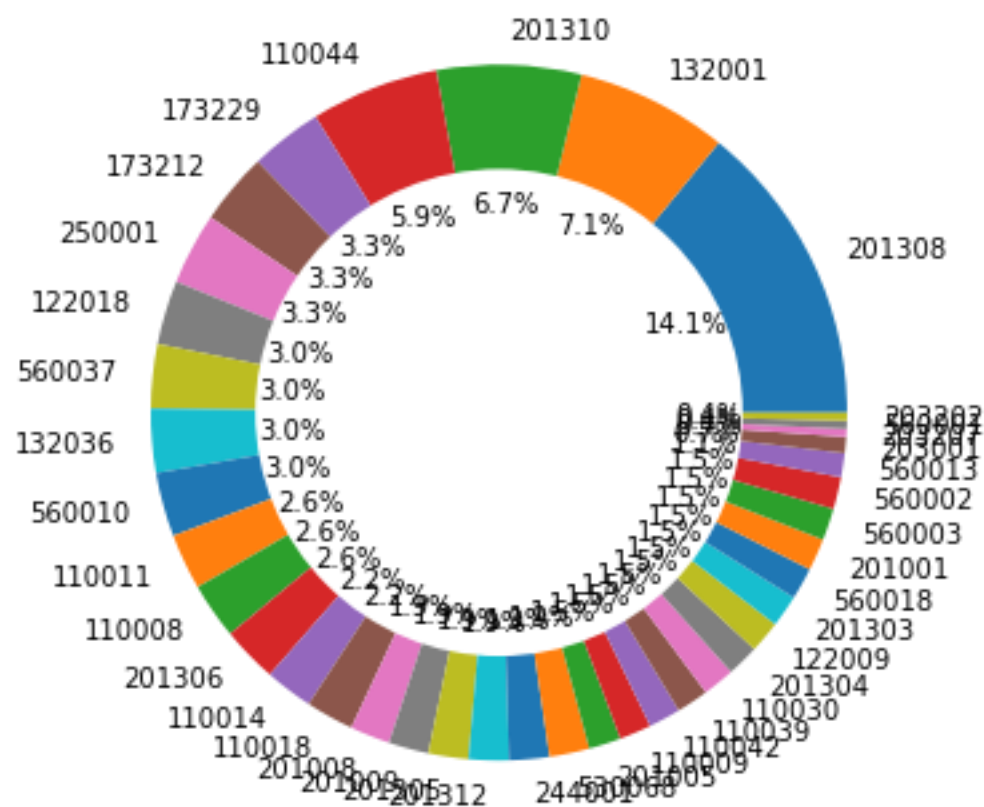


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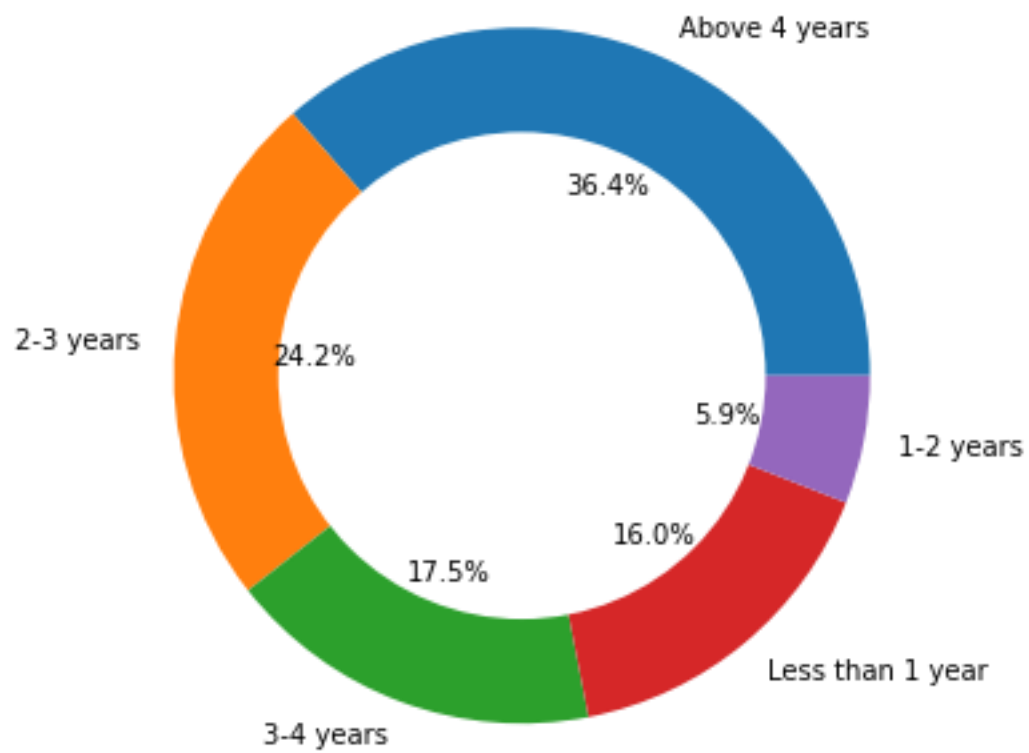
Which city do you shop online from?

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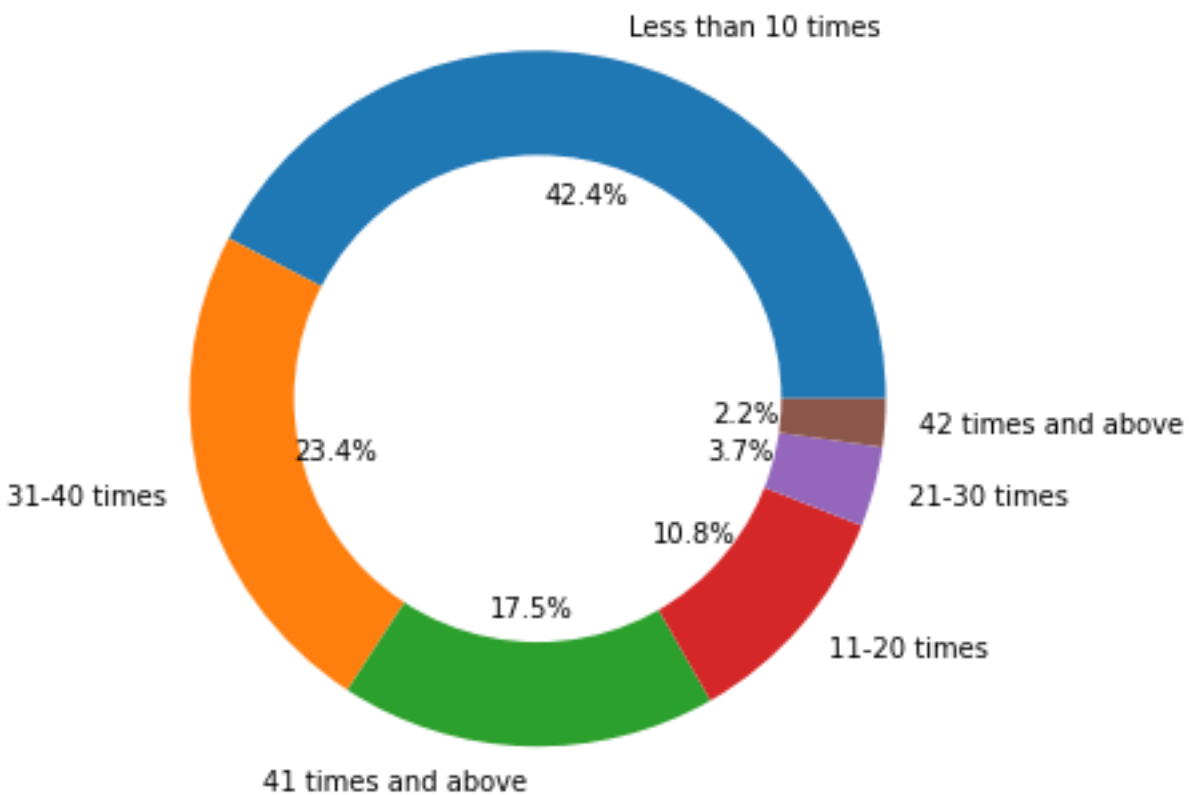
What is the Pin Code of where you shop online from?

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Since How Long You are Shopping Online ?

<Figure size 432x288 with 0 Axes>



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

<Figure size 432x288 with 0 Axes>

Dataset have 269 rows and 71 columns

All the columns are of object datatype except for pincode column which is of int type

There are no null values in the dataset

All the columns are of categorical types. There are no identifier or constant columns

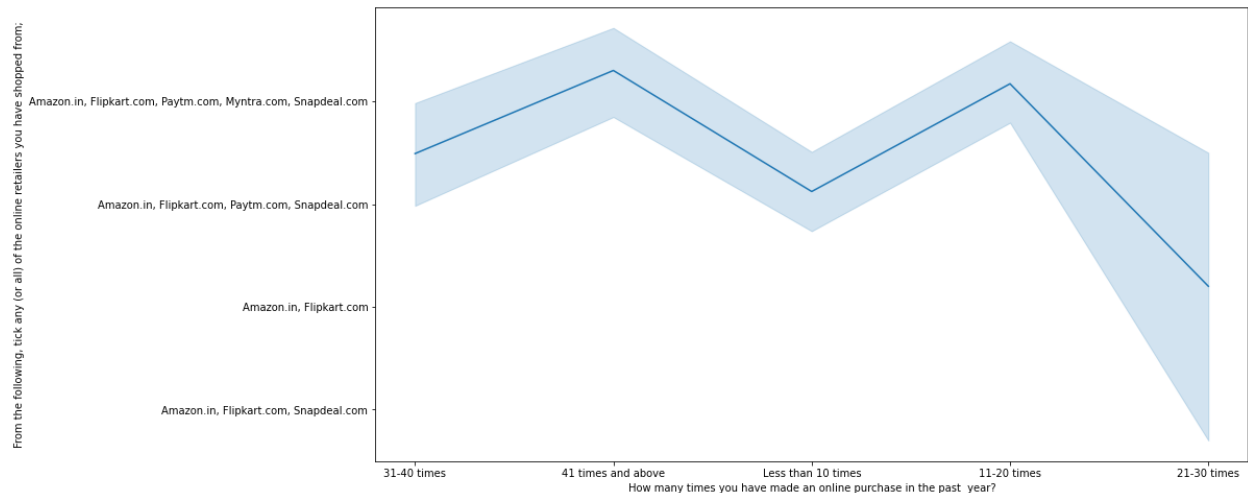
Univariate Analysis

There is double the number of women than men who have taken this survey. -Most of the people are in their 30's followed by 20's, teenagers and senior citizens are the least in number. -Most of the people belong from Delhi, Noida and Bangalore, ambiguity can also be seen as Noida has two categories (Noida and Greater Noida) which need to be handled. -Most of the people shopping online have been shopping from a long time. -Majority of people shop online 10 times a year, ambiguity can also be seen for range 42 times and above which needs to be handled.

Analysis on the basis of Various following factors

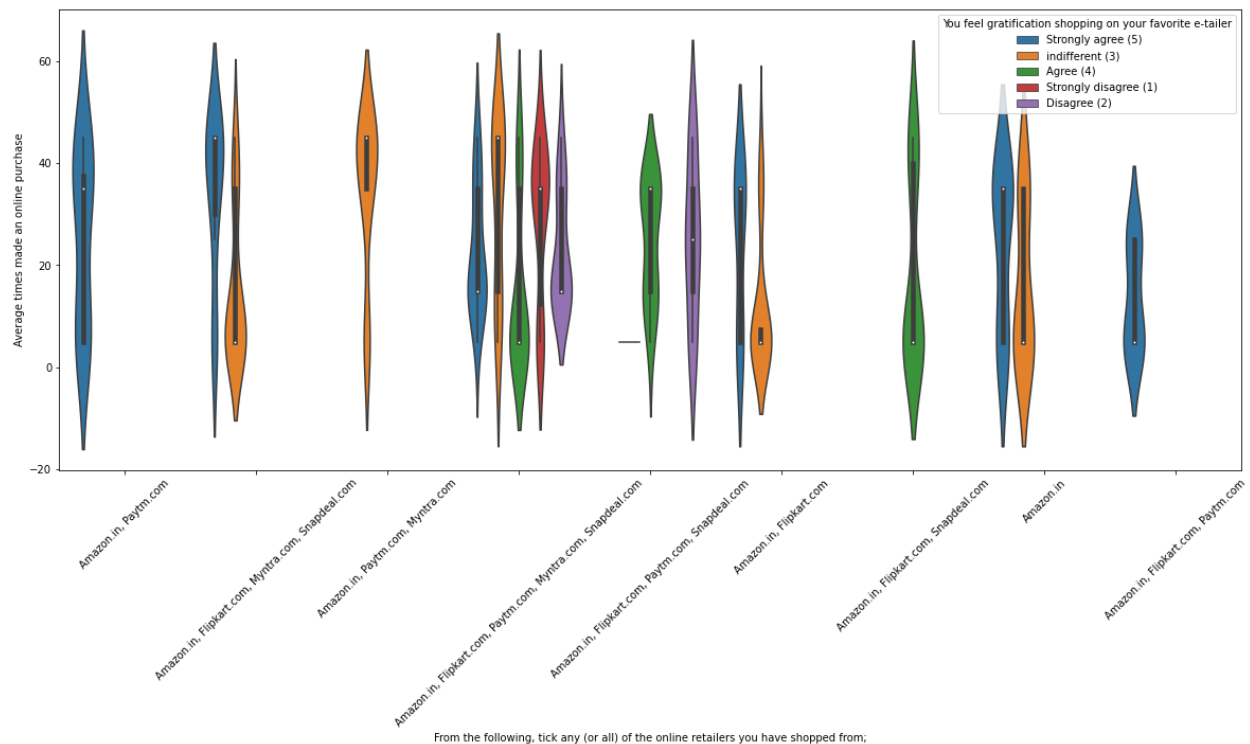
Intention of Repeat Purchase:

```
<AxesSubplot:xlabel='How many times you have made an online purchase in the past year?', ylabel='From the following, tick any (or all) of the online retailers you have shopped from;'>
```

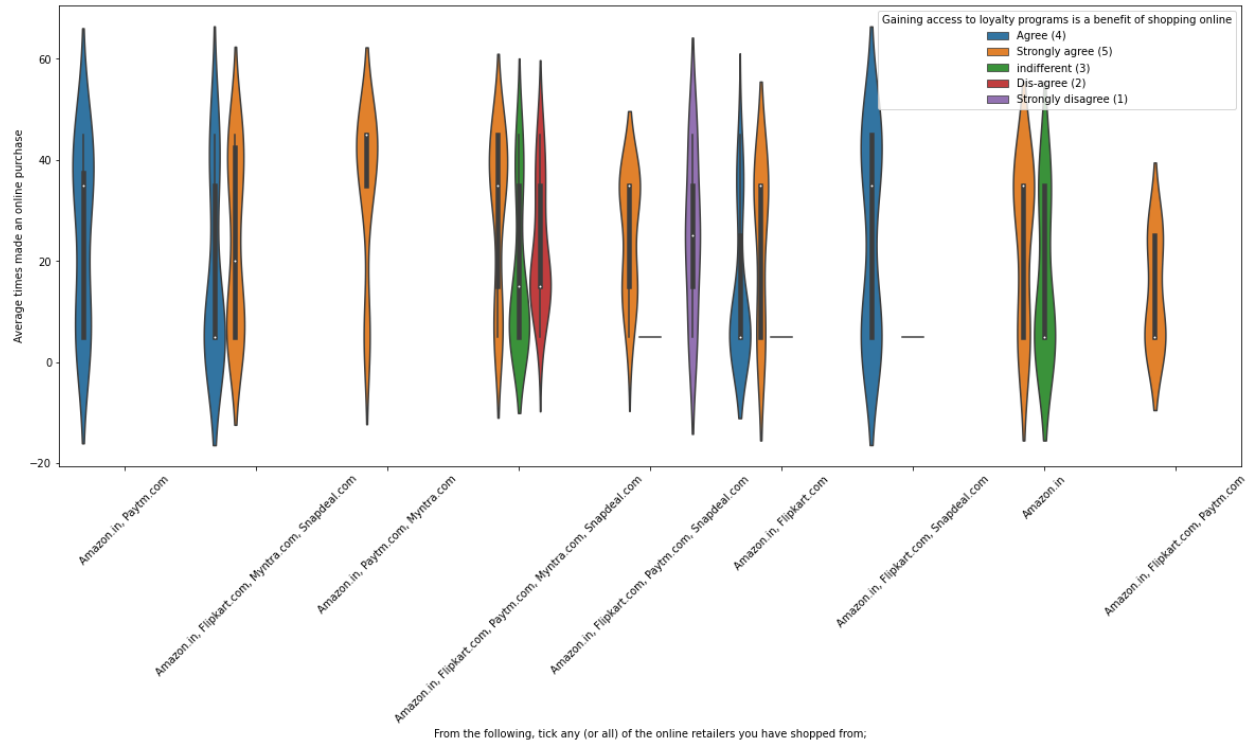


Heavy shoppers who shop more than 41 times a year shop from all the online brands, some of the people who shop for 32-40 and less than 10 times a year seem to exclude Myntra. People shop from Amazon and Flipkart whatever be the case.

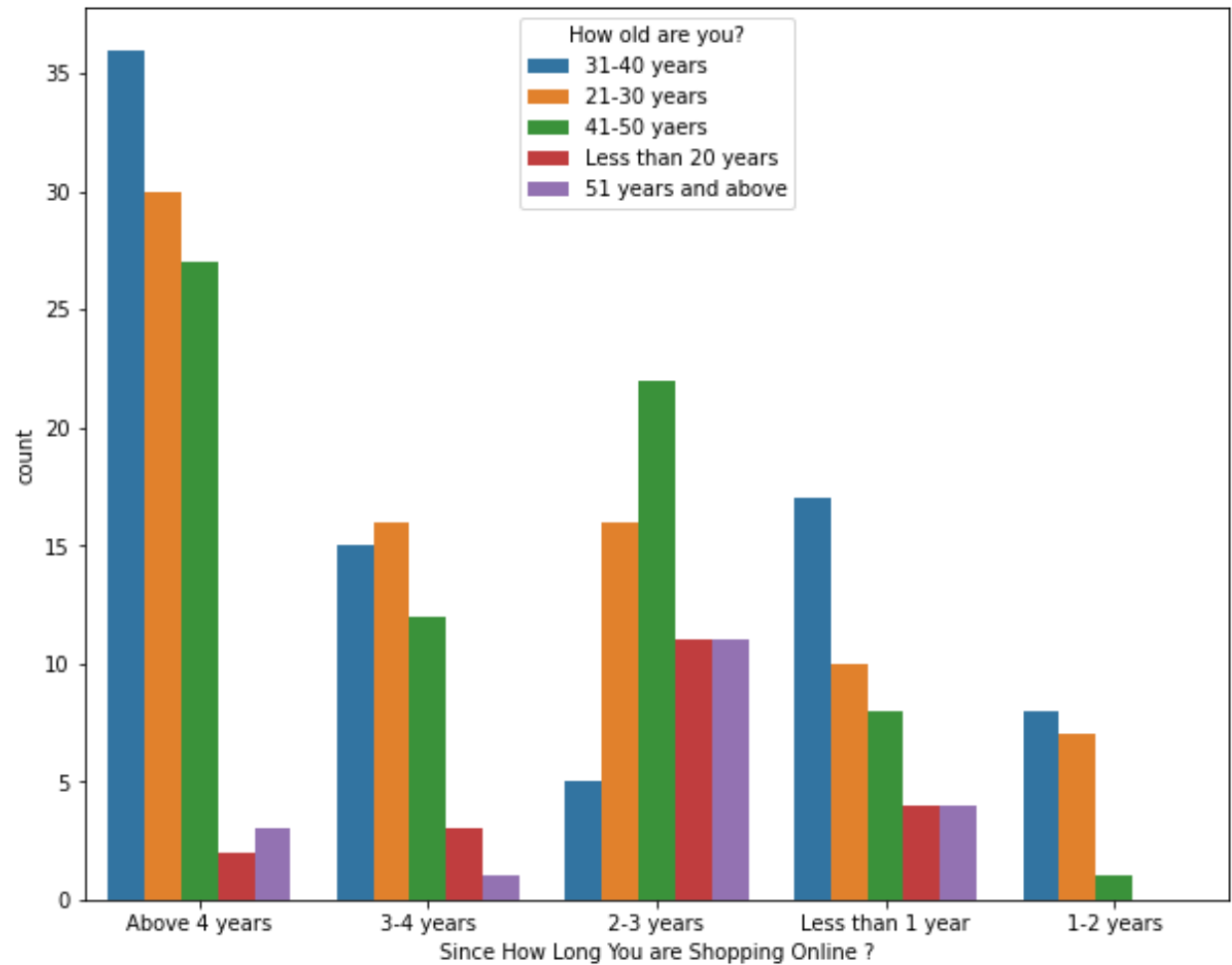
```
(array([0, 1, 2, 3, 4, 5, 6, 7, 8]),
[Text(0, 0, 'Amazon.in, Paytm.com'),
Text(1, 0, 'Amazon.in, Flipkart.com, Myntra.com, Snapdeal.com'),
Text(2, 0, 'Amazon.in, Paytm.com, Myntra.com'),
Text(3, 0, 'Amazon.in, Flipkart.com, Paytm.com, Myntra.com, Snapdeal.com'),
Text(4, 0, 'Amazon.in, Flipkart.com, Paytm.com, Snapdeal.com'),
Text(5, 0, 'Amazon.in, Flipkart.com'),
Text(6, 0, 'Amazon.in, Flipkart.com, Snapdeal.com'),
Text(7, 0, 'Amazon.in'),
Text(8, 0, 'Amazon.in, Flipkart.com, Paytm.com')])
```



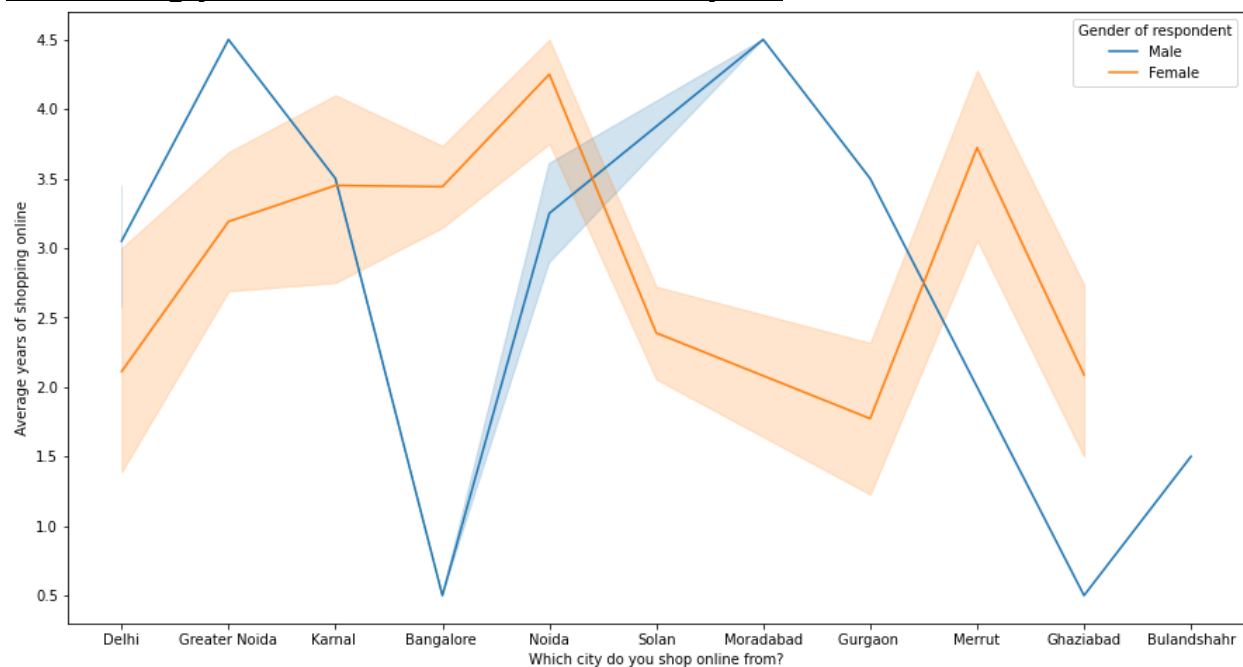
```
(array([0, 1, 2, 3, 4, 5, 6, 7, 8]),
[Text(0, 0, 'Amazon.in, Paytm.com'),
Text(1, 0, 'Amazon.in, Flipkart.com, Myntra.com, Snapdeal.com'),
Text(2, 0, 'Amazon.in, Paytm.com, Myntra.com'),
Text(3, 0, 'Amazon.in, Flipkart.com, Paytm.com, Myntra.com, Snapdeal.com'),
Text(4, 0, 'Amazon.in, Flipkart.com, Paytm.com, Snapdeal.com'),
Text(5, 0, 'Amazon.in, Flipkart.com'),
Text(6, 0, 'Amazon.in, Flipkart.com, Snapdeal.com'),
Text(7, 0, 'Amazon.in'),
Text(8, 0, 'Amazon.in, Flipkart.com, Paytm.com')])
```



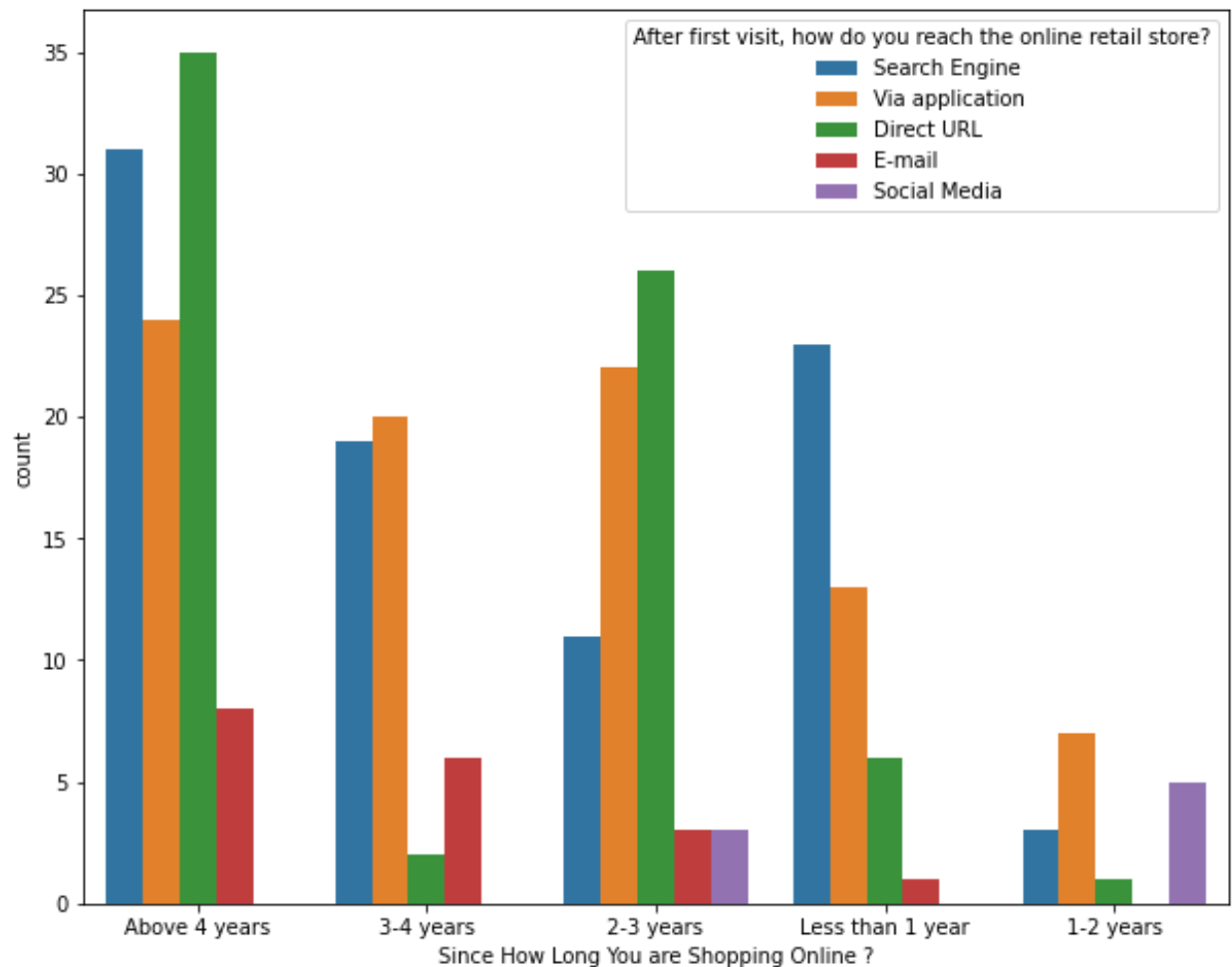
```
<AxesSubplot:xlabel='Since How Long You are Shopping Online ?', ylabel='count
'>
```



Converting years to number for better analysis




```
<AxesSubplot:xlabel='Since How Long You are Shopping Online ?', ylabel='count
'>
```



Almost all the people who have shopped from amazon, flipkart and Paytm are satisfied. People who shop from a more number of online brands doesn't seem to be satisfied.

Highest number of people have been shopping online for above 4 years except for the age group below 20 years and above 50 years. People who are shopping online for 1-2 years does not include teenagers and elder people

Converting Years to numbers for better analysis

In lines, we can see that density of female customers is more than male. Men living in banglore and Ghaziabad shop have shopped online for less than

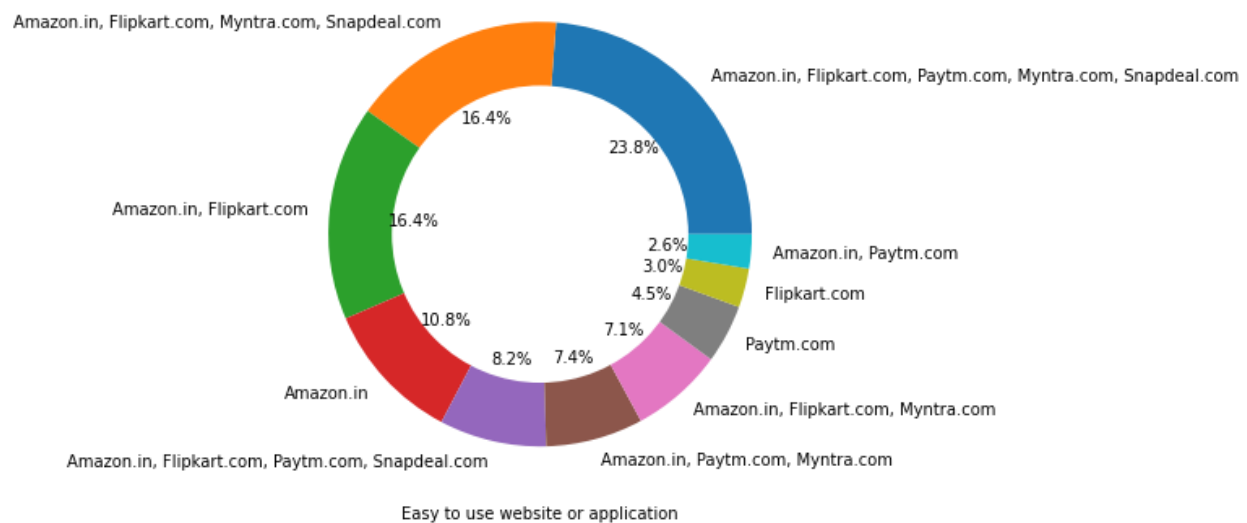
n 1 year. Highest number of men shopping online belong from delhi and noida, while men from moradabad have been shopping online for the longest. Women from meerut and noida have shopped the longest.

Even though people who are shopping online for more than 3 years do not use the application rather use search engine and direct url's in large number which indicates that online brands should update all their platforms rather than just application.

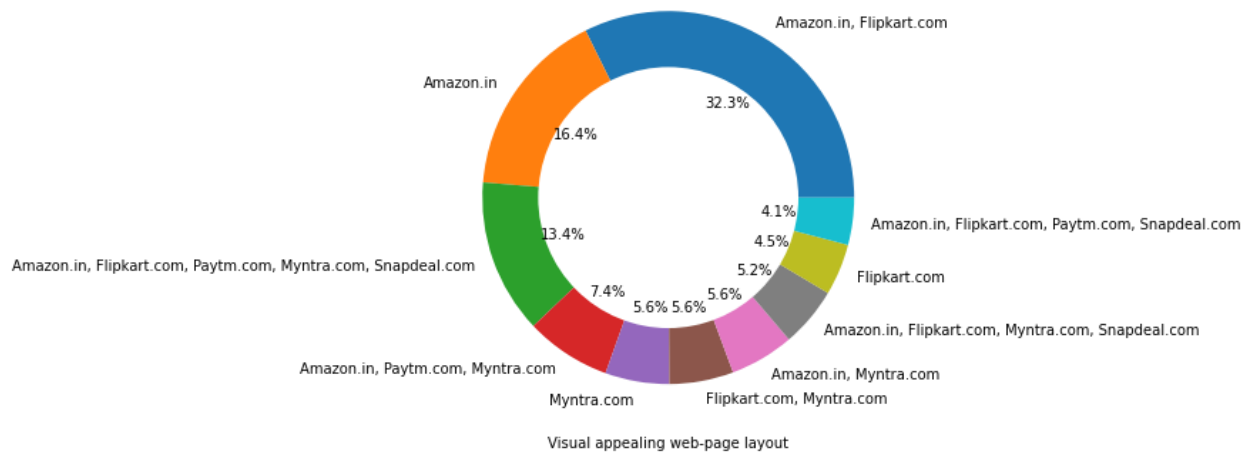
Online Retailing

Highest number of people have been shopping online for above 4 years except for the age group below 20 years and above 50 years. People who are shopping online for 1-2 years does not include teenagers and elder people

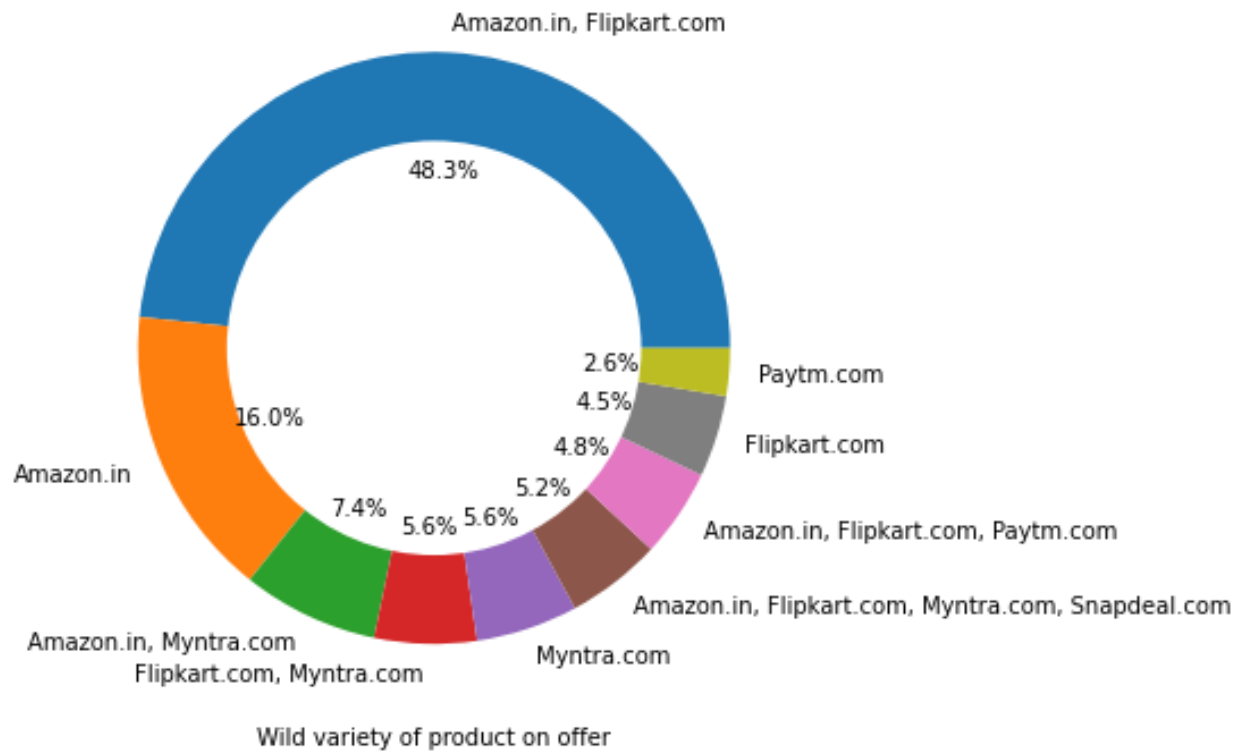
Brand Image



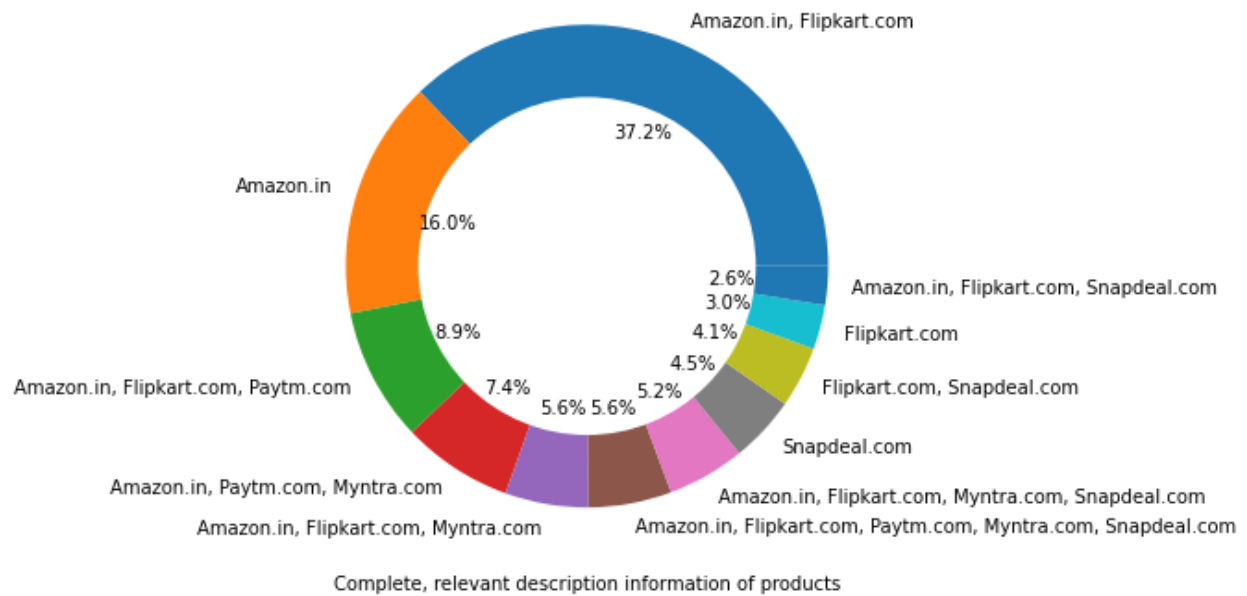
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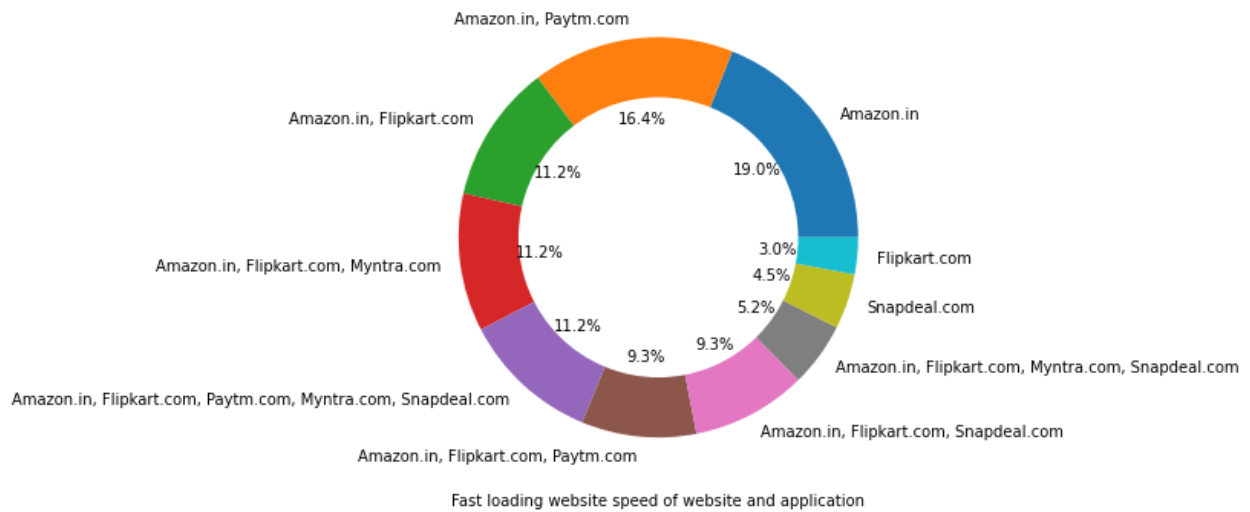
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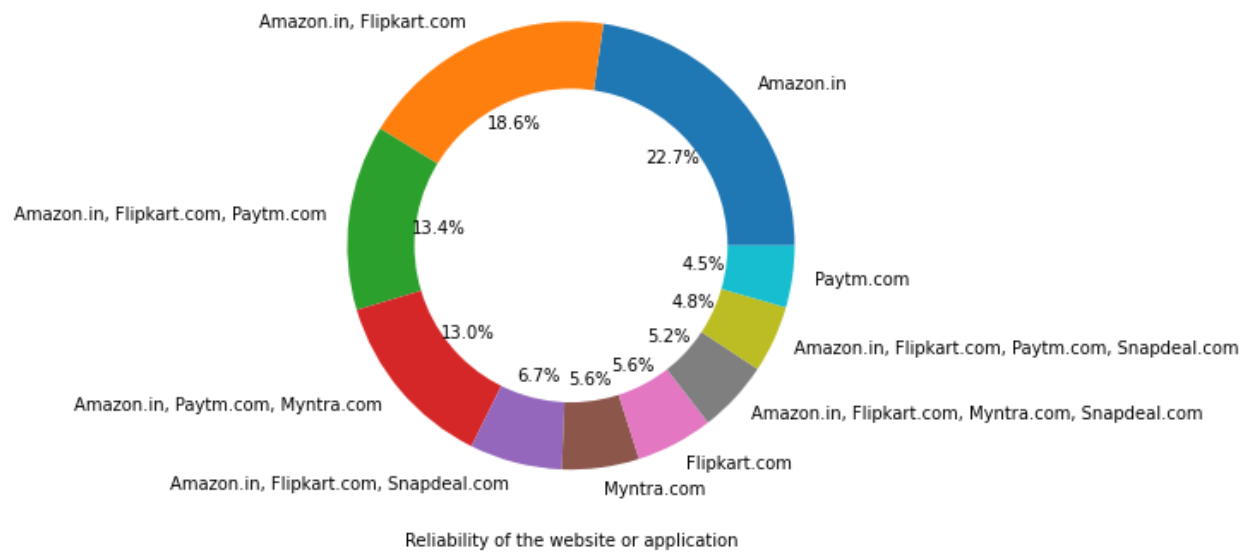
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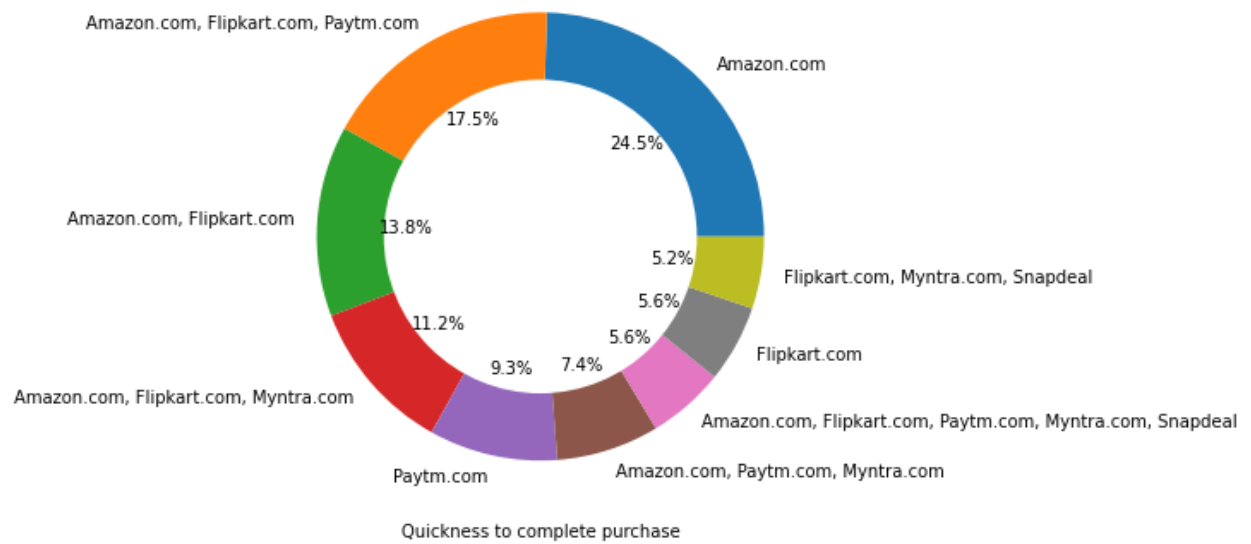
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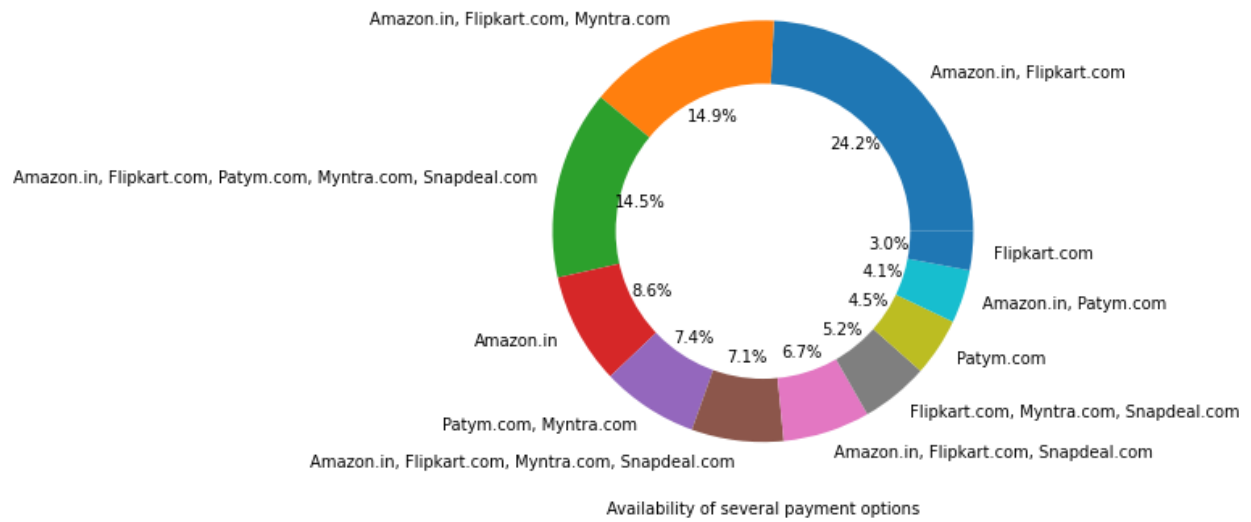
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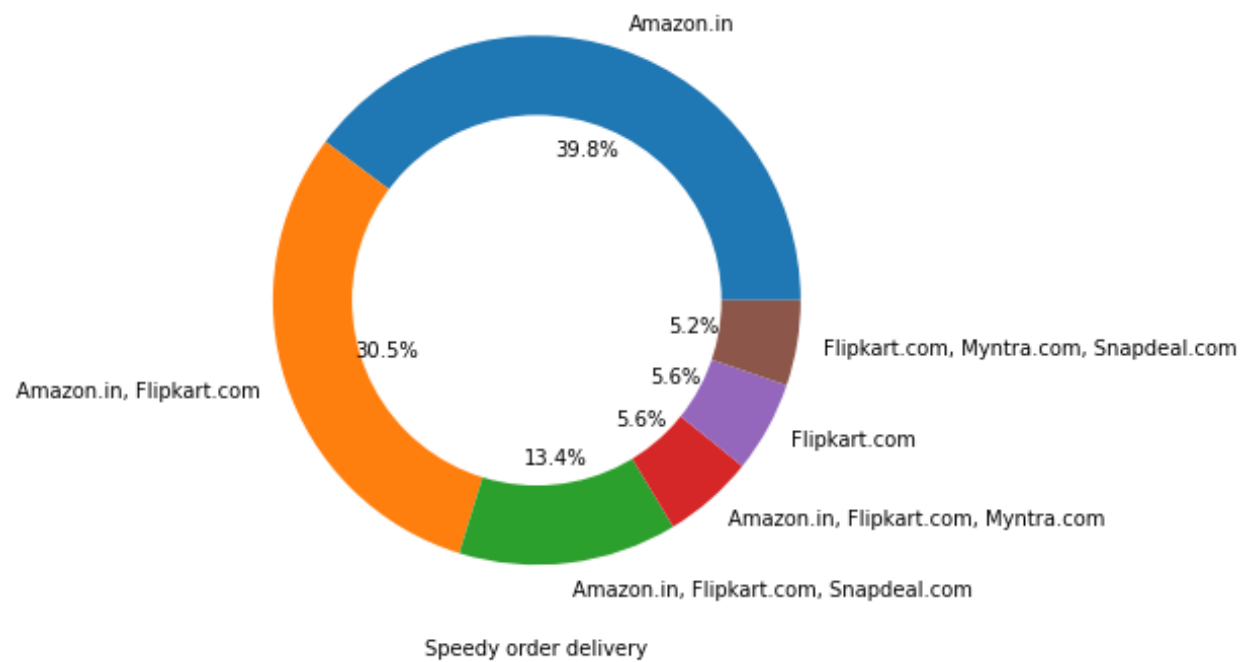
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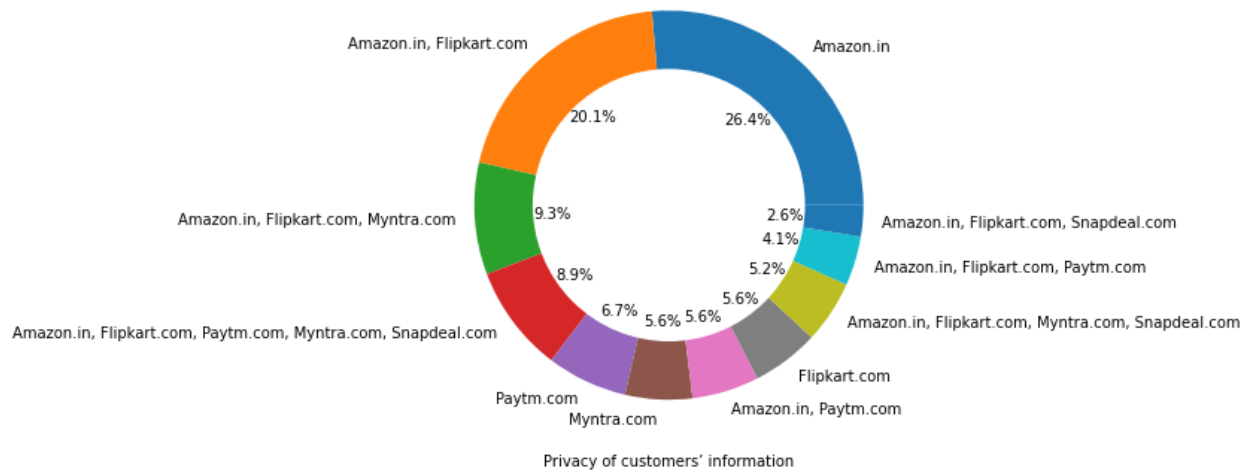
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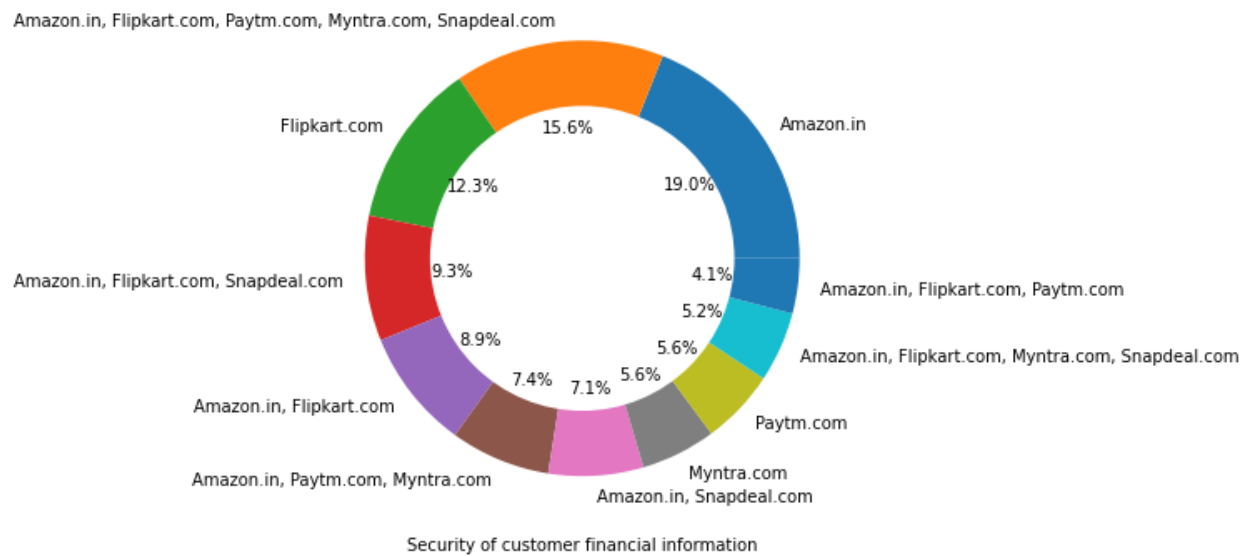
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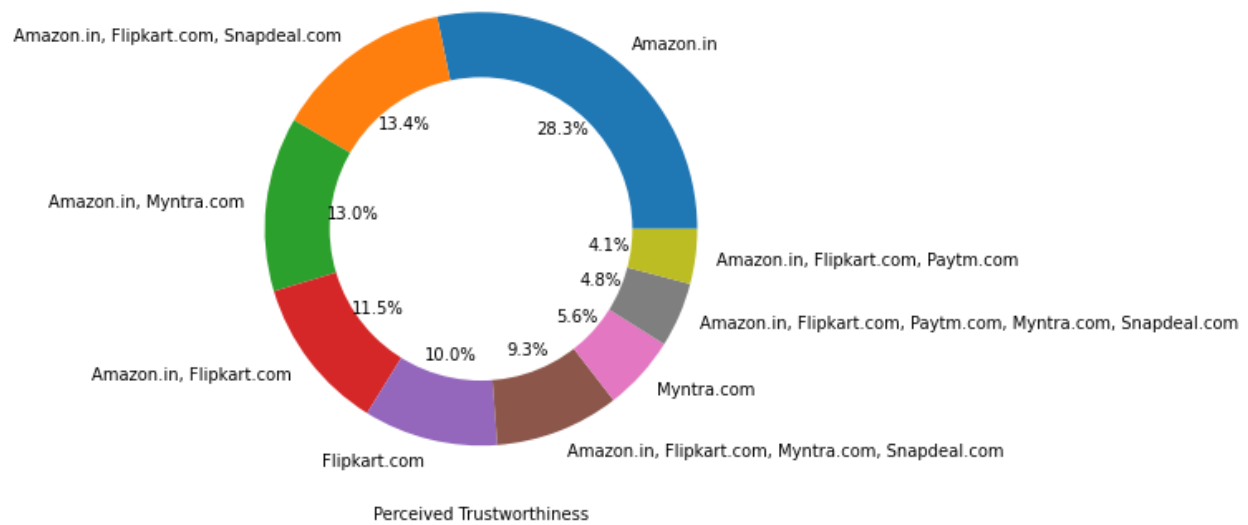
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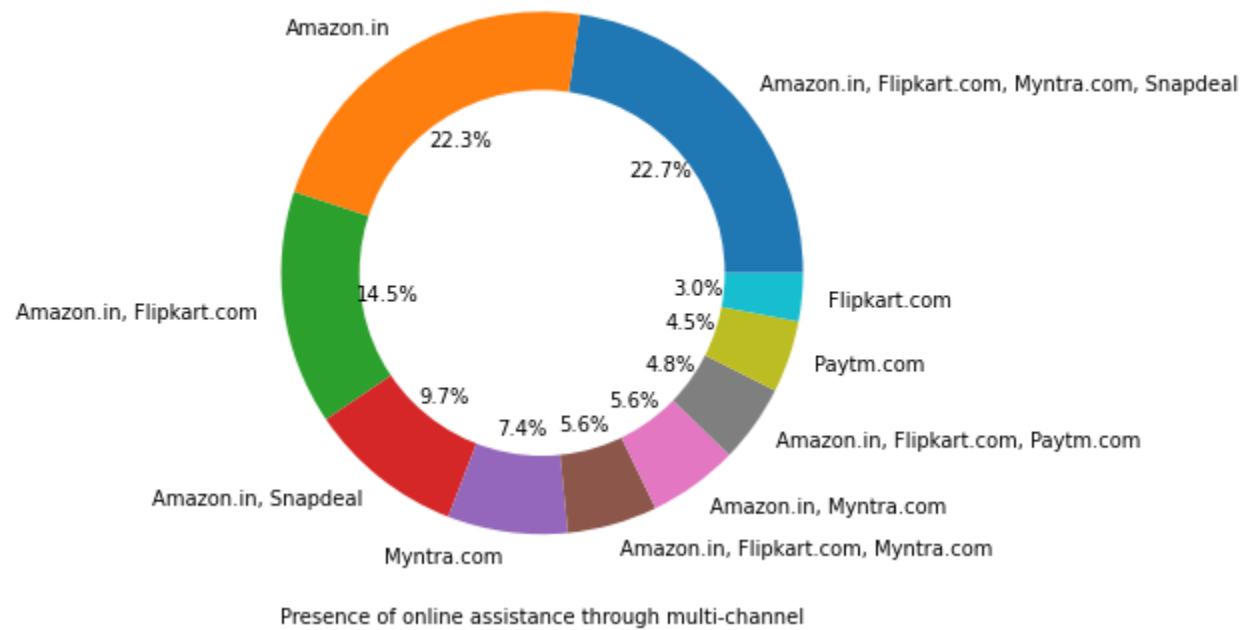
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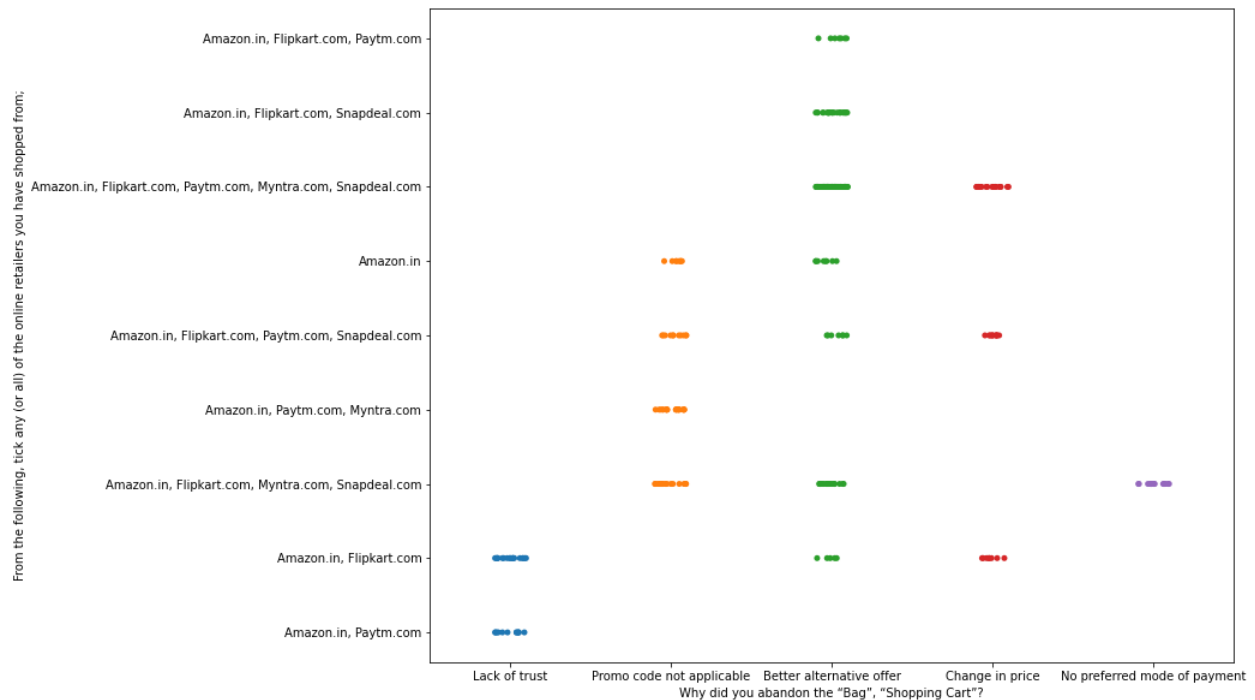


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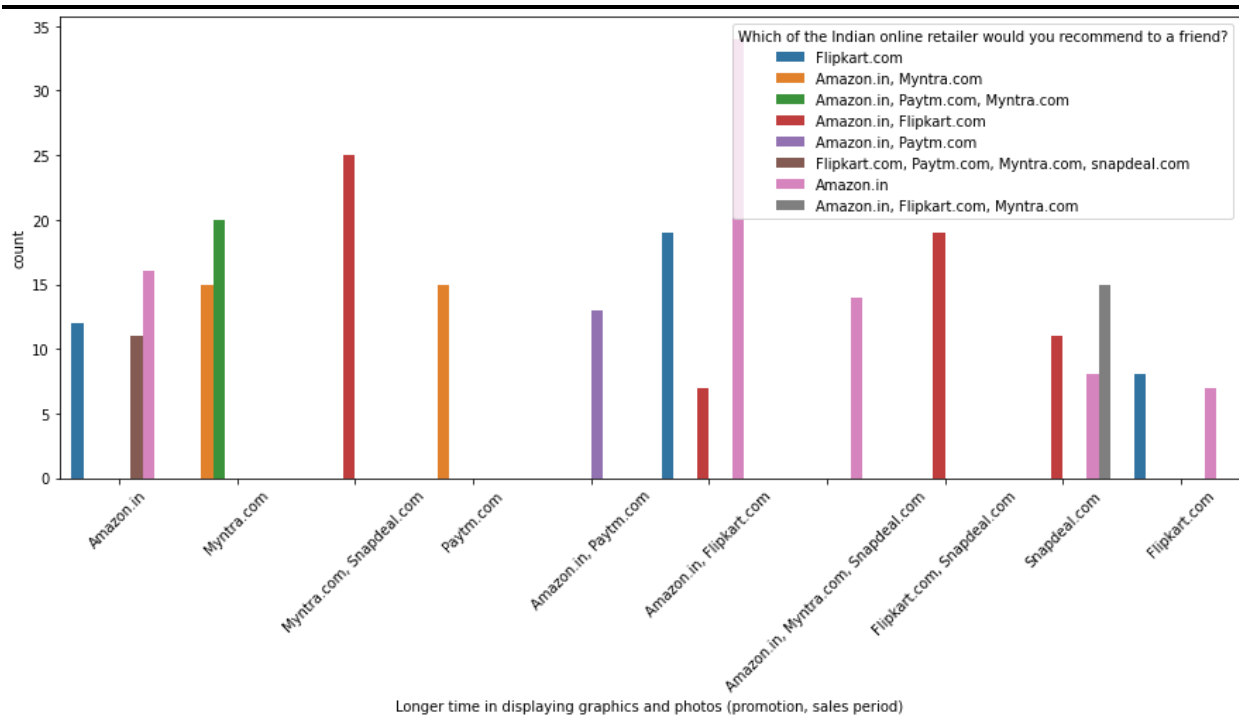
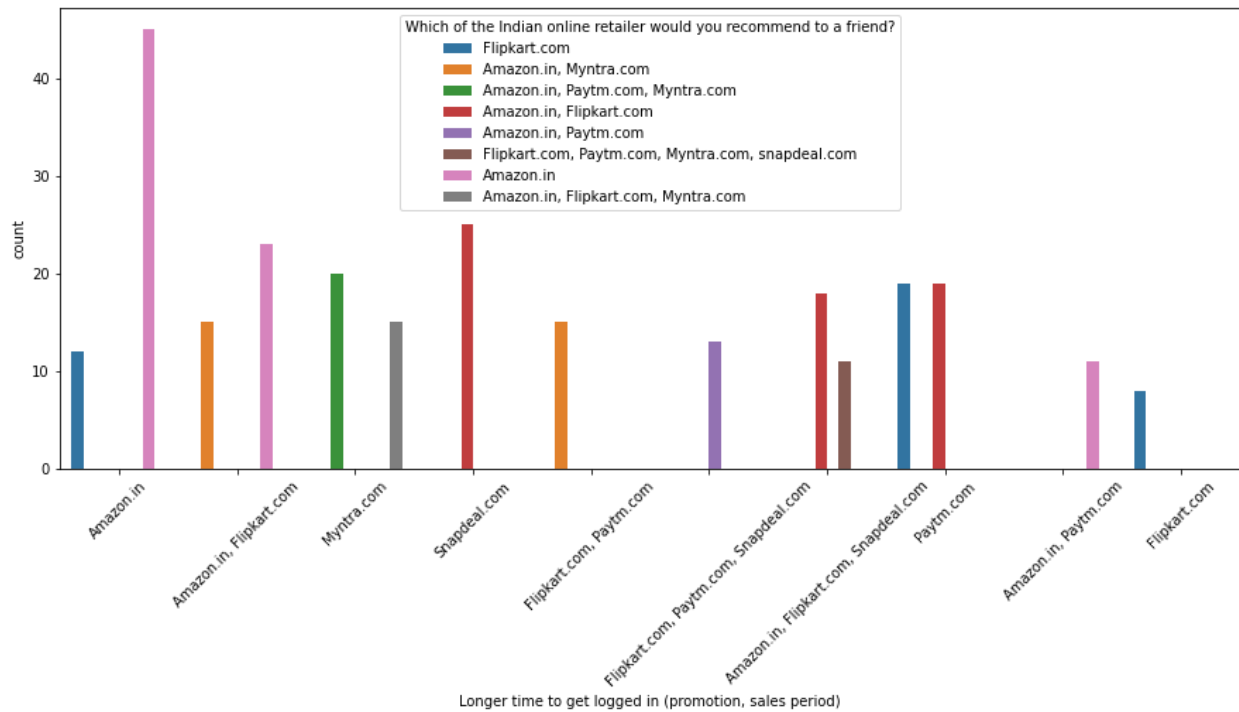
```
<AxesSubplot:xlabel='Why did you abandon the "Bag", "Shopping Cart"?', ylabel='From the following, tick any (or all) of the online retailers you have shopped from;'>
```



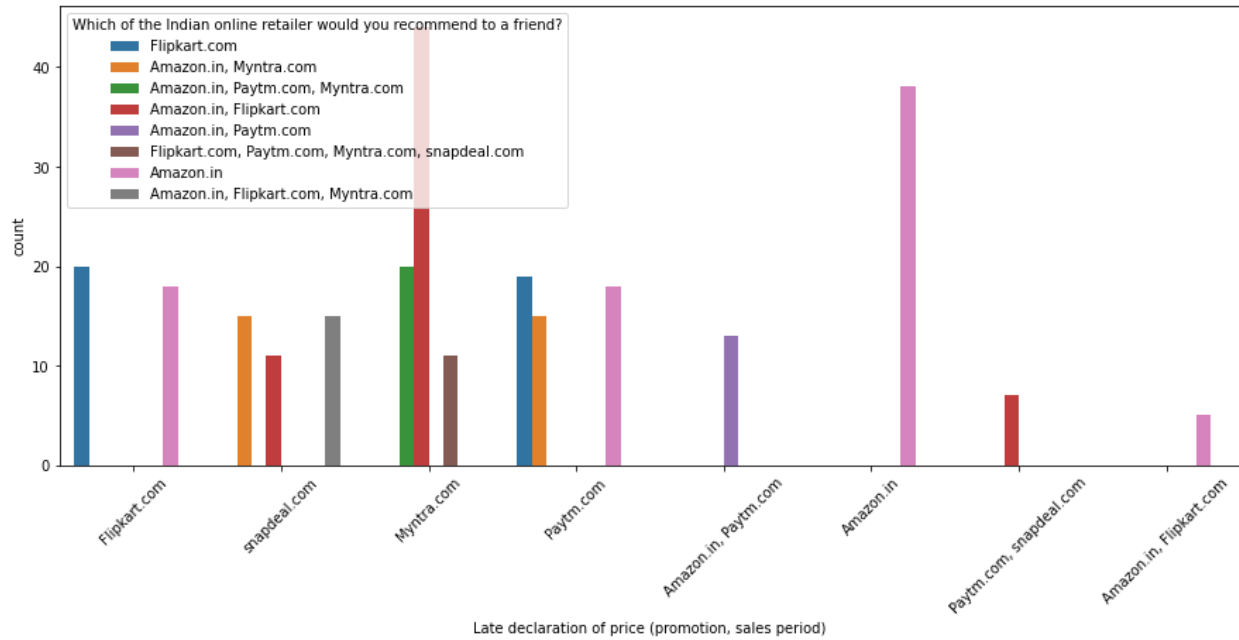
Amazon, Flipkart have been had the highest votes for having all the positive points and have maintained a very good brand image followed by paytm and the myntra.

We can clearly see that most of the time people abandon the bag is because they get a better alternative offer or promo code not applicable. There is also lack of trust seen in amazon, flipkart and paytm by some people.

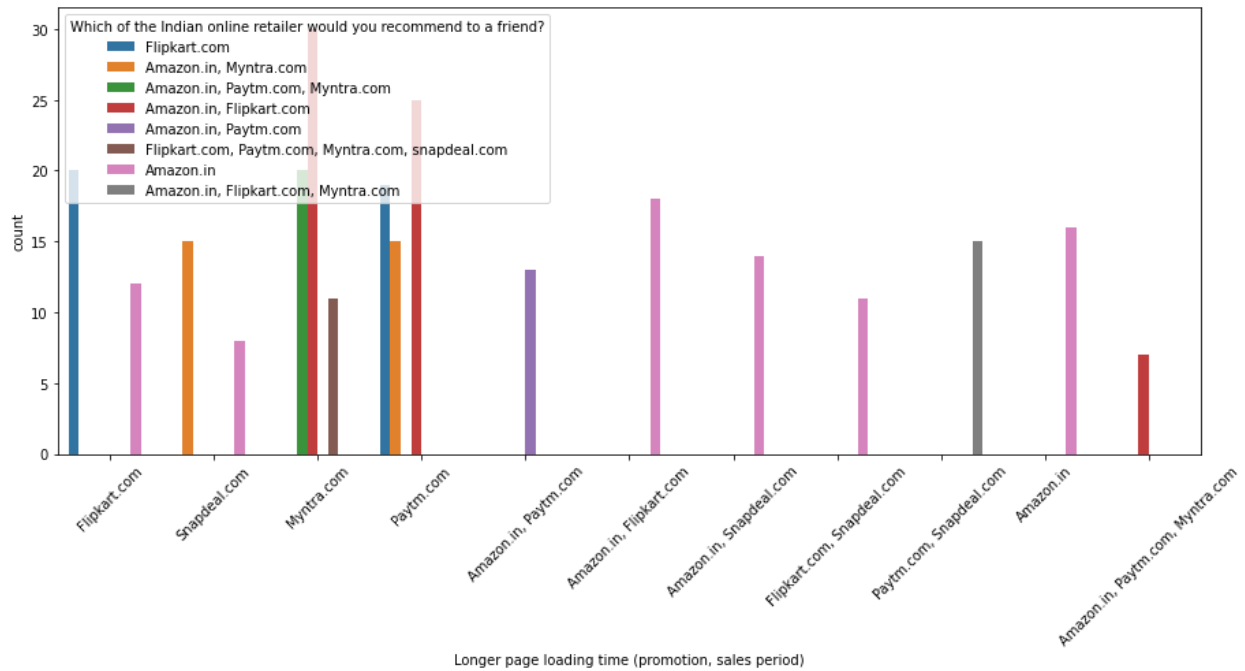
Loyalty



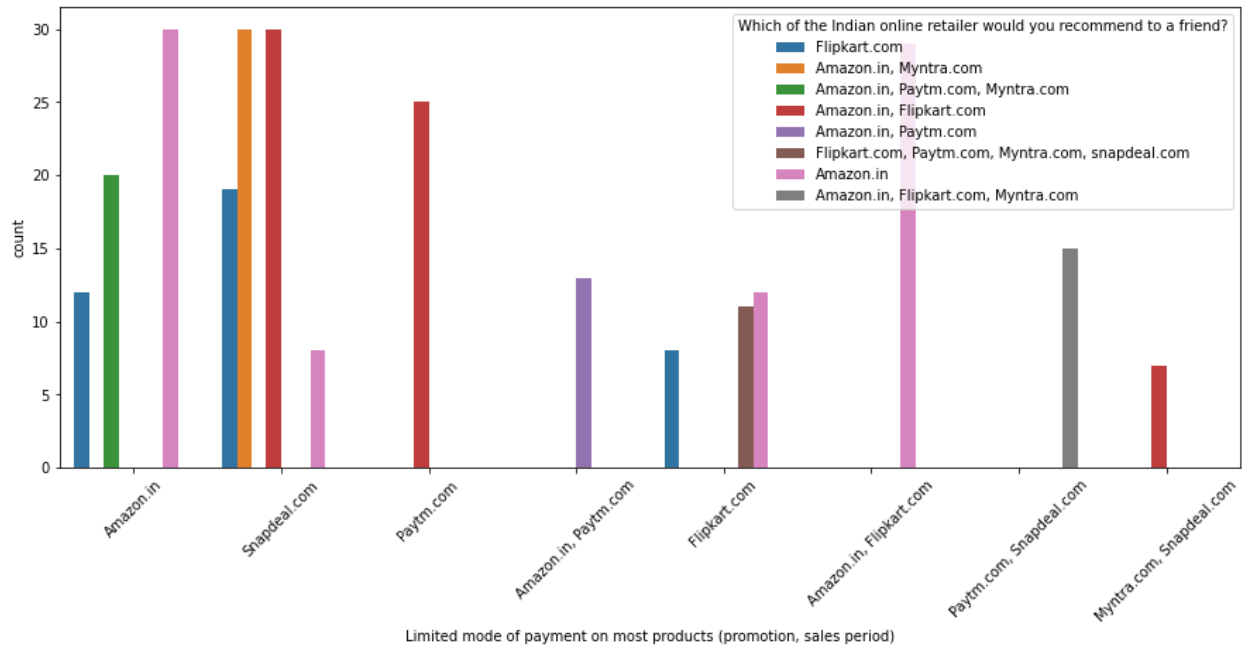
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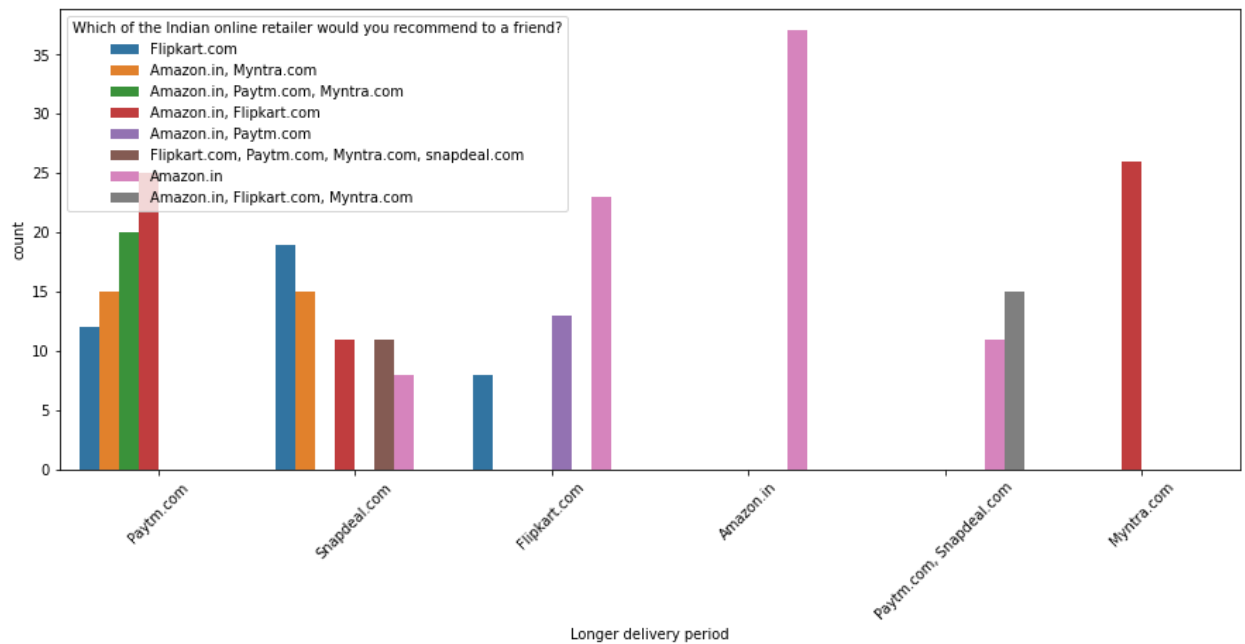
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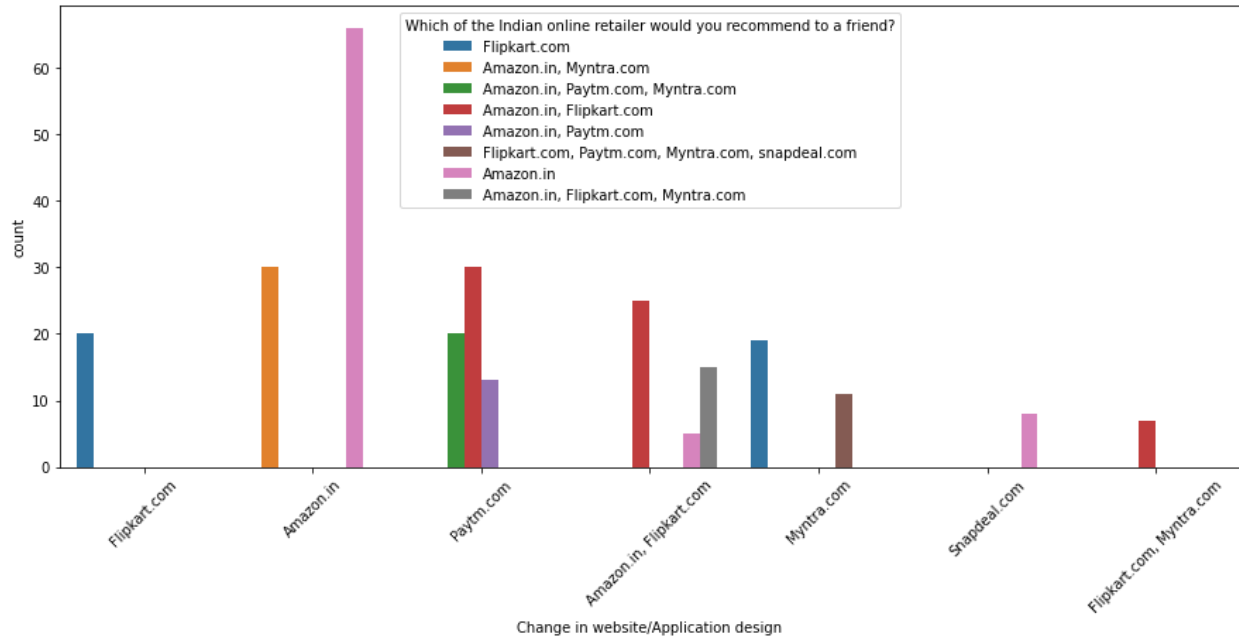
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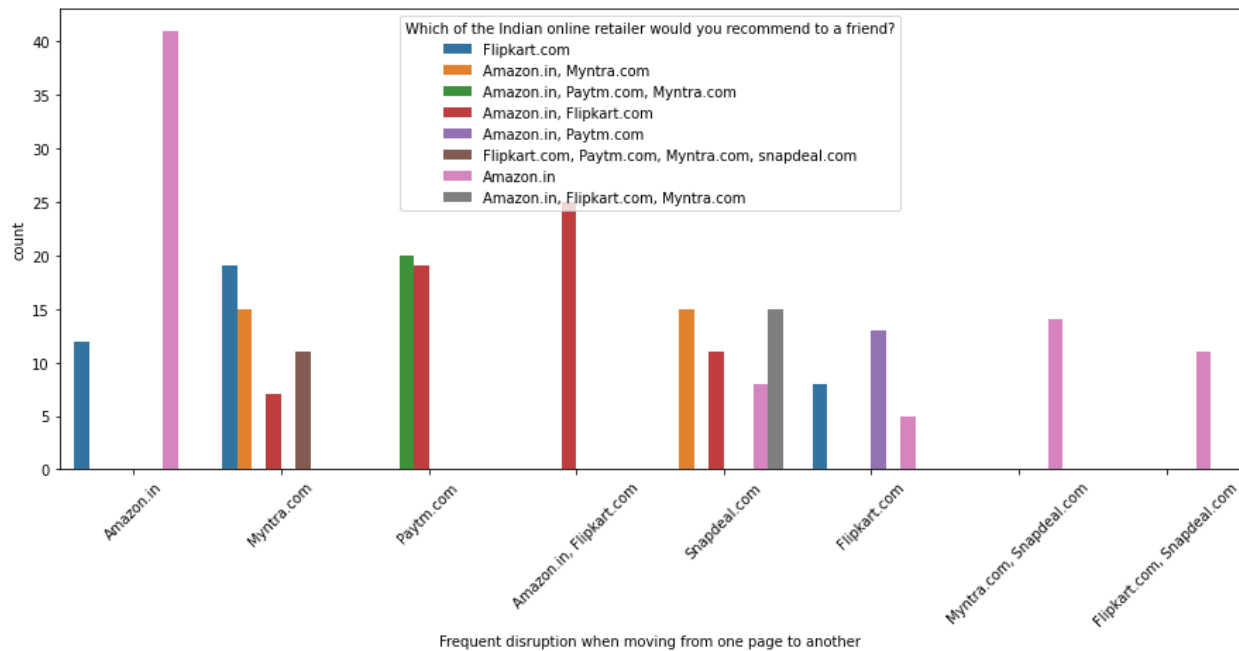
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Loyal customers are those who keep using the same brand even if it is not good as other brands.

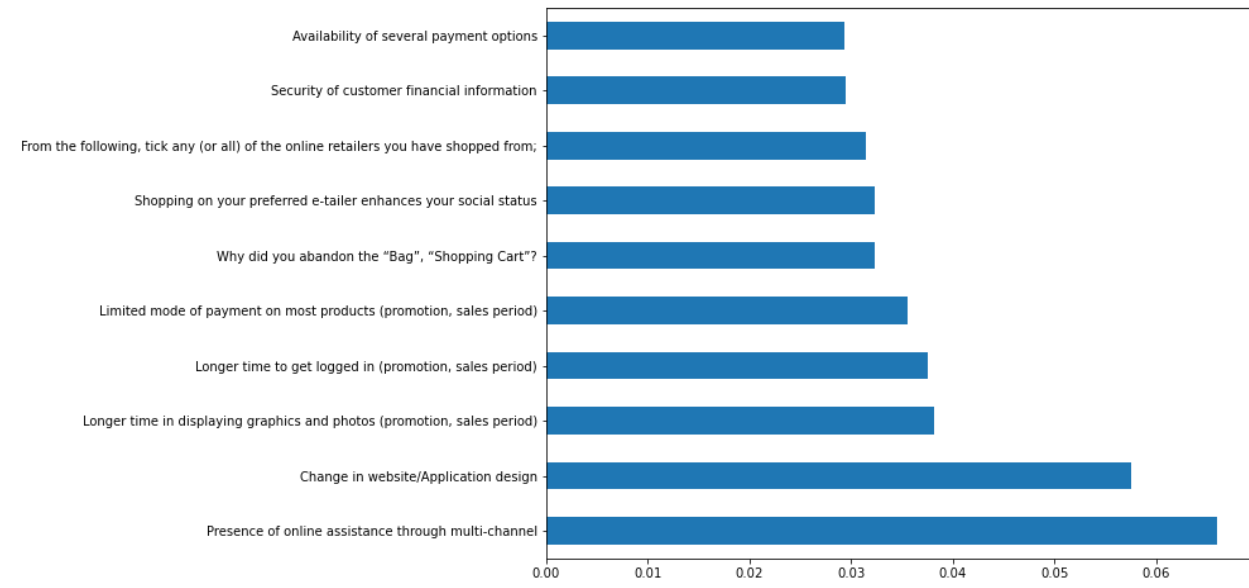
Customers seem to be more loyal to amazon, flipkart and paytm as even though many of them have given negative remarks about them still they would recommend these platforms to their friend.

Processing the dataframe

Separating the label from rest of the features

Scaling

Using various feature selection method to see which feature affects the Most



using Features importance of random forest.

A random forest is a meta estimator that fits a number of decision tree classifiers on various sub-samples of the dataset and uses averaging to improve the predictive accuracy and control over-fitting. The sub-sample size is controlled with the `max_samples` parameter if `bootstrap=True` (default), otherwise the whole dataset is used to build each tree.

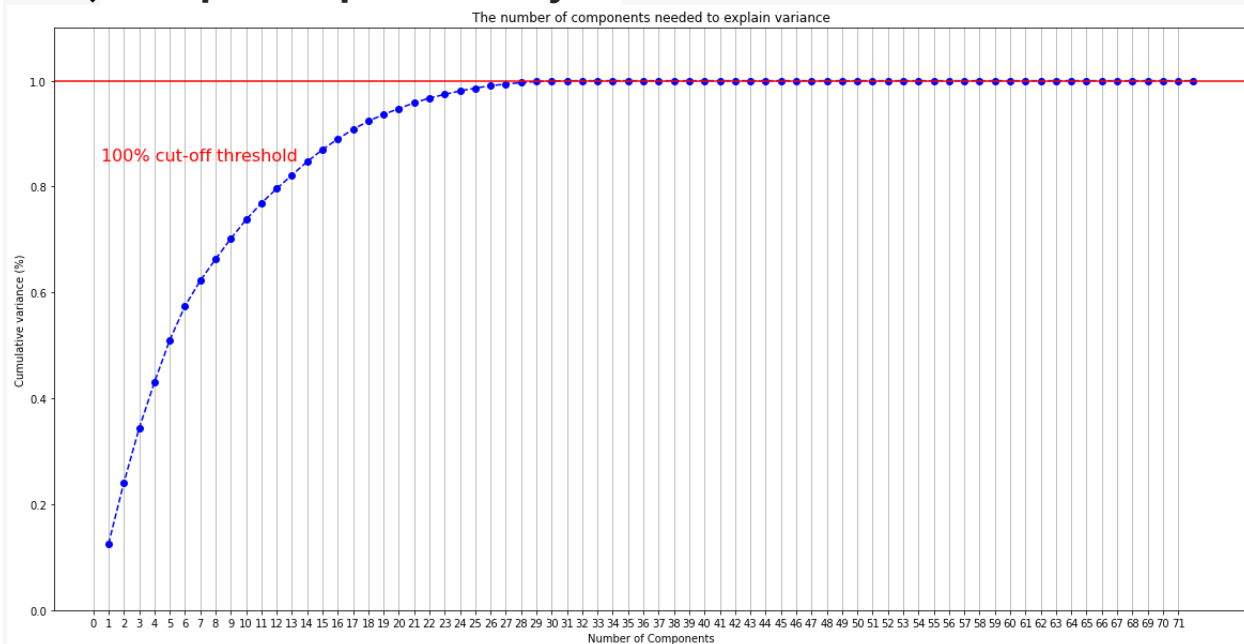
In the above chart we can see that above features are of most importance in determining which platform will a customer recommend to his friend.

Using chi2 test

Compute chi-squared stats between each non-negative feature and class.

```
from sklearn.feature_selection import chi2
```

PCA(Principal component analysis)



Linear dimensionality reduction using Singular Value Decomposition of the data to project it to a lower dimensional space. The input data is centered but not scaled for each feature before applying the SVD.

```
from sklearn.decomposition import PCA
pca = PCA().fit(x)
```

We can clearly see that with 29 features all the information can be retained

Modeling Phase

Random Forest

In this article, we will see how to build a Random Forest Classifier using the Scikit-Learn library of Python programming language and in order to do this, we use the IRIS dataset which is quite a common and famous dataset. The Random Forest or Random Decision Forest is a supervised Machine learning algorithm used for classification, regression, and other tasks using decision trees.

A random forest is a meta estimator that fits a number of decision tree classifiers on various sub-samples of the dataset and uses averaging to improve the predictive accuracy and control over-fitting. The sub-sample size is co

ntrolled with the max_samples parameter if bootstrap=True (default), otherwise the whole dataset is used to build each tree.

Xgboost

XGBoost provides a **wrapper class** to allow models to be treated like classifiers or regressors in the scikit-learn framework. This means we can use the full scikit-learn library with XGBoost models. The XGBoost model for classification is called XGBClassifier. We can create and fit it to our training dataset.

Hyperparameter Tuning

The best way to think about hyperparameters is like the settings of an algorithm that can be adjusted to optimize performance.

Evaluation Metrics

Accuracy Score. Accuracy is the most basic version of evaluation metrics

CONCLUSION

The cost of the product, the reliability of the E-commerce company and the return policies all play an equally important role in deciding the buying behavior of online customers. The cost is an important factor as it was the basic criteria used by online retailers to attract customers. The reliability of the E-commerce company is also important, as it is even required in offline retail. It is important because customers are paying online, so they need to be sure of security of the online transaction. The return policies are important because in online retail customer does not get to feel the product. Thus, he wants to be sure that it will be possible to return the product if he does not like it in real. Whereas, the logistics factor, which included Cash on delivery option, one day delivery and the quality of packaging plays a secondary role in this process though these are Must-be-quality. This is so because these all does not interfere with the real product and people believe that this is the basic value that E-commerce websites provide.

All the websites were not equally preferred by online customers. Amazon was the most preferred followed by Flipkart. This can be explained easily by previous result that we got. These two companies are most trusted in the industry and hence, have a huge reliability. Also, the sellers listed on these websites are generally from Tier 1 cities as compared to Snapdeal and Paytm which have more

sellers from tier 2 and 3 cities. Also, these websites have the most lenient return policies as compared to others and also the time required to process a return is low for these.