# E-Retail factors for CUSTOMER Activation and Retention

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# Contents

- ❑ Problem Statement
- ❑ EDA & Data Visualization
- ❑ Observations

# Problem Statement

Success of Online store or e-Store is most importantly dependent on *Customer satisfaction*.
It is one of the most important factors that guarantee its success.
Customer satisfaction is a key stimulant of :

i.      Purchase,

ii.     Repurchase Intentions, and

iii.    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. The research furthermore investigated the factors that influence the online customers repeat purchase intention. The combination of both utilitarian value and hedonistic values are needed to affect the repeat purchase intention (loyalty) positively. The data is collected from the Indian online shoppers. Results indicate the e-retail success factors, which are very much critical for customer satisfaction.

Five major factors that contributed to the success of an e-commerce store have been identified as:

a.      Service Quality,

b.      System Quality,

c.      Information Quality,

d.      Trust, and

e.      Net benefit.

f.      The research furthermore investigated the factors that influence the online customers repeat purchase intention. The combination of both utilitarian value and hedonistic values are needed to affect the repeat purchase intention (loyalty) positively. The data is collected from the Indian online shoppers. Results indicate the e-retail success factors, which are very much critical for customer satisfaction.

# Problem Statement
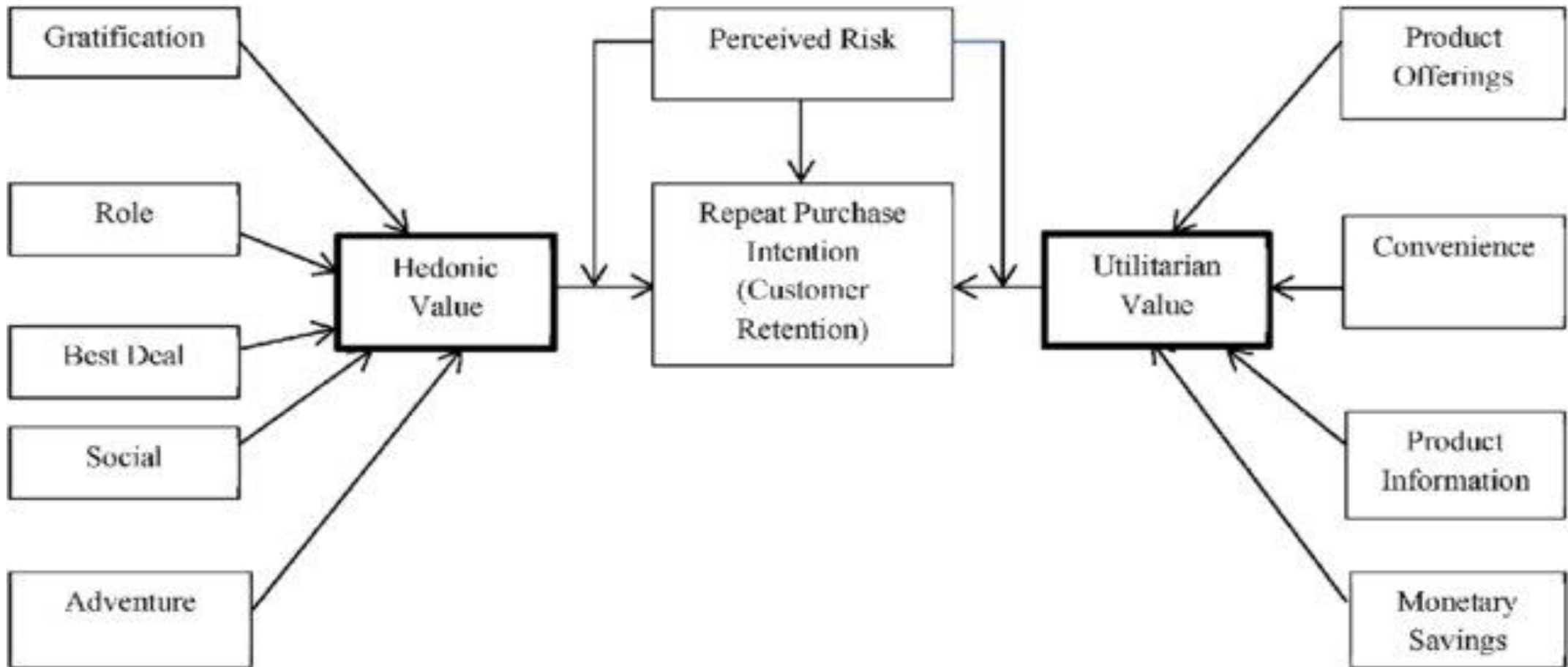
# EDA & Data Visualization

❖ EDA

• While checking data type for data all data are object data type leaving "Pin_Code" as that is int64 data type.
• There were no null values in the dataset.
• There are no columns that are containing "0" in data set.
• As we can see that there are repeated values in "Purchase_Frequency" & "Internet_Access_Mode" so we will remove those to get the real data set which will further help in ML.

❖ Data Visualization

- Using Univariate Analysis
• Count plotting for categorical columns

1. Gender
• As shown in Fig.1 Female customers are more as compared to male.
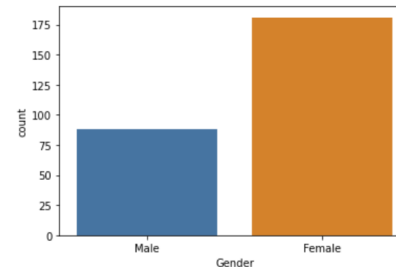
2. Age
• As shown in Fig. 2 Age range of 31-40 are more than other age ranges
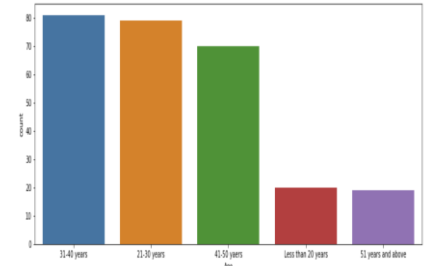
3. City of Shopping
• As shown in Fig. 3 count of online shopping in Delhi is more than other cities.


Fig.1


Fig.2
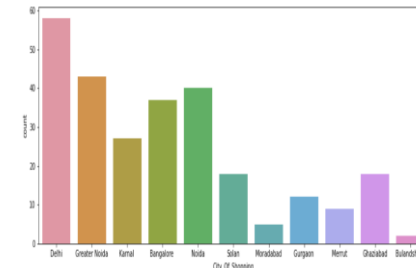

Fig.3

# EDA &
# Data Visualization

4. Pin Code
- As shown in Fig.4 201308 area done more shopping than other pin code areas.
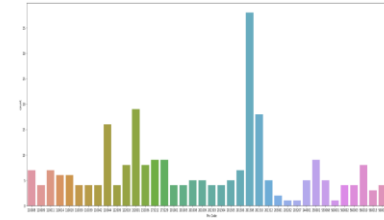

Fig.4

5. Online Shopping Since
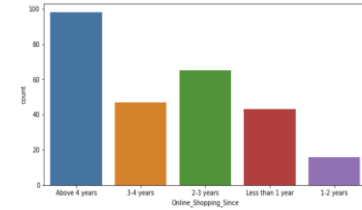- As shown in Fig. 5 Above 4 years are more than other years range.


Fig.5

6. Purchase Frequency
- As shown in Fig. 6 count of online shopping in Delhi is more than other cities.
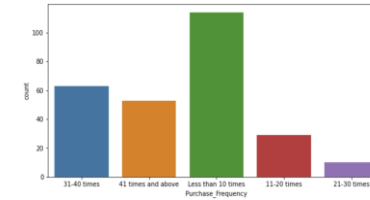

Fig.6

7. Internet Access Mode
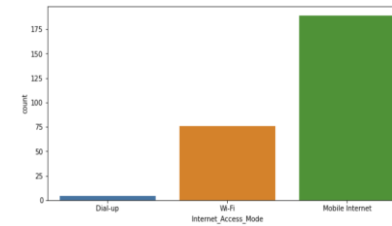- As shown in Fig. 7 shopping through Mobile Internet is more than others.


Fig.7

8. Device Used
- As shown in Fig. 8 major Smartphone is used for the online shopping.
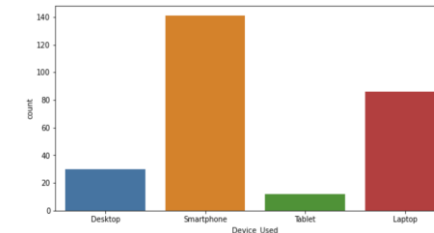

Fig.8

9. Mobile Screen Size
- As shown in Fig. 9 Other category scree size Smartphone is mostly used for the online shopping.
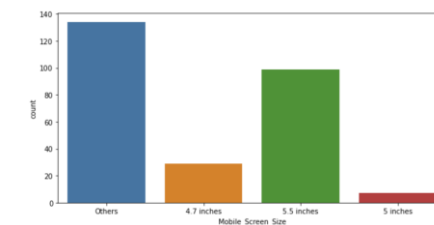

Fig.9

# EDA & Data Visualization

10. Device Operating System
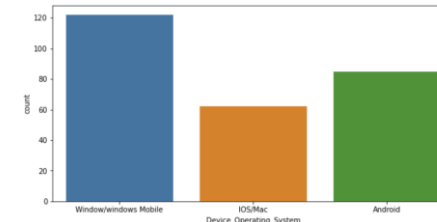• As shown in Fig.10 count of Windows/windows Mobile OS are used for shopping more than other.

11. Browser Used
• As shown in Fig. 11 count of Google chrome is used for shopping.

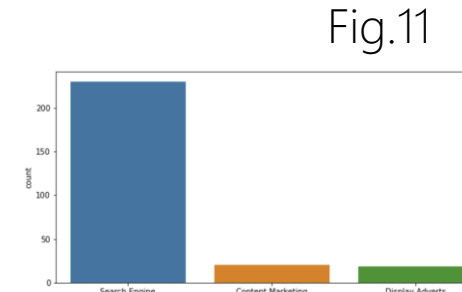12. Channel Followed
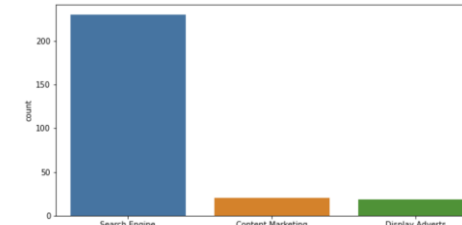• As shown in Fig. 12 count of Search Engine is more than other channels..

13. Login Method
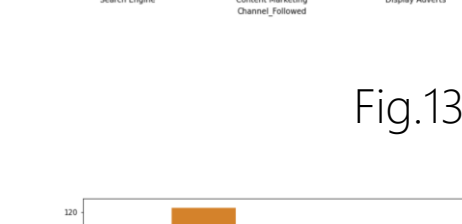• As shown in Fig. 13 count of Search Engine is more in case of log in.

14. Exploring Time Spent
• As shown in Fig. 14 more than 15 min were spent for online shopping.

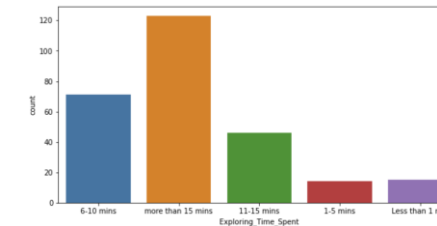15. Payment Mode
• As shown in Fig. 15 Credit. Debit Card payment method is mostly used for the online shopping.

Fig.10

Fig.11

Fig.12

Fig.13

Fig.14

Fig.15

# EDA & Data Visualization

16. Shopping Cart Abandon Frequency
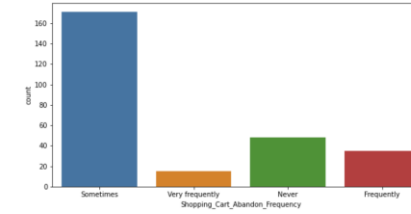- As shown in Fig.16 count of Sometimes is more than other.


Fig.16

17. Bag Abandon Reason
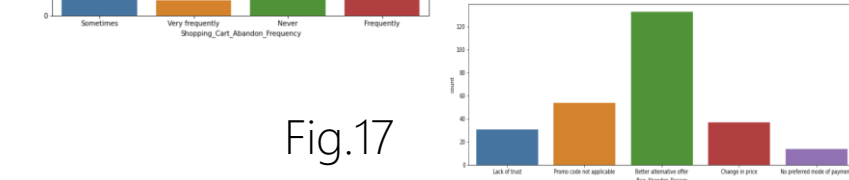- As shown in Fig. 17 count of Better Alternative offer is high.


Fig.17

18. Similar Product Info
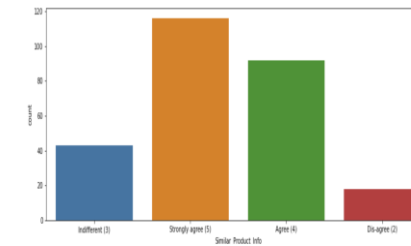- As shown in Fig. 18 count of Strongly agree is high.


Fig.18

19. Seller Product Info
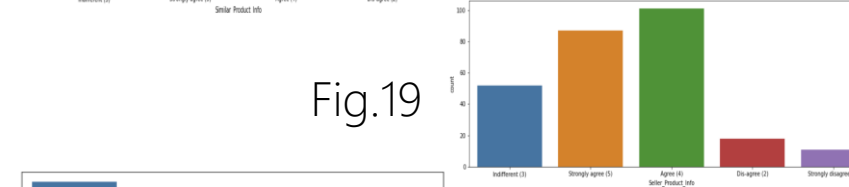- As shown in Fig. 19 count of Agree is high.


Fig.19

20. Product Info clarity
- As shown in Fig. 20 count of most of the customers agree for product info clarity.
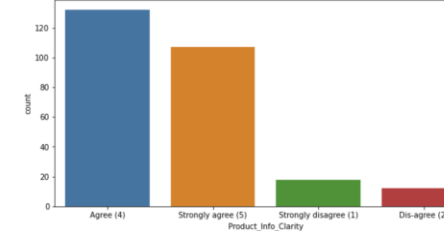

Fig.20

21. Navigation Ease
- As shown in Fig. 21 most of the customers agree for smooth navigation of site.
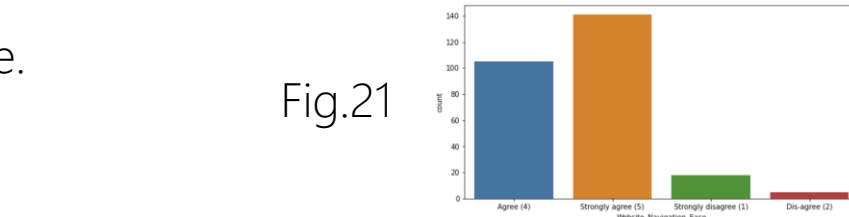

Fig.21

# EDA & Data Visualization

**22. Loading Processing Speed**
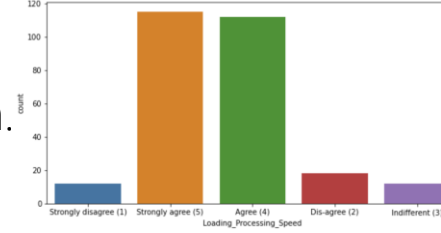- As shown in Fig.22 most of the customers agree that site load speed is high.

Fig.22

**23. User Friendly Interface**
- As shown in Fig. 23 most of the customers strongly agree with the familiar user interface.
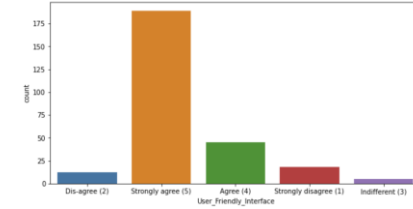
Fig.23

**24. Convenient Payment Mode**
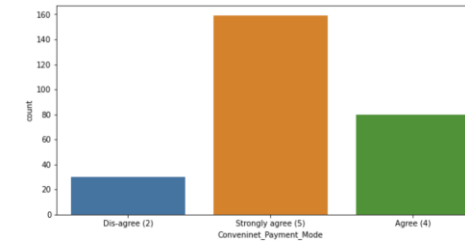- As shown in Fig. 24 most of the customers strongly agree with ease of payment mode.

Fig.24

**25. Timely Fulfillment Trust**
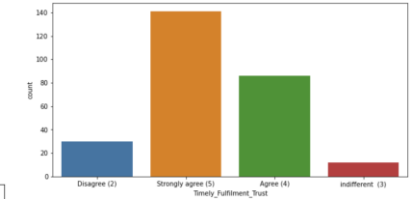- As shown in Fig. 25 most of the customers strongly agree.

Fig.25

**26. Customer Empathy**
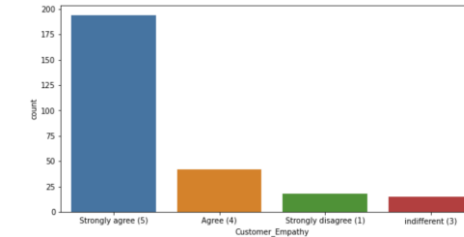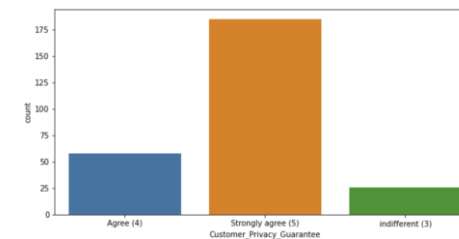- As shown in Fig. 26 most of the customers strongly agree.

Fig.26

**27. Navigation Ease**
- As shown in Fig. 27 most of the customers strongly agree.

Fig.27

# EDA & Data Visualization

## 28. Several Channel Responses
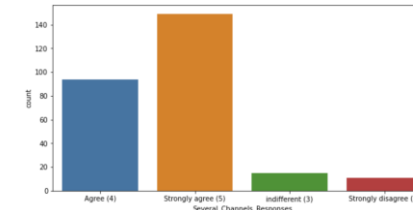• As shown in Fig.28 most of the customers strongly agree for several communication channels availability.

## 29. Discount Benefit
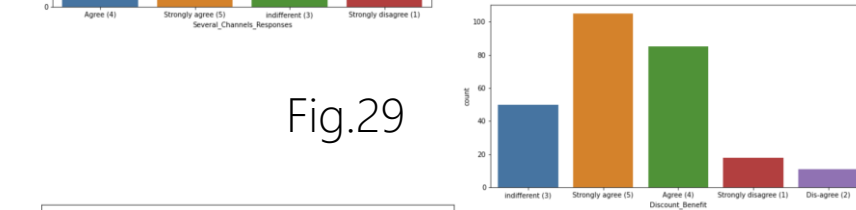• As shown in Fig. 29 most of the customers strongly agree that online shopping provides monetary benefits.

## 30. Online Shopping Benefit
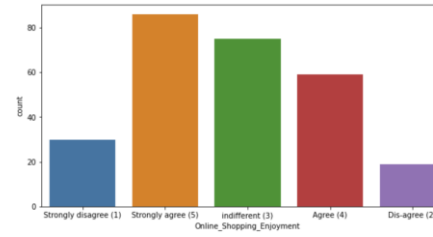• As shown in Fig. 30 most of the customers strongly agree.

## 31. Online Shopping Convenience Flexibility
• As shown in Fig. 31 most of the customers strongly agree.

## 32. Return Replace Policy
• As shown in Fig. 32 most of the customers strongly agree for this type of policy.

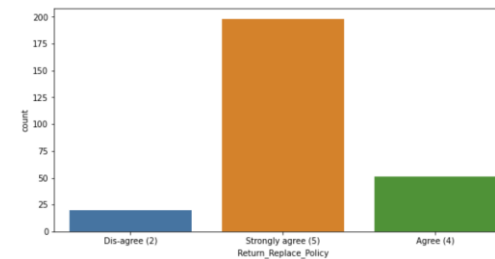## 33. Loyalty Program Access
• As shown in Fig. 33 most of the customers strongly agree because of the benefits of LPA.
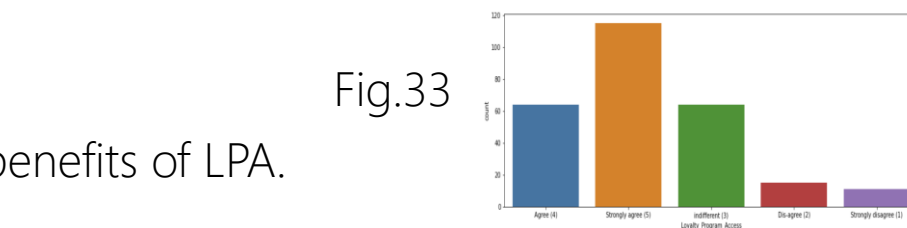


Fig.28

Fig.29

Fig.30

Fig.31

Fig.32

Fig.33

# EDA & Data Visualization

### 34. Quality Information Satisfaction
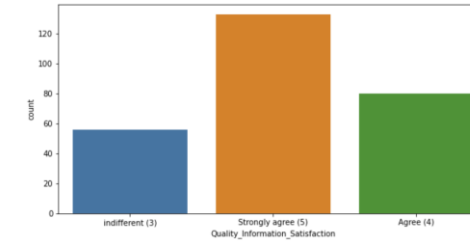- As shown in Fig.34 most of the customers strongly agree for website shows quality information.

### 35. Quality Satisfaction
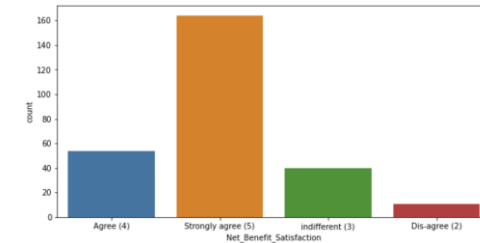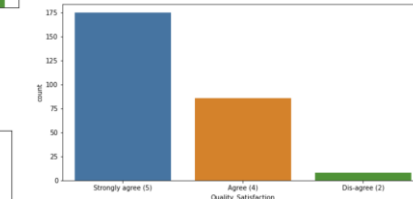- As shown in Fig. 35 most of the customers strongly agree.

### 36. Net Benefit Satisfaction
- As shown in Fig. 36 most of the customers strongly agree.

### 37. User Trust
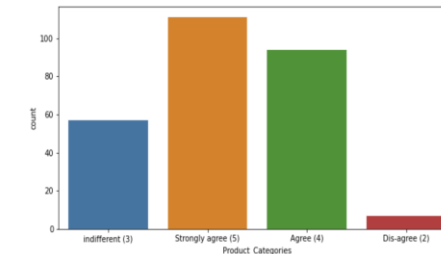- As shown in Fig. 37 most of the customers strongly agree.

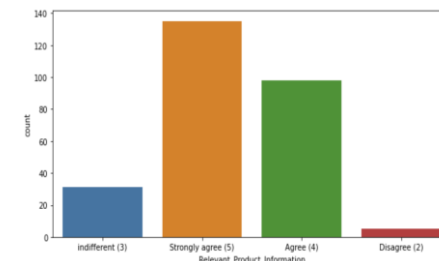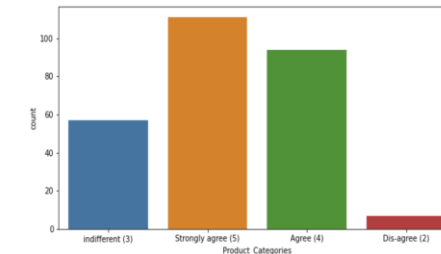### 38. Product Categories
- As shown in Fig. 38 most of the customers strongly agree.

### 39. Relevant Product Information
- As shown in Fig. 39 most of the customers strongly agree.



Fig.34



Fig.35



Fig.36



Fig.37



Fig.38



Fig.39

# EDA & Data Visualization

40. Monetary Savings
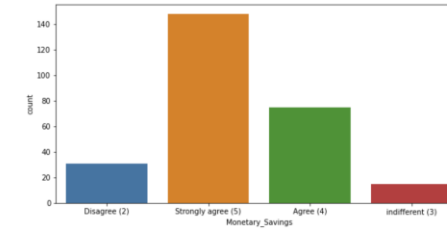- As shown in Fig.40 most of the customers strongly agree for high savings.

41. Patronizing Convenience
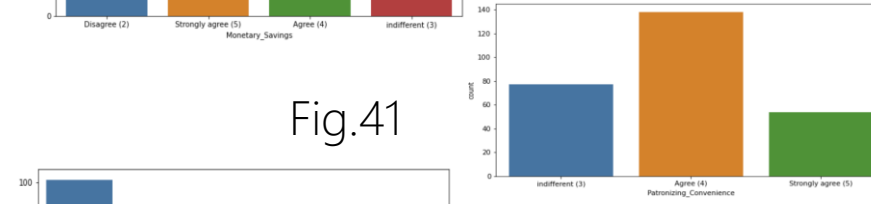- As shown in Fig. 41 most of the customers strongly agree.

42. Adventure Sense
- As shown in Fig. 42 most of the customers agree.
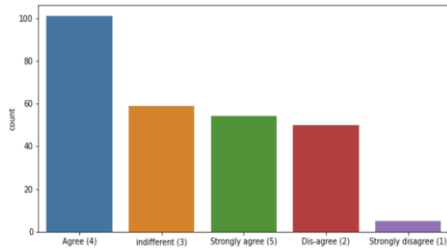
43. Enhances Social Status
- As shown in Fig. 43 most of the customers indifferent.

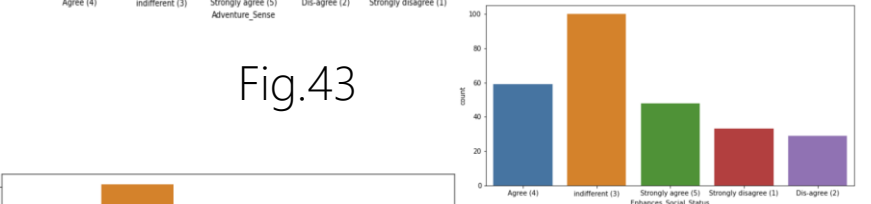44. Shopping Gratification
- As shown in Fig. 44 most of the customers indifferent with this.

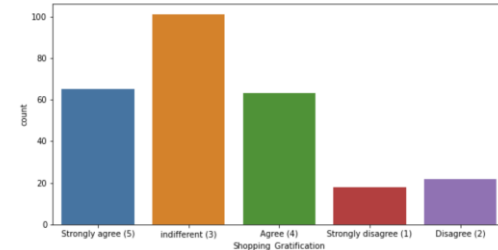45. Role Fulfillment
- As shown in Fig. 45 most of the customers strongly agree.



Fig.40

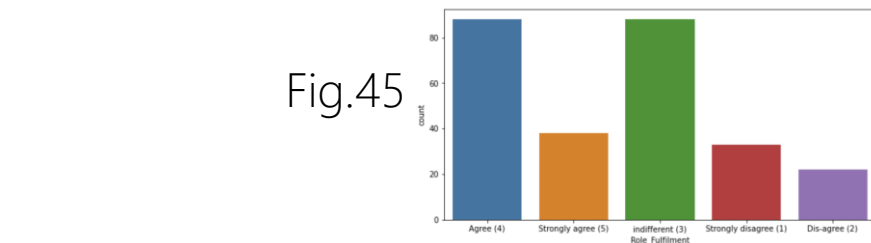Fig.41

Fig.42

Fig.43

Fig.44

Fig.45

# EDA & Data Visualization

46. Worth of Money
- As shown in Fig.46 most of the customers agree.
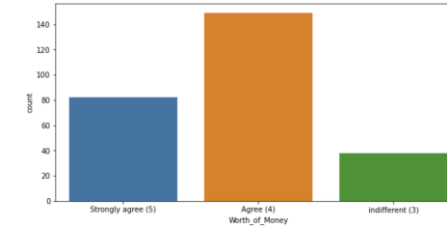

Fig.46

47. Shopped from Retailer
- As shown in Fig. 47 Amazon, Flipkart, Paytm, Myntra, Snapdeal shows mostly shopped.

Fig.47
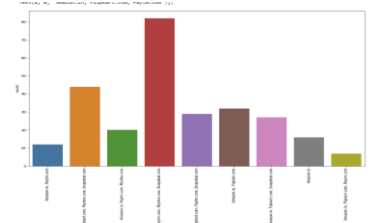


48. Ease Website Application
- As shown in Fig. 48 Amazon, Flipkart, Paytm, Myntra, Snapdeal shows ease of use.
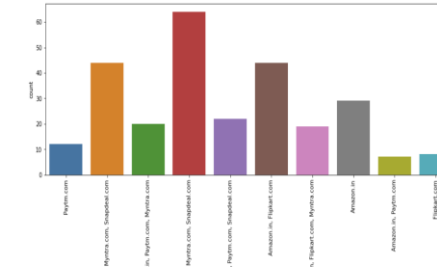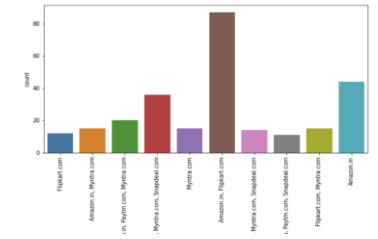

Fig.48

49. Visual Appealing
- As shown in Fig. 49 Amazon & Flipkart appeals very much.

Fig.49



50. Product Variety
- As shown in Fig. 50 Amazon & Flipkart have high product variety.
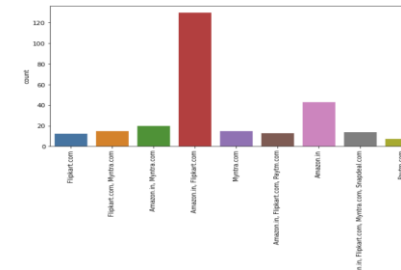

Fig.50

51. Complete Product Info
- As shown in Fig. 51 Amazon & Flipkart have all product quality info.

Fig.51
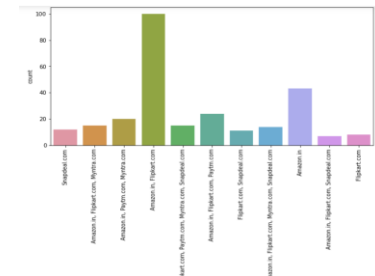
# EDA &
# Data Visualization

## 52. Fast Loading Speed Web app
- As shown in Fig.52 Amazon app is fastest loading app.
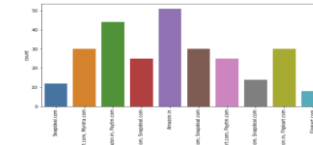
## 53. Reliable Website Application
- As shown in Fig. 53 Amazon app is very reliable app.
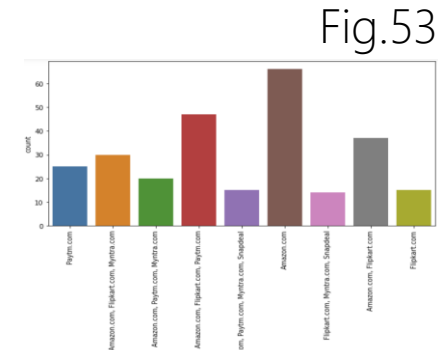
## 54. Quick Purchase
- As shown in Fig. 54 Amazon has quick purchase options.
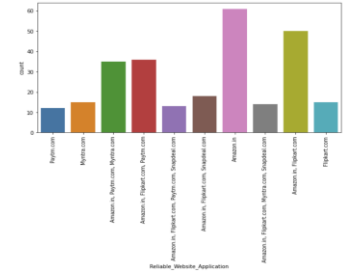
## 55. Payment Options
- As shown in Fig. 55 Amazon & Flipkart have multiple payment options.
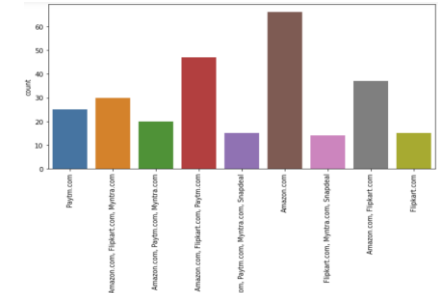
## 56. Fast Delivery
- As shown in Fig. 56 Amazon have fastest delivery.
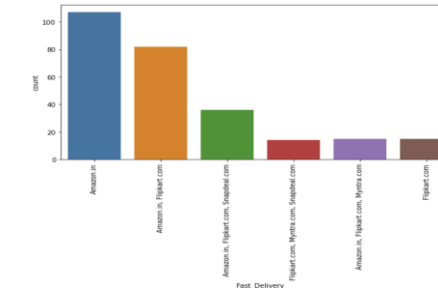
## 57. Customer Info Privacy
- As shown in Fig. 57 Amazon is better,.

Fig.52

Fig.53

Fig.54

Fig.55

Fig.56
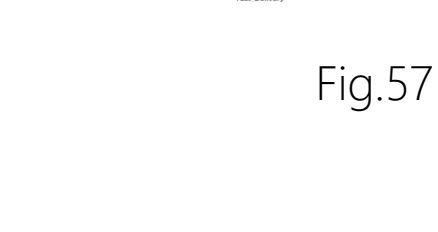
Fig.57

# EDA & Data Visualization

### 58. Customer Financial Info Security
• As shown in Fig.58 Amazon secure customer data.
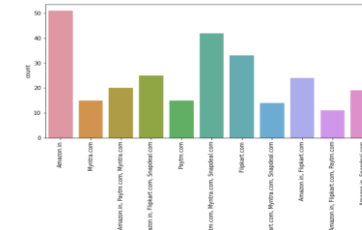
### 59. Perceived Trustworthiness
• As shown in Fig. 59 Amazon is trustworthy.
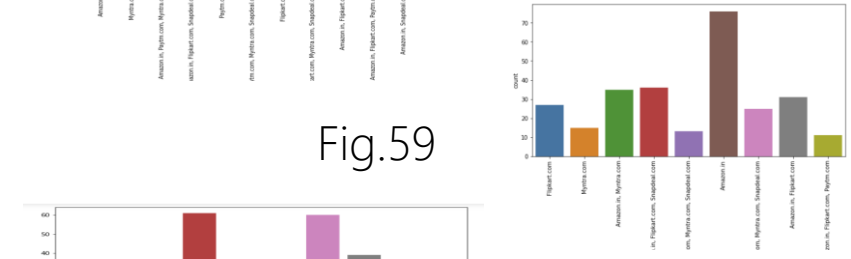
### 60. Multi Channel Assistance
• As shown in Fig. 60 Amazon, Flipkart, Myntra, Snapdeal have multi channel assistance.
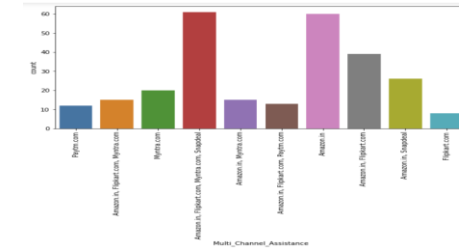
### 61. Loading Logging Time
• As shown in Fig. 61 Amazon.
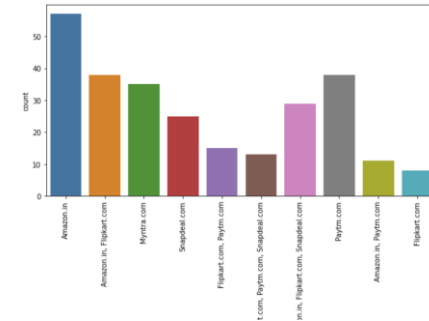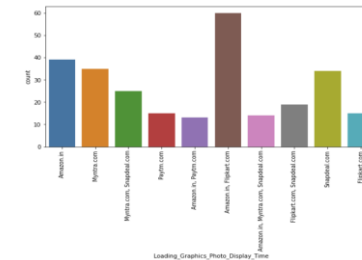
### 62. Loading Graphics Photos Display Time
• As shown in Fig. 62 Amazon & Flipkart takes less time to load.

### 63. Late Price Declare
• As shown in Fig. 63 Myntra have highest count


Fig.58


Fig.59


Fig.60


Fig.61


Fig.62
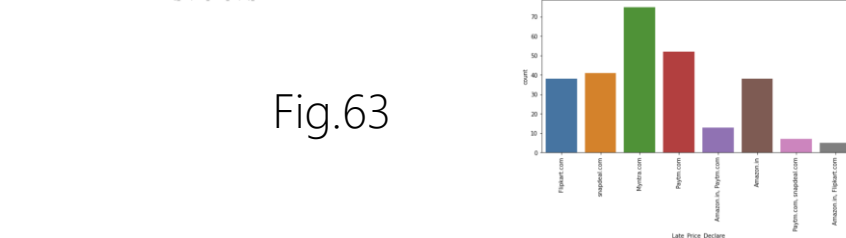

Fig.63

# EDA & Data Visualization

## 64. Limited Payment Mode
- As shown in Fig.64 Snapdeal have limited mode.
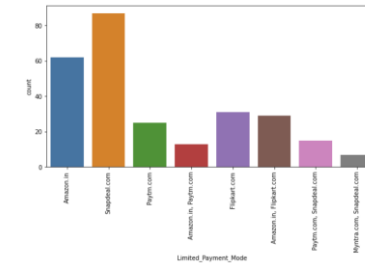
## 65. Late Delivery
- As shown in Fig. 65 Paytm have highest counts.
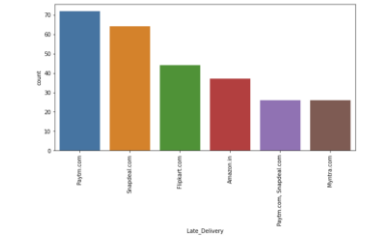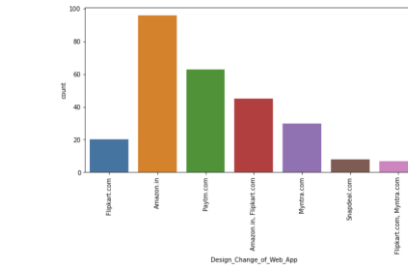
## 66. Design Change of Web Page
- As shown in Fig. 66 Amazon.
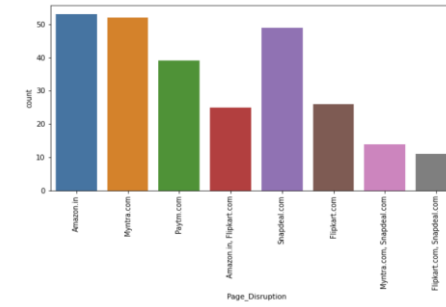
## 67. Page Disruption
- As shown in Fig. 67 Amazon have highest while moving between pages.
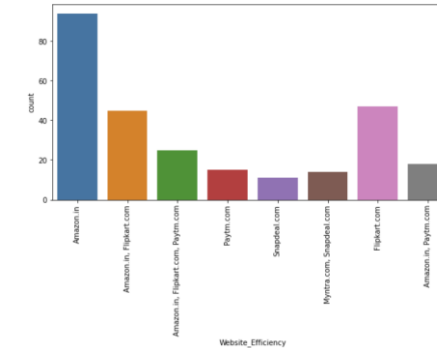
## 68. Website Efficiency
- As shown in Fig. 68 Amazon.
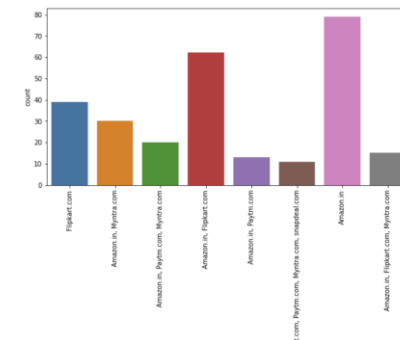
## 69. Recommend to Friend
- As shown in Fig. 69 Amazon has highest recommendations


Fig.64


Fig.65


Fig.66


Fig.67


Fig.68


Fig.69

# EDA & Data Visualization

- Using Bivariate Analysis

1. Gender & Age

**We can see Male customers of:¶**

- Age 31-40 years are 30
- Age 21-30 years are 20
- Age 41-50 years are 28
- Age less than 20 years are 8
- Age 51 years and above are 5

**And Female Customers of:**

- Age 31-40 years are 50
- Age 21-30 years are 58
- Age 41-50 years are 42
- Age less than 20 years are 12
- Age 51 years and above are 15
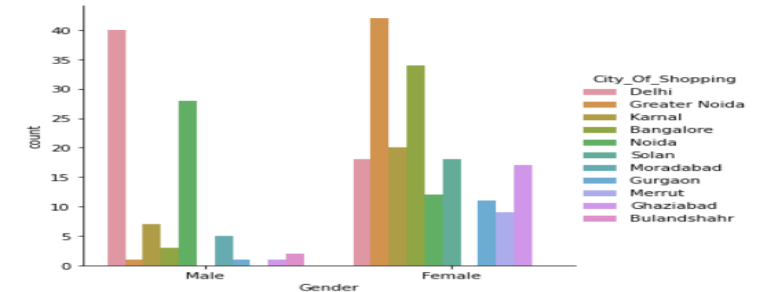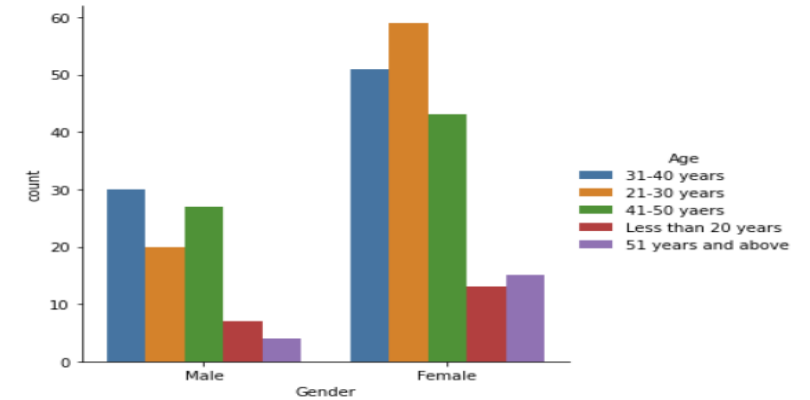
2. Gender & City of Shopping

- Female Customers from Greater Noida is more compared to other city and Male Customers from Delhi is more compared to another city. Also Female customer are more compared to male customer.

# EDA &
# Data Visualization

- Using Bivariate Analysis

3. Gender & Online Shopping Since

Female customer shopping from above 4years are more than 70.
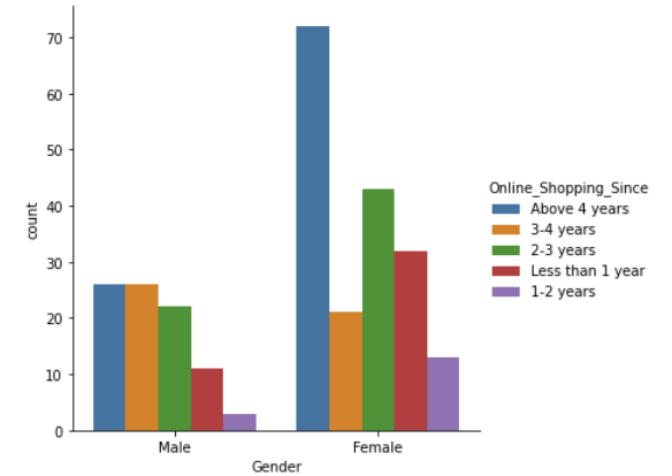
4. Gender & Purchase Frequency

- Female customer purchasing online Less than 10 times are 70 and male e-customer are 44.
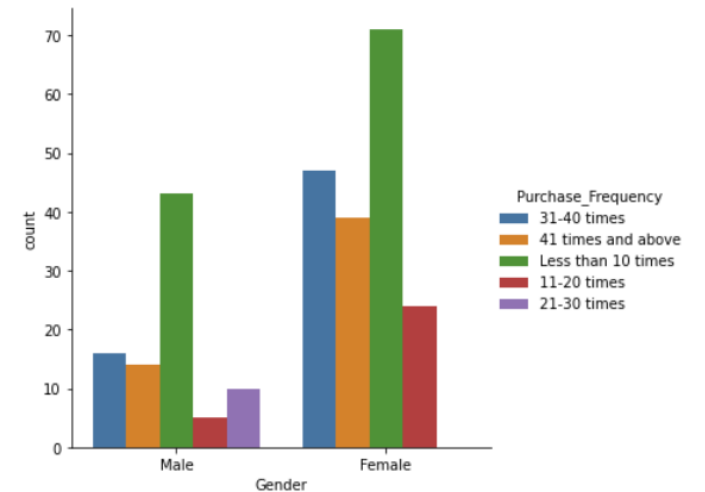
- Using Bivariate Analysis

5. Shopping cart Abandon Frequency & Bag Abandon Reason

There are 5 reason to abandon Bag/Shopping cart but Top 2 reasons are:

•Sometimes and frequently Bag/Shopping cart is abandon due to better alternative offer mostly is first reason and*

•second reason is Sometimes due to change in price
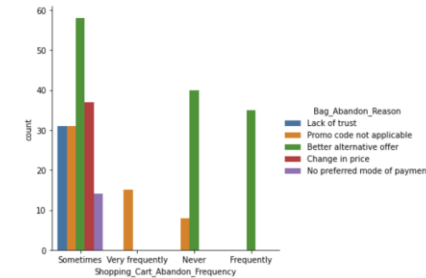


6. Product Categories & Relevant Product Information

• Female customer purchasing online Less than 10 times are 70 and male e-customer are 44.

# EDA & Data Visualization

- Using Bivariate Analysis

5. Reliable Website Application & Quick Purchase

According to Most of the customers, Reliability of the website/application and quickness to complete purchase is good with Amazon.



6. Website Efficiency & Fast Delivery

efficient Website with Fastest Delivery is Amazon.in according to customers.

1. High Customer Satisfaction from website:

- Amazon.com
- Flipkart.com

2. High Risk from website:

- Myntra.com
- Snapdeal.com

3. Website recommendation to a friend:

- Amazon.in (first)
- Flipkart.com (second)

# Observations

Observation:
- Most Customer believe that the content on the website must be easy to read and understand.
- Most Customer agree that information on similar product to the one highlighted is important for product comparison.
- Most Customer (70%) believe that Complete information of listed seller and product is important for purchase decision.
- Most Customer (90%) agree Shopping online is convenient and flexible.
- Most Customer (70%) believe that Enjoyment is derived from shopping online.
- Most Customer believe that Online shopping gives monetary benefit and discounts.
- Getting value for money spent on Online Shopping.
- Return and replacement policy is important for purchase decision according to 90% customers.
- Gaining access to loyalty programs is a benefit of shopping online.
- Most Customer (90%) believe that All relevant information on listed products must be stated clearly.
- Most Customer (80%) believe that Displaying quality Information on the website improves satisfaction of customers.

More than 90% Customer wants website to be:
1. Easy to navigate
2. Loading and processing speed fast
3. User friendly Interface
4. Convenient Payment methods
5. Guarantee the privacy of the customer
6. Availability of several communication channels (email, online rep, twitter, phone etc.)

# Observations

60-80 % Customer believe that:
1. Shopping on your preferred e-tailer enhances your social status
2. You feel gratification shopping on your favorite e-tailer
3. Shopping on the website helps you fulfill certain roles

Customer "Strongly Agree" (rating 5) to:
1. Shopping on a good quality website or application
2. Net Benefit derived from shopping online
3. Customer Trust
4. Offering a wide variety of listed product in several category
5. Provision of complete and relevant product information
6. Monetary savings
7. The Convenience of patronizing the online retailer
8. Shopping on the website gives you the sense of adventure

E-commerce to consider their customer satisfaction because this will retain customer loyalty as well as attract potential customers

# Thank You