**FLIP ROBO**

# CUSTOMER RETENSION CASE STUDY



Submitted by:

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# ACKNOWLEDGMENT

# INTRODUCTION

- E-retail factors for customer activation and retention: A case study from Indian e-commerce customers. The data is collected from the Indian online shoppers. Results indicate the e-retail success factors, which are very much critical for customer satisfaction.

- Customer satisfaction has emerged as one of the most important factors that guarantee the success of online store; it has been posited as a key stimulant of purchase, repurchase intentions and customer loyalty.

- A comprehensive review of the literature, theories and models have been carried out to propose the models for customer activation and customer retention. Five major factors that contributed to the success of an e-commerce store have been identified as: service quality, system quality, information quality, trust and net benefit. 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.

- This project is done as a case study while I am working as a Data Scientist Intern at Flip Robo in Banglore, India. The objective is to apply the analytical skills to provide findings and conclusion that would help to predict customer retention for a E-Retail company using their data on users provided over period of time. Using the model, I was tasked with determining which features were most influential in loss of retention and then making a plan for how the company could use this information to increase retention.

# Analytical Problem Framing

- ## Mathematical/ Analytical Modeling of the Problem

  The dataset is having 269 rows and 71 columns. I have used profiling report and seaborn for detailed analysis of each features as there are multiple features in the dataset.

- ## Data Sources and their formats

  The dataset is provided by Flip Robo and the format is xlsx. There are two sheets (one is detailed) and second is encoded in the excel file. I have used the detailed excel sheet.

- ## Data Pre-processing Done
  1) Importing Libraries.
  2) Read the CSV file and convert into data frame.
  3) Checking the data dimensions for the original dataset.
  4) Looking for null values if any, in heat map.
  5) Checking the summary of the dataset.
  6) Checking unique values.
  7) Checking all the categorical columns in the dataset.
  8) Visualizing each features using matplotlib and Seaborn.
  9) Performed encoding.
  10)    Checked for co-relation.
  11)    Checked for Outliers/Skewness.

- ## Exploratory Data Analysis through Visualizations
  1) Profiling Report analysis
  2) Checked for the trend and patterns for each features to decide feature importance.
  3) Visualizing each features using matplotlib and Seaborn to check the relationship and count of each features.
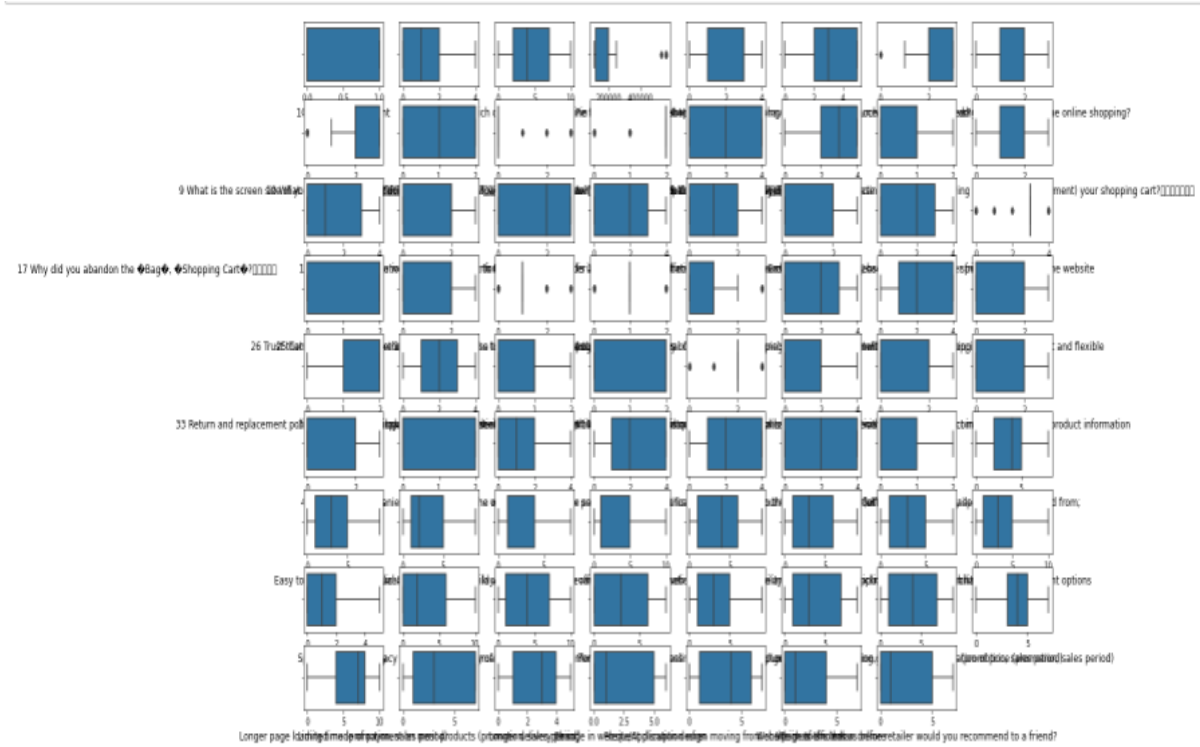  4) Analysing both numerical and categorical columns separately.

# Overview

## Dataset statistics

| | |
|---|---|
| Number of variables | 71 |
| Number of observations | 269 |
| Missing cells | 0 |
| Missing cells (%) | 0.0% |
| Duplicate rows | 60 |
| Duplicate rows (%) | 22.3% |
| Total size in memory | 149.3 KiB |
| Average record size in memory | 568.5 B |

## Variable types

| | |
|---|---|
| Categorical | 70 |
| Numeric | 1 |

## Outliers:

# FINDINGS

- Pin code: 201308 (Uttar Pradesh) has the maximum number of counts for online shopping.
- Female buyer has more number of count than male in the Dataset.
- Buyer Age between 31 to 40 years is more followed by 21-30 years for online shopping.
- Delhi city has a maximum number of buyers followed by greater Noida & Noida. Bulandshahr city has a minimum number of buyers for online shopping.
- Tenure wise maximum buyers are preferred online shopping since 4+ years.
- Maximum number of online buyers purchased less than 10 products in past one year.
- Using mobile phone internet is more for online shopping.
- Smart Phone has been used more for online shopping followed by laptop.
- Smartphones having screen sizes other than 4.7, 5.5 & 5 inches had been used more times for online shopping.
- Devices having a windows operating system has been used often more for online shopping followed by android.
- Google Chrome browser is used maximum times to access the website as compared to other browsers.
- Search engine is more useful for the potential online buyers, also after the 1st visit to the store, the search engine has been used more to locate the website.
- Usually buyers explore the particular website more than 15 times before making a purchase decision.
- Credit/Debit has been used more than other options for online purchases.
- Maximum buyer chooses to add the product to the cart & leave without making payment because of a better alternative offer.
- Content & all relevant information on the website is easy to read & understand, also easy to navigate for a maximum number of the online buyer.

- Maximum number of people strongly agree that information on a similar product to the one highlighted is important for product comparison.
- Maximum number of people strongly agree that complete information on the listed sellers and the product being offered is important for purchase decisions.
- Most buyers strongly agree that the loading & processing speed of the website should be fast which makes the website user- friendly.
- For online purchases, the payment method is a key factor to retain the customer, also buyers trust that online retail stores would fulfill their part of the transaction at the stipulated time.
- More number of buyer strongly agree that customer service & customer privacy is very much important to retain the customer.
- Online shopping provides monetary benefits and discounts on the product that customers would buy for & visit the website again to shop more as it is value for money spent.
- Maximum number of people enjoys online shopping, which is more convenient & easy to use.
- Most buyers strongly agree that the return & replacement policy is important for purchase decisions.
- People strongly agreed that gaining access to loyalty programs is a benefit of online shopping.
- Maximum number of buyers strongly agree that provided quality information on the website improves satisfaction & trust of the customer.
- Offering a wide variety of products in several categories with correct information helps to retain the customer.
- Frequent online shopping gives a sense of adventure.
- Shopping on your preferred e-tailer enhances your social status is indifferent to the maximum number of buyers.
- Maximum buyer feels that it is ok to shop from a favourite e-tailer.
- Most people prefer to shop online from Amazon.in, Flipkart.com, Paytm.com, Myntra.com & Snapdeal.com as these are more user friendly.
- According to the survey, the best visually appealing web page layout is Amazon.in & flipkart.com.
- Wide variety of products & its offer are mostly available on Amazon.in & flipkart.com.

- Complete, relevant description information of products are available in Amazon.in & flipkart.com.
- Amazon is best in terms of Trustworthiness/reliability, quickness to complete purchase & fast loading speed on website & application.
- Amazon & Flipkart.com has several payment options whereas Snapdeal has a limited mode of payment method.
- Amazon comes in number 1 position in terms of delivery of products & security of customer information followed by flipkart.com whereas Paytm took longer time to deliver the products.
- Amazon.in provides the best customer support followed by Flipkart.com, Myntra.com, & Snapdeal.
- Flipkart.com takes less time to get logged in (promotion, sales period), however, Amazon.in takes a long time to logged in.
- When it comes to displaying graphics & photos (promotion, sales period), Amazon.in & flipkart.com take a longer time to load.
- Myntra delays to declare its sale price & offers, also took a long time to load the page followed by paytm.com.
- With time Amazon update/changes its website/Application design as Amazon disrupts frequently when moving one page to another & still works efficiently as before.
- Most recommended Indian online retailer by a friend is Amazon followed by Flipkart.



Which of the Indian online retailer would you recommend to a friend?
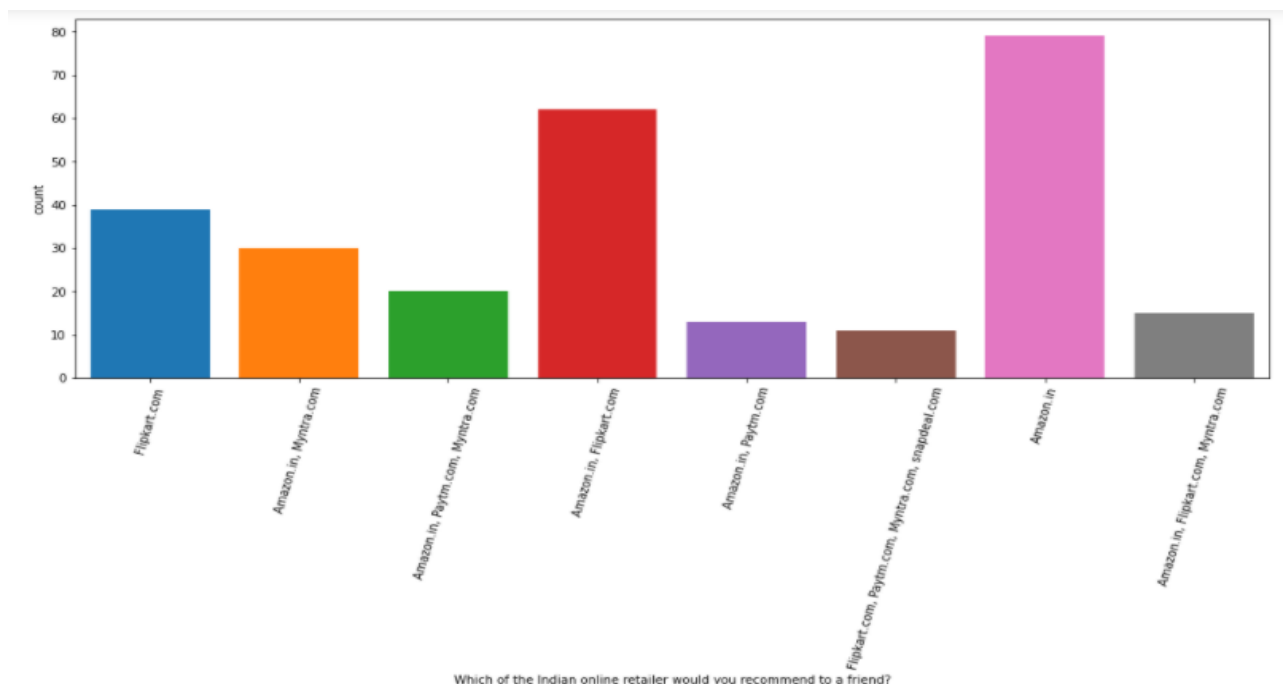
# CONCLUSION

- Based on overall observations, the First 47 features provide insights into how e-tailer is helpful & growing based on customer inputs. The data explained how the online platform has been used more often in which CITY, PIN CODE, AGE GROUP, etc. It also showed that in some factors there is less importance given to contribute to the success of an e-commerce store, so based on that we could remove those factors & keep all the important factors, also we could improve on some factors that influence the online customers repeat purchase intention.

- Apart from the first 47 features, the rest of the features showed which online platform has been used more based on the success factors. Based on the case study for customer activation & retention, Amazon is most reliable and has been fulfilled the customer requirements. After Amazon, data showed Flipkart has been used more for online shopping.

- The case study from Indian e-commerce customers showed Amazon and Flipkart has been used mostly for Online Shopping and most recommended by Friends. So, based on the research factors, Amazon & Flipkart are the e-commerce platform, which are having the combination of both utilitarian and hedonistic values to keep the repeat purchase intention (loyalty) positively.