



Customer Retention Case Study

Submitted by:

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ACKNOWLEDGMENT

It is my sensual gratification to present this report. Working on this project was an incredible experience that will have a tremendous impact on my career. I would like to express my sincere thanks to the company Flip Robo Technologies for a regular follow up and valuable suggestions provided throughout. They always been an origin of spark and direction. I also thank all the respondents who have given their valuable time, views and valid information for this project.

Shivanchal Asthana

INTRODUCTION

- **Business Problem Framing**

Biggest problems in Customer retention are that:

1. Brand has poor customer service
2. Unable to connect with the customers in a right way
3. Unable to deliver according to customer needs
4. Brand doesn't care about existing customers

- **Conceptual Background of the Domain Problem**

Customer retention is the collection of activities a business uses to increase the number of repeat customers and to increase the profitability of each existing customer.

- **Motivation for the Problem Undertaken**

The main objective of Customer Retention project is to know the customer behaviour, Customer expectation of future use.

Analytical Problem Framing

- **Data Description**

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. The data is collected from the Indian online shoppers. Results indicate the e-retail success factors, which are very much critical for customer satisfaction.

- **Data Pre-processing Done**

Various steps are used to clean the data like:

1. Use rename command to clean column name
2. Remove duplicate values
3. Improve the skewness

- **Data Inputs- Logic- Output Relationships**

1. Data Inputs are Knowing customers behaviour.
2. Results are e-retail success factors, which are very much critical for customer satisfaction.
Customer behaviour while tracking the customer needs and their opinion, to know the customer satisfaction and their recommendation about best Indian retailer.

- **Hardware and Software Requirements and Tools Used**

1. Jupyter Notebook
2. MS Word
3. MS Power Point
4. Statistical Tool
5. Visualization Plots

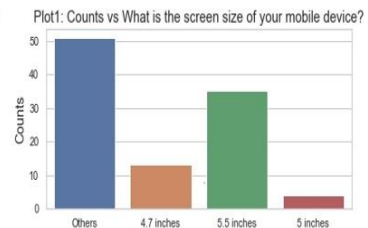
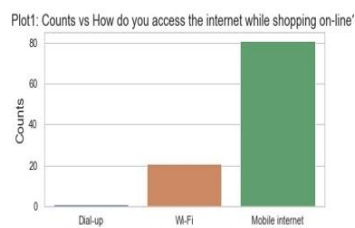
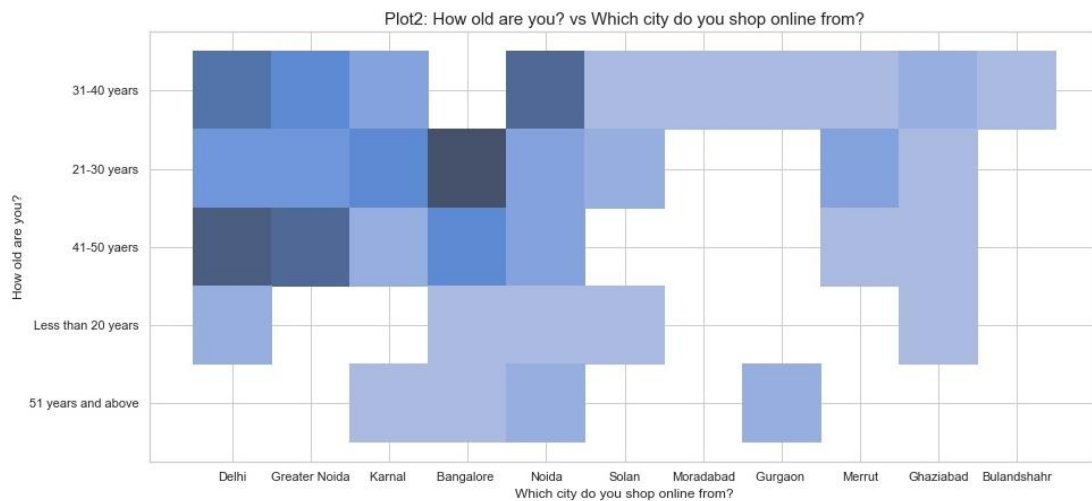
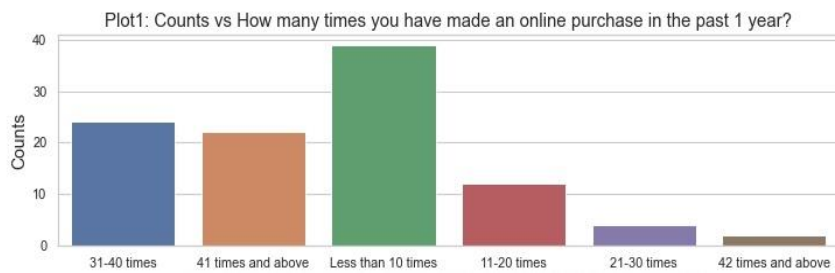
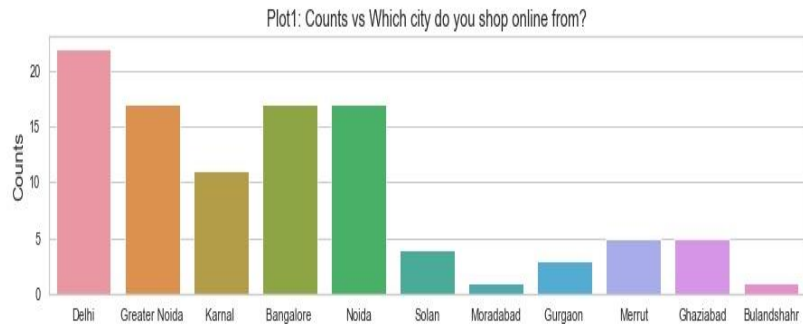
Model/s Development and Evaluation

- **Identification of possible problem-solving approaches (methods)**

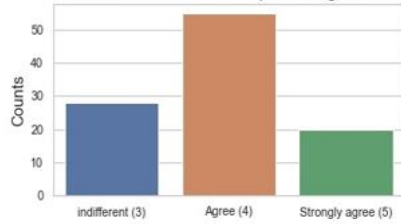
Both statistical and analytical approaches are followed in this project to track the customer need and opinions, Unique values, count plot, bar plots, pie charts, histogram are being used to solve this problem.

- **Visualizations**

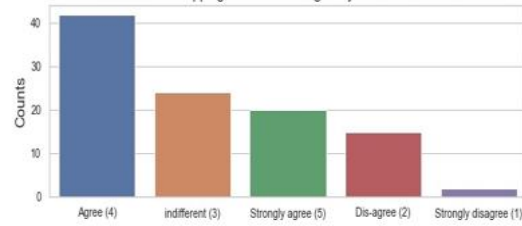
Some of the plots are mentioned below along with the



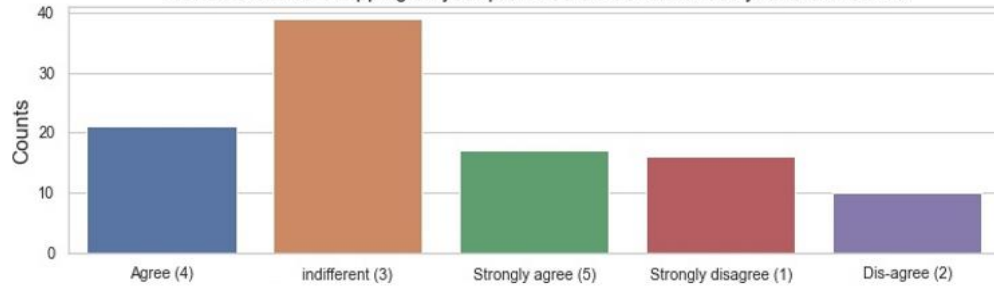
Plot1: Counts vs The Convenience of patronizing the online retail



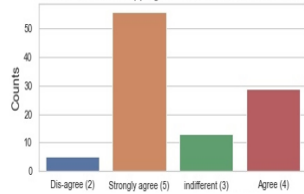
Plot1: Counts vs Shopping on the website gives you the sense of adventure



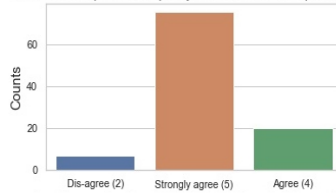
Plot1: Counts vs Shopping on your preferred e-tailer enhances your social status



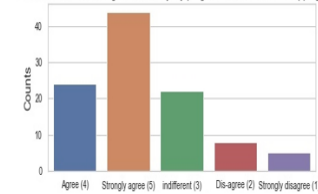
Plot1: Counts vs Shopping online is convenient and flexible



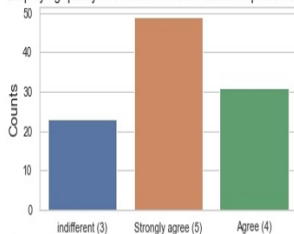
Return and replacement policy of the e-tailer is important



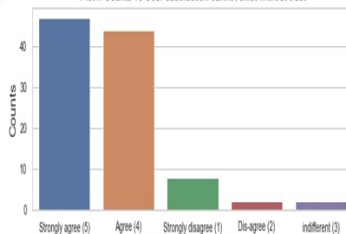
Plot1: Counts vs Gaining access to loyalty programs is a benefit of shopping online



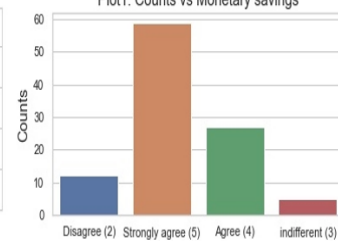
Displaying quality information on the website improves satisfaction



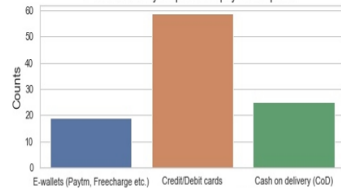
Plot1: Counts vs User satisfaction cannot exist without trust



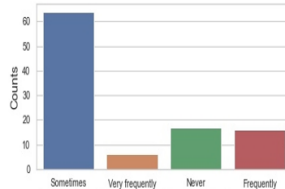
Plot1: Counts vs Monetary savings



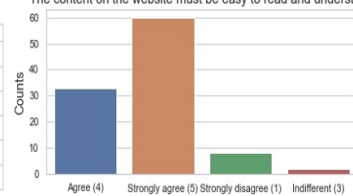
Plot1: What is your preferred payment Option?



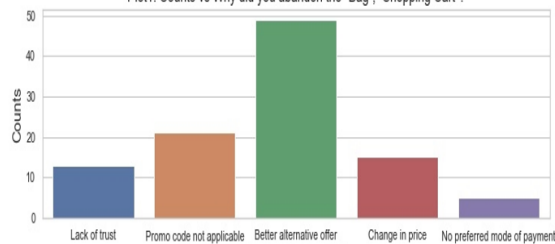
selecting an items and leaving without making payment



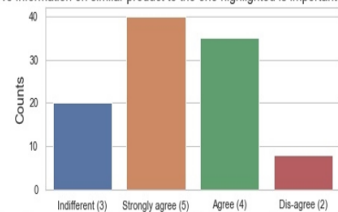
The content on the website must be easy to read and understand



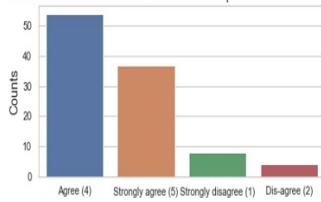
Plot1: Counts vs Why did you abandon the "Bag", "Shopping Cart"?



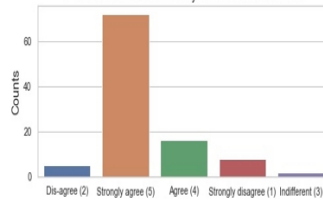
vs Information on similar product to the one highlighted is important for proc



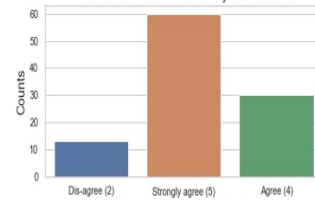
Counts vs All relevant information on listed products must be stated



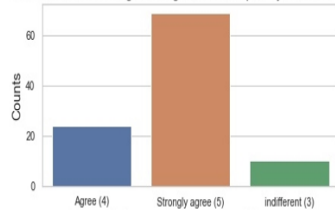
Plot1: Counts vs User friendly Interface of the website



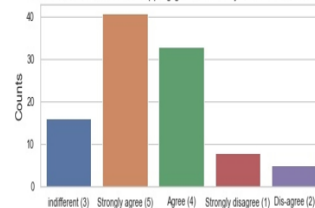
Plot1: Counts vs Convenient Payment methods



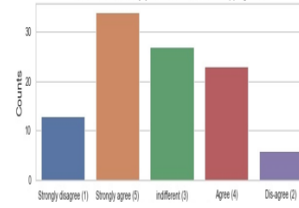
Plot1: Counts vs Being able to guarantee the privacy of the customer



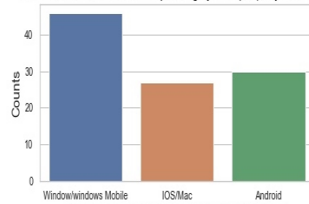
Plot1: Counts vs Online shopping gives monetary benefit and discounts



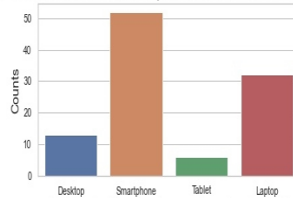
Plot1: Counts vs Enjoyment is derived from shopping online



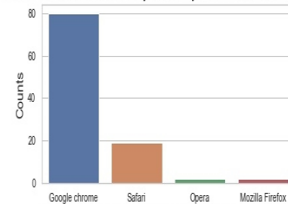
Plot1: Counts vs What is the operating system (OS) of your device?



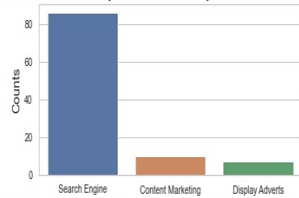
Plot1: Counts vs Which device do you use to access the online shopping?



Plot1: Counts vs What browser do you run on your device to access the webs



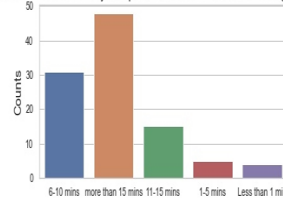
Counts vs Which channel did you follow to arrive at your favorite online store for t



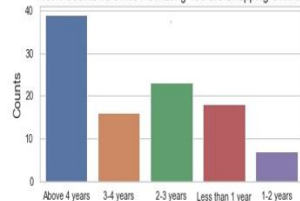
Plot1: Counts vs After first visit, how do you reach the online retail store? s



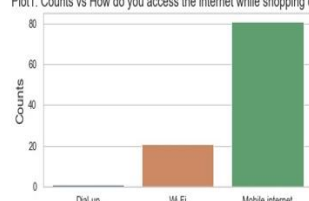
s vs How much time do you explore the e- retail store before making a purch



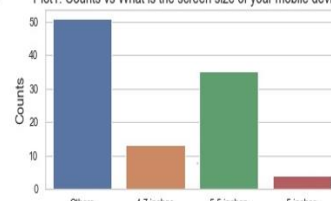
Plot1: Counts vs Since How Long You are Shopping Online?



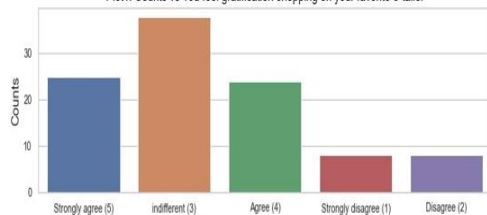
Plot1: Counts vs How do you access the internet while shopping on-line'



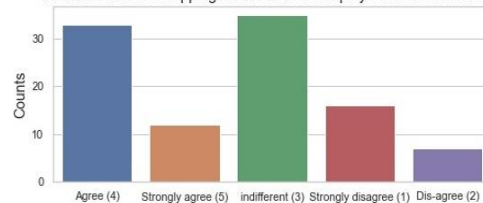
Plot1: Counts vs What is the screen size of your mobile device?

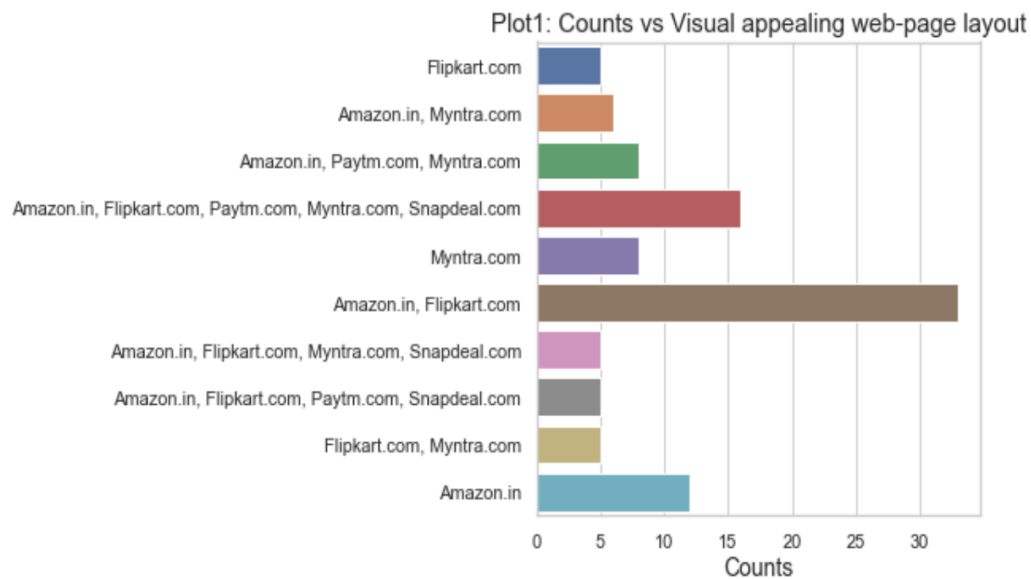


Plot1: Counts vs You feel gratification shopping on your favorite e-tailer



Plot1: Counts vs Shopping on the website helps you fulfill certain roles





• Observations And Interpretation of the Results

1. Females are more than Males
2. Mostly peoples do online shopping from Delhi
3. Peoples are more in their age group 21-30 years.
4. In any Age Group, Females are more than Males.
5. Maximum Females are from the Age Group 21-30 years in terms of percentage.
6. Mostly, less than 10 times peoples made an online purchase in the past 1 year
7. Mostly peoples are from Bangalore who have age group 21-30 years.
8. Only two cities Bulandshr and Muradabad, there are only one age group who are doing online shopping that is 31-40 years.
9. We find, 43% males are from Delhi and 24% females are from greater Noida and Bangalore.
10. And there is no male from solan
11. We find, peoples are more who are doing online shopping more than 4 years in percentage wise also. that is 37.86%
12. Peoples who are doing shopping more than 4 years, their age groups are 31-50 years old
13. Peoples who are doing shopping more than 4 years, mostly are females in this category

- 14.** Peoples who are doing shopping more than 4 years, mostly peoples are from Greater Noida
- 15.** We find, there are more peoples who are using mobile internet than others.
- 16.** There is only one person who use dial up service.
- 17.** Males are using more mobile internet than females in terms of percentage
- 18.** Generally, smartphone users have Screen size 5.5 inches and laptops users has others Screen size.
- 19.** Smartphone users are more than others.
- 20.** Females are using more smartphone than males, and only males are using Tablets
- 21.** In every age group, smartphone users are more than others.
- 22.** Mostly smartphone users are from Bangalore
- 23.** Mostly smartphone users are using mobile internet
- 24.** Mostly peoples are using window/windows mobile than others
- 25.** Both female and male are using window mobile more than another category
- 26.** Mostly laptop users are using windows mobile
- 27.** People using google chrome more than another browser
- 28.** Smartphone users use google chrome more than other category users
- 29.** Peoples are using search engine more than others
- 30.** Mostly people use google chrome as a search engine
- 31.** Mostly people use search engine and Via application to reach the online retail store
- 32.** Peoples are more who spent more than 15 min for making decisions
- 33.** Mostly 21-30 years old females are spent time more than 15 mins to take decisions
- 34.** Most preferred payment option is credit/debit card
- 35.** Mostly females are using credit/debit card

- 36.** Age group 21-30 years old are using credit/debit card most
- 37.** Mostly in Delhi peoples are using credit/debit card
- 38.** People sometimes abandon (selecting an item and leaving without making payment) your shopping cart.
- 39.** People abandon the “Bag”, “Shopping Cart” because they see better alternatives
- 40.** Peoples are strongly agreeing that Information on similar product to the one highlighted is important for product comparison
- 41.** Those peoples are strongly agreeing who are doing shopping more than 4 years
- 42.** Mostly peoples are agreeing with this that all relevant information on listed products must be stated clearly.
- 43.** Peoples are strongly agreeing with user friendly interface of the website
- 44.** 21-30 years old peoples are strongly agreeing with this
- 45.** Peoples are strongly agreeing with Convenient Payment methods
- 46.** Peoples who are using credit/debit cards, those persons are agree with this.
- 47.** Peoples are strongly agreeing with that companies are being able to guarantee the privacy of the customer
- 48.** Peoples are strongly agreed with Responsiveness, availability of several communication channels (email, online rep, twitter, phone etc.)
- 49.** Peoples are strongly agreeing with Online shopping gives monetary benefit and discounts
- 50.** Peoples are strongly agreeing with the enjoyment is derived from shopping online
- 51.** 1People's who do shopping more than 4 years, they strongly agree about Enjoyment is derived from shopping online
- 52.** Peoples are strongly agreeing with shopping online is convenient and flexible
- 53.** Peoples who do shopping more than 4 years, they strongly agree about Shopping online is convenient and flexible.

- 54.** Peoples are strongly agreeing with return and replacement policy of the e-tailor is important for purchase decision.
- 55.** Peoples are strongly agreeing with gaining access to loyalty programs is a benefit of shopping online.
- 56.** Peoples are strongly agreeing with displaying quality information on the website improves satisfaction of customers.
- 57.** Peoples are strongly agreeing with user satisfaction cannot exist without trust
- 58.** Peoples are strongly agreeing with Monetary savings
- 59.** Peoples are agreeing with the convenience of patronizing the online retailer.
- 60.** Peoples are agreeing with the shopping on the website gives us the sense of adventure
- 61.** The maximum opinion on 'Shopping on your preferred e-tailer enhances your social status' is indifferent
- 62.** People feels indifferent that they feel gratification shopping on their favorite e-tailor
- 63.** People's opinions are indifferent that Shopping on the website helps you fulfill certain roles
- 64..** Peoples are agreeing with Getting value for money spent
- 65.** People thinks all the company's website and their applications are easy to use.
- 66.** Peoples likes Amazon and Flipkart the most appealing web-page layouts
- 67.** People also likes the variety of products on Amazon and Flipkart.
- 68.** They think the variety of products on offer are better than other companies like Myntra, Paytm etc
- 69.** People feels that complete and relevant description information of products are necessary and better on Amazon and Flip Kart websites and their application.
- 70.** More peoples are 'indifferent' opinion when compare it with Complete information on listed seller and product being offered is important for purchase decision.

- 71.**People thinks that Amazon and Paytm Fast loading website speed of website and application
- 72.**Only Amazon website speed is faster than other company
- 73.**Flipkart has lowest speed of loading website and application
- 74.**People thinks that Amazon has better reliability of the website or application
- 75.**Flipkart has worst reliability of the website and application.
- 76.**People thinks that Amazon has better quickness to complete purchase
- 77.**Flipkart has worst quickness to complete purchase
- 78.**People thinks that both (Amazon and Flipkart) has better Availability of several payment options
- 79.**Flipkart has worst Availability of several payment options
- 80.**Individually Amazon has best Availability of several payment options
- 81.**Amazon have best speedy order delivery and FlipKart has worst.
- 82.**Amazon have best privacy of customers information and Flip Kart has worst
- 83.**Amazon have best Security of customer financial information and Myntra has worst
- 84.**Amazon is more trustworthy than Flipkart and Myntra
- 85.**Amazon is more Presence of online assistance through multi-channel than Flipkart and paytm.com
- 86.**Amazon has longer time to get logged in (promotion, sales period) than other companies
- 87.**Amazon and Flipkart have longer time in displaying graphics and photos (promotion, sales period) than other companies
- 88.**Myntra and Paytm is good at Late declaration of price (promotion, sales period)
- 89.**Myntra and Paytm is good at longer page loading time (promotion, sales period)
- 90.**Paytm has longer delivery period than others
- 91.**Amazon is better at Change in website/Application design

- 92. Amazon and Myntra has high Frequent disruption when moving from one page to another while Flip kart has low
- 93. Amazon website is more efficient than other
- 94. Amazon is most recommendable website than others

CONCLUSION

- **Key Findings and Conclusions of the Study**

We conclude that mostly females whose age group is around 21-30 years takes part in online shopping. Most of the peoples belongs to big cities like Delhi, Noida, Bangalore etc. They are experienced people, they do shop more than 4 years and using smartphones, Laptops with mobile internet, their operating system is windows, screen size is bigger. They generally use applications, google chrome as a search engine to reach the online store.

People likes Amazon the most because its website and application is easy to use, wide variety of products on offer, Complete, relevant description information of products, fast loading website speed, more reliable, more quickness to complete the purchase, Availability of several payment options, Speedy order delivery, Privacy of customers' information, Security of customer financial information, more trustworthy, Longer time to get logged in, Longer time in displaying graphics and photos, quick declaration of price, Lesser page loading time, many mode of payment on most products, Lesser delivery period, better at Change in website/Application design

- **Learning Outcomes of the Study in respect of Data Science**

Learning obtained about this project are:

1. Data analysis by using describe (), info (), shape, value counts () methods etc
2. Data Cleaning by using Rename method, skewness etc
3. Visualization by using count plot, pie plot, Bar graph, Histogram.
4. Learning obtained by customer opinions, customer satisfactions.
5. Learning obtained by observing the customer behaviour and their perspectives to see the products on various platforms

• Limitations of this work and Scope for Future Work

1. one of the foremost benefits offered by customer retention as companies do not need to run mass wide marketing campaigns
2. Cheaper than Acquisition, Loyal customers yield higher profits
3. Large investment in terms of price and time, Require concerted commitment and Business Culture
4. Reduce Promotional Expenses It is one of the important advantages of customer retention process. Customer retention cuts down the advertisement and marketing cost of companies. If companies are able to retain sufficient customers for the long term, then it is required to focus less on targeting new customers

References

1. Farris, Paul W.; Neil T. Bendle; Phillip E. Pfeifer; David J. Reibstein (2010). *Marketing Metrics: The Definitive Guide to Measuring Marketing Performance*. Upper Saddle River, New Jersey: Pearson Education, Inc. [ISBN 0-13-705829-2](#).
2. <http://www.commonlanguage.wikispaces.net/> Material used from this publication in this article has been licensed under Creative Commons Share Alike and Gnu Free Documentation License. See talk.
3. [Gitman, Lawrence J.; Carl D. McDaniel \(2005\). The Future of Business: The Essentials. Mason, Ohio: South-Western. ISBN 978-0-324-32028-2.](#)
4. [Coelho, Pedro S.; Esteves, Susana P. \(May 2007\). "The Choice between a Fivepoint and a Ten-point Scale in the Framework of Customer Satisfaction](#)

- Measurement". *International Journal of Market Research*. **49** (3): 313–339. [doi:10.1177/147078530704900305](https://doi.org/10.1177/147078530704900305). [ISSN 1470-7853](https://issn.org/1470-7853). [S2CID 166325179](https://s2cid.org/166325179).
5. [^ Dawes, John; Stocchi, Lara; Dall'Olmo-Riley, Francesca \(May 2020\). "Over-time variation in individual's customer satisfaction scores" \(PDF\). *International Journal of Market Research*. **62** \(3\): 262–271. \[doi:10.1177/1470785320907538\]\(https://doi.org/10.1177/1470785320907538\). \[ISSN 1470-7853\]\(https://issn.org/1470-7853\). \[S2CID 213159177\]\(https://s2cid.org/213159177\).](#)
 6. [^ Jump up to:^a ^b ^c ^d Kucukosmanoglu, Ahmet Nuri; Sensoy Ertan \(2010\). "Customer Satisfaction: A Central Phenomenon in Marketing". \[\\[1\\]\]\(#\)](#)
 7. [^ Westbrook, Robert A., and Richard L. Oliver. "The dimensionality of consumption emotion patterns and consumer satisfaction." *Journal of consumer research* \(1991\): 84-91.](#)
 8. [^ Homburg, Christian, Nicole Koschate, and Wayne D. Hoyer. "The role of cognition and affect in the formation of customer satisfaction: a dynamic perspective." *Journal of Marketing* 70.3 \(2006\): 21-31.](#)
 9. [^ Johnson, Michael D., Andreas Herrmann, and Frank Huber. "The evolution of loyalty intentions." *Journal of marketing* 70.2 \(2006\): 122-132.](#)
 10. [^ John, Joby \(2003\). *Fundamentals of Customer-Focused Management: Competing Through Service*. Westport, Conn.: Praeger. \[ISBN 978-1-56720-564-0\]\(https://isbn.org/978-1-56720-564-0\).](#)
 11. [^ Parker, Christopher J.; Wang, Huchen \(2016\). "Examining hedonic and utilitarian motivations for m-commerce fashion retail app engagement". *Journal of Fashion Marketing and Management*. **20** \(4\): 487–506. \[doi:10.1108/JFMM-02-2016-0015\]\(https://doi.org/10.1108/JFMM-02-2016-0015\).](#)
 12. [^ Batra, Rajeev and Olli T. Athola \(1990\), "Measuring the Hedonic and Utilitarian Sources of Consumer Attitudes," *Marketing Letters*, 2 \(2\), 159-70.](#)
 13. [^ Berry, Leonard L.; A. Parasuraman \(1991\). *Marketing Services: Competing Through Quality*. New York: Free Press. \[ISBN 978-0-02-903079-0\]\(https://isbn.org/978-0-02-903079-0\).](#)
 14. [^ Kessler, Sheila \(2003\). *Customer satisfaction toolkit for ISO 9001:2000*. Milwaukee, Wis.: ASQ Quality Press. \[ISBN 0-87389-559-2\]\(https://isbn.org/0-87389-559-2\).](#)
 15. [^ Wirtz, Jochen and John E. G. Bateson \(1995\), "An Experimental Investigation of Halo Effects in Satisfaction Measures of Service Attributes," *International Journal of Service Industry Management*, 6 \(3\), 84-102.](#)
 16. [^ Jump up to:^a ^b ^c ^d ^e Wirtz, Jochen; Chung Lee, Meng \(2003\), "An Empirical Study on The Quality and Context-specific Applicability of Commonly Used Customer Satisfaction Measures," *Journal of Service Research*, Vol. 5, No. 4, 345-355.](#)
 17. [^ Eroglu, Sergin A. and Karen A. Machleit \(1990\), "An Empirical Study of Retail Crowding: Antecedents and Consequences," *Journal of Retailing*, 66 \(Summer\), 201-21.](#)
 18. [^ Westbrook, Robert A. \(1980\), "A Rating Scale for Measuring Product/Service Satisfaction," *Journal of Marketing*, 44 \(Fall\), 68-72.](#)
 19. [^ Drolet, Aimee L., and Donald G. Morrison. "Do we really need multiple-item measures in service research?." *Journal of service research* 3, no. 3 \(2001\): 196-204.](#)
 20. [^ Salant, Priscilla, and Don A. Dillman. "How to Conduct your own Survey: Leading professional give you proven techniques for getting reliable results." \(1995\)](#)
 21. [^ Dawes, J. Stocchi, L., Dall'Olmo-Riley, F. "Over-time Variation in Customer Satisfaction Scores", *International Journal of Market Research*, March 2020](#)
 22. [^ Fornell, C., R.T. Rust and M.G. Dekimpe \(2010\). "The Effect of Customer Satisfaction on Consumer Spending Growth," *Journal of Marketing Research*, 47\(1\), 28-35.](#)
 23. [^ Anderson, E.W., C. Fornell & S.K. Mazvancheryl \(2004\). "Customer Satisfaction and Shareholder Value." *Journal of Marketing*, Vol. 68, October, 172-185.](#)
 24. [^ Fornell, C., S. Mithas, F.V. Morgeson III, and M.S. Krishnan \(2006\). "Customer Satisfaction and Stock Prices: High Returns, Low Risk," *Journal of Marketing*, 70\(1\), 3–14.](#)
 25. [^ Morgeson, F. V., & Petrescu, C. \(2011\). "Do They All Perform Alike? An Examination of Perceived Performance, Citizen Satisfaction and Trust with US Federal Agencies." *International Review of Administrative Sciences*, 77\(3\), 451-479.](#)
 26. [^ Johnson, Michael D.; Anders Gustafssonb; Tor Wallin Andreassenc; Line Lervikc; Jaesung Cha \(2001\). "The evolution and future of national customer satisfaction index models". *Journal of Economic Psychology*. **22** \(2\): 217–245. \[CiteSeerX 10.1.1.134.7658\]\(https://citeseerx.ist.psu.org/viewdoc/doi?doi=10.1.1.134.7658\). \[doi:10.1016/S0167-4870\\(01\\)00030-7\]\(https://doi.org/10.1016/S0167-4870\(01\)00030-7\). \[ISSN 0167-4870\]\(https://issn.org/0167-4870\).](#)
 27. [^ Bluestein, Abram; Michael Moriarty; Ronald J Sanderson \(2003\). *The Customer Satisfaction Audit*. Axminster: Cambridge Strategy Publications. \[ISBN 978-1-902433-98-1\]\(https://isbn.org/978-1-902433-98-1\).](#)

28. [^](#) Reichheld, Frederick F. (December 2003). *"One Number You Need to Grow"*. *Harvard Business Review*. **81** (12): 46–54, 124. [PMID 14712543](#).
29. [^](#) Customer Relationship Management, Emerging Concepts, Tools and Application, Edited by Jagsish N Sheth, Atul Parvatiyar and G Shainesh, published by Tata McGraw-Hill Education - see Chapter 21, pages 193 to 199
30. [^](#) European Commission: [eGovMoNet: eGovernment Monitor Network](#).
31. [^](#) Pokryshevskaya, Elena B.; Antipov, Evgeny A. (2017). "Profiling satisfied and dissatisfied hotel visitors using publicly available data from a booking platform". *International Journal of Hospitality Management*. **67**: 1–10. [doi:10.1016/j.ijhm.2017.07.009](#).