Impact of AI on Customers Purchasing Intention Towards Online Grocery Shopping: A Case Study of Delhi/NCR, India

Dr. Swati Singh
Associate Professor, Galgotias College of Engineering and Technology
Mail I'd- singhswt@gmail.com

Neha Nagar
Assistant Professor, Noida International university
Mail I'd- neha.deesha.chaudhary@gmail.com

Shashi Bala
Assistant professor, Gniot MBA Institute Greater Noida
Mail I'd- Dixitshashi30@gmail.com

Karishma
Assistant Professor, Gniot MBA Institute Greater Noida
Mail id - karishma1996chouldhary@gmail.com

Ms. Priyanka Chauhan
Assistant Professor, Galgotias College of Engineering and Technology
Mail I'd- 25priyachauhan@gmail.com

Nitin Tripathi
Assistant Professor, GNIOT-MBA Institute, Greater Noida
Mail I'd- nitintriphathi@gniotmba.net

ABSTRACT
Artificial Intelligence (AI) is an area which is fast growing in all over the world. It has already been applied in our daily life. With AI in business, all the industries rely on cheaper and faster and more suitable marketing techniques. The present research study is undertaken to find the relation between AI and consumer purchasing intention and secondly to know the difference between consumer purchasing intention based on their demographics. To prove these objectives, the researcher has collected data from 550 respondents from Delhi/NCR. The researcher has applied descriptive statistics, correlation, Cronbach alpha, Anova, Mann-Whitney Test and Kruskal-Wallis Test and has used SPSS 23.0 version for these tests. Findings of the study concluded that to have significant relationship between AI and consumer purchasing intention. It is concluded that there is a difference between consumer purchasing intention and gender & monthly income. These findings were supported with hypothesis testing.

KEYWORDS-Consumer Intention, Artificial Intelligence, Retail, Marketing Techniques

INTRODUCTION
Online purchasing is getting famous for a number of reasons. There may be different factors such as rising fuel cost, difficulty in accessing regular stores etc. increasing the use of artificial intelligence technology helps in enabling business to deal with large amount of data. Artificial intelligence uses the technologies such as genetic algorithm, deep learning, natural language processing to train the machines to recognize patterns from large amount of data. Customer can find out more information related to the product and its updating. If anyone wants to purchase the product by using internet can take review of that product first.
Ecommerce is one of the former adopters of artificial intelligence, with use cases from personalized products recommendation and enhancing customer services to pricing optimization, smart logistics and sales forecasting. Artificial Intelligence can be defined as a technology has the abilities to perform tasks that require intelligence to perform when performed by human beings. Artificial intelligence modifies the customer experience in real time according to the command of users. For instance, if a customer is browsing certain types of products on websites, artificial intelligence can adjust the website’s content to highlight the similar products by creating highly personalized shopping experience. The online business Industry has encountered fast development throughout the past years. Because of the quick development of online clients, understanding their necessities and behaviours is basic.

LITERATURE REVIEW OF THE STUDY

Artificial Intelligence has turned into a ground-breaking power in the domain of web-based business, reforming the manner in which organizations cooperate with purchasers (akter & carillo, 2022). With regards to online shopping, simulated intelligence includes a scope of innovations and instruments intended to improve the shopping experience. Computer based intelligence driven proposal frameworks examine buyer information to give custom fitted item ideas, accordingly customizing the internet shopping venture (park & Wamba, 2023). By utilizing simulated intelligence calculations, organizations can break down purchaser information to make and convey advertising content, offers, and advancements that are exceptionally applicable to individual customers (Dwivedi, 2021). The market seriousness powers routine checking and execution of new methodologies, or, in all likelihood the items will confront the gamble of being dismissed from the business sectors. Buyers will go searching for options on the off chance that they feel like they are not getting an adequate number of advantages for the cash spent. Clients anticipate that the retailers should be prepared with2 items that surpass or if nothing else match their assumptions (wong & sohal, 2020)

PROCESS OF ONLINE SHOPPING

OBJECTIVES OF THE RESEARCH STUDY

RO1: To find the relation between AI And consumer purchasing intention.

RO2: To know the difference between customer purchasing intention based on their demographics.

HYPOTHESIS OF THE RESEARCH STUDY

H1: There is a significant relationship between AI and Customer purchasing intention.
H2: There is a significant difference between customer purchasing intention based on their demographics (income & gender).

SCOPE OF THE STUDY

Functional Scope

Functional scope of the study is to know the impact of AI on customers purchasing intention towards online grocery shopping.

Geographical Scope

Delhi/NCR is the region for this research study. The study covered the area – Delhi, Noida, Gurgaon, Ghaziabad, Faridabad.
RESEARCH METHODOLOGY

Research Type: Descriptive research study has been used because it will describe the various characteristics of the variables used.

Sampling Technique: Convenient Sampling which is non-probability sampling method. It is a method in which samples are taken from a portion near the population sample unit & sample size.

Sample Size: The questionnaire was distributed to 580 customers who are willing to do online grocery shopping, out of these 550 customers have provided full details of their purchasing intention. Thus, making sample size – 550.

TARGET POPULATION

The target population includes customer who are willing to do online grocery shopping in Delhi/NCR.

DATA COLLECTION METHOD

The questionnaires were utilized for collecting the data from customers who purchase online. The questionnaire was divided into two parts.

Part A: It consists of demographic information
Part B: It consists of questions related to the artificial intelligence and customer purchasing intention.

Primary Data: The primary data was collected through questionnaire. 5 points likert scale was used to frame the questionnaire.

Secondary Data: The data collected through books, websites, magazines etc.

RESULTS & DISCUSSION

Part A- Demographic Analysis

This part consists the information about the respondent’s demographic characteristics.

<table>
<thead>
<tr>
<th>Table: Demography of the Respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
</tr>
<tr>
<td>Male</td>
</tr>
<tr>
<td>Female</td>
</tr>
<tr>
<td>Age</td>
</tr>
<tr>
<td>15 – 20</td>
</tr>
<tr>
<td>21 – 25</td>
</tr>
<tr>
<td>26 – 30</td>
</tr>
<tr>
<td>31 – 35</td>
</tr>
<tr>
<td>Above 36</td>
</tr>
<tr>
<td>Education</td>
</tr>
<tr>
<td>X or XII</td>
</tr>
<tr>
<td>Graduate</td>
</tr>
<tr>
<td>Post Graduate</td>
</tr>
<tr>
<td>More than PG</td>
</tr>
<tr>
<td>Homemaker</td>
</tr>
</tbody>
</table>
Part B: Analysis of Artificial Intelligence and Customer Purchasing Intention

This part consists analysis to drive a conclusion by keeping in mind the objectives of the research work.

Table 2: Reliability Test

<table>
<thead>
<tr>
<th>S. No</th>
<th>Construct</th>
<th>Cronbach Alpha</th>
<th>No. of Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Artificial Intelligence</td>
<td>0.876</td>
<td>10</td>
</tr>
<tr>
<td>2</td>
<td>Customer Purchasing Intention</td>
<td>0.784</td>
<td>8</td>
</tr>
</tbody>
</table>

Source: output of SPSS

A reliability coefficient of 0.70 or higher is usually acceptable. Artificial intelligence and customer purchasing intention having coefficients of 0.876 & 0.784 respectively which indicates high reliability.

Table 3: Correlation analysis

<table>
<thead>
<tr>
<th></th>
<th>Artificial Intelligence</th>
<th>Consumer Intention</th>
</tr>
</thead>
<tbody>
<tr>
<td>Artificial Intelligence</td>
<td>1</td>
<td>0.896</td>
</tr>
<tr>
<td>Sig.(2-tailed)</td>
<td>0.000</td>
<td></td>
</tr>
<tr>
<td>Customer Purchasing Intention</td>
<td>0.765</td>
<td>1</td>
</tr>
<tr>
<td>Sig.(2-tailed)</td>
<td>0.000</td>
<td></td>
</tr>
</tbody>
</table>

Source: output of SPSS

Table 3 concluded about correlation matrix. The above table has two variables i.e, artificial intelligence and consumer intention. It is found that artificial intelligence and customer purchasing intention have positive relationship with each other. Also, there exist a significant relationship between these two variables at 0.001 level.

**HYPOTHESIS TESTING**

**Regression Analysis**

H1: There is a significant relationship between AI and Customer purchasing intention.

To test the hypothesis H1, a simple regression model was constructed between the independent and dependent variables (consumer purchasing intention and artificial intelligence).
The above table shows that the outcome of regression analysis between customer purchasing intention and artificial intelligence. Calculated $F$ value in the table shows the results were compared to $F$ tabulated was significant: $F (1/382)=7618.08, p<0.005$, which implies that artificial intelligence have strong significant relationship with customer purchasing intention.

Table 5: Simple Regression

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Unstandardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Constants)</td>
<td>.103</td>
<td>.039</td>
<td>2.533</td>
<td>.011</td>
</tr>
<tr>
<td>AI</td>
<td>.959</td>
<td>.011</td>
<td>.982</td>
<td>93.419</td>
</tr>
</tbody>
</table>

Source: Output of SPSS

The table above shows the results of simple regression, which confirms the result of Anova with AI being significant, $t(2.533) = 93.419, p<.05$. The coefficient of determination was .961, meaning that the effect of AI is 96.1% in the distinction of consumer behaviour. Hence, Hypothesis 1 is accepted.

H:2 There is a significant difference between customer purchasing intention based on their demographics (income & gender).

To test the hypothesis H2, the researcher has taken Mann-Whitney test for gender and Kruskal wallis test for income.

Table 6: Mann-Whitney test for customer purchasing intention in accordance to gender

<table>
<thead>
<tr>
<th>VARIABLES</th>
<th>GENDER</th>
<th>MANN-WHITNEY TEST</th>
<th>WILCOXON W</th>
<th>Z</th>
<th>SIGN. *</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>MALE</td>
<td>FEMALE</td>
<td>U</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MEAN RANK</td>
<td>CUSTOMER PURCHASING INTENTION</td>
<td>125.1</td>
<td>245.6</td>
<td>4467</td>
<td>23467</td>
</tr>
</tbody>
</table>

Source: output of SPSS

The value of significance is .000 which is less than 0.05 which gives evidence to reject the null hypothesis and accept the alternate hypothesis. The overall conclusion is that there is significant difference between customer purchasing intention and gender.
Table 7: Kruskal Wallis Test for customer purchasing intention in accordance to income

<table>
<thead>
<tr>
<th>VARIABLES</th>
<th>MONTHLY INCOME</th>
<th>CHI- SQUARE</th>
<th>DF</th>
<th>SIG.*</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>LESS THAN 20000</td>
<td>TO 30000</td>
<td>TO 40000</td>
<td>And Above</td>
</tr>
<tr>
<td>CUSTOMER PURCHASING INTENTION</td>
<td>162.3</td>
<td>134.7</td>
<td>122.63</td>
<td>236.86</td>
</tr>
</tbody>
</table>

Source: output of SPSS

The value of significance is .000 which is less than 0.05 which gives evidence to reject the null hypothesis and accept the alternate hypothesis. The overall conclusion is that there is significant difference between customer purchasing intention and income. Hence, Hypothesis 2 is accepted.

CONCLUSION

The conclusion of the study provided the valuable results that impact of artificial intelligence on customer purchasing intentions in context of the online grocery shopping. The hypothesis was tested and the findings strongly supported the effectiveness of artificial intelligence in enhancing customer purchasing intention and shaping new experiences for online shopping. Simulated intelligence keeps on developing, it will stay a vital participant in the computerized commercial centre, reshaping the manner in which shoppers communicate with online retailers and pursue informed buy choices. Along these lines, online business coordinated artificial intelligence empowered innovation to discover client requirements and inclinations with respect to online products and services. These discoveries give significant direction to organizations hoping to remain serious and receptive to the changing scene of web-based shopping. The purpose of this research study is to find the relationship between artificial intelligence and customer purchasing intention and to find the difference between customer purchasing intention on their demographics (income and gender). It is concluded from the analysis that there is a positive relationship between artificial intelligence and customer purchasing intention. On the other hand, the significant difference was found between customer purchasing intention in accordance to gender and income. And it is concluded that gender affects the purchasing decision.

REFERENCES