

THE ROLE OF ARTIFICIAL INTELLIGENCE IN CONSUMER PURCHASE DECISION MAKING

W. Martin Ruban

Research scholar, St. Peters Institute of Higher Education and Research, Avadi, Chennai

Dr. S. Smilee Bose

Associate Professor, Department of commerce, St. Peters Institute of Higher Education and Research, Avadi, Chennai

G. Lakshmi priya

Research scholar, St. Peters Institute of Higher Education and Research, Avadi, Chennai

ABSTRACT

This paper proposes the conceptual review of emergence of artificial intelligence in consumer behavior and their decision making in online shopping and the role of artificial intelligence in consumer decision making.

Artificial intelligence (AI) is playing a significant role in predicting consumer behavior by leveraging advanced algorithms and large-scale data analysis. Through its capabilities in machine learning and data mining, AI can extract meaningful insights from vast amounts of consumer data to make accurate predictions and inform businesses' decision-making processes. One of the major technological enhancements in the world is artificial intelligence, and its impact into the field is unimaginable. The role of artificial intelligence in consumer decision making, by using our data such as location, browsing history, and purchasing decisions, artificial intelligence can provide hyper-personalized products, services, and additionally AI can be in the form of customer support chat box, customer self-service, natural language processing for speech recognition and support. And how does AI affect consumer artificial intelligence will also improve customer trends, aid in improving customer interaction, and extract valuable points. In this study, it is analyzed to find out the major role of AI in consumer purchase decision making and whether it has an impact on their decisions while buying products and services.

Keywords: Artificial intelligence, AI, customer, Purchase Decision Making

INTRODUCTION

The role of artificial intelligence in every sector is inevitable, taking charge in each individual sector even in our own decision. Do you think that AI is influencing your decision? Yes! With the help of this study, we came to know that AI has a role in consumer decision making. The major part and the role of AI's occurrence is when you're buying products through online shopping. Online shopping

is a form of electronic commerce which allows consumers to directly buy goods or services from a seller over the internet. In the year of 1960s online shopping came into existence but it took several decades to take this position. Now-a-days public is blindly has the trust over online shopping. From kids to senior citizen everyone is using this mode. Pre covid era was slightly different from now, pandemic has the supreme influence in the online shopping.

Online shopping is happening only because of Artificial intelligence, when you are the application you can see customizable products, voice search for online purchases, augmented and virtual reality, chat bots. These are all upgrades things happened only through AI, the major reason for this fondness among people is only through AI. It will suggest you the best among 1000 products through Rating, Reviews, Images, direct customer testimonial ideas you may be interested in one particular product but the data you collected through AI is second class, then you will choose the best product. With the help of this research, we have discovered that the AI has a role in consumer decision making.

OBJECTIVE OF THE STUDY:

The primary objective of the study is to study the role of artificial intelligence in consumer decision making.

REVIEW OF LITERATURE:

Benedict.G.C.Dellaert, 2020 From this study it is understood that artificial intelligence voice assistance has the vital role in the market, people are all adopted to (AIVA) and it's a rich topic for marketers lately. This study has found that people tend to disclose more people to virtual humans, in the form of computer avatar than to actual humans. Psychologically people were tend to use (AIVA) if they are using latest technology, they feel that they are socially standard.

Minwoo lee, wooseok kwon, ki-joon, 2021 developing a prediction model of restaurant review helpfulness for customer decision making. From this study it is understood that artificial intelligence is completely operated by machine learning and there few context these are like adding feathers in A.I's cap. That is multivariate linear regression and extreme gradient boosting (XG BOOST) MLR is designed to find the relationship between dependent variable and multiple independent variable it helps to predict prior, and xg boost which stands for extreme gradient boosting which attempts to accurately predict a target variable by combining the estimates, it gives efficiency and accuracy there are all major tools for predicting consumer decision.

laura abrardi, carlo cambini, laura rondi (2022) From this study it is understood that AI are increasingly used to organize and select relevant information from our day today search activities in internet, the news we read, the multimedia context we use, people started believing AI, machine learning systems other than human being, this is a biggest indicator that all should consider that AI has influenced humans, there by originating that concept of algorithm consumers.

Priya Grover, Brand Mavericks LLP (2022) Social media marketing is a very important tool for the marketers of appeal brands online for trending new fashion, announce sales and most importantly generate positive reviews and word of mouth as these reviews are the most looked for. Online shopping has brought about a paradigm shift in the way consumers are shopping in today's world. Consumer is the epicenter in the process of marketing. This makes it extremely important for marketers to thoroughly understand the way consumers make decision. With the digital intervention the concept remaining the same consumer often checks the online conversations around the product he is interested in, reviews, goes through content, check the most competitive prices, delivery options, payment and transactions facilities, post purchase amenities. Internet has changed consumers and societies at large through availability of wide information, better social networking and better communication. Social networks are defined as websites that link millions of users worldwide through Blogs, YouTube, MySpace, Facebook and similar social media sites. Online Shopping has brought about a paradigm shift in the way consumers are shopping in today's world.

Bikram Prasad, Indrajith Ghosal (2022) The direct to consumer brands are emerging to reach more number of consumers with more potential to meet their expectations. They are characterized through metamorphosis as the vertical brands sell their products from the manufacturer to consumers directly without any interruptions from distribution channels as in traditional mode of doing business. They are annihilating themselves in the virtual platforms and later disrupting their linear sales models. The attributes of online buying behavior like safety of transaction, availability of innovative products and quality of products have been considered to build a predictive model through artificial neural network (ANN).

Role of artificial intelligence in predicting consumer purchase decision making

SAMPLE DESIGN:

The research design is conclusive and descriptive in nature. The primary data is collected using Stratified Sampling technique. Data was collected from 50 respondents. The collected data are analyzed using SPSS with suitable tools like Anova and Chi-Square.

Overview of Artificial Intelligence

Artificial intelligence In the Year 1943 The First work which is now recognized as AI was done by Warren McCulloch and Walter Pitts but it was named as Artificial Neurons. In the year of 1949 Donald Hebb has updated the AI and Strengthen the process and, in the year of 1950, Alan Turing has done a test called Turing test to check the Ability of the AI machine and the machine was became successful. The word Artificial intelligence first adopted by American computer scientist John McCarthy at the Dartmouth Conference.

Artificial intelligence and machine learning are specifically what retailers and marketers need. Advance in these technologies allow segmenting of content and products for customers based on analyzing and understanding their purchasing habits. But personalization is not effective enough. Retailers need solutions and tools that will individualize interactions with customers and increase brand loyalty, artificial intelligence and machine learning offer some obvious and clear benefits for retail businesses. With the power of these technologies, marketers would be able to correctly forecast the value of individual customers as well as the potential revenue from certain segments of the client base. As a result, marketing budgets will be spent efficiently and generate more profits for retail businesses.

One way AI predicts consumer behavior is through recommendation systems. These systems analyze a user's past behavior, such as purchases, browsing history, and preferences, to generate personalized recommendations. By employing techniques like collaborative filtering or content-based filtering, AI algorithms can identify patterns and similarities among consumers to suggest products or services that align with their interests and preferences. This personalized approach enhances the user experience and increases the likelihood of converting recommendations into purchases.

AI also helps businesses understand consumer sentiment and preferences by analyzing social media data, customer reviews, and feedback. Natural language processing (NLP) techniques enable AI systems to extract insights from textual data and identify emerging trends, sentiments, and opinions. By monitoring online conversations, businesses can gauge consumer sentiment toward their products or services and make necessary adjustments or improvements. Furthermore, AI-powered predictive analytics enables businesses to forecast consumer behavior based on historical data. By analyzing past consumer interactions, purchase patterns, demographic information, and other relevant variables, AI algorithms can identify trends and patterns that help predict future consumer behavior. This predictive capability allows businesses to anticipate market demands, optimize inventory, develop targeted marketing campaigns, and improve overall business strategies. Another application of AI in predicting consumer behavior is through customer segmentation. By clustering consumers based on their shared characteristics and behaviors, AI algorithms can identify distinct consumer groups with similar preferences and purchase patterns. This segmentation enables businesses to tailor their marketing strategies and offerings to specific consumer segments, resulting in more effective and targeted campaigns.

Overall, AI's predictive capabilities empower businesses to gain valuable insights into consumer behavior, enhance customer experiences, and make data-driven decisions. By leveraging AI algorithms and techniques, businesses can stay ahead of market trends, understand their customers better, and deliver products and services that meet consumer needs and preferences.

Analysis and Findings

Research has shown that artificial intelligence plays an important role in purchase decision making. This Study examines the role of artificial intelligence in consumer decision making. In this context the main purpose of this study is to investigate the influencing power of artificial intelligence in customer decision making. Decades back customer's decision making was different comparing to the latest purchase decision making, since customers are tech savvy they depend on artificial intelligence to make their decision making.

Socio Economic profile of the respondents:

| Variables | Attributes | Frequency | Percent | Valid percent | Cumulative percent |
|-----------|--------------|-----------|---------|---------------|--------------------|
| Gender | Male | 32 | 65.3 | 65.3 | 65.3 |
| | Female | 17 | 34.7 | 34.7 | 100.0 |
| Age | 18-24 | 10 | 20.4 | 20.4 | 20.4 |
| | 25-34 | 20 | 40.8 | 40.8 | 61.2 |
| | 34-44 | 15 | 30.6 | 30.6 | 91.8 |
| | 45-54 | 4 | 8.2 | 8.2 | 100.0 |
| Status | Fulltime | 6 | 12.2 | 12.2 | 12.2 |
| | Parttime | 13 | 26.5 | 26.5 | 38.8 |
| | Entrepreneur | 13 | 26.5 | 26.5 | 65.3 |
| | Business | 9 | 18.4 | 18.4 | 83.7 |
| | unemployed | 8 | 16.3 | 16.3 | 100.0 |
| Salary | 10000-15000 | 4 | 8.2 | 8.2 | 8.2 |
| | 15000-20000 | 9 | 18.4 | 18.4 | 26.5 |
| | 20000-25000 | 14 | 28.6 | 28.6 | 55.1 |
| | 25000-30000 | 10 | 20.4 | 20.4 | 75.5 |
| | 35000-35000 | 6 | 12.2 | 12.2 | 87.8 |
| | Above 40000 | 3 | 6.1 | 6.1 | 93.9 |
| Education | UG | 11 | 22.4 | 22.4 | 22.4 |
| | PG | 12 | 24.5 | 24.5 | 46.9 |
| | Student | 21 | 42.9 | 42.9 | 89.8 |
| | Scholar | 4 | 8.2 | 8.2 | 98.0 |
| | others | 1 | 2.0 | 2.0 | 100.0 |

Source: Computed data

Interpretation:

For the Topic of Role of artificial intelligence in consumer purchase decision making Questionnaire Was given to the Respondents and these are all the data's of the participants with their demographic variables.

Customer Preference to use Artificial Intelligence to make Purchase Decision making

Table no.2

| | | Gender | | Total |
|---|--|-------------|------------|--------------|
| | | male | female | |
| Why Consumers Prefer to use Artificial Intelligence for shopping? | Time efficient | 5 100.0% | 0 0.0% | 5 100.0% |
| | Cost efficient | 8 72.7% | 3 27.3% | 11 100.0% |
| | Better recommendation | 10 55.6% | 8 44.4% | 18 100.0% |
| | Completing task better than humans | 5 62.5 | 3 37.5 | 8 100.0% |
| | Making life simple, safe, and more efficient | 4 57.1% | 3 42.9% | 7 100.0% |
| Total | Count% within 9. Why Consumers prefer to use Artificial Intelligence for shopping | 32 65.3 | 17 34.7 | 49 100.0% |

Source: Computed data

Interpretation

From this table it is understood that consumers are using artificial intelligence and their preference on purchase in online shopping through artificial intelligence and the intention on why they prefer AI. This table shows the reason why consumers prefer to AI in online shopping and it shows the exact percentage of the respondents on what made them prefer to use AI in online shopping. It is proved that time efficient, cost efficient, better recommendation, completing task better than human, making life simpler.

Predicting Buying Behavior through Artificial Intelligence is more Reliable

Table no.3

| Valid | Frequency | Percent | Valid percent | Cumulative percent |
|----------------|-----------|---------|---------------|--------------------|
| Strongly agree | 16 | 32.7 | 33.3 | 33.3 |
| Agree | 20 | 40.8 | 41.7 | 75.0 |
| Neutral | 10 | 20.4 | 20.8 | 95.8 |
| Disagree | 2 | 4.1 | 4.2 | 100.0 |

| | | | | |
|------------------|----|------|-------|--|
| Stronglydisagree | 48 | 98.0 | 100.0 | |
|------------------|----|------|-------|--|

Source: Computed data

Interpretation:

FromthetablewecanbeabletounderstandthatPredictingBuyingbehaviorthroughartificialintelligenceismore reliable and it has been proved with the data collected. The percentage of the respondents of Disagreeandstrongly disagree was comparatively Fewer. The percentage of agree and strongly agree shows thatPredictingBuyingbehaviorthroughartificialintelligenceismore reliable.

Genderoftherespondentandthepreferencetouseartificialintelligenceincustomerpurchasedecisionmaking

Tableno.4

| | Sum of squares | Df | Meansquare | F | Sig. |
|----------------|----------------|----|------------|------|--------|
| Between Groups | .916 | 4 | .229 | .915 | 0.0468 |
| Within Groups | 11.264 | 45 | .250 | | |
| Total | 12.180 | 49 | | | |

Source: computed data

H1: There is no significant level between gender and why customers prefer to useartificial intelligenceH0: There is a significance level between gender and why customers prefer to use artificialintelligenceInterpretation:

From the above table it can be inferred that the f value is .915 and the significance value is 0.0468 < (0.05)therefore H1 is rejected in the favor of H0 The p value is 0.0468 which is lesser than the significance level value(0.005) so H0 is accepted and H1 is rejected. The significant difference among and the customer preference touseartificialintelligenceisidentifiedsince therespective Pvalueissignificant.

Conclusion:

Artificial intelligence is shaping the future of humanity across nearly every industry, especially in E-commercefield the changes and upcoming changes are phenomenal. Now a day’s artificial intelligence are one side of ourlife. Using AI business can do more than just prevent data breeches. It can also help companies get a betterunderstanding of their customers and often even humanize there brand. Literally Customers like the approach ofartificial intelligencein this research my data clearly mention that artificial intelligence is cost efficient, timeefficient, Better recommendations and so on and now a day’s people are adopting to technologies far morequicker than before and they have adopted AI as their regularlife pattern and some of them are literallydepending on

Artificial intelligence as same as companies are also getting benefited by this prediction is donethrough so manyArtificial intelligence tools.Companies are gettingmore benefits through as well customersare also getting benefited by Artificial intelligence. And finally any company that aims for a long term futureshould incorporate this technology. As per this study it has proved that thereis a role for artificial intelligence inconsumer decisions. The respondents feel the same, they are accepting thatA.I has a strong role in theirdecision making. This paper will help the emerging researchers and students who are keen to know the role ofartificial intelligence in consumer purchase decision making. Because youth interest in this field can mergehigher rapidity in enhancement of this technique. Overall, AI is increasingly becoming a valuable tool forconsumers in making informed decisions about what products and services to buy. However, it is important torecognize that AI is not perfect and can still have biases and limitations, and that consumers should alwaysexercisetheirownjudgmentand criticalthinkingwhenmakingimportantpurchasingdecisions.

References:

- Jane Irene Kelly,2023 The future marketing: predicting consumer behaviour with AI
- benedict dellaret, 2021 Consumer decisions with artificially intelligent voice assistant
- PamelanN.Danziger Why people buy thingstheyDon'tneed(understandingandpredicting consumerbehaviour)
- bikram Prasad, indrajith (2021) The Impact of Digital Strategies on Consumer Decision Journey
- Brand Mavericks LLP (2020) Artificial intelligence, firms and consumerbehavior
- Soni,N.;Sharma,E.K.;Singh,N.;Kapoor,A.ArtificialIntelligenceinBusiness:FromResearchandInnovationtoMarketDeployment.Procedia Comput.Sci.2020,167,2200–2210.
- Miller,G.PerceivedImpactsofArtificialIntelligenceandResponsestoPositiveBehaviourChangeIntervention. InInformationandCommunicationTechnologies inTourism2019;Springer ScienceandBusinessMedia LLC:Berlin,Germany,2018;pp. 359–370.
- Court, D., D. Elzinga,S. Mulder,and O. J. Vetvik.“The Consumer Decision Journey.” McKinsey Quarterly, 2009
- Artificial Intelligence Technologies and Knowledge Sharing Femi Olan; Jana Suklan; Emmanuel OgiemwonArakpogun
- ThinkLikeYourCustomer(Billstinnett)
- Danziger,Pamela,n WhyPeopleBuyThingsTheyDon'tNeed(2004)

JanKietzmann
consumerJourney

Artificialintelligenceinadvertising:HowmarketerscanleverageA.IAlongthe