

EFFECTIVE ROLE OF ARTIFICIAL INTELLIGENCE AND CHATBOTS IN MARKETING STRATEGIES FOR DECISION MAKING FOR ONLINE CUSTOMERS

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ABSTRACT

Internet marketing is the practise of marketing and selling products and services via the use of the internet as a distribution and sales channel. With a texting-based website that just provided product information and other necessary information, internet marketing first gained traction in the year 1990. It deals with more than only the selling of goods; it also deals with several advertisement platform such as websites, software, applications, and social media. Websites like Amazon.com, YouTube.com, Alibaba.com, Google.com, and Yahoo.com are just a few of the businesses that have changed how the internet is used for marketing in the twenty-first century. Among the many online marketing strategies are pay-per-view, pay-per-click, and payper-call advertisements. New marketing strategies are created every day. It is critical to understand the current trend. Every organization is constantly creating new techniques in order to find a better strategy to optimize income and company growth. Consumers are growing more smarter these days. There are couple of trends in digital marketing which help a customer to understand about the right information from time to time. An attempt was made to find out which of these digital marketing trends is impacting the decision-making process of the customer, more. In this research study, it is found that most of the respondents are being impacted by the Chatbots among other digital marketing trends followed by Voice-search.

I. INTRODUCTION

The business and distribution components of marketing and selling goods and services online are referred to as "internet marketing." E-commerce capabilities are extensively used in internet marketing. Comparison to the 1990s, digital marketing has become extremely popular such as

This is an Open Access article distributed under the terms of the Creative Commons Attribution License (https://creativecommons. org/licenses/by/4.0/), which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited. Go on a visual hunt, Microseconds, Apps for social messaging, Stories from social media, The use of chatbots, and Search by voice [1].

Internet advertising started out within the early Nineteen Nineties with a fundamental feature like a text-based totally internet site that offer a product information and different facts most effective. It no longer handiest deals with the sale of factors, but additionally with facts, advertising, software program, stock trading, and so forth of the product[2]. Pay-in keeping with-click on, pay-in keeping with-view, pay-in keeping with-call, and pay-per-click on advertisings are only a few of the online advertising techniques. New marketing strategies are created each day. It is essential to recognize the current fashion. Every organisation is continuously growing new strategies with a view to find a better strategy to optimize earnings and enterprise boom. Consumers are growing greater smarter these days [3].

Chatbot is a software application that is for online chat conversation using normal text, messaging apps, websites, and mobile apps instead of direct contact with a real human agent (Figure 1). The entire study was built on data provided by consumers who conducted online shopping while utilising various digital marketing trends. While recording their responses, some customers might not want to answer the questions or might not react correctly [4]. In the modern world, as people's demands and goals change, so does their degree of contentment.

Chatbot use occasions in customer service

• Using chatbots to respond to inquiries and issues

• Chatbots assist in the purchase of tickets to events and shows.

• Chatbots can be used to find products, obtain product information, check inventory, and perform other tasks.

• Chatbots for a better customer experience Chatbots can also handle requests for returns and exchanges.

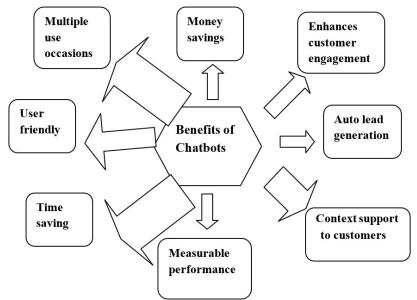


Figure 1: Chatbot Advantages

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II. RESEARCH METHODOLOGY

It is completely and simply the framework of the study's plan; it directs the data's gathering and analysis. This research used a variety of statistical procedures, including hypothesis tests and others, to make the study effective.

Primary Data:

The term "primary data" refers to the collection of recent or first-hand information. With surveys and descriptive research, there are many ways to gather primary data. Customers who have done internet shopping are the respondents. A questionnaire changed into designed to gather the responses from the respondents. The take a look at become designed in Google shape and the hyperlink turned into despatched thru sociologies media linksWhatsApp and different ways as a way to accumulate records. The data was collected from huge respondents. But the data for analysis is considered from210 respondents only, those who experienced online using either Voice Search or Chatbots trends [5]. The criteria form sampling was Stratified random sampling. The area of the study is in around the Hyderabad.

Secondary Data

The Secondary data means collecting the data which is already existing in some other research reports or other. For our investigation, secondary data were also gathered in addition to the primary data. Websites, books, reputable journals, and periodicals were used as sources of information.

There are several parameters needs to be used for the evaluation of results and effectiveness of artificial intelligence and chatbots for online customers.

III. LITERATURE REVIEW

Digital marketing is the term for consumer outreach that uses the Internet, mobile devices, social media, search engines, and other platforms. Digital marketing, in comparison to traditional marketing, is the growing industry and creates a new system that necessitates both new customer innovations and new insights into consumer behaviour [6]. "The online purchasing process - According to most study academics, marketing is a commercial organization's innovation activity. E-marketing was defined by Colorado, Milley, and Marcolin as the using of the internet marketing and other required technologies to create and mediate between a company and its clients to sustain better in the market. Various study scholars have recognized the digital marketing and extension of features. and a variety of different services in various classes Both expand at the same time and in the same way inside the same process. Many studies show that a large quantity of purchasing is done in online, but the number of online customers who purchase online is low, which is consistent with the findings. Mayer (2015), Betts (2015), and Oliver (2015). This is all attributable to a lack of customer intent to benefit from the digital environment in many ways. It also arises as a result of various issues that arise when online buying, causing the buyer the abandon the work in the middle. By converting them into a continuing visit with the environment, Berthon 2015 can assist them grasp how to undertake online engagement, purchase, and repeat purchase [7]. Paul 1996 concurred with Philip Kotler, a form of marketing that is quickly gaining prominence is digital marketing. Customer perceptions of happiness, pricing, product-related knowledge, and attractive purchase-post-purchase services have been particularly harmed by the web and current selling needs in corporate organizations to be committed to the consumer attitude. Today the digital marketing has replaced a traditional advertising, as well as marketing tactics. As of now, it is so energized that it is assisting in the recovery of the economy and may also provide a greater number of prospects for governments in a big way [8]. Munshi was born in the year 2012. The effectiveness of digital marketing trends, which are good for achieving the target and the desired objectives Teo 2005, has been demonstrated by businesses in Singapore and other countries. Voice search is used everyday by 55 percent of teenagers, according to statistics from Review [9] [20].

To begin with, in the twenty-first century, the popularity of intelligent speakers has skyrocketed. 20% of households have have purchased a smart speaker that includes Google Home and Amazon Alexa [10]. The acceptability of gadgets run entirely by voice search, as demonstrated by Karan Shah's devices, shows that people are beginning to get used to this new technology. Authors also said about different issues faced by the customers. Goodbye, and farewell to 2020. Every business was affected by the global pandemic. What will 2021 bring in terms of digital marketing? Several digital marketing experts and other intelligent experts shared their predictions for the future market condition in advance only. The Gauge Collective's founder, Teddy Heidt, made the following prediction: It is possible that digital marketing business turns may become permanent in future [11]. "Virtual Events and Experiences to engage people outside of standard sales messaging. To connect with more engaged consumers, diversify your social media activity by Henry Devries. Chatbots will play a bigger and better role in the future. Businesses need to develop innovative ways to keep customers engaged now more than ever given the emerging chatbot trends and market predictions by Snigdha Patel. August 13th, 2021, update. Voice search is rapidly expanding, and an increasing number of businesses are optimising their websites for voice search. In this piece, we'll go over the most important voice search data, facts, and trends that can help you create a successful speechbased search SEO and marketing strategy by Asad Butt. Based on this I am focusing on two trends only [12].

1. Chatbot

Chatbot is a software application that is for an online chat conversation using normal text, messaging apps, websites, and mobile apps instead of direct contact with a real human agent.

2. Voice search

Instead of digesting, voice search uses voice input to quickly and freely search the web using tools like Google Voice Search, Cortana, Siri, and Amazon Echo, for instance.

IV. Background Details

In terms digital marketing refers as a selling and marketing the goods and services through internet with using different digital marketing platforms. Internet marketing started in the early 1990s with a basic feature like a text-based website that provide a product information and other information only. It deals with more than only the selling of goods; it also deals with information about the product, advertising, software, stock trading, and other things [13]. It is critical to understand the current trend. Every organization is constantly creating new techniques in order to find a better strategy to optimize income and company growth. Consumers are growing more smarter these days.

СНАТВОТ

Instead of speaking directly to a real person, a chatbot uses regular text, messaging apps, websites, and mobile applications for online chat conversations [14]. Systems using chatbots are created to make customers' lives easier and to be understandable. Chatbots is one of the top most digital marketing trends in 2021 records.



The word "ChatterBot" was first used in 1994 by Michael Mauldin, the creator of the original Verbot, to refer to these conversational algorithms. Chatbots are employed in conversation systems for a number of functions, such as operation, request routing, and customer service. While some of the chatbots using the complex AI, elaborating the word classification methods and other innovative features. The majority of chatbots are occurs via website popups/notifications or other online assistants [15].

Development

While processing the things it got so many developments to reach the market needs and as well as the customer's needs. Starbucks has launched a chatbot that works through the MyBarista app and allows you to order via Amazon Alexa or messaging [19].

Example Apps:

Duolingo.

Duolingo is a popular learning tool with many individuals utilizing it on a daily basis. Luka\sGymbot

Mona

Dinner suggestions using PayPal.

VOICE SEARCH

Users can search the web, a website, or an application using voice search, also known as voiceenabled search. In the majority of situations, voice search is more involved and includes multiple rounds of interaction that all enable a system to request clarification [16]. One may think of voice search as a conversational mechanism. There is no replacement for typing for voice search. Preferably, depending on the input type, search phrases, experience, and use cases can vary significantly [18].



Figure 2: Voice Search

Method of use

The Voice search is a type of search engine that allows all the users to search for information using mic rather than typing the text. The searches are frequently conducted on any gadget that allows for voice input. There are three primary ways to activate the voice search:

- 1. Select the mic button icon from the drop-down menu.
- 2. Say the virtual assistant's name aloud.
- 3. Press the home button.

How it working

The distinction between voice search and text search is not limited to the input type. Examples include TextToSpeech (TTS) or a daily display of output modalities. Users could occasionally be asked for a wake word to start the search. The search engine will then identify the user's language, then the keywords and the statements' context. Then, based on the result, the device will provide its findings. A tool with a screen might display the results, in contrast to a tool without one [17].

Importance

Instead of typing terms into a search query to get results, voice search allows users to talk into a device. Speech recognition is used by audio technology to detect precisely what people are saying. The user is given the results in orally.

Example Apps: The top Android voice search apps are shown below.

- Headspace.
- Cortana.
- Sygic.
- DataBot
- Spotify
- Bixby
- Vlingo

V. DATA ANALYSIS & RESULTS

Demographics:

Table	1.	Age	of r	espone	dents
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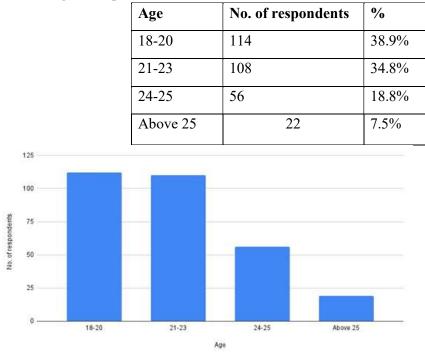


Figure 3: Age of respondents

Interpretation:

According to the graph above, 38.9% of respondents in the 18-20 age group. Then there are 34.8% of responders who are between the ages of 21 and 23. Then 18.8% of respondents fall under 24-25 age group. And 7.5 respondents are above the 25-age group.

Gender	No. of respondents	%
Female	175	57.7%
Male	125	42.3%
Total:	300	100%

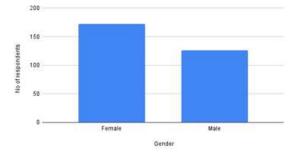


Figure 4: Gender of respondents

Interpretation:

In the above figure 57.7% respondents are females and 42.3% are males.

Table 3. Occupation of respondents

Occupation	No. of respondents	%
Student	187	64%
Employees	84	28%
Others	29	8%
Total:	300	100%

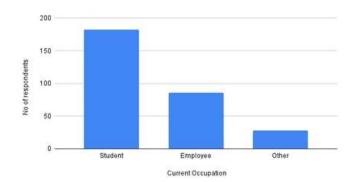


Figure 5: Occupation of respondents

Interpretation:

According to the above graph, students account for 64% of the responses. Employees were cited by a quarter of the respondents 28%. 8.9% of respondents are in another area, such as owning a business or running a startup.

Table 4. Which of the following digital marketing trends do you know more about

Digital Marketing Trends	No. of respondents	%
Chatbots	137	43%
Voice search	86	27.6%
Social messaging apps	37	13%
Social media stories	21	9.7%
Other	19	6.7%
Total	300	100%

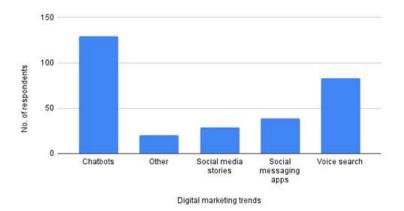


Figure 6: Trends of Digital Marketing

Interpretation:

From the above conversation, 43% of respondents learned more about Chatbots.Following that, 27.6% of respondents stated that they are better knowledgeable about voice search. After that, 13% of respondents said they know more about social messaging applications, and 9.7% said they know more about social media stories. 6.7% of respondents are more aware about other digital marketing trends.

Chatted with a Chatbot	No. of respondents	%
Yes	210	70%
No	90	30%
Total	300	100%

 Table 5. Have you ever chatted with a Chatbot?

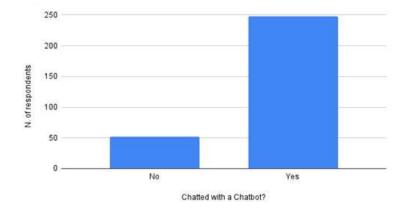


Figure 7: Have you ever chatted with a chatbot

Interpretation:

According to the graph above, the majority of respondents (70%) indicated they had a chat with a Chatbot. And 30 percent of those polled stated they had never interacted with a chatbot.

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Positive aspects	No. of respondents	%
User Friendly	90	42%
It answered quickly	68	33%
It assisted properly	42	20%
It provides right information	10	5%
Total	210	100%

Table 6. While chatting with a Chatbot what were some positive aspects

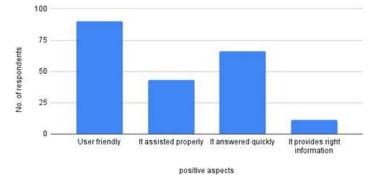


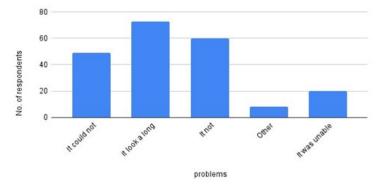
Figure 8: Positive aspects with a chatbot

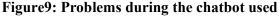
Interpretation:

According to the graph above, the majority of the respondents (90) claimed that one of the beneficial aspects of the chatbot is that it is "user friendly." It "it answered quickly," according to 68 respondents. Then, according to 42 respondents, "it assisted properly." Others stated that it "provides the correct information."

Table 7. What were the problems, you found, while using Chatbots?

Problems	No. of respondents	%
It <u>look</u> a Long Time to help	72	34.5%
It not <u>understand</u> my wordings	60	28%
It could not understand my query	48	23%
It was unable to solve my issue and I needed to speak to a human	20	9.6%
Other	10	4.9%
Total	210	100%





According to the graph above, 34.5 percent of respondents said "it takes a long time to help," which is one issue with chatbots. Then 28% of people said that "it doesn't understand my wordings" is an issue. "It couldn't interpret my query," 23% of respondents remarked. A major concern with chatbots, according to nearly 9.6 percent of respondents, is that "it was solve my issue and I needed to speak to a person." Other respondents stated that they are dealing with other issues such as technical, psychological, and so on.

Using the Chatbots for	No. of respondents	%	
Finding a right point of contact/agent	88	41.9%	
Product/service information	72	34.2%	
Making a complaint	30	14.2%	
Other	20	9.7%	
Total	210	100%	

Table 8. We, mostly, use the Chatbots for?

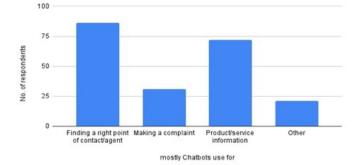


Figure10: Use of Chatbots

Interpretation:

According to the graph above, 41.9 percent of respondents claimed chatbots are usually used for "identifying a right point of contact/agent". Chatbots are used by 34.2percent of the

respondents for "product/service information". Then 14.2% of respondents said they used chatbots for "filing a complaint." 9.7% of respondents utilize it for personal reasons.

Table 9. Rate your experience with chatbot

Experience with Chatbots	No. of respondents	%
Neutral	78	37.1%
Satisfied	74	35%
Very satisfied	35	16.9%
Unsatisfied	15	7.1%
Very unsatisfied	8	3.9%
Total	210	100

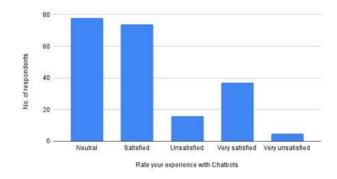


Figure 11: Rate your experience with chatbot

Interpretation:

According to the graph above, the majority of respondents (37.1%) described their experience with the chatbot as "Neutral." Then 35% of respondents were "satisfied". 16.9% of respondents were "extremely satisfied" with their experience. 7.1% of respondents stated that they were "unsatisfied" with the chatbot. And rest of the other respondents unsatisfied.

Experience with voice search	No. of respondents	%
Satisfied	70	33.3%
Neutral	65	30.9%
Very satisfied	39	18.8%
Very unsatisfied	18	8.5%
Unsatisfied	18	8.5%
Total	210	100%

Table 10: Rate your experience with voice search

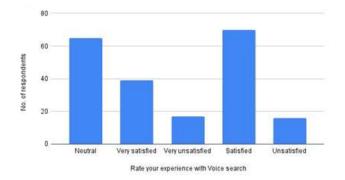


Figure 12: Rate your experience with voice search

Interpretation:

According to the graph above, 33.3 percent of respondents have had a satisfied experience with voice search. The 30.9% said they were Neutral with their voice search. 18.8% of respondents are extremely unsatisfied. Other respondents stated that they were dissatisfied.

VI. Findings, Suggestions & Conclusion

FINDINGS

• In this investigation, it is discovered that there are many trends ex: Chatbot, Voice search etc, the majority of respondents have better knowledge about the Chatbots among other digital marketing trends.

• Most of the respondents agreed that there are different issues while using Chatbots and the most common issue is taking long time to help and it couldn't grasp the wordings. a) It could not understand my query, b) It could not understand my wordings, c) It took a long time to help me out., d) It was unable to solve my issue and I needed to speak to a person, e) Others.

• Most of the respondents satisfied with the Chatbots while online purchasing. And also majority of the respondents said that they satisfied with Voice search.

• In this study, it is founded that most of the respondents facing timeliness issue with the voice search.

• In this study, it is understood that the Chatbot digital marketing trend has a greater impact on customers.

SUGGESTIONS

• In this investigation, it is discovered that timeliness is the major problem in both Chatbots and Voice Search. Technology updating are suggested.

• The most of customers were neutral in terms of their satisfaction and experience with digital marketing trends. So, faster response time and better voice recognition tools can turn these neutral segments to Satisfaction.

• Background noise distracts customers when using voice search; so, innovate new feature or software which consists of noise cancellation technique.

• It is also suggested that implementing Voice Search in multilingual also to assist the consumers in a better way.

CONCLUSION

In the twenty-first century, virtually every business sector has adopted digital marketing and its tendencies. In today's market, marketing techniques are evolving on a daily basis thanks to digital marketing. The Chatbots and Voice search digital marketing trends coming out with new innovations. If this trends got improvement the process then that leads to a betterment of digital marketing and its future. If any marketing expert is not updated their strategies then that leads to a negative impact. They will fail if their strategies are not updated. This research comprises a number of measures that are used to assess the success of our marketing efforts. Actually, digital marketing trends are more beneficial to clients, and this has simplified their work. The market's job is to figure out what customers want and need, and then companies try to meet those demands. Chatbots and voice search trends are very helpful to customers, and they aid in a variety of ways. Because digital marketing trends are constantly evolving with new features and updated products, contents, and so on, purchaser behavior in online shopping is changing. Digital marketing has a bright future for the long-term competitiveness of products and services in the current technology market, with both advantages and disadvantages. Companies must develop an effective platform and ensure that services are

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APPENDIX QUESTIONNAIRE

Demographics:

Age:

Gender:

Occupation:

1. Which of the following digital marketing trends do you know more about

a) Chat bots b) Voice search c) Social messaging apps d) Social media stories e) other

2. Have you ever chatted with a Chatbot?

a) Yes b) No

3. While chatting with a Chatbot what were some positive aspects

a) The Chatbot answered quickly b) The Chatbot was friendly c)The Chatbot assisted properly

d) It provided right information e) Others.

4. What were the problems, you found, while using Chatbots? (Checkboxes)

a) It could not understand my query b) It could not understand my wordings c) It took a long time to help me out d) It was unable to solve my issue and I needed to speak to a person.e) Others.

5. We, mostly, use the Chatbots for?

a) Product/service information b) Finding a right point of contact/agent c) Making a complaint d) Other

6. Rate your experience with chatbot

a) Satisfied b) Very satisfies c) Neutral d) Unsatisfied e) Very unsatisfied

7. Do you ever use voice searches on any device? (For e.g., Google Assistant on Android) a) Yes b) No

8. Which device are you using, voice search assistants, on:

a) iPhone b) Android c) Desktop d) Other

9. How frequently do you use voice search?

a) Daily b) Weekly c) Monthly d)Hardly ever

10. Positive things about voice search

a) Faster response b) Voice assistance c) Ease of use d) Available in multilingual e) Others

11. Problems of voice search

a) Accuracy in results b) Timeliness c) Accent recognition d) Background Novicee) Others.

12. Rate your experience with voice search

a) Satisfied b) Very satisfies c) Neutral d) Unsatisfied e) Very unsatisfied