



A STUDY ON HOW ARTIFICIAL INTELLIGENCE IS BEING USED TO TRACK AND UNDERSTAND INDIVIDUAL BEHAVIOR AND HOW MARKETERS ARE USING THIS FEATURE ON SOCIAL MEDIA TO DRIVE THEIR BUSINESSES.

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Abstract

Businesses are shifting their marketing efforts from mainstream media to social media platforms due to the availability of efficient tools such as artificial intelligence, which helps businesses target a specific set of individuals who are most likely to purchase, use and provide valuable feedback on a particular product or a service.

This study aims to analyze the impact social media has on individuals and their buying behavior and how artificial intelligence carefully monitors every minute action of individuals and creates a complete profile of their character. This paper uses secondary data to conduct the research and find out how artificial intelligence interprets actions and provides feedback to the systems to create a viable audience for the businesses; this data is collected by analyzing multiple accurate articles, newspapers, and websites.

There has been a significant increase in new-age businesses starting up because of social media marketing. It has been the leading factor for this business to perform exceptionally in a short span. The growth of social media platforms has increased significantly as the users are finding more relevant products and services through this. By gaining millions of active users on social media platforms, these companies can withdraw valuable data regarding individual and group behavior, which further helps them decode the psychological factors affecting an individual's thought process and use this competitive advantage to generate revenue. This study provides insights on how businesses can use these platforms to increase their reach to a wide variety of people, increasing their revenue, and all of this can be achieved at a minimal cost.

Key Words- Social Media, Artificial Intelligence, Businesses, Individual Behavior.

Introduction

Artificial intelligence has become highly popular among social media platforms. Companies utilize this advanced technology to optimize their platforms and analyze data in a more organized and deep manner. By doing this, social media platforms can understand what an individual is looking for and provide the most similar type of content to them. This would require an extended period if humans perform it, but artificial intelligence uses specifically designed algorithms to identify hidden patterns in a fraction of the time, saving ample time for the companies (Francisco, 2021).

Social media platforms have evolved to a great extent, and a popular platform may have millions of users, and it becomes complicated to track each and every user. But with the implementation of artificial intelligence, every pattern and minor behavior of the individual can be optimally recorded and accordingly decoded.

Marketers are getting the maximum benefit from this feature as they can target a specific type of audience and get the maximum benefit out of their investment. When this feature was not available, the ads of products and services were reflected on random individual's pages, and not much behavior recognition was available, which led to the wastage of resources of the company. This usually tends to happen in mass media communication such as flyers, billboards, television, radio, etc. But using AI, the companies are able to identify the quick changes in the behavior patterns in individuals, and the technology will know the right content to display to the individual, increasing the chances of purchase or communication.

Small businesses do not have the required resources to compete with big companies who have captured the main advertisement avenues, but because of AI and social media features, small businesses are able to reach out to more individuals and target ads more specifically.



Problem statement

Social media platforms are bringing about a new trend in the marketing of products and services, which is turning out to be more effective than traditional methods of marketing. Traditional means of marketing cannot be accessed by every company as making a valuable impact can be quite expensive.

Traditional marketing methods do not use artificial intelligence, and therefore it cannot be targeted to a specific audience. And moreover, it is not accurately measurable (Christoph, 2020). The execution process of traditional methods of marketing is a cumbersome process, and both small and large organizations suffer because of this. As time passes by, the traditional means of marketing cannot be relied upon, and marketers have an increased opportunity to involve the attention of the consumers with the help of AI and social media.

Objectives

- How AI is helping businesses build a better network and reach out to a more specific audience.
- To understand how social media platforms are implementing AI in an ethical manner to study the behavior of individuals.
- To understand how a marketing effort was made by a company reaches the right set of individuals at the right time.
- How social media platforms are able to generate revenue from marketing products and services using AI.

Literature Review

Satpathy, Smitarani & Patnaik, Dr. (2021). Role of Artificial Intelligence in Social Media and Human Behaviour. International Journal of Engineering and Advanced Technology. 11. 207-210. 10.35940/ijeat.A1926.1011121.

Social selling is a concept where the issues and problems of consumers are heard, and an organization actively tries to solve their problems. By using AI, organizations are able to analyze huge data and identify specific problems relating to their product and services. Predictive analysis, multiple statistical tools, and specific algorithms to analyze human behavior in the context intended and provide valuable feedback to the company. Individuals process certain characteristics which come under repetitive behavior and use this predictive analysis. It becomes easier for AI to predict certain behavioral changes of individuals in the future. This gives companies a competitive edge when it comes to understanding human behavior in the future. AI is able to provide useful insights about the demand of consumers, which will help the marketers target ads that are custom made to individuals.

TK, Balaji & Sekhar, Chandra & Bablani, Annushree. (2021). Machine learning algorithms for social media analysis: A survey. Computer Science Review. 40. 100395. 10.1016/j.cosrev.2021.100395.

Social media platforms used algorithms in various velocities and as required. Algorithms are a crucial part of decoding data and information in social media platforms because they help in identifying what individuals are looking for and provide the most suitable and optimal content to them, which will provide satisfaction in their search. For example, individuals who are scrolling through Instagram will get similar content because the algorithm recognizes the pattern and behavior that is displayed by them.

If Instagram does not implement artificial intelligence and algorithms to determine what the individuals require, then random content can be displayed to them, leading to dissatisfaction while using the social media platforms. Algorithms are carefully mapped and customized according to the requirement of the particular social media platform, and they use machine learning which helps the technology to learn the behavior of humans as they are using the social media platforms that are in real-time and find out similar patterns and positive feedback. Algorithms act as a filter that protects the user from unwanted information and provides only relevant and engaging posts or content that is most likely to retain them on the platform for a longer period of time. Having



algorithms is also highly useful for marketers as it will help them filter the potential consumers who have the potential to engage in their businesses' services, which in turn makes it a much better medium for marketing their organization.

Background of study

The main purpose of this paper is to understand how businesses are able to use artificial intelligence, which is being utilized in social media platforms, to their advantage, and what statistical figures have helped them to achieve such excellence in terms of sales and customer retention. Over the past few years, there have been more than 1 billion people who are using Instagram, and almost 90% of them are outside the United States. Taking into consideration geographical locations and various factors that an individual might face, it is studied that a user is most likely to stay active on Instagram for at least 30 minutes every day. The traditional method of seeking information has now shifted towards social media platforms due to the quality of content that is being displayed to individuals, and Google is not able to keep up with this pace.

A magnitude of small businesses all over the world use social media platforms such as Instagram for marketing their services to people all over the world, and the artificial intelligence which is being employed by the social media platforms are powerful enough to understand how an individual is reacting to particular content, and they can even understand their behavior in the coming minutes as well. The statistical figure of how an individual reacts to a sponsored post that is being displayed by a business is highly efficient that is more than 50% of the people who view an advertisement view the business's profile. The rate of conversion in social media platforms is huge, and this is an advantage for businesses is as they can capture optimal customers who are looking for their product.

Businesses in India are able to thrive due to the fact that more than 120 million users are active on social media platforms such as Instagram, and this opens a business is to a new demographic of people who are willing to review their ads and purchase the product. The advertisement displayed by businesses are highly specific, and Instagram has the feature for businesses is to customize their reach in terms of audience demographic, age, and much more. This customization is not possible in traditional methods of advertisement, and there is no implementation of artificial intelligence in traditional technology.

The growth of Instagram is also increasing steadily, and this is happening all over the world and businesses are able to take advantage of this factor and market their products all over the world, such as online services. This provides businesses with an unlimited opportunity wherein they are able to project their products and services all over the world, and due to the improvement in logistics management, a small business will be able to ship their product anywhere. Social media platforms are slowly being adopted by younger generations as well even though it is not advised for such young children to be active on social media, but the reality is that they like watching content on these platforms, and advertisements are bound to popup which will intrigue them, and the parents will end up buying the product. A similar situation would happen in an offline store wherein a kid would look at a creative design on a package and would want the product, but now as we are moving to a more online platform, the same situation is being mimicked in the virtual world.

Research methodology

The research methodology is mainly used in this paper is secondary data which is collected from highly reliable sources such as research papers, magazines, articles, and much more. The research papers from where the data has been taken have conducted primary data collection from different variety of sources and users all over the world relating to the usage of social media. Many articles also talk about small businesses that have grown up due to the artificial intelligence feature provided by social media platforms such as Instagram and how they were able to build an entire business model revolving around these social media platforms.



Many businesses were able to do business in the pandemic, and this data is collected primarily. A thorough analysis has been done in terms of investigation and the questions that have arrived due to the implementation of artificial intelligence and what are the ethical issues that arise from the social media company is collecting data of individuals. There are multiple questions that have been formulated above, and the answers have been provided through various analysis, which is done on a secondary basis.

Analysis and interpretation

According to the secondary data which has been researched, we can clearly see that almost 55% of the artificial intelligence which is being deployed in social media is exclusively devoted to sales and marketing techniques. This tells us that data of individuals are closely monitored in order to extract vital information regarding their behavior and thinking patterns.

Having devoted this level of artificial intelligence towards sales and marketing has a huge impact on business. Social media companies are able to anticipate and predict what a consumer will need in the coming weeks or days. For example, if an individual exhibits a certain pattern in choosing a restaurant, this can be easily picked up by the artificial intelligence software, and accordingly, the individual can be targeted for restaurant-related advertisements. But simply displaying random restaurants advertisement will not help the organization, but with the help of artificial intelligence and the data collected of the individual, it becomes easier for them to display the restaurant from which the individual is most likely to choose and consume the food from that particular outlet.

By doing this, both the social media platform and the restaurant benefit mutually because of artificial intelligence and its ability to predict behavior.

A consumer is able to interact with organizations easily because of the chat bots that are available, and these chat bots are capable of interacting with consumers and collecting vital pieces of information relating to the product and their personal information as well. An organization does not need to allocate a huge sum of money in customer service unless necessary, but with the employment of chat bots, they are able to understand the needs of consumers in real-time, and they will be able to provide what the consumer needs easily.

Once the issue is resolved or the consumer's questions are answered, their opinions and feedback can be collected in an organized manner which becomes vital data for the organization. We can see multiple businesses are generating revenue just because of product recommendations, and one of the retail giants almost has a 40% of its revenue being generated from product recommendations. The percentage is high due to the implementation of artificial intelligence and its ability to target customers optimally, and this induces them to purchase a particular product.

Data security and integrity are also important aspects of social media platforms because if there are multiple attacks being done and hackers interfering with the code, then it becomes difficult for data collection. But with the implementation of artificial intelligence, organizations are able to reduce the time required for fraudulent investigation activities by 70%, and they are able to detect if there is any malicious activity, and this accuracy has gone up by 90%.

Many organizations are also utilizing the opportunity of startups wearing multiple big companies like Google have acquired firms that have expertise in artificial intelligence and machine learning such as Deepmind technologies. This tells us that more use organizations are on track to implementing artificial intelligence into their operations to make it more effective and improve overall functioning by reducing the processing time, and it also reduces the errors that are committed, which are commonly found When human interaction is observed.

To specifically dog about Instagram and artificial intelligence, there are close to 500 million people who are active on Instagram stories on a daily basis, and as we all know, there are multiple ads which are projected



between these stories, and it has been studied that almost 90% of Instagram users have you a story to its completion, and this study was conducted in 2019. The success rate is high because of artificial intelligence and its ability to understand what product a consumer requires based on the data which has been collected over a period of time. It has also been studied that people are more interested in buying a product or are more interested in a particular brand after seeing an advertisement of it, and this percentage results in 60% of the users (Marcus, 2020).

Instagram also has a highly innovative approach to measuring individuals who are purchasing products from small businesses, using the support small businesses sticker. Users have a positive feeling after purchasing from a small business, and they would like to express their feeling towards it, and almost 60% of Instagram users have implemented this sticker in their stories which also act as a marketing campaign for others.

Having a business page on Instagram is highly important as users get constant updates, and offers are displayed to them when they follow a business and 90% of individuals follow a brand from which they admire and purchase their product. To have a higher reach to individuals on Instagram of business account posts a creative content or a video at least once every day. This will engage the consumers who are following the page, and a constant reminder is provided to the individuals about the brand. By following certain strategies and posting content such as photos, videos, and reels, an Instagram business account will likely see an increase in followers on an average of 1.46 %.

The advertisement on Instagram's reach is close to 1.1 billion. There is a huge number of youth audience who are present on social media and have an active account which means that advertisers can directly market their products to the youth audience. The reach is almost up to 83 million. Instagram uses modern technology and artificial intelligence to help organizations market their product optimally, and due to this, they are able to earn almost 18 million dollars in revenue, and this is calculated in 2020 (Francisco, 2021).

There are more than 4 million businesses that are active on Instagram, and they use their story advertisement facilities on a monthly basis which generates a huge amount of revenue for Instagram and the businesses are also able to drive a steady stream of income using the facilities provided by Instagram.

Findings

Social media these days is not only about entertainment, but also there are a lot of entrepreneurs coming into the platforms like Instagram and are able to make good money through sales. This is possible because the AI is recognizing these accounts, the kind of business that they are into, and trying to make them reach to the potential customers who will end up purchasing this again is captured by the AI as a good response henceforth

The ads generated when an individual is viewing Instagram or Facebook are also generated through AI. These ads are nothing but the products and services that one would have browsed earlier in the search engine.

Reels, on the other hand, is being used for promoting the businesses, there are many influencers with an increased presence on Instagram, hence when a product or service is promoted by them in their video, the views will be higher because the previous videos have also been tracked by the AI and it will already know the market that is established for such reels.

How social media's AI can influence an individual's purchasing pattern and achieve the higher potential for closing sales.

Businesses are able to generate more revenue with the help of social media marketing.

The AI can be customized according to the requirements of the social media platform.

Statistical figures which suggest how AI is being implemented in the promotion of a business.



Statistical figures relating to the consumer's behavior and how effective AI is in the recording of data and converting it into valuable information.

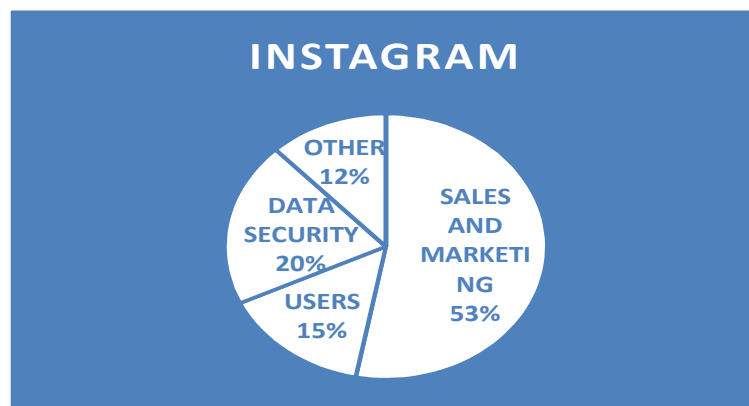
Conclusion

We can witness more implications of AI in social media platforms in new and innovative ways which promote business activities. There is a high possibility that artificial intelligence will significantly increase, leading to capturing data more accurately.

Data will be collected in a more efficient manner and also stored in a more sustainable way.

There will always be an ethical issue while recording user information, but this can be reduced and will be closely monitored by regulatory authorities. Businesses will rely on AI to provide accurate information and data about users in the future. There is huge potential in the startup market for new inventions in AI, machine learning, deep learning, and much more.

Out of the total AI used in social media, almost 55% of it is used for sales and marketing purposes.



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