

Artificial intelligence between both artificial marketing and intelligent advertising

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Abstract:

Today, artificial intelligence has become a common concept in many fields of technical sciences and humanities, the presence of smart phones in our hands is the best proof of that, as it has become necessary to acquire smart devices and deal with smart information programs. Artificial Intelligence is also considered one of the most successful fields at the present time, as it came out of the research phase into the field of development and employment.

Artificial intelligence began to take center stage when it was considered a scientific breakthrough during the past two decades due to the superior skills and achievements that resulted out of it in various fields, including medicine, commercial, industrial and educational business organizations, and security systems, artificial intelligence or machine learning relies on algorithms to simulate the human learning process.

The field of marketing and advertising has been affected by artificial intelligence, so adopting the growth and development of artificial intelligence is crucial for marketing and advertising efforts, where institutions use artificial intelligence programs to improve their efficiency, reduce costs, and improve their mental image among the recipients, which helped in developing the designs and operational structures of the institutions.

The key to successful marketing campaigns is through a qualitative analysis of recipient data and the study of the target group, although artificial intelligence is used by a wide range of applications in many scientific fields, the amount of data that is collected daily provides the opportunity to analyze, design and implement marketing strategies aimed at developing decision-making patterns based on smart knowledge.

The research is concerned with emphasizing the vital role that artificial intelligence plays in making marketing more intelligent, impactful and relevant to the recipient, therefore, during the coming period, artificial intelligence is expected to turn into a basic and effective feature in order to enhance the presence and competition of advertising.

With the development of science and the advancement of technology, humans have turned towards the machine to take advantage of it in the completion of tasks in a neater, fast and flexible manner, and improvements are taking place on machines constantly so that they are no longer confined to routine completion of work, but rather acquire the characteristic of intelligence in a way that simulates the unique mental abilities of humans. This is what scientists and specialists termed artificial intelligence, which is called an acronym (AI) and is defined as a branch of computer science that seeks to replicate or simulate human intelligence in a machine, so that this machine can perform the tasks that required the use of one type of human intelligence to accomplish it.

Artificial intelligence systems include some programmable functions such as planning, learning, thinking, problem solving and decision-making in some areas. Artificial intelligence systems are operated by algorithms using techniques such as machine learning and deep learning, the system based on artificial intelligence is more sophisticated and more capable of

detecting and predicting how data patterns will be formed. Through its ability to consistently access relevant statistics and rapidly increase data volumes, marketing strategies are greatly improved.

It has also become necessary to target recipients as independent individuals or according to their field of interest instead of targeting them only according to their demographic characteristics. With this development, artificial intelligence provides institutions with a means to reach the recipient in a unique way in addition to unique capabilities to facilitate interaction between the parties to the communication process, and it will also become more applicable to be integrated into all electronic systems soon.

Statement of the problem:

The research problem lies in trying to answer the following question:

What is the role played by artificial intelligence techniques in the marketing and advertising process and the extent of its impact on each of them?

Objective:

The research aims to emphasize the importance of using artificial intelligence in advertising and marketing and try to define its concept and identify the advantages offered by artificial intelligence technologies for each of them.

Importance:

The importance of the research is evident by achieving positive results for advertising and marketing in the light of artificial intelligence by studying how to activate it in advertising and its effect on the purchasing behavior of the recipient and deduce its components and areas of application.

Hypothesis:

The research assumes that:

- The employment of artificial intelligence helps achieve the positive impact of the content of the advertising message, making it more effective and personalized, and transforming the advertisement into a distinctive method of dialogue and directing the target group.
- Studying the effectiveness and impact of artificial intelligence techniques on advertising and marketing by studying it, standing on its basics and concluding how to employ it, may contribute to understanding its role in drawing a positive mental image of the recipient.

Methodology:

The research followed the descriptive approach through the theoretical framework and analyzing some models to confirm the research hypotheses.

There were many definitions of artificial intelligence, including:

1. It is the scientific and technical current that includes theories and techniques that aim to create machines capable of simulating human intelligence, depending on innovation and change.
2. It is a branch of computer science that is concerned with studying and creating computer systems that have some characteristics of intelligence and that have the ability to deduce solutions to the problems presented. It can also understand natural languages or vivid perception and the similar capabilities that require human intelligence.

Opinions are divided regarding the remarkable development in the field of artificial intelligence, **and as a result, two contrasting viewpoints are exchanged:**

- first: It emanates from a pessimistic position based on fear of the future in which the limits of artificial intelligence may exceed the ability of humans to control smart machines.
- second: It predicts a more optimistic future as humans use artificial intelligence as a tool to enhance their life experience, as the applications of artificial intelligence have a great impact on the way daily life proceeds and completing tasks quickly and efficiently that were not available before.

In addition to that Artificial Intelligence aims to add a set of new technological capabilities that may serve humanity, including:

- Inference and problem solving: Researchers have developed an algorithm that simulates the steps that humans take when solving problems or puzzles or when they make logical conclusions. To solve these problems, you need a huge number of computational algorithms that depend on artificial intelligence techniques.
- Knowledge Engineering: Knowledge engineering is of central importance in artificial intelligence research. Artificial intelligence applications must recognize objects, their characteristics, their categories, their relationship with each other, on time, places, events, their causes, and many other areas.
- Planning: AI applications must be able to plan, set goals and work to achieve them, assess conditions, and predict results and their consequences.
- Automatic learning: one of the basic concepts of artificial intelligence research, which is the ability to automatically develop algorithms, which adds more experience to applications.
- Social Intelligence: Artificial Intelligence has developed many systems capable of interpreting and simulating human feelings and emotions.
- General intelligence: where all the previous skills are collected in a single application whose abilities surpass the capabilities of humans in many fields.

Idiomatic difference between artificial intelligence, machine learning, and deep learning is explained through the following:

Human learning is a long and slow process, which prompted researchers and continues to push them to always search for a fast way of learning with minimal effort by designing the same learning methods for machines whose computational and storage capacity exceeds human capabilities.

It is necessary to distinguish between three overlapping and interrelated terms for a deeper understanding of what artificial intelligence is:

- Artificial intelligence: It is a term that describes the way in which a computer program or machine can imitate different types of human behavior and thinking, such as movement, speech, and the ability to implement acquired intelligence to perform different actions with minimal human intervention.
- Machine learning: (machine learning) is a set of software techniques that allow artificial intelligence applications to adapt behavior to their environment without human intervention or partial interference, that is, designing algorithms that are able to make independent decisions

without prior programming, and machine learning allows artificial intelligence applications to identify as it is based on patterns of data and learning from them, and hence, Integrated Application of Machine Learning can improve its capabilities without human assistance.

- Deep learning: It is the most prominent manifestation of artificial intelligence, as it is based on the development of artificial neural networks that mimic in the way they work the style of the human brain, that is, it is able to experiment, learn and develop itself on its own without human intervention.

In addition to that we can define artificial intelligence marketing as being a marketing strategy to take advantage of recipient data and machine learning technology to propose and formulate the goal of the marketing campaign that helps in achieving the organization's goals more effectively and helps to stabilize its mental image with recipients. Marketers also use artificial intelligence to update market research, data science, analyze the impact of advertising campaigns and measure the extent of its effectiveness quickly.

Or It is a way to make use of recipient data and artificial intelligence concepts such as machine learning and deep learning to anticipate the recipient's next step and improve the mental image of the institution.

It is necessary to distinguish between the idiomatic difference between artificial, electronic and traditional marketing:

- Artificial Marketing: It is a marketing method that develops over time as it provides a broader database and information to facilitate the marketing process with less use of resources. In the era of globalization, artificial intelligence has developed and grown in an effective and highly productive way to be an opportunity for small enterprises as it allowed them to develop in an unprecedented way.

The online platform used by important websites such as Google and Facebook is controlled by artificial intelligence that collects and provides massive information by interacting in various ways with recipients to obtain data and build a database system that displays products that match their preferences.

- Traditional Marketing: It is a marketing style that depends on the traditional method of interacting with the recipient, such as newspaper and television advertisements. These marketing techniques also have a different impact factor. These methods have an effective influence as they facilitate communication between the advertiser and the recipient.

- E-marketing: It is the type of marketing that creates a new perception of the market and a way to increase sales over the Internet. The electronic age has provided recipients with the opportunity to express themselves and their opinions and at the same time give them the power of choice and influence. It also gave institutions the opportunity to interact dynamically with the recipients and users, an opportunity to search for Information, products or services.

Due to the distraction of the recipients' attention due to the huge volume of advertisements through traditional and electronic advertising means, it was necessary for marketers to find a way to allocate data and target audiences to solve this problem, and the importance of artificial intelligence marketing is evident through its **intrinsic impact on the marketing process as follows:**

- Helping organizations increase their revenues by improving the performance of electronic marketing campaigns and advertising means, measuring the impact of advertising campaigns

on recipients, improving the mental image of the institution and creating customized content for the target group.

- Artificial intelligence and machine learning tend to extract data and increase recipient satisfaction by helping them identify strengths, weaknesses, opportunities, market needs, and continuous and updated analysis of the interests and requirements of the target group.
- Effective data processing through artificial intelligence helps to precisely categorize the needs of the recipients and increase the economic growth of the organization.
- Artificial intelligence takes data from websites, sales, analytical reports, and engagement rates through social media ads and processes them to extract effective, accurate and highly predictive results.
- Supporting the process of formulating the Organization mission and identity by identifying the types of core activities for competitors and providing information on target markets.
- Providing information on the behavioral and demographic characteristics of consumers and on the behavior of competitors.
- Identifying marketing opportunities, that is, providing information about the products that are presented in the market in all their details and the type of market in which they are offered, as well as providing information on consumers' purchasing patterns and the extent of the need to present them at this time.

It has become necessary to make radical changes in marketing and advertising strategies, and the traditional advertising campaign is no longer sufficient, as the future revolves around ads that respond to the needs of the recipients and meet their desires before they are aware of those needs and desires, which led to a change and growth in advertising campaigns based on artificial intelligence and its attempt to be available on all social media and it has the ability to penetrate all smart electronic devices, based on the fact that a successful advertising campaign must contain several aspects and elements, including creativity, interesting idea, and ability to employ new advanced technologies.

It has also become possible to constructively overlap between artificial intelligence and ads, as all advertisements across websites operate through cookies, which are programs that collect data on recipients and transmit it to marketers and advertisers that can then customize advertising messages appropriate to the target group.

Intelligent advertising can be defined as: Advertising that focuses on fulfilling the recipient's desires by studying data and algorithms, so that it contributes to accurately describing the needs and desires of the recipient and goes beyond just anticipating his interests in different contexts and certain time frames. It can recommend various advertising ideas that are allocated to each recipient individually to suit him.

The effectiveness and ability of artificial intelligence in advertising depends on several essential and important factors, namely:

- Natural language processing (NLP): The linguistic processing of artificial intelligence systems allows to analyze the nuances of human language to derive the correct meaning from the entered data, as the comments of the recipients and their posts on social media sites depend on the NLP that the advertiser uses to respond to the inquiries of the recipients on the homepage of the institution's website.

- **Machine Learning:** Artificial intelligence systems create possibilities and suggest options for the multiple needs of the recipient by discovering repeated patterns in the data more efficiently than the human ability to remember what was previously calculated and then storing it in a knowledge base and using machine learning to take advantage of that data and experience in solving problems.

- **Image Recognition:** The ability of artificial intelligence helps advertisers to understand the images and videos that recipients share on social media that show their behavior, desires and orientations, as advertisers benefit from their minute details by determining the type of products that the recipients use or want to acquire, and this is evident in their self and personal photos.

Results: Through research, we can reach the following results:

- Artificial intelligence provides ease and effectiveness in communicating with the target group to ensure the organization makes the right marketing decisions.

- Artificial intelligence is considered one of the mechanisms that help the use of technological development in facilitating the marketing relations of the economic institution, as investing this mechanism in the areas of advertising and marketing is the future.

- Advertised machine learning enables collecting data from many sources imperceptibly, combining it and analyzing it to infer and limit the visions and desires of the recipients, which allows the use of these desires to create an effective advertising message that facilitates communication between the recipient and the institution later.

- In the future, it is possible that AI will be imperceptibly woven into the fabric of traditional advertising so that it is indistinguishable from it.

- One of the biggest obstacles to artificial intelligence is its application framework, which suffers from the difficulty of technological follow-up on the one hand, and the huge and remote financing on the other hand, in addition to the public opinion and academic community's fears of its unclear future.

- The legal risks of using artificial intelligence in advertising create opportunities for advertisers to be more effective in understanding recipients and trying to reach them constantly. However, it is necessary to modify the artificial intelligence systems that are used to comply with the new privacy standards.

- The increasing competition and the increase in the number of advertising and electronic media are increasing competition and making the market more complex, which led to the necessity to take into account the advertising content to suit the different nature of the new electronic media compared to the traditional advertising media.

Research recommendations:

- The need to emphasize institutions by giving great importance to artificial intelligence techniques in managing their various activities, especially with regard to data storage and analysis to reach effective marketing results and solutions.

- The advertiser should not use artificial intelligence techniques in a way that harms the mental image of the institution or negatively affects it, and uses its results in drafting targeted, specific and appropriate advertising messages for the target group.

- The use of recipients' personal data must be subjected to the law and work to find joint coordination to reach the setting of binding determinants that have legal consequences for those who violate the privacy of that data or prove misuse of it or harm the recipient.

- The need to keep pace with the technological development provided by artificial intelligence mechanisms in the areas of advertising and marketing.
- Encouraging research and studies to find different ways to develop the skills of modern technologies for artificial intelligence to enable the optimal use of data and information as they are of high value.

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