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### محلـــة الفنــون والعلوم التطبيقية



### تأثير استخدام تكنولوجيا الذكاء الاصطناعي على صناعة الإعلان

### The impact of Using Artificial Intelligence Technology on Advertising Industry

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#### **Abstract:**

The world witnessed a revolution in the field of artificial intelligence (AI), whose effects appeared in most areas of life, including the scientific and technical fields and even the humanities. Smart phones and continuous televisions are the best proof of this. Significant advancements in technological innovation have resulted in the transformation of numerous manual tasks and processes that had existed for decades, to the point where artificial intelligence (AI) technologies are widely used in advertising to increase efficiency and meet market demand. Artificial intelligence (AI) refers to computers becoming more capable of fulfilling particular jobs and activities presently done by people in the workplace and across society.

The purpose of the research is to determine the effect of artificial intelligence on advertising campaigns, how the future of advertising industry will be, and the extent of the impact of advertising campaigns implemented using artificial intelligence on the consumer, determine his behavior, and convey the advertising message.

Methodology/approach: The research follows the descriptive approach to identify and investigate the artificial intelligence techniques that the advertiser can employ in advertising campaigns and their impact on the effectiveness of advertising campaigns.

Then followed by analytical method to investigate the influence of using AI on advertising design in addition to a survey that was conducted with people who are specialists and scholars in the field of advertising design in order to understand the effect of the phenomenon on the field, and how the future of advertising will be, and the extent of its impact on advertising designers.

Findings: The use of artificial intelligence as a technical tool opens the way for the designer to creativity and saves time and effort while continuing to produce highquality results and reduces the error rate without canceling the value of the designer, as artificial intelligence applications can be greatly benefited through its ability to quickly analyze huge amounts of data and generate ideas new. Artificial intelligence technology improves dealing with customers and this leads to attracting customers renew and retain existing clients. It provides a way to deal with this huge amount of information, and also provides a way to increase demand for products and services faced by companies, and this led to mutual benefit between companies and customers because of the speed of communication and service delivery.

**Originality/value** Investigation of the effect of using AI on advertising design to set criteria of using this technology as it is still in development stage.

### **Keywords:**

Artificial Intelligence, Artificial Intelligence Advertising, Digital marketing, Aldriven marketing, ChatGPT.

### 1. Introduction

Technology is the ideal tool in our rapidly changing world to meet the needs of the future, the

progress of societies, and the wellbeing and happiness of individuals. In light of the rapid developments of modern technological means used in institutions, the traditional institution no longer has a place. Technology has facilitated communication institutions, worked to improve their management and work to upgrade and them towards advance institutional reality based on advanced technology, the most important of which is artificial intelligence. (Saleh, Y.Y.). As a result of the rapid changes in the field of science and technology, the multiplicity of markets and needs, as well as the increasing competition in the field of design, the designer has been imposed on the responsibility to meet these changing needs in addition to keeping pace with scientific and technological development( Khaled Farouk Al-Sindiouni Mohammed Ahmed Hashem, Y. 10)

Undoubtedly, advertising design requires creativity and is subject to influence in the automation process. With the advancement of technology and the advertising design process on computers .Advertising is developing as a result of the development of many technological means that directly change the means used by advertising, allowing the designer to create unprecedented advertising messages and design ideas that keep pace with the requirements of the times and achieve visual representation products and services that are offered day after day in the local and international markets, which seek to achieve the goals Advertising creating an impressionable state in the emotional, psychological and mental the recipient entity of of advertising message to achieve its maximum goals and then the conviction of the recipient of the idea and advertising concept of the product or company. (karaata, ۲۰۱۸)

Artificial Intelligence (AI) is a rapidly growing field that has already begun to revolutionize many

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industries, and advertising design is no exception. The ability of AI to analyze and interpret vast amounts of data, combined with its ability to learn and adapt, has led to the development of new tools and techniques that are transforming the way graphic design is created and experienced. repetitive tasks automating to generating designs based on data and user preferences, AI is having a profound impact on the field of graphic design. In this report, we will explore how AI is being used in graphic design, the impact it is having, and the future possibilities of this technology (Mustafa, Y.YY).Perhaps the most exciting of all the technological developments advertising in artificial intelligence (AI). It has gained significant attention in the advertising sector globally, and this focus is projected to rise significantly as technology advances. (Yu, Y·YY)

Also, as a result, entrepreneurs and future marketing leaders are turning to AI for its ability to increase revenue, reduce costs, and build a massive competitive advantage. Artificial intelligence solutions aiming to help identify potential customers, overly personalize and personalize messages according to their specific needs, improve ad placement, and identify the effective means most communicating the message, which is a leap in this experience. In fact, AI is particularly good at all of these things:

Identifying leads through grouping and matching patterns, designing messages through AI-powered hypercustomization, and finding the best times and means to communicate by identifying patterns. Advertising AI has the potential to increase your return on advertising (revenue) and reduce the amount you spend on inefficient employee time and advertising budget. (Wanes, Y. ) Y

It is essential that designers fully understand how AI works and how they can manipulate its attributes, features, and algorithms to match the designer's vision and goals, not the other way around. Designers must remember that they can only achieve optimal results through a balance of human ingenuity and algorithm support. (Wahid, ۲۰۲۳)

### **Statement of the problem:**

The research problem is the following question:

How can artificial intelligence (AI) applications influence the advertising process?

### **Objective:**

The research aims to determine the impact of artificial intelligence on advertising campaigns, how the future of the advertising industry will be, and the extent to which advertising campaigns implemented using artificial intelligence affect the consumer, determine his behavior, and deliver the advertising message.

### Significance:

Emphasizing the role of artificial intelligence technology in enriching the advertising and marketing process.

### **Hypothesis:**

The research assumes that:

The use of artificial intelligence opens the way for the designer to creativity and saves time and effort while continuing to produce highquality results and reduces the error rate without canceling the value of the designer.

### **Research Methodology:**

- The research follows the descriptive approach to identify and investigate the artificial intelligence techniques that the advertiser can employ in advertising campaigns and their impact on the effectiveness of advertising campaigns.
- This is followed by an analytical approach to investigate the impact of the use of artificial intelligence on ad design in addition to a survey conducted with people who specialists and scholars in the field of advertising design in order to understand the impact of the phenomenon on the field, what the future of advertising will be, and the extent of its impact on advertising designers.

# **Y.** Literature Overview Definition of the main concepts:

Since ancient times, there have been ideas of intelligent entities. As the Chinese and Egyptian engineers created automatons, the ancient Greeks actually had mythology about robots. However, the roots of contemporary AI can be found in the attempts of classical thinkers to characterize human thought as a symbolic system.

A few scientists from several disciplines talked about the viability of developing an artificial brain between the \95.s and \90.s. As a result, the field of AI research grew.

John McCarthy, who is now regarded as the father of artificial intelligence, originally used the term when he organized the first academic meeting at Dartmouth College in Hanover, New Hampshire, in 1907, on the topic "The science and engineering of producing intelligence robots," (Rezk, ۲۰۲۳)

### Y, \Artificial Intelligence definition

The term artificial intelligence (AI) refers to systems or devices that simulate human intelligence to perform tasks and that can improve themselves based on the information they collect. It is more about the ability to think and analyze data than it is related to a specific form or function. (Saleh, Y.Y.)

Artificial intelligence consists of two words intelligence and means "the power of thinking" and artificial and means man-made, and thus artificial intelligence means the power of manmade thinking as artificial intelligence consists of two concepts The first concept is memory and is represented by storage and is considered a form of intelligence called negative intelligence and the second concept is inference It is the ability to analyze with the awareness of relationships between things in order to understand the facts and this is done through the use of memory, logic and other means derived from mathematical sciences. (Hashem, ۲۰۲۳)

Artificial intelligence (AI) is defined as a technology-enabled system for evaluating real-time service scenarios using data collected from digital and/or physical sources to provid personalized recommendations, alternatives, and solutions to

customers' enquiries or problems, even very complex ones. (Black, ۲۰۲۱)

It the behavior is and characteristics of computer programs that simulate human mental abilities and work patterns. Such as the ability to learn, conclude and react to situations that have not been programmed. (Omar Ashmil, Y.YY)

artificial advertising, also known as smart advertising, is defined advertising that focuses on achieving the recipient's desires through the study of data and algorithms, so that it helps to accurately describe the recipient's needs and desires and goes beyond simply predicting his interests in various contexts and specific timeframes and can recommend various advertising ideas that are allocated to each recipient individually in what suits him. (Abdo, Y.YT)

# Y,Y The most prominent types of artificial intelligence:

Artificial intelligence has clearly developed and solved many problems in reality. We can now distinguish between the various stages of artificial intelligence, from weak artificial intelligence artificial to general intelligence strong artificial or intelligence, thanks to the era of Siri from Apple and Alexa from Amazon applications. (Abdo, Y, YY)

<u>First:</u> Narrow AI expresses specific fields, which is what is expressed in the name of this type of intelligence: narrow artificial intelligence. Accordingly, this type works in one field and not others, and the best example of this type is the traditional chat screens, or social networking sites

that specialize only in Community communication between people, and the associated audio and video technologies, and the possibility of obtaining or downloading pictures.

### **Examples of weak AI:**

### Weak AI systems include:

- Video games such as the chess.
- Google search suggestion.
- Suggested replies to the mails.
- Email spam filters, where a computer knows which redirects messages from the inbox to the spam folder if they are suspected to be spam.
  - Suggested purchases' ads
  - Image recognition software.
- Digital personal assistants like Apple's Siri and Amazon's Alexa. The assistance will answer any questions the user may have (Rezk, ۲۰۲۳)

Secondly, artificial general intelligence: This technical type expresses the second generation of artificial intelligence, which developed artificial intelligence programs simulate the human mind in carrying out business, so this generation was specialized in carrying out business instead of people. Automatic waiting, automated teller systems and other systems have replaced humans in meeting the needs of users.(Omari, (17.7

Third: Super artificial intelligence (ASI): is the one that exceeds the level of intelligence of humans, as it can do tasks better than a specialized or knowledgeable human, it has many characteristics such as the ability to learn, plan, communicate automatically, and make judgments. (Omar Ashmil, Y.YY)

# Y, "The definition of the Internet of Things (IoT)

The Internet of Things (IoT) is evolving and will likely continue to be the newest and most well-known concept in the field of information technology because the definition of the IoT is not currently limited and is not defined, i.e., there is no general definition that has been accepted by the majority or by the global user community.

The "Thing" in the Internet of Things (IoT) can be any gadget with a sensor built in that can gather data and transfer it over the network without human interaction. The decision-making process is aided by the technology that is integrated into the object through interactions with internal states and the surrounding environment.

The Internet of Things (IoT) is a framework that gives every object a digital representation and online presence. More specifically, Internet of Things intends to provide brand-new services and applications that connect the real and virtual worlds. MYM communications serve as the foundational communication for interactions between Things and cloudbased applications. The **IEEE** Communication Magazine defines this. Oxford **Dictionaries** provides summary definition that calls the Internet as an element of IoT: "Internet of things (noun): The interconnection via the Internet of computing devices embedded everyday in objects,

enabling them to send and receive data". (Mouha, ۲۰۲۱,)

# Y, Y, \The Beginning of the Internet of Things (IoT) in Advertising:

Nike has dominated international marketing for more than  $\mathcal{T}$  vears. Leading edge athletic footwear and clothing are represented by the brand. Nike's advertising campaigns in the 19A.s centred mostly on legendary international athletes like Michael Jordan. The 'Just Do It' campaign was the next step, a first step in engaging target audiences and challenging people to use Nike products to attain their own athletic goals. As a result, Nike became a pioneer in customer even before engagement the emergence of social media. Nike launched a new chapter in digital marketing in Y ... \ with the help of the New York City-based agency RG/A: Nike+.

Nike+ is a prime example of how a company can create a self-sustaining platform for users to measure their training progress. Customers wear shoes with a chip inside of them that links to smartphone apps, smartwatches, and fitness wristbands today, as opposed to the earlier iPod music player. Within the first three years, Nike+ runners logged more than to more than  $\xi \cdots$  moon visits. However, at the time, Nike+ had already made it possible for customers to not only track their training progress, but also to share and compare it with millions of other Nike+ athletes. The Internet of Things (IoT) was used to connect shoes to iPods and social media platforms as well as to provide an open platform for sharing personal data with other athletes. In Cannes Y..., RG/A's platform and associated campaigns were hailed as the "campaign of the decade" and earned the Titanium Lion. (Morrissey Y...).

## Y, Artificial Intelligence (AI) skills:

AI programming focuses on three cognitive skills: learning, reasoning and self-correction, which are what the designer should focus on and avoid obstacles.

**First Learning:** This aspect of AI programming focuses on acquiring data and creating rules for how to turn data into actionable information. Rules called algorithms provide computers with step-by-step instructions on how to complete a particular task.

**Second, Inference:** This aspect of AI programming focuses on choosing the right algorithms to reach the desired result

**Third, Correction-Self:** This aspect of AI programming is designed to adjust algorithms and ensure that they provide the most accurate results possible. (Wahid, ۲۰۲۳)

# **r.** Using artificial intelligence in advertising:

As the future revolves around advertisements that respond to consumers' needs and satisfy their desires before they are even aware of those needs and desires, it has become necessary to make significant changes in marketing and advertising strategies.

As a result, artificial intelligence-based advertising campaigns have changed and become more popular. And based on the fact that a successful advertising campaign must contain a number of aspects and elements, including creativity, interest, an intriguing idea, and the ability to use technological techniques, it attempts to be present on all social media as it has the ability to penetrate all smart electronic devices.

Additionally, it is now possible to combine artificial intelligence with marketing since all online advertisements are powered by cookies, which are programmes that gather information about recipients and send it to marketing and advertising firms so they can tailor their messages to the target audience.

# **T, N** Relation between AI and Personalization in Graphic Design

One of the most notable effects of AI on graphic design is its capacity to customise graphics depending on user preferences and data. Deep learning and neural networks, which enable AI to analyse and comprehend enormous volumes of data in a way that was previously not feasible, make this possible. This makes it possible for design tools based on AI to provide designs that are customised particular demographics, browsing patterns, and purchasing patterns. This enables the creation of designs that are unique to a particular target market or audience, enhancing their relevance and potency.

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Moreover, AI-based design tools can also generate designs that are tailored to specific user preferences, such as color and layout. This means that designs can be generated that are individual specific to an user's preferences, making them more personalized and relevant (Vanden Berghe, ۲۰۱۳).

# The impact of AI on the advertising design industry:

The advertising design industry has been significantly and widely affected by AI. AI has allowed designers to concentrate on more creative and strategic parts of their work by automating tedious chores. As a result, production and efficiency increased since designers are able to execute tasks more quickly and accurately. Additionally, this implies that designers will have more time to concentrate on other elements of their work, such as coming up with fresh concepts, investigating new design avenues, and conceptualizing new projects, all of which can result in more creative and effective designs.

Designers may now produce designs based on data and user preferences thanks to AI-based design improved tools. This has engagement and boosted consumer loyalty by increasing the personalization and relevancy designs. Designers can build designs that are more likely to be pertinent to and appealing to their target audience adapting those to demographics, browsing and purchase histories, as well as user preferences, such as colour and layout.

A further benefit of AI-based design tools is that they make it simpler for designers to spot patterns and trends in data, which can help make more strategic them and successful design choices. For designers working in industries like branding and marketing, where datadriven design decisions can have a big impact on a campaign's success, this can be very useful.

The capacity to automate monotonous operations and produce designs based on data and customer choices has had a huge impact on the graphic design business overall. This has improved user engagement and boosted client loyalty while also increasing productivity, efficiency, and personalization. We may anticipate even more fascinating advancements and opportunities in the use of AI in graphic design as technology continues to advance. (Mustafa, ۲۰۲۳)

Brand marketing will become more precise and successful as artificial intelligence (AI) technology advances in the advertising business. Advertisement content relevant to the target audience may be created from vast and fragmented resources using artificial intelligence and content marketing, for example. As of Y. 1A, the OPPO phone is based on the latest data-driven technology to provide users with information such personal consumption data analysis and classification, user behavior and shopping consumption, and APP use. This is all done through algorithm programs, data flows, mobile terminal market software, and relevant searches. The target market is identified once the user picture has been created early in the brand marketing process. Further stages of data services are provided to empower target audiences and increase the pertinence of advertising. (Yu, Y.YY)

# T,T Advantages of artificial intelligence in advertising

### Faster data analysis:

Using artificial intelligence tools, marketers can analyses large datasets more quickly than people can. This boost in productivity allows marketers to gather and implement effective advertising ideas more quickly. Additionally, it implies that businesses can cut down on the time spent manually processing information, enabling them to execute more successful advertising campaigns sooner and with a higher ROI at a lesser cost.

### Clearly define the target audience:

The application of artificial enables intelligence deeper a examination of data, allowing the machine learning algorithm to break down complex data sets, correlate them with other pieces of knowledge, and enhance recipient insights, desires, and preferences. In terms advertising, the aforementioned means being able to use more targeted advertising concepts that are suited for the target audience while creating advertising campaigns, as well as being able to take action based on the outcomes.

- The success of advertising campaigns and to be more effective and influential to be relevant to a large percentage of the target group and express it, but the lack of basic data and the inability to precisely identify the needs and desires of the target audience led to facing new challenges that can be overcome using artificial intelligence so that all the necessary data and statistics can be obtained and increased the efficiency of the advertising process.
- One of artificial intelligence's strengths is that it can use the recipient's data with his or her prior consent. It also permits the application, which is documented to rely on AI, to collect the recipient's data, and in exchange, the application uses the data to enhance the services offered to it and provide pertinent advertising content. (Abdo, ۲۰۲۳)

# T, AI application in the advertising design industry:

A growing challenge is the effect of AI on the advertising process. A new class of advertising activities, including large-scale personalized advertising production based consumer profiling, omnichannel precision media planning, and buying, strategy-based and proactive algorithms that evaluate and optimize advertising impact, have emerged as a result of a new set of process steps, including consumer insight discovery, ad creation, media planning buying, and ad impact evaluation.

### ۳,٤, \ AD platform

Artificial intelligence and machine learning are used by programmatic advertising exchanges and ad tech platforms to control real-time purchasing and selling. Almost all ad exchanges, third-party networks, and advertising options on Facebook, Instagram, and Snapchat are included in this.

In the foreseeable future, it is unlikely that these exchanges, services, and platforms will be able to explain to marketers how their artificial intelligence functions. Artificial intelligence controls how money is spent, who sees advertisements, and the campaign's overall effectiveness.

The following provides a crystalclear example of this: More specifically, the frequency and relevancy score adverts of on Facebook. These two criteria are crucial pieces of information that Facebook's algorithms rely on to decide how much money to spend on advertising and how to completely automate the commercials' display.

# T, £, Y Optimize budget and targeting

Artificial intelligence technologies demonstrate their ability to target and automatically optimize advertising spending. Ad spend and targeting data can be analyzed by AI, which can then identify the actions (adjustments to spending, changes to targeting) that will improve performance. These useable insights are created and carried out at scale across a huge number of difficult undertakings. We found that travel company RedBalloon the

employed the artificial intelligence (AI) programme Albert automatically manage and optimise their digital advertising budget and plan. The results were astounding. developed strategies Albert maximising spending and targeting in order to outperform human agencies and increase return on investment. Additionally, the programme found customers for RedBalloon's new products that the company unaware of thanks to the insights obtained from sufficient amounts of expenditure data.

### T, £, T Ad creation and management

AI determines how the advertisements work and may even assist people in significantly increasing performance. However, it is also utilized nowadays to simplify the process of creating advertising campaigns significantly.

Platforms with advertising components, most notably Facebook, offer AI that enables people to generate ad text and variants far quicker than people could manually, utilizing previously submitted material.

AI system may help people save time managing their entire marketing strategy. WordStream combines machine learning with the flexibility to make adjustments to many ad campaigns on Facebook, Google, and Bing with a few clicks. (Yu, Y·YY)

# t. Digital marketing and advertising:

There are billions of user profiles on social media platforms like Facebook, Twitter, and Snapchat, all of which need to be saved and handled very effectively. Massive volumes of data can be managed and organised by AI. A lot of data may be analyzed by AI to find the newest hashtags, trends, and user requirements. Based on intricate big data, these autonomous algorithms place the appropriate adverts in front of the appropriate audiences to avoid creating a chaotic situation. What is referred to be "programmatic advertising" is this.

The key is to target the correct audience and communicate the proper message based on their interests and preferences.

As for advertising copywriting, in Y.\A Lexus was the first brand who created a commercial that was fully scripted by IBM's Watson artificial intelligence system. Fig (\(\frac{1}{2}\)) (Rezk, Y.\T)



Fig. \. Shots of Lexus AI ad (Rezk, \( \cdot \cdot \cdot \cdot \cdot \)

# **£.** \Artificial intelligence marketing:

Artificial Intelligence Marketing (AIM) is an approach of optimally utilizing technology and customer data to enhance the customer's experience. The various techniques used to accomplish such a task are Big Data Analytics, machine learning and gaining insights of our targeted sector of customers. Such operations have made it apparent to call this aeon as "The Ai Marketing Era" which obligates radical transformation in former pattern in which the marketers

interact with their customers, formulate the strategies to accomplish their objectives. (Piyush Jain, July ۲۰۲۰)

Artificial intelligence (AI) technologies being used are in marketing to make automated judgements based on data gathering, data analysis, and further observations of audience or economic trends that may have an impact on marketing activities. When speed is crucial in marketing campaigns, AI is frequently used. To ensure optimum efficiency, ΑI technologies learn how

effectively engage with clients using data and customer profiles. They then give them personalized messages at the appropriate moment without assistance from marketing team personnel. AI is employed by many modern marketers to support marketing teams or to carry out more tactical jobs that don't require as much human finesse. Use cases for AI in marketing include:

• Data analysis, natural language processing, media buying, automated decision making, content generation, personalization. real-time (Nalini. 7.71)

### ۶٫۲ AI-driven marketing

Sales can be significantly increased with the help of an AI-powered marketing and business strategy, and according to a Y.IA McKinsey research of over  $\xi \cdots$  use cases utilising sophisticated AI techniques, marketing has the most promise for According to Huang and Rust, AIdriven marketing makes use technology to enhance the consumer experience and journey. AI tracks customer mood, purchases, travel, and other data to create machine learning algorithms that forecast consumer behavior.

Personalized messaging, suggestions, and information will be used to create strategies for customer engagement and retention. Goals for AI include reducing costs, boosting income, and improving customer satisfaction. Despite lacking empathy or compassion, artificial intelligence (AI) is capable of a wide range of tasks. Streamlines, enhances,

provides data-driven reporting on marketing efforts to reduce digital marketing blunders. In essence, AI is what makes the personalized email marketing that many of us are familiar with possible.

A Chabot is an excellent example of an AI application that simulates human intelligence by interpreting and responding to consumers' queries and inquiries, as well as completing online. At the moment, purchases Chabot's are gaining popularity. Numerous businesses use bots into their operations using Meta Messenger or their own websites. Typically, a Chabot is introduced to increase the efficiency of a customer support department; however, data obtained via Messenger can help organization enhance its digital marketing effectiveness through its data analysis capabilities. (Abdul Moaz Alkhayyat ,Ahmed Mohamud Ahmed, (1, 1, 1)

### How is Artificial Intelligence فرج المعالمة الم (AI) reshaping marketing?

It has become customary perform large- scale data analysis in the marketing sector. Elements like Artificial intelligence, machine learning is making their mark on corporate operations. After increased use of these trailblazing techniques marketing teams have wide scope to convey massive value to AI's potential data. Artificial Intelligence is the machines ability of to execute intellectual tasks that one can relate with human minds such as problem solving, learning, exercising creativity, reasoning, perceiving and interacting with the environment. The emergence of AI-powered marketing solutions is reducing the responsibility of marketers and assigning tasks to machines.

Customer segmentation: It is the responsibility of marketers to provide the appropriate information to the appropriate person at the appropriate time. To do this, marketers prefer using customer segmentation. The majority of businesses like to group their clients based contemporaneous, related variables. AI assists marketers in identifying their target audience and learning what drives them. This knowledge assists marketers in forging enduring connections with their clients. (Piyush Jain, July Y.Y.)

# . 4 Benefits of Artificial Intelligence in Marketing

incorporating AI into marketing operations would help the company increase efficiency and save time in the marketing functions, and it is now clear that AI assisted the company in improving marketing processes

the advantages of implementing AI-based software included increased conversion rates, a better grasp of consumer data, and the ability to more informed marketing make decisions. Most significantly, it aided inenhancing the return on investment. The advantages of AI integration include insights and marketing decisions.

The main benefit of AI adoption in marketing, is the

insights. The AI-based software's findings may be used to a variety of operations, including pricing and new product creation. the main benefit of using AI-based software in marketing is that it allows the firm to deliver better service and provide more value clients, resulting in the degree of highest customer satisfaction. Improved data analysis and efficient marketing operations are among the other advantages. (Basha, 7.77)

Mechanical ΑI provides standardization benefits due to its ability to be consistent. In marketing, various forms of mechanical AI have been used to provide a standardization benefit; for example, collaborative robots (cobots) help with packaging, drones distribute physical goods, selfservice robots deliver service, and service robots automate social presence in frontline . All these applications aim to generate standardized, consistent, and reliable outcomes.

Feeling ΑI provides relationalization benefits (i.e., personalizes relationships), due to its capability to recognize and respond to emotions. Any marketing functions or activities that require interaction and communication, with the goal relational benefits (e.g., when customer lifetime value is high) should consider AI—one example customer service. A broad range of marketing functions involves feelings, for example, customer satisfaction,

customer complaints, customer moods, and emotions in advertising, etc., and can make use of feeling AI. (Rust,  $(7 \cdot 71)$ 

### t, o Use of artificial intelligence in marketing

### £,0,1 Use of artificial intelligence in strategy and planning

Artificial intelligence can support marketers in strategy and planning marketing activities by helping in segmentation, targeting, positioning (STP). Besides STP, AI can help marketers in visioning strategic orientation of firm Text machine mining and learning algorithms can be applied in sectors and finance, like banking marketing, retail and tourism for identification of profitable customer segments.

### £,0,7 Use of artificial intelligence in product management

A marketing analytics tool based on artificial intelligence may assess how well a product is designed in relation to the needs of the consumer and the degree of customer happiness that results. The system's capacity for service innovation and designs is increased through topic modelling.

### ن, ه, ۳ Use of artificial intelligence in pricing management

Pricing is a calculation-intensive task that takes into account a number of factors before determining the ultimate

price. The complexity of the pricing task is increased by real-time price fluctuation depending on shifting demand. A multiarmed bandit system based on artificial intelligence can dynamically modify price in a realtime environment. (Sanjeev Verma, (17.7

### ٤٫٦ ChatGPT:

ChatGPT is based on machine learning, which is currently the most popular technique Artificial Intelligence (AI) technology. With its ability to create human-like text and answer complex questions, it designed to create human-like conversations by understanding the context of the conversation and generating appropriate responses. ChatGPT is based on a deep learning model called GPT-7, which is trained on a large dataset and can perform many natural language tasks, such as language translation, sentiment analysis, and text summarization. GPT stands for Generative Pre-trained Transformer and is the name given to a family of natural language models developed by artificial intelligence (AI). (Sabzalieva & Valentini, ۲۰۲۳)

### o. Examples of graphic design programs working with AI and machine learning method:

There are many pieces of design software that work with artificial intelligence and the machine learning method.

### •, \ Adobe Sensei – AI-Powered Photo Editor

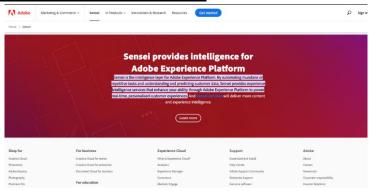


Fig. 7. Interface Adobe Sensei

### https://simplified.com/blog/design/ai-graphic-design/

A group of intelligent services called Adobe Sensei are used to create design and digital experiences on the Adobe Cloud Platform. In the midst of all this information, Adobe Sensei is designed for picture matching, comprehending and sensing documents and significant mass portions. By identifying font kinds, machine learning predicts the designer's next move and recreates typefaces for the designer. By

automatically defining facial characteristics like eyes, mouths, and nose in a photo with Adobe Photoshop's "Liquify" filter, it also cuts down on the time a designer needs to modify faces. Photoshop Fix, Photoshop Mix, and PS Express,

which include desktop-like functionality including adding color effects, making collages, cutting, trimming, and color correction, have been integrated by Adobe with AI. Photoshop Fix 'o recognizes things automatically. (link 'A) Fig. (")

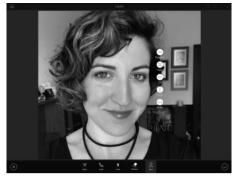


Fig. \(^\). photoshopfix-liquify filter (Karaata, \(^\)\(^\))

### o, Y Designscape – AI-Powered Layout Designer

Supported by Adobe, Microsoft and NSERC, Design Scape is a system which aids the design process by

making interactive layout suggestions, i.e., changes in the position, scale, and alignment of elements. It is the first work provides interactive suggestions

for single-page designs like posters/advertisements. Fig. (ξ)



Fig. 4. Designscape-Refinement suggestion (Karaata, Y. )A)

In the adaptive interface mode, the program automatically orders the design with no suggestions when the user changes an object. Brainstorming suggestions appear on the right of the screen on this interface as well. Fig. (°)



Fig. o.Designscape-Adaptive interface mode (Karaata, ۲۰۱۸)

The feature of retargeting layout changes the page size. After entering the page size to the interface, the page is resized and design objects are automatically rearranged according to the previous design. Fig. (7)

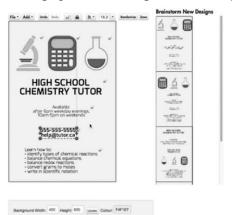


Fig. 7. Designsacape – Retargeting Layout (Karaata, Y. )A)

# • , Firedrop – AI-Powered Web Designer

A website called Firedrop provides web design services with AI support. Users are greeted by an AI Chabot that will design the page and develop the design. The Chabot poses questions, analyses the responses to identify the type of website that has to be created, and then proposes the design for user approval. The design is still constrained by the possibilities provided by the artificial intelligence; however, the user has the ability to

alter the color scheme, typefaces, or page design templates, as well as to give a link or upload an image. Fig. (Y)





Fig. V.Three different websites that are generated by Firedrop-The design process of Firedrop (Karaata, Y. VA)

### o, Logojov – AI Powered Logo Maker

Logojoyis a website. It uses learning artificial intelligence to create and sell a variation of logos without a real graphic designer. Logojoy's process involves four stages. The user writes in the brand name, and chooses various logos and colors offered by the

website. Optionally, slogans and icons relevant to the brand are added to the options. In a few seconds, the website's algorithm creates different logo designs based on the input and the user chooses a design. The logos in Logojoy are a blend of various types of fonts, colors, symbols and compositions. (Karaata, Y. A) Fig. (A)



Fig. A. The design process of Logojoy (Karaata, Y. )A)

### o, o Design software

As for the different examples of applications or programs that incorporate AI in its work are like:

e,e,1 Colormind. ColormMind is a deep-learning colour palette generator. It can come up with aesthetically acceptable colour selections on its own or with your input. Media like movies,

photos, and traditional art are frequently used by designers as inspiration. By training on distinct datasets made up of millions of images and movies.

- e, e, Y Let's Enhance uses machine learning to enhance images of low quality. By remembering the ways one or more photos might be enhanced.
- •,•, \*Prisma. It is a photo and video editing program that turns user-

submitted materials into masterpieces by well-known artists. The use of picture and video filters makes this possible. This program gives the visual content the appearance that it was made by Van Gogh, Edvard Munch, etc. Another application that used artificial is the scope of packaging design as illustrated in the next point. (Rezk, ۲۰۲۳) Fig. (٩)

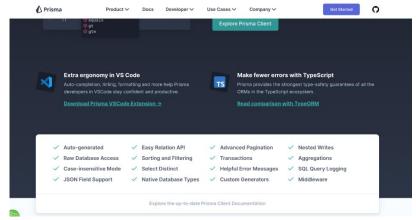


Fig. <sup>9</sup>. Interface Prisma application

https://simplified.com/blog/design/ai-graphic-design/

- 7. Companies that used artificial intelligence in their advertisement campaigns:
- 7.1 Starbucks Corporation uses predictive analytics to provide personalized recommendations

Starbucks is one example of a brand using a loyalty card and mobile app to collect and analyze customer data. They announced plans to privatize again in Y. 17.

Since then, they have created the perfect app experience. Records details of purchases, including where they were made and at what time of day. Starbucks uses predictive analytics to process this data and serve customers with personalized marketing messages. These messages include recommendations when approaching a local store as well as offers aimed at increasing the average value of a customer'sorder.(Wanes, Y·Y))Fig.



Fig. () ·) - STARBUCKS USING ARTIFICIAL INTELLIGENCE

https://blog.socialmediastrategiessummit.com/\\\ -examples-of-ai-in-marketing/

### Ty Clients Create Custom Nikes In 9 · Minutes

In Y. Y. Nike launched a system that allowed customers to design their own sneakers in store. The Nike Makers Experience lets customers wear blank Nike Presto X shoes and

choose their own graphics and colors. Using augmented reality and display systems, the system then projects the design onto the empty shoes. The designs are printed on the sneakers and available to the customer in about 9. minutes. (Wanes, 7.71) Fig. (11)



Fig. 11. NIKE USING ARTIFICIAL INTELLIGENCE

https://blog.socialmediastrategiessummit.com/\\\ -examples-of-ai-in-marketing/

### **いて Coca-Cola Launches Creative AI Platform**

Whereas other brands might be content with using existing technologies in their marketing, Coca-Cola launched its own AI platform, built exclusively for the brand by OpenAI and Bain & Company.

Dubbed "Create Real Magic," the

platform combines GPT-5 — used to produce human-like text from search engine queries — and DALL-E, which turns text prompts into images.

The resulting campaign saw Coca-Cola prompt fans to create their own digital artwork based on dozens of branded assets, such as the brand's distinctive contour bottle and script logo.(link ٣٠, ٣١) Fig. (١٢)

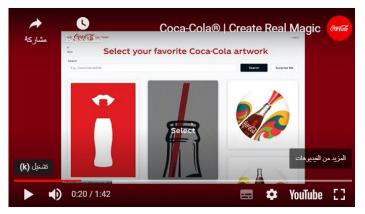


Fig. \footnotesia. Coca-Cola Launches Creative AI Platform
https://blog.socialmediastrategiessummit.com/\footnotesia-examples-of-ai-in-marketing/
https://www.youtube.com/watch?v=FPGDMj\QUBE

# **The Heinz Use Artificial Intelligence** in Design

Heinz — with the help of marketing agency Rethink Ideas — decided to launch what they described as "the first-ever ad campaign with visuals generated entirely by artificial intelligence."

As is often the case, the campaign stemmed from a simple idea. After playing around with AI image generator DALL-E <sup>Y</sup>, Rethink Ideas

noticed that prompts related to ketchup (like "ketchup in outer space" and "ketchup scuba diving") frequently produced results that look *just like bottles of Heinz*.

So the agency urged consumers to get in on the act by sharing their own AI prompts for ketchup-based imagery, with the best creations appearing in social media posts and print ads. (NORRIS, ۲۰۲۳) Fig. (۱۳)



Fig. \".Heinz Use Artificial Intelligence in Design https://blog.socialmediastrategiessummit.com/\'\cdot\-examples-of-ai-in-marketing/

### **A.** Examples of advertising campaigns created using artificial intelligence:



Advertising campaign created by artificial intelligence AI for KFC (link <sup>my</sup>)



Advertising campaign created by artificial intelligence AI for Colgate (link  $^{\intercal \Upsilon}$ )



Advertising campaign created by artificial intelligence AI for UBER ( link  $^{\mbox{\scriptsize TT}}$ )



Advertising campaign created by artificial intelligence AI for Gymshark (link T)



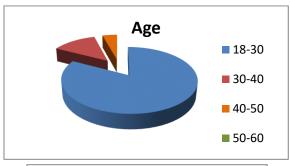
Advertising campaign created by artificial intelligence AI for Nespresso (link "\")

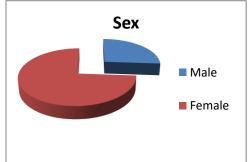
### 4. Search Procedure:

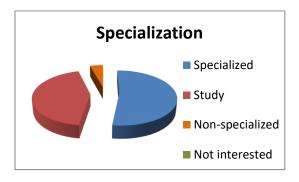
A sample of o people working on the advertising design industry has been involved in a survey through a questioner in order to measuring the impact of artificial intelligence on the field of advertising industry and how the future of advertising will be, in addition to its effect on impact on advertising designers, the extent of the advertiser's absorption and acceptance and the recipient's interaction with the advertisements created by artificial intelligence,

### The research sample:

The questionnaire questions were divided into demographic questions in which he was asked about gender and age, and a set of questions that were directed to specialists in the field of advertising, in which he was asked about artificial intelligence and its role in advertising design, artificial intelligence, its role on the advertising designer, artificial intelligence, its role in marketing, and influencing the behavior and attitudes of the recipient.



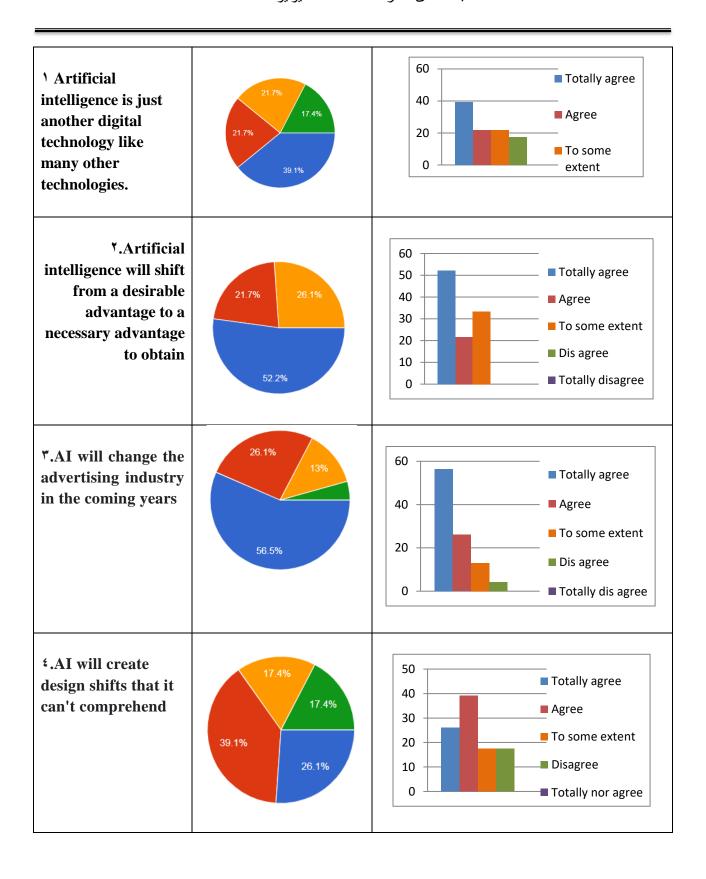


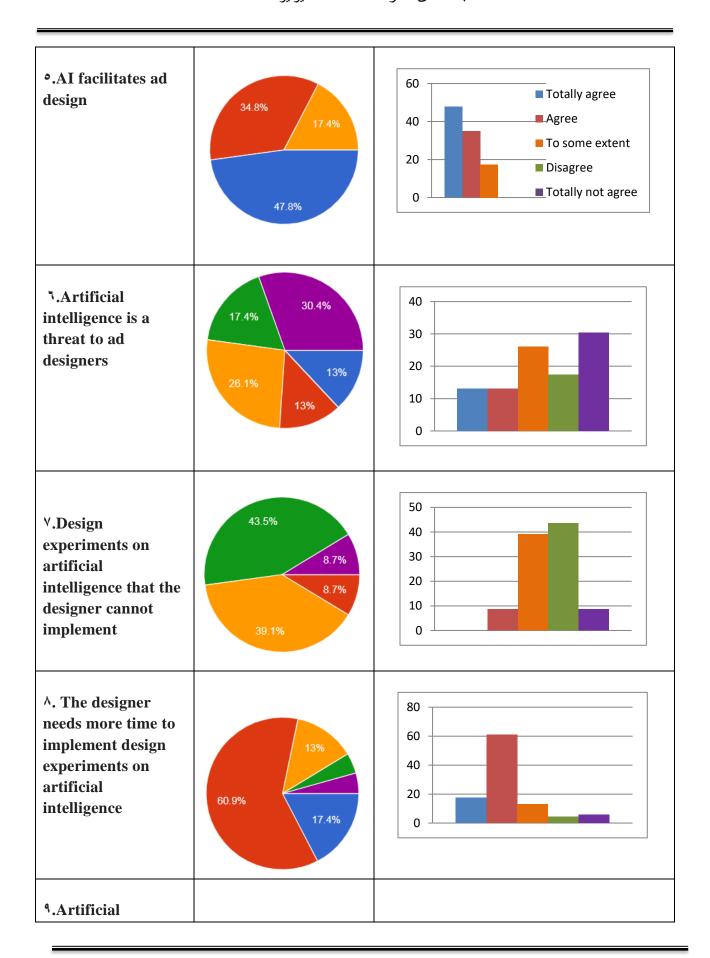


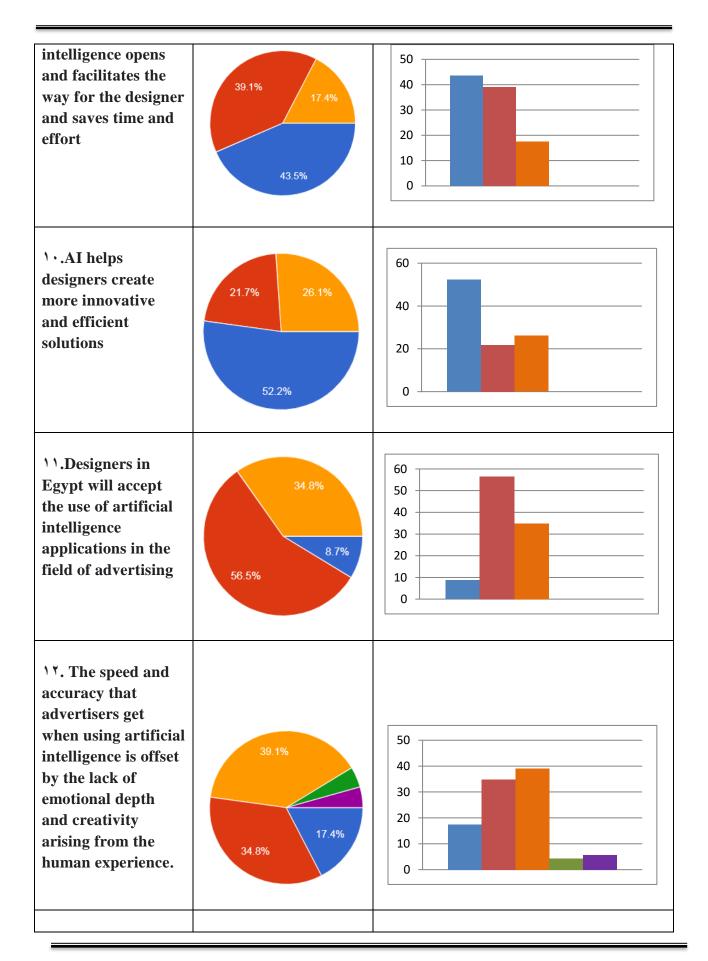


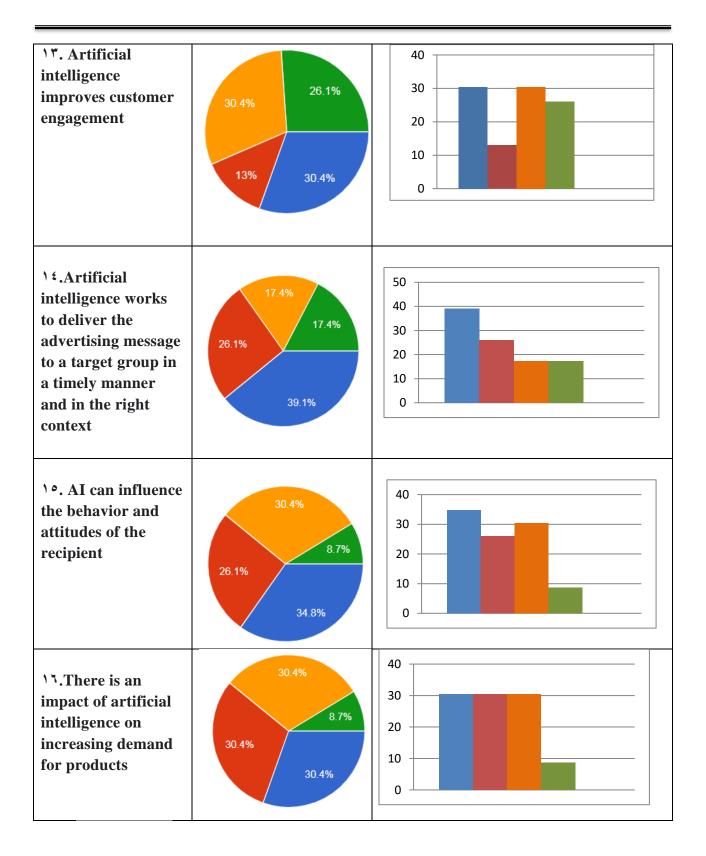
• The results of the questionnaire showed the following:











### **Results and discussion:**

1. % of the research sample agreed that AI is just another digital technology

like many other technologies, while Y1,4% believe that AI is just another digital technology, while Y4,5%

- rejected that AI is just another digital technology like many other technologies. While ''. completely rejected that AI is just another digital technology like many other technologies.
- Y. The largest of, Y. agreed that AI will shift from a desirable advantage to a necessary feature, while YT, Y believe that AI will shift from a desirable advantage to a necessary feature, While Y. rejected and completely rejected Y that AI will shift from a desirable advantage to a necessary feature.
- will change the advertising industry in the coming years, while '\"% believe that AI will change the advertising industry in the coming years, While '\"% rejected and completely rejected '\"/ that AI will change the advertising industry in the coming years.
- \*. ٣٩,١% agreed that AI will create design shifts that it cannot comprehend, while 17% believe that AI will create design shifts that it cannot comprehend, While 14,5% rejected and completely rejected .% that AI will create design shifts that it cannot comprehend.
- •. % \$\forall \tau, \text{\Lambda} of respondents agreed that AI facilitates ad creatives, while \forall \tau, \forall \text{\Lambda} believe that AI facilitates ad creatives, While \forall \text{\Lambda} rejected and completely rejected \forall \text{\Lambda} that AI facilitates ad creative.

- W. %•of respondents fully agreed, Λ, ν/. agreed that design experiments on AI cannot be done by the designer, Υ۹۱.% of respondents believe that design experiments on AI cannot be done by the designer, εγ, ο/. disagreed, and Λ, ν/. did not fully agree that design experiments on AI cannot be done by the designer.
- AI opens up and facilitates the way for the designer and saves time and effort, while 'Y', 5% believe that AI opens up and facilitates the way for the designer and saves time and effort, While ''.' rejected and completely rejected ''.' that AI opens up and facilitates the way for the designer and saves time and effort.
- AI helps designers create more innovative and efficient solutions while ۲۱,۷% agreed, ۲٦,1% believed that AI helps designers create more innovative and efficient solutions, while •% disagreed and completely disagreed that AI helps designers create more innovative and efficient solutions.

- 11. %οτ, of respondents agreed that designers in Egypt will accept the use of artificial intelligence applications in the field of advertising while τε,λ% believe that designers in Egypt will accept the use of artificial intelligence applications in the field of advertising While ''. rejected and completely rejected ''. that designers in Egypt will accept the use of artificial intelligence applications in the field of advertising.
- when using artificial intelligence is offset by the lack of emotional depth and creativity arising from the human experience while "9,1% believe that the speed and accuracy that advertisers get when using artificial intelligence is offset by the lack of emotional depth and creativity arising from the human experience While £,7% rejected and completely rejected £,7%.
- 17. %7.5 of the research sample agreed that artificial intelligence improves customer interaction while 7.5% believe that artificial intelligence improves customer interaction While 77.1% rejected and completely rejected .%.
- respondents agreed that artificial intelligence works to deliver the advertising message to a target group in a timely manner and in the right context while 'V', 5% believe that artificial intelligence works to deliver the advertising message to a target group in a timely manner and in the right context, While 'V', 5% rejected and completely rejected '%.

- 1 . % τ ε , Λ of respondents agreed that AI can influence recipient behavior and attitudes, while τ , ε ½ believe that AI can influence recipient behavior and attitudes, While Λ, ∀ ½ rejected and completely rejected ½.
- that there is an effect of artificial intelligence on increasing demand for products, while "., \(\xi\)! believe that there is an effect of artificial intelligence on increasing demand for products, While \(\lambda\), \(\xi\)! rejected and completely rejected \(\xi\)!.

### **Conclusion:**

- The use of artificial intelligence as a technical tool opens the way for the designer to access different creative and innovative solutions.
- AI helps designers create multiple designs in a short time.
- Artificial intelligence opens and facilitates the way for the designer and saves time and effort while continuing to produce high-quality results.
- Artificial intelligence will not replace designers, but it shortens their time and effort while obtaining more effective results in a faster time.
- Artificial intelligence can inspire creative thinking by offering new perspectives on existing designs or introducing new concepts.
- AI technology improves customer engagement, renewal and retention of existing customers and provides a means to increase demand for business-driven products and services.
- The importance of exploring and discussing the impact of artificial intelligence on graphic design to understand its benefits and ensure the

best possible way to advance graphic design.

### **Recommendations:**

- Encourage designers to use artificial intelligence in advertising design to obtain different innovative and creative results.
- The use of artificial intelligence in the advertising environment to achieve greater effectiveness in influencing the recipient and his response.
- The need to keep pace with technical developments with regard to artificial intelligence in the field of advertising and the need for cooperation between designers and researchers in the field of artificial intelligence technology.

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### الملخص:

شهد العالم ثورة في مجال الذكاء الاصطناعي، ظهرت آثارها في معظم مجالات الحياة، بما في ذلك المجالات العلمية والتقنية وحتى العلوم الإنسانية. الهواتف الذكية وأجهزة التلفزيون المستمرة هي أفضل دليل على ذلك. أدت التطورات الكبيرة في الابتكار التكنولوجي إلى تحويل العديد من المهام والعمليات اليدوية التي كانت موجودة منذ عقود ، لدرجة أن تقنيات الذكاء الاصطناعي تستخدم على نطاق واسع في الإعلان لزيادة الكفاءة وتلبية طلب السوق. يشير الذكاء الاصطناعي إلى أن تصبح أجهزة الكمبيوتر أكثر قدرة على أداء وظائف وأنشطة معينة يقوم بها حاليا الأشخاص في مكان العمل وعبر المجتمع.

ويهدف البحث إلى تحديد تأثير الذكاء الاصطناعي على الحملات الإعلانية، وكيف سيكون مستقبل الحملات الإعلانية، ومدى تأثير الحملات الإعلانية المنفذة باستخدام الذكاء الاصطناعي على المستهلك، وتحديد سلوكه، وإيصال الرسالة الإعلانية.

منهج البحث: يتبع البحث المنهج الوصفي للتعرف على تقنيات الذكاء الاصطناعي التي يمكن للمعلن توظيفها في الحملات الإعلانية وتأثيرها على فعالية الحملات الإعلانية.

المنهج الكمي: تم إجراء استبيان شمل ٥٠ شخصا من المتخصصين والدارسين في مجال تصميم الإعلانات، تمت صياغة الاستبيان لقياس تأثير الذكاء الاصطناعي على مجال الإعلان وكيف سيكون مستقبل الإعلان، ومدى تأثيره على مصممي الإعلانات.

النتائج: استخدام الذكاء الاصطناعي كأداة تقنية يفتح المجال أمام المصمم للإبداع ويوفر الوقت والجهد مع الاستمرار في إنتاج نتائج عالية الجودة ويقلل من معدل الخطأ دون إلغاء قيمة المصمم، حيث يمكن الاستفادة من تطبيقات الذكاء الاصطناعي بشكل كبير من خلال قدرته على تحليل كميات هائلة من البيانات بسرعة وتوليد أفكار جديدة. تعمل تقنية الذكاء الاصطناعي على تحسين التعامل مع العملاء وهذا يؤدي إلى جذب العملاء وتجديد العملاء الحاليين والاحتفاظ بهم. يوفر وسيلة للتعامل مع هذا الكم الهائل من المعلومات، كما يوفر وسيلة لزيادة الطلب على المنتجات والخدمات التي تواجهها الشركات، وهذا أدى إلى المنفعة المتبادلة بين الشركات والعملاء بسبب سرعة الاتصال وتقديم الخدمات.

الأصالة / القيمة التحقيق في تأثير استخدام الذكاء الاصطناعي على تصميم الإعلانات لوضع معايير الاستخدام هذه التكنولوجيا.

الكلمات الاساسية: الذكاء الاصطناعي ، إعلان الذكاء الاصطناعي ، التسويق الرقمي ، التسويق القائم على الذكاء الاصطناعي ، ChatGPT.