**Research Paper**

# The influence of Artificial Intelligence Applications in Digital Marketing: An Analytical Study of a Sample of Iraqi Internet companies' customers

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*Abstract*

AI has extensive data on how customers behave and what they like, which helps companies better understand what they need. This has led many businesses to adopt these technologies to market their goods and services. The objective of this paper is to examine the influence of applications of AI on digital marketing strategies. This study used a quantitative approach. Questionnaires were distributed to a sample of 250 clients of Iraqi Internet providers. All forms were collected; 192 were deemed valid for analysis, representing 76%. SPSS 28 used for data analysis. The findings revealed a significant correlation between artificial intelligence applications and digital marketing for clients of Iraqi Internet enterprises. This study provides recommendations for Iraqi Internet enterprises to integrate AI with digital marketing activities.

The study concluded that there is great importance in integrating artificial intelligence into electronic marketing activities because of its significant impact on understanding customer needs and demands, in addition to improving customer care service.

ورقة بحثية

# تأثير تطبيقات الذكاء الاصطناعي في التسويق الرقمي: دراسة تحليلية لعينة من عملاء شركات الإنترنت العراقية

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## المستخلص

يعالج الذكاء الاصطناعي بيانات واسعة النطاق حول سلوك العملاء وتفضيلاتهم، مما يسهل على الشركات معرفة احتياجاتهم بشكل أفضل. وقد دفع هذا نسبة كبيرة من الشركات إلى استخدام تقنيات الذكاء الاصطناعي لمساعدتها في تسويق منتجاتها وخدماتها. يهدف هذا البحث بشكل إلى معرفة واختبار تأثير استخدام الذكاء الاصطناعي على استراتيجيات التسويق الرقمي. استخدمت هذه الدراسة منهجًا كميًا، حيث وُزعت استبيانات على عينة من 250 عميلًا لمزودي خدمات الإنترنت العراقيين. جُمعت جميع الاستبيانات، واعتُبر 192 منها صالحة للتحليل، أي ما يعادل 76%. استُخدم برنامج SPSS 28 لتحليل البيانات. اهم النتائج كانت وجود ارتباط بين تطبيقات الذكاء الاصطناعي والتسويق الرقمي لعملاء شركات الإنترنت العراقية. تقدم هذه الدراسة توصيات لشركات الإنترنت العراقية لدمج الذكاء الاصطناعي في أنشطة التسويق الرقمي. خلصت الدراسة إلى أن استخدام الذكاء الاصطناعي في أنشطة التسويق الإلكتروني له أهمية بالغة نظرًا لتأثيره الكبير على فهم احتياجات العملاء ومتطلباتهم، فضلًا عن تحسين خدمة رعاية العملاء.

_**الكلمات الرئيسة:**_

**الذكاء الاصطناعي، التسويق الرقمي، مجهزي خدمة الانترنت، زبائن شركات الانترنت العراقية**

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## 1.Introduction

The tremendous developments and major and rapid changes in the field of knowledge and communications technology have led to a qualitative leap in all areas of life, especially those related to the Internet(Maaroof, Dedeoğlu, & Ahmed, 2025), as this technology has contributed and enabled the world to become a small space free and devoid of all barriers (not being bound by time and space boundaries) that hinder the speed and ease of communication and acquaintance, whether between individuals or business organizations(Surdilovic, Ille, D'Souza, & Learning, 2022).

Digital marketing has emerged as a pivotal strategy in contemporary commerce, serving as an effective means of communication and interaction with consumers. It has become integral to the lives of individuals, particularly in the current generation (Danook & Al.obaidy, 2022). For companies and institutions aspiring for success and distinction in the marketplace, digital marketing is now a primary objective. Social media has transcended its traditional social function, evolving into a platform for business interactions, enabling organizations to engage with one another and their clientele. This strategy presents opportunities to penetrate and access new markets. The maximum number of customers is determined by assessing consumer perceptions and understanding their sentiments and responses towards the brands, goods, and services offered (Al.obaidy, Albayaty, & Al-Tamimi, 2025). Conversely, these organizations are prepared to advance and enhance their strategies of digital marketing to optimize the outcomes of their online ventures through technological utilization, as the significant technological advancements accompanying digital transformation in the contemporary era have contributed to the proliferation of information and data influx, as well as its application and comprehension. The social media may aid in engaging and understanding both potential and existing clients. pertains to the use of AI technology (Al-Obaidy, Al-Dulaimi, & Al-Tamimi, 2025).

The dilemma of the study is encapsulated in the subsequent questions:
How do the dimensions of Applications of AI relate to Digital Marketing for Asian mobile phone companies?
It gave rise to sub-hypotheses:

Q1: How do the dimensions of AI Applications (such chat bots) relate to Digital Marketing for clients of Internet businesses?
Q2: How do AI Applications aspects (such dynamic pricing) and Digital Marketing affect clients of Internet companies?
Q3: How do the different parts of AI Applications (such targeted advertising) relate to digital marketing for Internet businesses' customers?
Q4: What is the link between Data analysis in AI Applications and Digital Marketing for Internet firms' customers?
Q5: How do the dimensions of AI Applications (Data analysis) relate to Digital Marketing for customers of Internet companies?

The significance of research papers is underscored by the innovations and advancements driven by the evolution of the digital landscape and the shifting behaviors and trends across generations. Resulting in the emergence of new marketing strategies that many organizations, particularly service-oriented ones, have adopted to enhance their image (Anas, 2021), promote their products, and maintain their market presence amid intense competition. This approach is a crucial means of boosting competitiveness and a tool for delivering immediate information, thereby heightening institutional interest in it (C. Ma, Wang, Dai, Guan, & Yang, 2025).

This paper brings attention to the role played by AI applications play in digital marketing in how to influence consumer behavior, Explaining the impact of AI applications on digital marketing at Asia cell Communications(FitzSimmons, 2025), In addition, defining Identifying the most significant advantages and disadvantages of digital marketing (email marketing, PPC ,social media marketing, search engine optimization) is crucial to understanding the concept (Encarnacao, Alves, Marques, Neves-Amado, & Alves, 2025).

## 1.2. Literature Review

This section of the research analyzes prior studies that investigated the research variables from various perspectives, including the study by Shanmugam et al.(2023), This study aimed to identify the applications and technologies employed by AI that are suitable for digital marketing, particularly in light of the current information explosion and significant advancements in digital transformation. This study elucidates the inevitability of AI in digital marketing by examining its principal applications and technologies, previously utilized by various companies and business organizations, through a descriptive analysis of AI patterns in digital marketing. The study yielded several findings, the most significant of which is that AI is presently seen as a substantial problem and an essential requirement for institutions of diverse sorts, sizes, and forms to secure their survival and continuation in the market. A subsequent research (C. Ma et al., 2025)  Impact variables related to stakeholders in the advancement of electric construction machines for plateau tunnels:  An examination of social networks,  The study sought to assess the influence of social media promotions on consumer purchasing behavior in cosmetic stores and companies. A questionnaire was employed, with a sample of 411 individuals. A key finding indicates that consumers actively seek products that fulfill their needs and desires. Cosmetic and cosmetics are among the basic needs for women, Among the most important recommendations recommended by decision makers is the need to pay attention to electronic marketing in general and marketing through social media networks in particular, and to hold seminars and conferences known for this. Cosmetics stores also recommend adopting social media networks as part of the promotional mix, and proceeding according to a well-thought-out promotional plan with specific goals. A recent study (Wilson, Johnson, & Brown, 2024) titled "Marketing and AI " investigates the scope of AI 's deployment in digital marketing and its ramifications for practitioners utilizing AI approaches. For this study two study questions have been identified: What areas of AI are utilized in digital marketing? What impacts does AI have on digital marketing managers?  To address these inquiries, the researchers analyzed secondary data, utilizing instances of AI

applied in digital marketing, as commercial solutions leveraging it benefit from all five domains of AI: decision-making, text recognition, voice recognition, image recognition and robotics..While the first three are widely applied in digital marketing, Practical application cases for voice recognition are rare technologies, which major companies such as Amazon, Google, and Apple are seeking to develop .

### 1.3. Objectives of Study

- Identify AI applications through digital marketing websites for services provided by internet service provider companies in Iraq.
- Identify the impact of diversity (services) through the social network in persuading and meeting the needs of existing customers and targeting new customers.
- The role of AI applications in facilitating digital marketing and enhancing the efficacy of marketing initiatives.

### 1.4.The importance of studying:

This study shows the importance of internet service provider companies in digital marketing and the extent to which they contribute to enriching theoretical knowledge, In addition, highlighting is manifested in the introduction of a type of new marketing taken by many business organizations, especially those that offer new products and services, as a direction to market their image, promote their products and stay in the market under strong competition, as it is an important means of increasing competitiveness

## 2. Methods

### 2.1 Population and Sample :

The study included, informal, unstructured interviews with members of the study sample from the surveyed companies. Questionnaires were distributed to sample members in Nineveh Governorate (subscribers of Internet service providers) from the study community. The sample size was 192 valid questionnaires for analysis, and the number of surveyed companies was 6 leading telecommunications and Internet companies in Nineveh Governorate.

### 2.2 Sample:

The questionnaire form was developed by the researchers, and 192 questionnaire forms were distributed using SPSS V.28 program, and 250 questionnaire forms were retrieved and distributed to customers of Iraqi Internet companies in Nineveh Governorate. The questionnaire items presented in Table 1.

**Table (1)** Showing the distributing questionnaire in the Iraqi Internet companies' customers in Nineveh governorate

| Iraqi telecom companies | Distributed Questionnaire | Retrieved Questionnaire | Invalid Questionnaire | Valid Questionnaire | Rate |
|---|---|---|---|---|---|
| Earth Link | 64 | 56 | 10 | 46 | 71.87 |
| Alwatany For Internet Service | 53 | 48 | 7 | 41 | 77.35 |
| Viber X For Internet Service | 44 | 42 | 6 | 36 | 81.81 |
| NBL 4G For Internet Service | 33 | 30 | 4 | 26 | 78.78 |
| Soft Link For Internet Service | 30 | 25 | 3 | 22 | 73.33 |
| Smart Link For Internet Service | 26 | 22 | 1 | 21 | 80.76 |
| **Total** | **250** | **223** | **29** | **192** | **76.8** |

SPSS version 28 was used for analyzing the data collected by 192 valid questionnaires. Table 2 shows the questionnaire items

**Table (2).** Questionnaire items

| Variables | Dimensions | Items | Referneces |
|---|---|---|---|
| **AI Applications** | Chat Bots | 10 | (Maaroof & Kalay, 2020) |
| | Dynamic Pricing | 8 | |
| | Target Advertising | 8 | |
| | Data Analysis | 6 | |
| **Digital Marketing** | Content Marketing | 10 | (Enshassi, Nathan, Soekmawati, & Ismail, 2025) |
| | Pay Per Click | 8 | |
| | Search engine optimization(SEO) | 8 | |
| | Social Media Marketing | 8 | |

**2.2.The research model:**

According to our study, digital marketing is the dependent variable, and the AI application is the independent variable, each with several factors, as demonstrated in the figure 1.
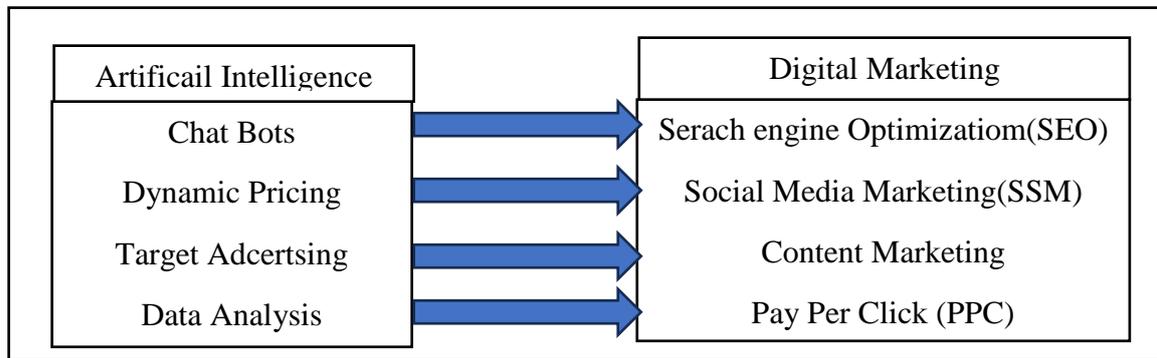
**Figure (1)**. The research model

## 3. Theoretical Background

### 3.1.The concept of AI

AI is derived from computer science. It is frequently used synonymously with concepts such as automation or robotics. It is sometimes conflated with machine learning or algorithmic application (Nigro et al., 2025). AI is defined, The ability of a computer or robot that is controlled by a computer to perform tasks typically executed by humans, as these tasks necessitate human intelligence. Nonetheless, no AI systems now possess the capability to do the multitude of activities that an ordinary person can. While certain AI can compete with humans in particular functions, there remains a distinction (Encarnacao et al., 2025). Contemporary business enterprises globally amass substantial data from several sources. AI applications evaluate and utilize data to enhance organizational business operations (Rowan, 2023). AI technology can engage in human dialogue for customer care, generate original graphics and content for marketing, and offer insightful recommendations for analytics (Moradi & Dass, 2022).

### 3.1.1.The Historical Development of AI

After relying on AI applications in many organizations; Onetime dreams have turned into a tangible reality that affects various aspects of our lives, and current and future generations depend on it to achieve many achievements et al, 2022). Some believe that AI is a product of the modern era, but in reality it began since ancient times, when scientists thought about the possibility of creating artificial beings and robots in the lines of this article, we explain when AI began, the stages of its development, the first to discover it, and its most famous scientists(Kshetri, Dwivedi, Davenport, & Panteli, 2024).

Antiquity is the beginning of the development of the concept of AI. Scholar were dominated by the idea of mechanical men who could be found in some way(Kshetri et al., 2024), an idea that developed increasingly during the eighteenth century and beyond, when philosophers thought about the possibility of using intelligent, non-human machines to mechanize human thinking. And manipulating it, which ultimately led to the invention of the programmable digital computer(Nalbant & Aydin, 2025).

### 3.1.2. Artificial Intelligence Marketing

Marketers are no longer required to speculate or depend exclusively on personal experience; AI tools enable precise analysis of consumer behavior, prediction of trends (Gong, Wang, & Dong, 2025; Macapagal et al., 2025), and the provision of personalized content that satisfies consumer needs. AI marketing encompasses the application of AI technologies. As AI evolves, marketing divisions are utilizing this technology to rapidly generate highly individualized marketing content, derive insights from customer data, and revise existing marketing strategies (Helmefalk etal., 2025). Due to the vast amount of multi-channel data processed by marketing departments and the significant value derived from utilizing this data, the use of AI has become essential for firms aiming to sustain their competitive edge. The IBM Institute for Business Value's annual CEO research reveals that over 70% of high-performing CEOs questioned assert that competitive advantage relies on possessing the most sophisticated generative AI technology (Santamaría Ruiz, Jiménez Calderón, Osorio Venecia, Santodomingo, & Forero, 2025).

### 3.1.3. Applications of AI in digital marketing

AI has numerous applications that significantly enhance digital marketing, contributing to the evolution and efficiency of marketing activities overall, and specifically within the digital realm. Its utilization demonstrates the capacity for adaptation and effective operation amidst continuous changes. Notable applications include the following (Braithwaite et al., 2025; Hari, Sharma, Verma, & Chaturvedi, 2025):

- **Chatbots** are defined as computer programs designed to engage with customers via the Internet, addressing inquiries and offering assistance, as well as facilitating purchases. They can be integrated into social media and platforms (Figueiredo, Pereira, Frias, Rodrigues, & Diogo, 2025). Chatbots augment brand interaction and enhance customer experience by offering 24/7 support, capable of assisting multiple customers concurrently. Furthermore, numerous companies have increasingly depended on chatbots for customer support due to their cost-effectiveness (Cil & Yildiz, 2025).

- **Dynamic pricing** is a pricing technique wherein the price is established based on supply and demand, the inventory of the product inside the organization, and the customer's profile. AI systems can evaluate client profiles by utilizing cookies, individual visit histories, and search activities (Perr-Sauer et al., 2025).

- **Targeted marketing** AI technologies utilize customer cookie data and browsing histories to target advertisements based on specific demographic criteria, including geographical location, age, gender, income, marital status, educational attainment, and profession (Yang et al., 2025). Google has effectively implemented these AI technologies in marketing by analyzing customers' online activities and search histories to tailor advertisements to their preferences, needs, and interests (Yang et al., 2025).

- **Analysis of the Data** In social media marketing, data analysis is considered to be one of the most essential approaches of AI. In reality, the data is examined via

the identification of the marketing problem that is being faced by the business organization, and as a result, all marketing decisions should be based on the data (Luo et al., 2025). On the internet, there is a vast store of information that pertains to consumers. Techniques that are based on AI may be employed to evaluate this data with an exceptional level of speed and accuracy that surpasses the capabilities of people. In order to assess market fluctuations, anticipate general trends, and analyze consumer behavior online, BA depends on systems. This involves analyzing all data from numerous sources and touchpoints, such as business apps that enable digital marketing, social media, and feedback surveys. Companies are able to utilize this data analysis in order to enhance advertising and devise new marketing strategies that are based on the information that has been examined (Shonubi, 2025). This analysis of data is done in order to better understand what consumers desire and anticipate.

### 3.1.4.Why AI applications are the backbone of digital marketing

AI significantly influences marketing, particularly digital marketing—including web design, social media marketing, search engine optimization, and email marketing—by facilitating the collection and analysis of vast data sets for informed decision-making (Shonubi, 2025). Promotion. AI algorithms, including supervised learning, unsupervised learning, and reinforcement learning, can predict customer behavior, ascertain their desires and requirements, tailor advertisements and sales personnel (Saunila, Rantala, & Ukko, 2025), and continuously enhance website content for search engines via feedback, thereby facilitating companies through data analysis. Large corporations and corporate entities utilize AI-powered applications to automate repetitive everyday chores, like email marketing and social media management (Fu, Ni, & Fang, 2025).

- **Providing a unique customer experience:**

In most cases, business organizations aim to make their customers happy by meeting all their needs and desires or working to meet them in the near future, whether they are gifts, messages, or offers specific to the company(Tsiavos & Kitsios, 2025). In fact, giant organizations use machine learning to analyze current and expected customer behavior patterns. Customer behavior analysis is important in order to get to know closely the targeted customers geographically and physically and their various behaviors and actions As well as helping you reach them faster and quickly with the best added value and optimization based on their different needs, along with facilitating the use of your products and removing the challenges they face during the shopping process(S. Wang, Qiang, & Yao, 2025).

- **Real-time response to customers 24/7/360:**

Immediate response is often crucial to high customer retention, especially in our digital world where customer attention spans are short due to intense competition between companies(W. Zhang et al., 2025). AI excels in providing instant interaction through notifications and alerts, and the use of chatbots allows providing a quick

response to customers. Chabot's are available 24 hours a day, 7 days a week, which leads to enhancing customer loyalty(Z. Zhang, Li, & Zhang, 2026).

- **Predicting customer behavior (current& future):**
    Through AI applications, companies, business organizations(J. Ma, Shang, & Liang, 2025), and marketers can predict the behavior of current and new customers by collecting data about customers through the use of data management platforms (which are applications or cookies that are designed according to the company's activity to collect data from various sources, online or offline or via mobile phone. This data is used to create detailed customer profiles (demographic information)(Kavak & Rusu, 2025).

- **Web Site Design:**
    Designing a commercial website is the cornerstone to achieve success in the world of digital marketing, especially with the increasing dependence of customers on electronic shopping(Li & Zhong, 2024), owning a professional website has play a must for any business, play you enhance your digital presence and attract the prime number of client. a commercial website is not just an interface, but an actual tool to communicate with your customers and display your products and services in an innovative way(Maaroof * & Oğrak, 2024).

### 3.2.Digital Marketing Overview:

Digital marketing encompasses the creation and dissemination of content via digital channels such as email , websites, mobile apps, social media, and landing pages. It includes promoting this marketing content by different means and strategies. (Krishen, Dwivedi, Bindu, & Kumar, 2021)(Verhoef & Bijmolt, 2019). In contrast, social media marketing is a modern marketing tool(Rizkita, Winarno, Suwono, & Malek, 2025), as most business organizations have tried to offer their products and services through these networks because it is considered an effective medium to influence the sales of companies (finding leads Target qualified potential customers, make deals with them, maintain relationships with customers) by disseminating this data about the brand of their products(Shashi, Ertz, Cerchione, & Kumar, 2025).

Digital marketing is a prevalent form of marketing that utilizes digital platforms on the Internet to promote and introduce products and goods. It encompasses the execution of advertising campaigns through websites, instant messaging techniques (Spilotro, Secundo, & Del Vecchio, 2025), email, and text messages. This approach facilitates online cash payment services and enables communication with consumers to engage and inspire them. Customers need only to search for the company and its products via search engines and register on the company's website, thereby gaining access to continuous updates, offers, and services. Through text messaging, video communications, and emails (Oliveira, Belitski, Kakabadse, & Theodorakopoulos, 2024).

### 3.2.1.Digital marketing strategies

The advent of digital marketing has led companies to improve their marketing channels in order to retain existing customers and gain new customers(Liu, Zou, Lv, & Yao, 2025), as well as providing content that leads to increased rates of communication with the corporate brand, so the use of digital marketing strategies provides great measurable business benefits and help marketers to know the needs and desires of customers and consumers in fine detail and build personal relationships with them and manage their data, The highly well-known digital marketing strategies include(Özmen, Heikkilä, Karvonen, & Ojanen, 2025):

- **Search engine optimization (SEO)** define internet website internet website for search engines means the work of a legislation tools, methods and skills that are used in order to increase the quantity and quality of traffic to the site, during which the site gets an advanced rank on the search engine results page. " thus, search engines work to enhance the appearance of the website at the top of search engine results. this happens according to search engine algorithms(Sezer Çırakoğlu & Koşaner, 2024).

- **Social Media Marketing (SMM)** Social media is one of the most major digital marketing strategies of our time and is considered the most, In interaction with customers and the public, on the other hand(Westland, 2026), most researchers believe that " marketing through social networks is a growing force and a new marketing tool, as much business organizations and commercial companies have resorted to offering their products and services through these web because they are considered an important commercial intermediary with an impact on sales by spread this information about the brand of their products(K & Massand, 2025).

- **Content Marketing** Nowadays, content marketing is no longer just a positive thing, but it has become a necessity and an imperative imposed by the reality and conditions of the current environment of the organization. Provided that the content is regular, reliable, and of high quality(Wahid, Mero, & Ritala, 2025). This is done by providing sufficient value and providing the forum with benefits that can satisfy its needs and expectations. Content marketing is currently considered the most attractive tool in terms of its effectiveness and impact on customers(Zhou & Jiang, 2025).

- **Pay Per Click (PPC)** It is a digital marketing model based on keywords or keywords, and drives traffic through the "internet", by buying visits to a particular page. As the name suggests, the advertiser pays a fee for each click made by the user on his ads(Sisodia & Sisodia, 2023).

- **E-mail Marketing** is all about sending messages, tracking responses, and continuing to engage with non-subscribers. If your marketing strategy is based on email, On the other hand, it is " an integration of marketing intelligence and virtual copying, and in its simplest form it is an email sent to a list of what includes a sales offer and an invitation to act(Magnusson & Westjohn, 2025).

### 3.2.2.Digital Marketing Tools:

Digital marketing offers significant advantages for small businesses and entrepreneurs by enabling them to promote their products within limited budgets. Historically, substantial financial resources, often in the millions, were required to initiate significant marketing campaigns aimed at surpassing competitors. Digital marketing provides a significant return on investment, both financially and temporally. Numerous marketing tools exist to alleviate some challenges associated with digital marketing. These tools are particularly beneficial for small businesses lacking the resources to maintain a dedicated marketing team or the budget to engage marketing agencies (Biemans & Malshe, 2024):

- **Google Analytics** is free software that provides valuable analytics about your site visitors, and what they are doing on the site. This tool is best used with Google Search Console - another free tool that helps you identify and solve your site problems(Toukola, Ståhle, & Mahlamäki, 2023).

- **Mailchimp,** an email marketing platform, is a widely used tool that facilitates the dissemination of visually appealing messages and the management of recipient lists. It provides analytical insights, establishing a direct connection between businesses and their customers. Rather than relying solely on advertisements, Mailchimp enables direct communication through personalized email messages. This tool is utilized to communicate directly with a specific customer, allowing for the assessment of their response to the message, including whether it has been read and if they have unsubscribed from the list (Mali et al., 2025).

- **Hoot suite** with the development and diversity of social networks, and the need for companies, government agencies, and public and private media networks to be present in these networks, many tools, programs and sites have emerged that serve those who manage more than one account on social networks and their constant need to access all accounts, add topics and news, as well as follow up on all social media accounts(Y. Wang, Rod, Deng, & Ji, 2020).

- **Click Point** It is one of the basic digital tools for marketing managers, as it helps them determine the priorities of potential customers and their distribution points, and show the results of marketing staff and their ability to achieve goals, which helps to evaluate their performance more transparently. The program also gives various information about sales, speeding up the process of closing deals and closing sales operations easily(Wei, Jiang, Gan, & Zou, 2025).

### 3.2.3.Advantages of Digital Marketing

- Digital marketing techniques allow developing relationships with customers.
- Attract new customers in addition to existing Clients to achieve the maximum benefit of selling on the virtual site and gain customer loyalty.
- Making it possible for everyone to sell their goods or services, without any distinctions between a big company with lots of money and a regular person or a small business with few resources.
- Low cost and ease of implementation(W. Ma & Yong, 2025).

### 2.11 Digital Marketing Challenges:

Entering the digital markets is very difficult, many organizations face intense competition because there are many challenges, including (Sanmathi & Jeganatha:2017,9):

- **Organizational Challenges:** Business development through digital marketing needs to bring about fundamental changes in the management infrastructure, organizational structure and administrative philosophy of business organizations. In fact, there is an urgent need to reorganize organizational structures and integrate activities, events, communications and marketing channels for digital marketing in line with developments(Leeflang, Verhoef, Dahlström, & Freundt, 2014).

- **Language and Culture Problems**: Dealing with customers or business organizations via the Internet requires a certain degree of technical culture to purchase services or goods through digital marketing in addition to the common language (some customers are not good at using a cell phone or do not know how to buy through digital marketing, in addition to the language used in the app).

- **Privacy and confidentiality:** Some customers refuse the idea of accepting digital marketing or anything via the Internet, especially the electronic exchange process, which needs to obtain customer data. Name, nationality, address, many customers are worried when entering data during the digital marketing process, which makes the process of not completing the process the shopping(Ru-Zhue et al., 2025).

- **Digital Security**: E-commerce or (electronic marketing, digital marketing, viral marketing, Internet marketing, interactive marketing, direct marketing) is subject to many violations practiced by hackers on the Internet, due to the lack of real parties to conclude contracts, the absence of geographical boundaries or place for the company (Virtual market only) There is no legal framework to protect registered trademarks, and no specific post-sale banking regulations(Gensler & Rangaswamy, 2025).

## 4. Results and Discussion

### 4.1 Testing study hypotheses:

This section outlines the variables to be examined in the current study, with AI applications identified as the independent variable and digital marketing as the dependent variable. The questionnaire will be analyzed to assess the correlations among the study variables and their mutual influences. Before analyzing the regression model to test the hypotheses, we will first present the primary hypothesis of the research.

**First main hypothesis:** There is a statistically significant effect Applications of AI in Digital Marketing for Internet companies' customers.

**The first sub-hypothesis:** There is a significant effect of Applications of AI dimensions (Chat bots) and Digital Marketing for Internet companies' customers.

$H^1$: There is a significant effect of AI dimensions (Chat bots) and Digital Marketing for Internet companies' customers.

**Table (3).** Shows Regression analysis of the impact of AI applications (chatbots) on digital marketing for Internet companies customers in Iraq

| Variable | B | Std. Error | β | T | P Value |
|---|---|---|---|---|---|
| **(Constant)** | -0.397 | 0.067 | | 5.898 | 0.000 |
| **Chat Bots** | 1.096 | 0.016 | 0.961 | 68.636 | 0.000 |
| **$R^2$** | 0.924 | | | | |
| **α ≤ * 0.05 at the significance level** | | | | | |

The statistical results presented in Table (3) and the analysis of the test values (t) indicate that the dimension of Chat Bots positively influences digital marketing for internet companies in Iraq. The calculated T values reached 68.636, which are significant at the alpha level of 0.05. The dimension of Chat Bots accounts for approximately 92.4% of the prediction. The proportion attributed to additional elements not encompassed in the model influences the changes in the digital marketing of online firms, hence validating the first sub-hypothesis.

**The Second sub-hypothesis:** there is a statistically significant impact of Dynamic pricing on the digital marketing for Internet companies' customers.
**$H^2$**: There is a significant effect of Applications of AI dimensions (Dynamic pricing) and Digital Marketing for Internet companies' customers.

**Table (4).** Regression analysis of the impact of AI applications (Dynamic pricing) on digital marketing for Internet companies customers in Iraq

| Variable | B | Std. Error | β | T | P Value |
|---|---|---|---|---|---|
| **(Constant)** | 0.211 | 0.065 | | 3.274 | 0.001 |
| **Dynamic pricing** | 0.956 | 0.015 | 0.954 | 62.332 | 0.000 |
| **$R^2$** | 0.909 | | | | |
| **α ≤ * 0.05 at the significance level** | | | | | |

The statistical results presented in Table (4) indicate that the calculated t-values demonstrate a positive effect of the dynamic pricing dimension on digital marketing for internet companies in Iraq. The calculated t-values reached 62.332, which are significant at the indicative level (a < 0.05). Furthermore, the dynamic pricing dimension accounts for approximately 90.9% of the predictions. The changes in the digital marketing landscape of internet companies are influenced by various factors not accounted for in the model, resulting in the acceptance of the second sub-hypothesis.

**The Third sub-hypothesis:** there is a statistically significant impact of Target Advertising on the digital marketing for Iraqi Internet Companies.
**$H^3$**: There is a significant effect of Applications of AI dimensions (Target Advertising) and Digital Marketing for Iraqi Internet Companies.

**Table (5).** Shows Regression analysis of the impact of AI applications (Target Advertising) on digital marketing for Internet companies customers in Iraq

| Variable | B | Std. Error | β | T | P Value |
|---|---|---|---|---|---|
| (Constant) | 3.053 | 0.290 | | 10.529 | 0.000 |
| Target Advertising | 0.268 | 0.069 | 0.193 | 3.863 | 0.000 |
| $R^2$ | 0.310 | | | | |
| α ≤ * 0.05 at the significance level | | | | | |

The statistical results presented in the table clearly indicate that the dimension of Target Advertising exerts a positive influence on digital marketing for internet companies in Iraq. The calculated t-values reached 3.863, which are significant at the indicative level (a < 0.05). Furthermore, the dimension of Target Advertising accounts for approximately 31% of the predictive capacity. The percentage attributed to the changes in the digital marketing of internet companies is influenced by additional factors not encompassed within the model, thereby supporting the acceptance of the Third sub-hypothesis.

**The Forth sub-hypothesis:** there is a statistically significant impact of Data Analysis on the digital marketing for Iraqi Internet Companies.
**H4**: There is a significant effect of Applications of AI dimensions (Data Analysis) and Digital Marketing for Iraqi Internet Companies.

**Table (6).** Shows Regression analysis of the impact of AI applications (Data analysis) on digital marketing for Internet companies customers in Iraq

| Variable | B | Std. Error | β | T | P Value |
|---|---|---|---|---|---|
| (Constant) | 3.053 | 0.290 | | 10.529 | 0.000 |
| Data Analysis | 0.268 | 0.069 | 0.193 | 3.863 | 0.000 |
| $R^2$ | 0.17 | | | | |
| α ≤ * 0.05 at the significance level | | | | | |

The statistical results in the table show that the dimension of Target Advertising has a positive effect on digital marketing for internet companies in Iraq. The calculated T values reached (3.863), which are significant values at the indicative level (a < 0.05). The dimension of Target Advertising predicts about 17%. The percentage is attributable to additional factors not included in the model, which means that the Third sub-hypothesis is true.

## 4.2 Discussion of Results:

This study article seeks to elucidate the influence of AI applications (chatbots, dynamic pricing, targeted advertising, and data analytics) on digital marketing within a sample of clients from Iraqi online enterprises. Online questionnaires were administered to clients of the organizations included in the study, and the data from 192 respondents was analyzed using SPSS version 28, sourced from six Iraqi internet providers. This software conducted a comprehensive analysis of the research variables and evaluated the study's hypotheses. This document outlines the findings, research conclusions, suggestions, and prospective research avenues. 4.1 Analysis of the Findings:

By doing a statistical analysis of the data that was gathered in order to evaluate the primary hypothesis as well as the secondary hypotheses that were developed from it: The first primary hypothesis is as follows: There is an impact that is statistically significant. The ways in which AI may be used to benefit the clients of Iraqi Internet businesses in the field of digital marketing.

The initial sub-hypothesis: Chat bots have an influence on the digital marketing for clients of Iraqi Internet firms that is statistically significant.

Researchers conducted an analysis of the data that was obtained in order to investigate the regression coefficient for the effect of AI applications (chatbots) in the digital marketing of customers of Iraqi internet companies. Their analysis revealed that there is a statistically significant effect, as the value of the significance level is less than 0.05 and the value of the regression coefficient is greater than zero. Furthermore, the value of the coefficient of determination, R Square, is 0.924, which indicates that 92.4 percent of the change in the level of digital marketing (chatbots) was observed.

The Second Sub-Hypothesis: The clients of Internet businesses are affected by the dimensions of AI applications (dynamic pricing) and digital marketing.

The researchers conducted an investigation to determine the extent to which the impact of AI applications, specifically dynamic pricing, in the digital marketing of customers of Iraqi internet companies could be observed. They analyzed the data that they had obtained and discovered that there was a statistically significant effect, since the value of the significance level was less than 0.05 and the value of the regression coefficient was greater than zero. In addition, the value of the coefficient of determination, R Square, was equal to 0.909, which means that 90.9 percent of the change in the level of digital marketing (dynamic pricing) was accounted.

The third sub-hypothesis posits that Target Advertising has a statistically significant impact on the digital marketing strategies employed by Iraqi Internet Companies. The researchers conducted an analysis of the regression coefficient to evaluate the influence of AI applications, specifically in Target Advertising, on the digital marketing strategies of Iraqi internet companies. The findings revealed a statistically significant effect, with a significance level below 0.05 and a positive regression coefficient. Additionally, the coefficient of determination, R Square, was calculated at 0.310, indicating that 31% of the variation in digital marketing effectiveness can be attributed to Target Advertising.

The fourth sub-hypothesis posits that data analysis has a statistically significant effect on digital marketing for Iraqi Internet companies.

The researchers evaluated the regression coefficient regarding the influence of AI applications (data analysis) on the digital marketing of customers from Iraqi internet companies. The analysis revealed a statistically significant effect, with a significance level below 0.05 and a regression coefficient exceeding zero. Furthermore, the R-squared coefficient of determination, at 0.17, accounts for 17% of the variation in digital marketing levels (data analysis).

## 5.Conclusion

In light of the improvement and challenges opposite the world currently, with the quick trend towards globalization in various fields, it has play imperative that organizations' goals not be limited to selling their products, achieving maximum sales, or promoting services. Instead, they must extend beyond this to other objectives in order to maintain and improve their relationships with their audiences, especially with their human capital. They work to make these relationships stable by strengthening relationships with them to gain their trust and build a good reputation. Based on this, we propose the following:

1. The study recommends that Iraqi internet companies in Mosul should rely on digital marketing because it provides good results for organizations in ensuring that many customers have access to products and services.
2. The need to move towards utilizing AI applications (chatbots, dynamic pricing, targeted advertising, data analysis) as a modern and effective marketing tool that helps to create innovative strategies that enable the largest number of customers to access products and services.
3. Improve the status of services and products and provide online help services such as chatbots and FAQs to provide an easy and smooth experience for customers and users.
4. Expended in AI and utilizing it optimally to achieve digital marketing goals and reach the target audience.
5. Investing in training and development for staff regarding the use of AI in digital marketing and its various methods, especially in social media(Li & Zhong, 2024).

**- Conflict of interest**

The aurh acknowledge that there are no conflicts of interest or disclosures relevant to this research, to ensure the quality of scientific publishing.

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