



Digital Marketing in the Age of AI: View global experience

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Abstract ;

The convergence of artificial intelligence and digital marketing is important in today's business world. the study features case studies involving prominent entities including Netflix, Alibaba, Starbucks, and JP Morgan Chase, offering tangible examples of how AI disruptively transforms content recommendations, fashion retail, consumer insights, and copywriting practices to amplify user encounters and yield tangible business results. In summation, the research emphasizes the profound influence of AI on the landscape of marketing, By harnessing the capabilities afforded by AI, businesses can establish more profound connections with their clientele, optimize operational strategies, and enhance the effectiveness of their marketing efforts.

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1. Introduction

In today's rapidly evolving landscape, the advent of Artificial Intelligence (AI) stands as a pivotal inflection point across diverse sectors, particularly in the domain of marketing. Artificial Intelligence encompasses a range of techniques and methodologies that enable systems to simulate and replicate human-like decision-making and interactions. By analyzing vast datasets and extracting intricate patterns,

Marketing has emerged as a realm notably impacted by the profound advantages of Artificial Intelligence.

Therefore, The study is expected to provide valuable insights into how companies are effectively utilizing AI in their digital marketing strategies. The case studies will offer practical examples of successful AI implementations, The research will also contribute to the body of knowledge surrounding AI's role in digital marketing practices

This study stems from the following problematic

What is the impact of artificial intelligence on digital marketing?

To answer the research problem, the following sub-questions have been raised:

- What is the importance of artificial intelligence in digital marketing?
- What are the primary transformations that businesses can achieve by adopting AI technologies in their digital marketing efforts? According to that case studies
- How to leverage global institutions' experiences into Local Markets?

1.1. Search objective :

The objective of this study is to explore the impact and applications of artificial intelligence (AI) in the field of digital marketing. The study aims to:

- To examine how various companies across different industries are leveraging Artificial Intelligence (AI) in their digital marketing strategies.
- To provide actionable insights and recommendations for other businesses aiming to integrate AI in their digital marketing campaigns based on the successes observed in the case study companies.

- To contribute to a broader understanding of the dynamic relationship between AI and digital marketing by showcasing real-world applications and outcomes through case studies. Among the studies that have addressed the topic of the impact of artificial intelligence on marketing, we mention the following:

1- study by (Mustak, Salminen, Plé, & Wirtz, 2021) titled “Artificial intelligence in marketing: Topic modeling, scientometric analysis” The aim of this paper is to examine the existing knowledge base on the use of artificial intelligence (AI) in marketing through the application of natural language processing, machine learning, and statistical algorithms. The authors identify ten salient research themes in AI marketing, including understanding consumer sentiments, analyzing customer satisfaction, and using AI for brand management .The study also utilizes scientometric analysis to reveal key concepts, keyword

co-occurrences, authorship networks, top research themes, landmark publications, and the evolution of the research field over time. Based on their findings, the authors propose a research agenda for further exploration in the field of AI marketing

2- The Study by (Vlačić, Corbo, e Silva, & Dabić, May 2021) titled “The evolving role of artificial intelligence in marketing: A review and research agenda”: The aim of the research was to analyze the development of marketing and AI fields and suggest a context-specific research plan for AI in marketing. The research involved analyzing 164 articles from Web of Science and Scopus indexed journals using Multiple Correspondence Analysis (MCA). The research identified various areas of study related to the implementation, use, and acceptance of AI technology in marketing, the significance of data protection and ethics, institutional support for marketing AI, and the transformation of the labor market and marketers' competencies. The study concluded that AI has the potential to imitate human behavior and perform intelligent activities in marketing. Additionally, it revealed a growing interest in AI among marketing researchers and practitioners. The study's research plan lays the groundwork for future research in the field of AI in marketing.

3- The Study by (Jones, 2018) titled “**Voice-Activated Change: Marketing in the Age of Artificial Intelligence and Virtual Assistants**” The study aimed to examine the applications of voice-controlled personal assistants in marketing and advertising in the USA, as well as the impact on advertising and marketing. The study revealed that brands need to focus on creating personalized experiences for their audience. Marketers should utilize the information gathered by virtual assistants to engage consumers and provide value. The rise of AI and connected homes may lead to devices making decisions for us, which marketers may need to adapt to. Concerns about privacy and data protection, as well as the potential for intrusive advertising, were also noted.

1.2. Methodology:

In This research will adopt a descriptive methodology by delving into theoretical concepts and presenting multiple companies from diverse industries that will be selected as case subjects.

2. Digital marketing Concepts

2.1. definitions of Digital marketing

Marketing is about identifying and meeting human and social needs. according to The American Marketing Association “Marketing is the activity, set of institutions, and processes for creating, communicating, delivering, and exchanging offerings that have value for customers, clients, partners, and society at large” (KOTLER & KELLER, 2012, p. 5).

Digital marketing refers to marketing efforts that use electronic devices or the internet. Businesses utilize digital channels like search engines, social media, email, and websites to connect with customers. This can also be called online marketing, internet marketing, or

web marketing. Digital marketing involves using various digital tactics and channels to reach customers online. There is a range of tactics falling under the umbrella of digital marketing, including digital advertising, email marketing, and online brochures. (Desai, 2019)

2.2. Digital marketing tactics

Digital marketing tactics refer to the strategies and techniques used by businesses to engage customers and promote their products or services online.. (Goldman, Herk, & Verhagen, 2021)

Digital marketers have the responsibility of driving brand awareness and lead generation through all the digital channels both free and paid at company's disposal. These channels encompass social media, the company's own website, search engine rankings, email, display advertising, and the company's blog. The digital marketer focuses on different key performance indicator (KPI) for each channel so they can properly measure the company's performance across each one. (Desai, 2019) Following are some of most common digital marketing tactics involved:

2.2.1. social media marketing: social media marketing is any form of direct or indirect marketing used to build awareness, recognition, recall, and taking action on a brand, business, product, person, or other thing that is packaged using tools on the social web, such as blogging, micro blogging, social networking, social bookmarking. (Chan & Purbasari, 2023)

2.2.2. search engine optimization: SEO involves an organic approach to optimizing a website for search engine friendliness. It comprises a series of techniques aimed at making the website and its content stand out, ensuring visibility to both search engines and online users. The primary goal of SEO is to enhance a website's presence on search engines, ideally securing a place on the first or second page of search engine results (SERPs). When a website ranks among the top ten search results, it not only boosts the quantity of high-quality traffic from search engines but also guarantees a substantial return on investment (ROI) and extends the global reach of the business. (Parikh & Deshmukh, 2013)

2.2.3. Content Marketing: In a broader sense, content marketing can be defined as a marketing strategy that encompasses the creation and dissemination of valuable content that is perceived as beneficial by the recipients. The primary purpose of this approach is to capture the interest of the audience and foster active participation within a community that revolves around a specific target demographic. (Świeczak, 2012)

3. Artificial Intelligence concept

3.1. Artificial Intelligence definition

The literature has offered various definitions of AI, each encapsulating the key concepts of non-human intelligence programmed to perform specific tasks. Russell and Norvig (2016) defined the term AI to describe systems that mimic cognitive functions generally associated with human attributes such as learning, speech and problem solving. (Yogesh K. , 2021)

Demis Hassabis, Co-Founder and CEO of Google DeepMind, defines AI as, “the science of making machines smart,” which in turn augments human knowledge and capabilities. (Drift & Institue, 2021) Although AI simulates human decision-making, it does not replace human intelligence; rather, it relies on human training! Unlike other types of technology, AI understands natural language. Natural language is written-out text, rather than structured data such as dates, numbers, and facts that computers normally handle. By understanding natural language and generating hypotheses based on evidence and learning as it goes, AI technology can be trained to make more logical decisions. (Patel & Kore, 2020) These technologies typically include machine learning, natural language processing and neural networks (among others), and allow machines to autonomously sense, comprehend, act, and learn via human– machine interaction (HMI).

3.2. Artificial Intelligence techniques in marketing

According to (Serena , Anthony., & Nort, 2008) The Artificial Intelligence techniques are case-based reasoning, rule-based systems, artificial neural networks, fuzzy models, genetic algorithms, cellular automata, multi-agent systems, swarm intelligence, reinforcement learning and hybrid systems.

AI techniques commonly used in marketing include chatbots and virtual assistants, predictive analytics, personalization engines, natural language processing (NLP), image and video recognition, marketing automation, content generation, voice search optimization, ad campaign optimization, social media insights, customer segmentation, marketing attribution, and A/B testing and optimization These techniques help marketers engage with customers in real-time, analyze data to make informed decisions, create personalized experiences, understand customer sentiments, categorize visual content, automate marketing campaigns, generate written content, optimize for voice search, optimize ad campaigns, analyze social media data, segment customers, understand marketing channel impact, and test and optimize marketing elements . (Sullivan, 2023)

4. Marketing digital tactic and AI

4.1. Search engine marketing and AI

The development of AI allows search engine managers to continuously improve their algorithms with the latest techniques. This poses a challenge for SEO designers to understand search engine algorithms. Search engines use various AI methods to obtain desired data. These methods include Support Vector Machine, Self-Organizing Map, and Forest Generation Algorithm. Search engines consider multiple factors to determine website ranking. Google, for instance, uses over 200 undisclosed factors. The weight and algorithms used for each factor remain unknown. Google also confirmed the use of RankBrain, an AI that helps build their search engine rank.

4.2. Social media marketing and AI

Social media marketing revolves around the intricate analysis of vast customer data, with artificial intelligence (AI) taking a central role in shaping the landscape of modern social

media. Prominent platforms such as Facebook, LinkedIn, and Instagram harness machine learning algorithms to recommend users to follow, offer job suggestions, recognize visual content, and monitor ongoing interactions. AI and machine learning govern content creation and the strategic placement of marketers' advertisements, influencing how content reaches users on diverse social media platforms. In essence, AI is the driving force behind the dynamics of contemporary social media and its marketing strategies, optimizing user experiences and engagement. (Yuniarthe, 2017)

4.3. Content marketing and AI

Artificial Intelligence (AI) plays a pivotal role in enhancing various aspects of content marketing. It can be integrated at different stages of the content marketing process, including preparation, application, and revision. AI offers solutions such as forecasting, optimization, expert support, adaptive guidance for users, and error detection and correction. Techniques like artificial neural networks, fuzzy logic, genetic algorithms, swarm intelligence, and machine learning are employed for these tasks. The primary objective is to make content marketing adaptive, flexible, interactive, and intelligent, catering to the specific needs and interests of customers and users. (Kose & Sert, 2016)

5. AI In Marketing: Case Studies

5.1. Netflix case study

Netflix is a global streaming platform that offers a wide variety of movies, series, and other content (Sudarsono, Leo, santoso, & Hendrawan, 2021), It distinguishes itself by offering exclusive Netflix content generated through cooperation with filmmakers worldwide. (Diamantopoulos, et al., June 2020)

Netflix's use of AI has transformed content delivery in the entertainment industry, with a focus on personalized recommendations. The platform collects and analyzes user data to understand individual viewing habits, employing machine learning to enhance content matching accuracy. Netflix's recommendation engine combines collaborative filtering and content-based approaches, adapting to changing user preferences. This AI-driven personalization has increased user engagement, retention, and revenue, contributing over \$1 billion annually to Netflix's valuation. It highlights AI's crucial role in Netflix's success within the competitive entertainment sector. (Liaquat, 2023)

5.2. Ali baba's case study

Alibaba, a global e-commerce giant, is making waves in AI-driven retail with its groundbreaking AI-infused fashion store in Hong Kong. This innovative venture signifies a significant leap in reshaping the fashion retail landscape through AI integration. Notably, the store features intelligent garment tags equipped with cutting-edge technologies like RFID, gyro-sensors, and low-energy Bluetooth chips. These tags empower clothing items to store and transmit vital information such as color and size while being responsive to user interactions like touch, repositioning, or lifting.

Furthermore, the store deploys intelligent mirrors throughout its sales floors and fitting rooms. These interactive mirrors serve multiple functions, assisting customers in discovering complementary items, keeping track of their selections, and digitally consolidating them within a virtual shopping basket. This fusion of physical retail spaces with AI-driven enhancements underscores Alibaba's unwavering commitment to redefine the consumer shopping experience. (Bajikar, 2021)

Alibaba's broader marketing strategy extends its AI applications to create a personalized and unique customer journey, seamlessly merging innovation with traditional retail practices. This approach positions Alibaba as a pioneer in leveraging AI's potential to provide unmatched shopping experiences to its clientele.

5.3. Starbucks' case study

Starbucks is a global coffee and snack brand that has become a famous international brand with more than 32,000 stores and 400,000 partners in 82 markets around the world. (Nair, Sinha, Crasto, Kian, Hung Kee, & Abdullah, 2021) The company's success can be attributed to its disciplined innovation, excellent employee training management, and service attitude, which have improved store sales and customer satisfaction. (Apriko & Trisiah, 2023)

Starbucks is at the forefront of leveraging artificial intelligence (AI) for marketing. Using predictive analytics and data from loyalty cards and mobile apps, the company gathers and analyzes customer insights, enhancing the user experience. Starbucks also conducts cutting-edge research to improve the user interface and records purchase details. Their "AI for Humanity" framework aims to reconnect with customers in an age of technology-driven detachment. While the integration of AI may go unnoticed, its impact is transformative, optimizing operations and fostering deeper engagement. Starbucks' AI-driven approach represents innovation, adaptability, and a commitment to authentic human connections in a constantly evolving business landscape. (Bajikar, 2021)

5.4. JP Morgan Chase's case study

JPMorgan Chase (JPM), an establishment with origins dating back to 1799, is a global investment bank that has its main offices situated in the city of New York in the United States. It is widely acknowledged as being one of the most ancient and largest financial service companies across the globe, entrusted by renowned corporate, institutional, and governmental clientele in excess of 100 nations worldwide. Furthermore, JPMorgan Chase boasts an impressive workforce of over 240,000 individuals. (Le, Mai, & Rangaraju, 2023)

JP Morgan Chase has harnessed the power of artificial intelligence (AI) in copywriting, partnering with Persado, an AI-driven software startup. Their collaboration resulted in a remarkable 450% increase in click-through rates for advertisements. Kristin Lemkau, Chief Marketing Officer, praised Persado's AI technology for its ability to revamp copy and headlines, surpassing traditional human-generated content. This successful integration showcases AI's potential to transform marketing, elevating JP Morgan Chase's marketing efficacy and reinforcing their commitment to AI-powered copywriting. The partnership

highlights how AI is reshaping the banking sector's marketing landscape through innovative content creation. (Kaur, 2023)

Table 1. AI Tools in Marketing According to Case Studies

Case Study	AI Tool	Explanation
Netflix Case Study	Machine Learning Algorithms	Netflix employs machine learning algorithms to analyze user data and decode patterns of content preferences and interactions
	Collaborative Filtering	Collaborative filtering is used to mine user behavior data and identify content preferences among similar users.
	Content-Based Filtering	Content-based filtering considers intrinsic attributes like genre and cast to offer personalized content suggestions
Alibaba Case Study	Radio-Frequency Identification (RFID):	Intelligent garment tags incorporate RFID technology to store and convey essential information.
	Gyro-Sensors	Gyro-sensors enable garments to discern patterns of interaction, responding to touch, repositioning, or lifting.
	Low-Energy Bluetooth Chips	Low-energy Bluetooth chips provide connectivity and enable interaction with customer devices.
Starbucks Case Study	Interactive Mirrors	AI-driven interactive mirrors aid customers in identifying complementary items and virtually aggregating selections
	Predictive Analytics	Starbucks employs predictive analytics to gather insights from loyalty cards and mobile apps
	Data Collection "AI for Humanity" Framework:	Advanced data collection methodologies amass invaluable customer insights for refining the user experience. Starbucks uses AI to forge meaningful connections between the brand and its customers.
JP Morgan Chase Case Study	Persado Collaboration	JP Morgan Chase collaborates with Persado to utilize AI-driven solutions for copywriting.
	AI-Generated Content:	AI technology generates persuasive and engaging content, including headlines
	Enhanced Click-Through Rates	The partnership with Persado results in a substantial increase in click-through rates for advertisements.

Source: made by researchers based on the previous information

In summary, the AI tools utilized in these case studies encompass a range of technologies such as machine learning algorithms, collaborative filtering, content-based filtering, RFID, gyro-sensors, low-energy Bluetooth chips, interactive mirrors, predictive analytics, and AI-driven content generation. These tools are employed strategically to enhance user

experiences, personalize recommendations, optimize content delivery, and improve marketing efficacy across diverse industries.

6. Conclusion

The integration of artificial intelligence (AI) in digital marketing is transforming global institutions. Case studies of leading organizations like Netflix, Alibaba, Starbucks, and JP Morgan Chase show the impact of AI on marketing. These studies demonstrate AI's potential to revolutionize marketing by enhancing user engagement, redefining customer interactions, gathering customer insights, and boosting customer satisfaction and business growth. AI empowers businesses to understand and meet customer needs, optimize marketing efforts, automate tasks, and improve decision-making. When adapted to local markets, AI can create personalized and culturally relevant marketing campaigns. Embracing AI-driven strategies and learning from global institutions is essential for staying competitive and relevant in the age of AI-powered marketing. The fusion of AI and digital marketing is not just a trend but a necessity for thriving in the ever-changing digital landscape.

According to the previous information, the following results have been obtained, addressing the sub-questions:

Artificial intelligence (AI) plays a crucial role in marketing by enabling businesses to meet customer needs more effectively and efficiently. Its importance lies in its ability to:

- Analyze vast amounts of data to gain deep insights into customer behavior, preferences, and trends, allowing businesses to tailor their marketing strategies accordingly.
- Personalize marketing by delivering customized content, recommendations, and offers to individual customers, increasing engagement and conversion rates.
- Assist marketers in making data-driven decisions, optimizing marketing campaigns, and allocating resources more effectively.
- Automate routine marketing tasks, such as email marketing, social media posting, and ad targeting, saving time and resources while ensuring consistent and timely interactions with customers.
- help marketers produce high-quality and relevant content at scale, reducing the time and effort required for content marketing.
- Chatbots and virtual assistants powered by AI can provide instant customer support, improving the overall customer experience.

The case studies provided demonstrate the transformative potential of AI in marketing:

- **Netflix:** AI-driven content recommendations have significantly boosted user engagement and retention, showcasing how AI can enhance customer satisfaction and revenue.
- **Alibaba:** AI integration in retail, such as intelligent garment tags and interactive mirrors, elevates the customer shopping experience and highlights AI's potential for creating unique interactions.

- **Starbucks:** Starbucks utilizes AI to gather and analyze customer insights, enhancing user experiences and strengthening customer connections.

- **JP Morgan Chase:** AI-powered copywriting has led to a substantial increase in click-through rates, illustrating AI's capacity to improve marketing efficacy.

To leverage these global institution experiences into local markets, businesses should:

- **Adapt to Local Culture:** Understand local customs, preferences, and behaviors to tailor AI-powered marketing strategies effectively.

- **Localized Content:** Utilize AI to generate content that resonates with local audiences, ensuring relevance and engagement.

- **Data Localization:** Comply with local data privacy regulations and ensure data security when implementing AI-driven marketing strategies.

- **Testing and Optimization:** Continuously test and optimize AI-driven campaigns to align with local market dynamics and customer preferences.

- **Local Partnerships:** Collaborate with local experts or agencies familiar with the market to maximize the impact of AI-powered marketing efforts.

In conclusion, AI is a powerful tool that can revolutionize marketing by enhancing customer insights, personalization, efficiency, and decision-making. By adapting AI strategies to local markets while considering cultural and regulatory factors, businesses can harness its potential for successful marketing campaigns

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