

Utilizing AI in the Professional Practice of Marketing: A Secondary Analysis

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المستخلص

يستخدم مصطلح الذكاء الاصطناعي (AI) في مختلف التوجهات الاجتماعية والتكنولوجية، وقد تم تعريفه بعدة طرق. أما في الآونة الأخيرة - على عكس بدايته في خمسينيات القرن الماضي - يتم استخدامه يوميًا من خلال عمليات البحث على محرك جوجل ومحتوى الوسائط الاجتماعية وكيفية تنفيذ مهام الاتصال والتسويق في الشركات حول العالم. وفيما يتعلق بالعلاقات العامة والتسويق، أصبح الذكاء الاصطناعي في وضع يسمح له بتغيير العمليات التكتيكية والاستراتيجية في الممارسة الاحترافية لهما بشكل جذري، وبالتالي يمكن الاعتماد من خلاله بشكل كامل على إدارة العلاقة بالعلامات التجارية والمسؤولية الاجتماعية.

وقد أشارت نتائج الأبحاث الإمبريقية المتعددة التي تتناول هذه الظاهرة في جميع أنحاء العالم، إلى أن محترفي التسويق الذين يتبنون تقنيات الذكاء الاصطناعي سيحظون بالعديد من المميزات التنافسية، حيث يبدو أن مستقبل

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مهنة الاتصال في العلاقات العامة والتسويق سيكون مزيجًا من تقنيات الذكاء الاصطناعي والحس البشري.

تستهدف الدراسة الحالية استكشاف المميزات التي سوف يحققها ممارسو التسويق عند استخدام تقنيات الذكاء الاصطناعي وخاصة ANI (الذكاء الاصطناعي الضيق). وتتصدي الدراسة الحالية للإجابة عن سؤالين رئيسيين، حول استخدام الذكاء الاصطناعي بشكل احترافي في التسويق من قبل الممارسين، والتناول البحثي لاستخدام الذكاء الاصطناعي في مجال التسويق والعلاقات العامة والاتصال التسويقي.

وقد قامت الدراسة من خلال منهج التحليل الثانوي بمراجعة أكثر من خمسين بحثًا علميًا يتناول الذكاء الاصطناعي وعلاقته بالتسويق والمصطلحات المرتبطة خلال الفترة من 2018-2023. وخرجت الدراسة بعدة نتائج أهمها: أن المسوقين يفتقرون الي التأهيل العلمي المناسب والمنظور المهني الصائب لاستخدام الذكاء الاصطناعي. ولاستغلال الذكاء الاصطناعي بشكل أمثل، اقترحت الدراسة بعض الموضوعات الهامة لتأهيل المسوقين لبيئة متغيرة باستمرار، بما في ذلك المفاهيم الأساسية والأخلاقية، وأبحاث التسويق المعتمدة على الذكاء الاصطناعي، وذكاء المحتوى، وتحليل البيانات، وتحليل المشاعر، ومعالجة اللغة الطبيعية من بين موضوعات أخرى. الكلمات المفتاحية: الذكاء الاصطناعي، التسويق، الذكاء الاصطناعي الضيق، معالجة اللغة الطبيعية

Abstract

The term artificial intelligence (AI) is used for various socio-technological approaches and has been defined in many ways. Nowadays – unlike its inception in the 1950s – it is used every day by everyone to some extent, through Google searches, social media content, and how communication and marketing tasks are performed in companies around the world. Regarding public relations and marketing, AI is positioned to fundamentally change both tactical and strategic processes, thereby thoroughly empathizing relationship management and social responsibility.

Findings of vast empirical research tackling the issue worldwide, suggested that marketing communication practitioners who adopt AI technologies would certainly gain a competitive advantage. It appears that the future of the communication profession in PR and marketing would be a blend of both AI technologies and human insight.

The current study tends to explore the advantages marketing practitioners would possess when utilizing AI technologies especially ANI (Artificial narrow intelligence).

The current research is set to answer two major questions: RQ1 How is AI professionally utilized in marketing? RQ2 How did academic research tackle utilizing AI in communication, PR, marketing and marketing communication?

First, a secondary analysis of more than 50 empirical studies tackling AI, marketing and related disciplines published in referred journals and referred books was carried out. The time interval of the study sample has fallen between 2018–2023 due to the recency of the topic. Findings revealed that western research schools haven't prevailed in this topic, rather Asian AI research schools from India, Malaysia, Indonesia, and Vietnam prevailed together with the Turkish literature. Pertaining to utilizing AI in marketing, the study found out that practitioners mostly lack professional perspective of AI. The study suggests a number of AI topics to be introduced to qualify practitioners for the ever-changing milieu of AI based communication, including core and ethical concepts, marketing AI research, content intelligence, data analytics, sentiment analysis and NLP among others.

Keywords: AI, Marketing, ANI, NLP

Introduction*

The fourth phase of the industrial revolution marked a shift towards automation, full digitalization, and the integration of information and electronic technologies into personal environments. While the transformation of the internet into a digital industry is ongoing, artificial intelligence (AI), big data, and connectivity signify a new wave of digital revolution in Industry 4.0 (Munandar & Irwansyah, 2019).

AI permeates daily life through Google searches tailored to user history, website chatbots, and automated phone systems. It influences social media content, healthcare decisions, and corporate communication and marketing tasks globally. AI algorithms drive Amazon's product recommendations, Google's search results, and Facebook's timeline, reshaping operations and decisions across various domains including policy-making and predictive policing (Buhmann & White, 2022). Moreover, AI has revolutionized fields such as digital marketing,

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where applications like personal assistants (e.g., Alexa, Siri, Cortana), music streaming (e.g., Pandora), and financial planning tools (e.g., Olivia) are widely adopted. In business applications, AI powers digital marketing platforms (e.g., Sentient), process automation (e.g., Amazon MTurk), and facial recognition technology (e.g., Haystack), transforming industries including media. Despite the continued importance of human factors like marketing intuition and consumer psychology, AI offers new methods for data acquisition, analysis, and personalized content delivery (Chen et al., 2022).

In the realm of marketing and communication, the past decade has seen significant digital innovations. AI enables machines to perform tasks traditionally requiring human intelligence, impacting areas like public relations within marketing communication, which is on the cusp of an AI-driven revolution (Panda et al., 2019).

The media and communication industry, encompassing journalism, advertising, PR, social media, and visual arts like film and photography, continues to evolve with AI-driven breakthroughs (Biswal, 2022). Luttrell et al. (2022) discuss the rapid pace of change in marketing,

emphasizing the importance for marketers to grasp AI's current and potential uses to inform strategic decision-making (McCollough et al., 2022). AI's capacity for automated content creation and advanced solutions using natural language processing (NLP) represents a significant advantage in modern marketing, aiding in customer understanding and relationship-building through enhanced user engagement, conversions, and retention (Ahmed & Ganapathy, 2021).

The current research would first elaborate on the professional utilization of AI in the most prominent marketing fields dwelt upon in literature i.e. public relations and advertising. Moreover, a secondary analysis would track research tackling utilizing AI in communication, PR and marketing. Discussion would follow.

Methodology of the study

Statement of the current problem:

According to previous studies such as Chen et al. (2022), there is a noticeable gap in the understanding of AI among marketing practitioners and consumers, characterized by intuitive but fragmented knowledge.

These stakeholders grasp key AI concepts such as computers, human-like machines, algorithms, software, and machine learning through varied and indirect sources. Moreover, practitioners typically associate AI with the functionalities of Weak AI or Artificial Narrow Intelligence (ANI), which are perceived as capable of handling simpler tasks. Human-AI decision-making studies consistently reveal a tendency among participants to view humans as superior in complex or creative tasks, influencing the messaging strategies in AI-based marketing. Consequently, AI has become an inevitable phenomenon in the marketing realm. This study aims to explore the benefits that marketing practitioners can derive from AI technologies, particularly ANI, and proposes several AI-related topics to equip practitioners for the dynamic landscape of AI-based communication.

Research Objectives:

The current research aims at achieving two major objectives:

1. Elaborate on the professional applications of AI in prominent marketing fields as discussed in literature, specifically public relations and advertising.
2. Examine existing research on the use of AI in communication, public relations, marketing, and marketing communication.

Research Questions:

The current research is set to answer two main questions:

1. How is AI currently utilized in professional marketing practices?
2. What insights have academic research provided regarding the use of AI in communication, public relations, marketing, and marketing communication?

Research Method:

This study utilizes a secondary analysis framework to synthesize empirical research on AI's involvement in marketing. Secondary analysis in marketing research

involves aggregating findings from multiple studies to integrate and reconcile disparate outcomes, thereby facilitating a comprehensive analysis of effect sizes across different studies (Laroche & Soulez, 2012). By synthesizing diverse research papers, the researcher aims to identify common themes and aspects within the nascent domain of AI and marketing.

Sampling Procedures:

The research employs a purposive sampling strategy due to the challenge of compiling comprehensive literature on AI and marketing. Utilizing online repositories and libraries, the researcher identified 52 empirical studies published in reputable journals and books meeting predefined criteria. The selected studies span the years 2018 to 2023 to ensure relevance and currency on this evolving topic. Notably, the literature predominantly originates from Asian research institutions in countries like India, Malaysia, Indonesia, Vietnam, and Turkey, rather than Western research schools. Key databases consulted include EKB, ProQuest, Science Direct, NGU Libraries, AUC Libraries, Sage Publications, and Google Scholar.

Findings

In the upcoming lines the researcher will discuss the various aspects tackled in the paper that tend to answer the research questions. Finally, discussion will follow to prove the researcher's viewpoint.

AI Role in the Professional Practice of Marketing:

Arief and Gustomo (2020) adopted the following AI definitions: "AI is defined as an advance and a high degree of complexity application of technology by which a machine demonstrates human cognitive function, such as learning analysis and problem solving". Another definition of AI is "a software or computer program equipped with the mechanism for learning. With that knowledge, it is used to make decisions in new situations, as is done by humans".

AI has the ability as a machine to use algorithms to learn from data and use what it has learned to make decisions as humans do. Machine learning algorithms which are equipped with valid data, PR and other marketing components can amplify several forms of content and promotions through social media, also

allowing the involvement between brands and audiences on social media to be improved. Moreover, AI can provide input to the sentiment of media coverage and then send a notification when negative news appears so that professionals can respond rapidly.

Marketers are leveraging AI for content customization. They additionally allocate the greater part of their marketing budgets to analytical analysis, personalized decision making, and content segmentation. AI-powered learning management has been generally adopted, as it helps the experts' instinct and thinking by working with the control and display of information to help reveal patterns probably not going to be recognized by the expert. In addition to comprehending the meaning, sentiments, and expressions in content, AI exceeded expectations by the remarkable quality, time, and money-saving advantages of embedded AI when managing enormous content (*Ahmed and Ganapathy, 2021*).

Suciati et al. (2021) focused in their seminal work, that one of the marketers' skills is the routine task of

creating press releases. This activity has a very close significant achievement with media relations and media monitoring. As a matter of fact, press releases are branding and credibility tools, not SEO tools. The content creation process of press releases is one of the skills that is predicted to be helped by the automation of AI. PR Bot is a "Press Release Robot". This application will make it easier to prepare press releases and distribute them to the press for publication in the mass media, as a representation of PR 4.0, in an era in which artificial intelligence (AI) and big data prevail, when robots are able to write articles in the media and help write, find materials, and other activities.

Various tools can be used by PR and marketing which serve to simplify their tasks, including managing corporate campaigns, artificial identifying buzzers, influencers, and managing data of interested parties. In addition, managing platforms for digital content, audio and video as well as managing data analytics can be done using AI technology (*Suciati et al., 2021*).

According to *Panda et al. (2019)*, AI can facilitate agencies' tasks and their clients with content creation. AI can scan various data sources and produce high quality and engaging white papers, case studies, data sheets and posts, through utilizing AI-powered systems like Wordsmith, a natural language processing platform. Wordsmith can create content on financial results for sensitive reporting. These AI-powered programs can identify the style of the publisher and write stories using relevant financial information quickly and reliably.

Munadar and Irwansysh, (2020) depicted on *social media analysis* that can be done by artificial intelligence and includes the activities of collecting, monitoring, analyzing, summarizing, and visualizing data obtained from social media that aims to facilitate online conversations and interactions and explore patterns that are useful for decision making in organizations. Artificial intelligence is predicted to be able to do real-time analysis of shifting sentiments on social media, so that it can identify the causes or contributors of certain problems and crises faced by organizations.

Another crucial field as discussed by (*Biswal, 2022*) is the creation of new campaigns. Automation and machine learning assist the professionals to understand which elements will pay the success to campaigns. Since a machine does faster than human beings, it is easy to take fast and accurate decisions, which are beneficial for the client concerned. It helps to understand and foresee the trend, which is ultimately required for decision-making process. It assists in sorting out the time, content, medium, and audience of the campaign. It can lessen the time wastes on content creations for specified audience.

(*Biswal, 2022*) also asserted that routinized and mundane communication tasks are being easily accomplished with AI assistance. Robotic Process Automation (RPA) is making several administrative tasks possible as scheduling calendars, structuring meeting notes, crunching numbers, organizing files and other similar tasks. Empowered with the technology, they can create, organize, and prioritize tasks in their firms to meet their clients' requirements.

Sentiment Analysis is not only used on social media but in *crisis management* as well, as it is known as opinion mining or emotion. AI indicates the use of natural language processing, text analysis, computational linguistics, and subjective information. This analysis is being applied to the voice of the customer materials. With the interventions from the machine, sentiment analysis uses the natural language processing to separate vocabulary use, tone, and language settings. Moreover, it assists the agencies to handle the clients' adverse situations. With AI involved into the picture, the technology proves beneficial in creating smarter chatbots which are being used to interact with consumers. To mobilize social interaction and effective communication, chatbots are acting as instrumental to follow the relevant hashtags or respond to messages related to crisis or even create ready-made messages for their audience (*Biswal, 2022*).

In a 2019 study on multiple practitioners, *Panda et al.* revealed their research results related to experts who believe that AI can assist the PR and marketing industry in the much-needed digital transition for

development, in sustaining themselves in the digital age. Content strategy is one input that AI can provide to make content creation easier, through drawing a clear picture of demands and possible trending demands. Various social media platforms are using AI to customize and personalize newsfeeds and posts. Major e-retailers are using AI to send offers to the users based on their browsing behaviours. AI can lead to current and relevant insights regarding drawing conclusions out of data coming from a variety of sources like social media, website traffic and other digital touch points. Communicators can make use of these insights generated from the data to make informed and active decisions. AI systems can keep messaging to the point, with ideas based on analysis of Big Data and other relevant trends. AI can help identify and tailor content for influencers. Using influencers is common but identifying them and adapting material for building engagement and loyalty is a huge challenge. AI can assist in determining and engaging these influencers and relevant stakeholders.

Not only influencers, but AI can create accurate buyer personas used to create engaging content for

these buyers. AI helps to know the choices, buying patterns, habits, influences, pain points and point of failures. With AI-based personas, companies can create and deliver targeted messages. AI systems can decipher the digital DNA and core characteristics of the target group, thus creating offers and messages to suit the individual client in real time (*Panda et. al, 2019*).

In conclusion, AI transforms marketing practices by enhancing content personalization, optimizing campaign strategies, and facilitating proactive crisis management through advanced analytics and automation. As AI continues to evolve, its integration into marketing operations promises to further refine customer engagement and drive organizational growth in the digital era.

AI techniques utilized in Marketing and Digital Marketing

In this regard, it is crucial to understand *Chen et al. (2022)* classification of AI into two types to be able to comprehend marketers' stance in the near future: namely,

Strong AI and Weak AI. Strong AI or artificial general intelligence is a more advanced and complex machine with consciousness, sentience, and mind, which exhibits intelligence in more than one specific area and can perform a variety of tasks. By contrast, Weak AI or artificial narrow intelligence (ANI) refers to a relatively simplified machine, which concentrates on one specific field by performing narrow tasks such as self-driving car. Based on the definition of ANI, most marketing-related applications are at the ANI stage.

AI encompasses several technologies crucial to marketing, including machine learning, deep learning, natural language processing (NLP), and robotics. Machine learning enables computers to learn from data independently, identifying patterns and making decisions based on analysed information. Deep learning extends machine learning capabilities by utilizing complex algorithms to process vast amounts of data and generate insights swiftly. NLP enhances speech recognition and text analysis, deciphering context and semantics to derive meaning from textual data. Robotics contributes to automated processes in marketing operations.

Haleem et. al., (2022) asserted that AI is primarily concerned with user retention and lead conversion in digital marketing. It can guide a user in the direction that aligns with the business's goals by using intuitive AI chatbots, intelligent email marketing, interactive web design, and other digital marketing services. Several factors determine the impact of AI on digital marketing. Machine learning is concerned with computer programmes that access data and use it to learn independently. It compiles data from various places, including social media accounts, menus, online reviews, and websites. AI then uses the information to produce and deliver content relevant to the audience. By implementing AI into marketing strategy, businesses can use the available data better and reach out to potential customers with attractive commercials at more convenient times. Digital marketing gives a visibly pleasant experience for clients with AI for advertising across social media and digital platforms such as Facebook and Instagram. These platforms thoroughly assess users' information before directing them to offers appropriate to their wants. It prevents the company from overspending on digital advertising and ensures that the money is well spent. AI has simplified building client

profiles and comprehending the customer journey process. It allows brands to provide valuable personalised content quickly and easily for the various client profiles in any marketing funnel stage and throughout each avenue.

The most used AI applications in digital marketing according to *Barton (2021)* are: ad targeting, web and app personalization, voice search such as Amazon Alexa, chatbots and marketing automation. Salesforce.com, a customer relationship management platform, offers customers the possibility to create their own customized AI-powered apps. The most used and beneficial outcomes of the AI-powered apps involve recommendations, forecasting and predictive scoring. Another company that has applied AI successfully is Adobe, who has its own marketing cloud that allows world's leading brands to co-operate in identifying and improving customer experiences.

Marketers can use AI to gain deeper consumer insights and better understand how to categorise and drive customers to the next step in their journey, providing the best possible experience, which can increase ROI.

Ai's contribution to Marketing Campaigns

AI plays a pivotal role in shaping successful marketing campaigns, offering companies a competitive edge through its advanced capabilities in replicating human cognitive functions like learning and problem-solving. By analysing user data, AI helps marketers interpret consumer intent and navigate the complexities of content marketing dynamics. Marketers leverage AI to generate content for straightforward narratives such as stock updates and sports reports, streamlining content creation processes.

In recent years, AI has permeated marketing, democratizing tools previously accessible only to large corporations and making them affordable for SMEs. Neural networks and deep learning algorithms enable dynamic tools that process extensive datasets, providing profound insights into consumer behaviour and enabling sophisticated segmentation and personalized marketing strategies. Predictive analytics, a subset of AI, assists marketers in forecasting campaign outcomes by identifying patterns from historical data, enhancing decision-making accuracy.

AI technology has been adopted to serve various functions in the context of marketing as explained by *Chen et al., 2022*:

- First, personalization: AI-driven decision-making based on comprehensive customer data allows for personalized marketing mixes, including product recommendations, pricing strategies, website content, and targeted advertising messages tailored to individual customer behaviors.
- Second, prediction and adaptation: AI's predictive capabilities enable real-time adjustments in marketing strategies, responding dynamically to both consumer behaviors and external market conditions.
- Third, interaction/engagement: Cognitive technologies like natural language processing (NLP) and computer vision enhance customer interaction through platforms such as chatbots and virtual assistants (e.g., Google Assistant, Siri, Alexa), offering 24/7 support for customer service, product information, and sales support.

Muli Uses of AI in PR

Literature review proved in this paper that PR is the most researched marketing component related to AI. Panda et al., 2019, explained that organizations are focussing heavily on delivering smart solutions to their stakeholders to achieve organizational goals. With the adoption and application of AI tools and technologies, organizations can measure the value of PR efforts and ensure alignment with their business' overall mission and goals. In the context of PR, AI has the potential to automate and perform various tasks. These tasks include writing data-driven stories, organizing and updating media lists, aiding in crisis management, converting, and transcribing audio into text, following and predicting media trends and monitoring and managing social media. Their research also contributed to the discussion of AI from the practitioner's perspective; they discovered that practitioners, in general, feel well-acquainted with the AI technology and that AI will have a transformative effect on the public relations industry, particularly in the areas of content creation, managing public relations crises, and public relations measurement.

Swiatek et al. (2022) focused on other PR functions: systems for natural language generation can produce news releases, convert written texts to speech and audio files to text, and generate promotional materials in multiple languages. AI is also used for communication management tasks that include monitoring and providing sentiment analysis from media clippings and social media, searching for brand mentions across large bodies of text, images, and videos, and monitoring competition. Commercially available AI-based products such as Hootsuite are widely used for social media analytics. AI can be used to customize story angles for public relations practitioners, based on their past coverage. It can provide predictive data to help determine when to release stories, or to predict potential issues that might affect a brand or company.

Chartered Institute of Public Relations (CIPR) formed #AlinPR panel to help understand the impact of technology and specifically artificial intelligence on public relations skills and professions. Until 2020, #AlinPR has tagged more than 130 tools. In each case, they have added a description, and labeled each tool based on AI's functionality and sophistication using a five-point scale:

(1) Simplification – technology that simplifies a public relations process, or provides a tactical service; (2) Listening and monitoring – media and social media listening and monitoring tools; (3) Automation – automation of tactical tasks; (4) AI for structured data – machine intelligence applied to structured data; and (5) AI for unstructured data – machine intelligence applied to unstructured data. The transformation of Public Relations practices in the industry 4.0 is full of technology penetration (*Suciati et al., 2021*).

Alawad (2021) asserted that big data, machine learning and the right solutions are the three most influential tools in the field of PR utilization of AI. Big Data: refers to the capacity of a practitioner to compile and classify broad datasets with minimal manual work. PR will then use this data to ensure that the correct message is sent to the correct person who asked about the query. Machine learning: When marketers try to make sense of this massive data collection, Machine learning systems will give an easy way to feed data. They can help recognize patterns or common events and forecast common observations, responses, and reactions effectively so, marketers can understand root cause and probability of

repeating those responding behaviour. Making up right solution: Strategies for artificial intelligence actually act in the same way a person makes decisions. This means that, extremely quickly, the platforms can recognize informative concepts and trends through large data sets. AI solutions also view emotion and communication like a human being, thereby allowing such networks to understand open form content such as social media, natural language and email responses, and put bigger value of both creative and strategic business practices in creating new competitive advantage. Because of the current level of AI improvement (the Artificial Narrow Intelligence level), a new model of cooperation with AI entities offering data engineering or ML techniques needs to be developed.

(Buhmann and White, 2022) discussed the use of AI in public relations and how difficult it is to assess because public relations as a communication function of organizations is as varied as organizations themselves. More specifically, it is difficult to make broad determinations about the use of AI for public relations for two reasons. First, AI varies across industry sectors and types of organizations. Since AI relies on massive

amounts of data, most SMEs simply do not have the capacity to set up their own AI-based systems and may have little need for sophisticated AI solutions in many domains. *Zerfass et al.* (2020) found significant differences in predictions among communication professionals about the impact of AI across types of industries. The second reason, it is difficult to give one overall assessment of the use of AI for public relations is that individual practitioners differ greatly in their understanding and use of AI and limited competencies about it.

Zerfass's research team concluded that communication managers need to *educate* themselves about AI and to identify the implementation of AI-based systems as a strategic and leadership issue, as well as serving the interests of the organization for which communication professionals work, there also is an *ethical* obligation to serve the public interest. Public relations communication is based on advocacy and persuasion, both of which can be used ethically. However, social media platforms move beyond simply presenting persuasive information; they use AI to put persuasive messages in front of individuals who are the most susceptible to them and who may not be

able to rationally evaluate them, resulting in emotional manipulation (Buhmann and White, 2022).

In conclusion, AI continues to revolutionize both marketing campaigns and PR practices, offering unprecedented capabilities in personalization, predictive analytics, and automated management of communication strategies. As AI technologies evolve, they are expected to further refine consumer engagement strategies and optimize organizational efficiencies across diverse sectors of marketing and PR.

Utilizing AI in Advertising

Turksoy (2022) highlighted that in 2017, AI was named the Marketing Word of the Year by the Association of National Advertisers. In the past ten years, advertising campaigns were enriched by artificial intelligence-driven platforms which make advertising design more efficient for advertisers. Artificial Intelligence is a game-changer for the advertising industry. Advertising that uses intelligent algorithms is defined as “consumer-centered, data-driven, and algorithm-mediated brand communication” that knows consumers’ interests, preferences, needs, wants, and tastes. It is suggested that with the help of Artificial

Intelligence practices, advertisers began to target the right customers at the right time.

Literature on AI within advertising shows that contemporary digital technologies have enormously transformed how companies reach and interact with consumers. Four key themes have been identified that highlight how AI applications may transform the advertising profession. These are: (1) discovering consumer insight, (2) evaluating the impact of ads, (3) media planning and buying, and finally (4) advertising creation. It is acknowledged that the algorithms knew the demographics, psychographics, motivations, and past purchase behaviours of customers, and even their vulnerabilities that may help them to practice the art of persuasion. AI may help consumers and advertisers alike, as AI can recognize both the product and potential social-media influencers; speech recognition would allow AI to analyse the meaning of spoken words, and provide meaningful voiceovers for advertisements, and natural language processing would allow AI algorithms to evaluate the nuances of human language. Ad agencies started focusing on Artificial Intelligence technologies that could transfer big data into valuable information about consumers. Examples of AI

advertising tools are Albert, that uses sophisticated AI to analyse ad campaigns, then manage targeting and budgets. It is a self-learning solution that improves the effectiveness of online advertising with more persistence and efficiency. Gumgum is another contextual intelligence company that could develop applied computer vision technology that ad agencies could use to place ads strategically. Ad tech company Sizmek is another AI-power platform that provides insights that help advertisers better understand customer data, thus producing more relevant campaign content, personalized messages, and impactful ads. WordStream, an online advertising company, also uses machine learning to quickly analyse an ad campaign. WordStream takes better decisions than human beings about the target market; these decisions translate into better performance, reduced costs, and increased revenue. New digital technologies created new opportunities for advertisers; they became able to build better consumer relationships and be more interactive on online platforms. Time and space are not important anymore, and consumers could be reached anywhere at any time via their smart devices.

Chen et al. (2022) projected that programmatic advertising which optimizes the purchase of online advertising space between agencies and publishers without human intervention on a case-by-case basis will become dominant in online advertising, and company websites will also allow for real-time adjustments in design and content to optimize for Search Engine Optimization. In other words, content marketing practices have been greatly enhanced by the adoption of AI techniques. *Chen et al. (2022)* asserted introducing an AI-assisted programmatic creative platform in 2019, which can facilitate advertising creative process by generating large-scale personalized and contextualized advertising messages in real-time.

In the upcoming part, the researcher will present a literature review of studies that tackled the role of AI in marketing communication and its separate components.

Taking off with literature that tackled AI and PR, advertising and communication, then more comprehensive studies tackling AI and marketing communication. A discussion will follow the review presented in chronological order.

In summary, AI represents a transformative force in advertising, enabling advertisers to leverage data-driven insights, automate processes, and deliver personalized experiences at scale. As the technology continues to advance, its impact on advertising practices and consumer engagement is set to grow, driving innovation and efficiency in the industry

Literature review on AI utilization in the field of Marketing

Artificial Intelligence (AI) has emerged as a transformative force in marketing, revolutionizing how businesses understand consumer behavior, execute campaigns, and enhance customer engagement. This literature review synthesizes recent research highlighting the diverse applications and implications of AI in the field of marketing.

Zada (2022) traces the evolution of AI research in marketing, noting a progression from Customer Relationship Management (CRM) to AI and Data Mining, and subsequently to Machine Learning (ML) and Big Data applications. This evolution underscores AI's growing influence in shaping marketing strategies and operations.

Kassem et al. (2023) emphasize the importance of data mining techniques for customer profiling and predictive analytics in direct marketing. Their study introduces a data preprocessing method using RFM (Recency, Frequency, Monetary) analysis and boosting trees to forecast customer actions and optimize sales performance. This approach highlights AI's role in enhancing targeting precision and campaign effectiveness through advanced data analytics.

AI-powered data analysis enables businesses to gain deep insights into customer preferences and behaviours across product and service sectors (Zada, 2022). The application of supervised, unsupervised, and reinforcement learning algorithms enhances customer knowledge management, supporting personalized marketing strategies and improving customer

Haleem et al. (2022) discuss AI's potential to transform marketing by proliferating data sources, improving data management capabilities, and facilitating real-time decision-making. AI enables marketers to personalize customer experiences, optimize content delivery, and analyze competitor campaigns effectively. Machine

Learning algorithms enable continuous learning and adaptation, enhancing marketing efficiency and effectiveness.

Ahmed and Ganapathy (2021) identify essential skills for marketers in an AI-driven environment, including automated content creation, user experience enhancement through AI chatbots, predictive analysis, and intelligent content curation. These skills are crucial for leveraging AI technologies to optimize marketing performance and enhance customer engagement.

The review by Haleem et al. (2022) identifies 21 critical applications of AI in various marketing domains, encompassing social media management, content creation, advertising, and customer relationship management. AI tools such as sentiment analysis, natural language processing (NLP), and speech-to-text conversion enhance marketers' capabilities in understanding consumer sentiments and optimizing communication strategies.

Discussion

Zerfass et al. (2020) and Panda et al. (2019) found out that AI will transform marketing communication and all its components. The following diagram by Haleem et al., 2022, enumerates multiple professional uses of AI regarding almost all marketing aspects.



Contributions of AI in Marketing (*Haleem et al., 2022*)
(Zahra, 2023)

The secondary analysis insinuates that none of the aforementioned studies has tried to find out how PR and marketing professionals are prepared and skilled enough

to survive and prosper in the AI-powered environment in the future. None of the papers has investigated how AI is going to impact the agency-client relationship, and whether AI has the potential to drastically change the PR and marketing industry.

Given ANI stage of evolution, limited academic research has been conducted to examine AI applications in marketing. With specific regard to the impact of AI in marketing, previous research has been conducted from both marketers' and consumers' perspectives as mentioned by Chen et al. (2022). For marketers, AI can increase marketing efficiency by speeding up the decision-making process and providing marketing managers with information and insights that they could not be obtained from traditional ways. AI can take over the mundane and time-consuming parts of the job and allows them to focus on the strategy and creation. AI can enhance both short- and long-term personalized engagement marketing by creating brand trust, superior brand experiences and facilitating different aspects of customer relationship management. AI can also assist marketers in every stage in a strategic marketing plan from analysing current situation to planning metrics and

implication control. Summing up, AI has shown potentials to increase revenues and reduce costs by improved marketing decisions and automation of marketing tasks, customer service and market transactions. For consumers, AI can bring convenience through recommendation systems and timeless services. AI can add value to brand and strengthen the brand–customer relationship by fostering an intimate feeling through personalization, purchasing process assistance and reduction of post–purchase dissonance. Consumers’ willingness to accept such technology has also been explored.

Previously mentioned, *Ahmed and Ganapathy (2021)* suggested that marketers should equip themselves with the following topics: Automated Content Creation, Enhanced User Experience with AI Chatbots, Information–Driven Insights, Predictive Analysis, Content Curation, Insightful Customer/User Trackers, Metadata Enrichment and Intelligent Content Classification

Furthermore, based on the literature review, the current study suggests a number of ANI skills to be introduced to marketers to qualify them for the ever–changing milieu of AI based tasks:

- Content intelligence (a subset of AI): which focuses on high-value content creation and hyper-targeting of audiences incorporating predictive analytics and utilizing digital strategies. (McCollough et al., 2022).
- Marketing research utilizing AI: Analysis of opinion polls, consumers' feedback, and monitoring of various platforms can be entrusted to AI. Research for marketing campaigns, automation of routine yet important tasks and analysis of people's sentiments and crisis communication can be incorporated. The services like 'speech to text conversion', 'sentiment analysis', 'massive data analyses', and 'identification of common problems' are worth-mentioning incorporated. (Biswal, 2022)
- Data Analytics: Artificial intelligence, especially big data, has innovations that allow new tools and procedures to be utilized not only by researchers, but also by practitioners. With these capabilities, it can analyze essential data and contribute to

providing solutions to complex and challenging problems. AI technology can be implemented in applications to collect data, share data, and data analytics. Processing of data parallelly based on big learning has a high possibility of increasing the final results of predictions (Arief and Gustomo, 2020).

- Social Media Management, content creation and campaign creation: Previous research has stated that social media analytics tools are very useful in generating data quickly in real-time, as well as being able to analyze, so that the audiences understand how an issue develops in public according to their perceptions. Content creation is a profession in which someone is competent to create content in the form of writing, images, videos, voice, or a combination in all content. This competency encourages the ability to utilize various media platforms with content that is expected to be liked and desired by the audience; and through utilizing sentiment analysis and NLP (natural language

processing) their tasks are getting way easier.

- PR robots and chatbots
- Routine and mundane tasks, utilizing robotic process automation RPA.
- Content strategy and big data analysis.
- Buyer Personas
- AI apps for digital marketing
- AI tools for Advertising (Albert/Gumgum and the likes)

In conclusion, AI is poised to reshape the marketing landscape by enabling data-driven decision-making, enhancing customer experiences, and optimizing marketing campaigns across diverse platforms. As AI technologies continue to evolve, marketers must cultivate AI-related skills and strategies to harness its full potential while navigating ethical and operational challenges in the digital era.

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