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THE ROLE OF ARTIFICIAL INTELLIGENCE IN SALES AND MARKETING

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Abstract: *This paper presents a systematic literature review on the role of artificial intelligence (AI) in sales and marketing, using the PRISMA methodology. It explores the influence of AI on sales performance, customer relationship management, marketing effectiveness, and decision-making processes. The study provides a holistic view of how AI contributes to success in these fields, elucidating the connection between AI and professional success. This research offers opportunities to enhance recruitment, training, and development strategies, contributing to a deeper understanding of AI's role in the competitive world of sales and marketing. By synthesizing existing knowledge, it paves the way for informed decision-making and strategic development in the industry.*

Keywords: *artificial intelligence, sales, marketing, PRISMA, customer relationship management*

JEL Classification: *C69, M31, M30, M15, O32*

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ULOGA VEŠTAČKE INTELIGENCIJE U PRODAJI I MARKETINGU

Sažetak: *Primenom metodologije Prisma u ovom radu je predstavljen sistematski pregled literature o ulozi veštačke inteligencije (AI) u prodaji i marketingu. Rad istražuje uticaj AI na pokazatelje prodaje, upravljanje odnosima sa kupcima, marketinšku efikasnost i procese donošenja odluka. Studija pruža holistički pogled na to kako AI doprinosi uspehu u ovim poljima i rasvetljava vezu između AI i profesionalnog uspeha. Ovo istraživanje nudi mogućnosti za unapređenje strategija zapošljavanja, obuke i razvoja, doprinoseći dubljem razumevanju uloge veštačke inteligencije u konkurentnom svetu prodaje i marketinga. Objedinjavanjem postojećih znanja, ovaj rad kreira put ka informisanom donošenju odluka i strateškom industrijskom razvoju.*

Ključne reči: *veštačka inteligencija, prodaja, marketing, PRISMA, upravljanje odnosima sa kupcima*

1. INTRODUCTION

In the constantly changing and dynamic world of modern business, the integration of technology and commerce has experienced a significant and deep transformation. Mitić (2019) stated that Artificial Intelligence (AI) has played a crucial role in driving innovative progress in sales and marketing, capturing the attention and creativity of entrepreneurs. The incorporation of AI into these vital business practices is not just a technological change; it represents a fundamental transformation that alters the conventional methods of customer interaction, data analysis, and strategic decision-making.

The interdependent connection between AI, sales, and marketing serves as evidence of the significant influence of technological advancement on business strategies. The utilization of AI by enterprises is leading to a powerful combination of intelligent algorithms and sales and marketing techniques, resulting in remarkable efficiency, innovation, and profitability (Peres, 2020). This synergy transcends any particular industry and instead infiltrates several sectors, shaping the way organizations engage with their audiences, recognize market trends, and create focused campaigns.

The objective of this study is to examine the various aspects of AI's involvement in sales and marketing, uncovering its impact on both operational complexities and strategic planning through a synthetic literature review using the Preferred Reporting Items for Systematic Reviews and Meta-Analyses

(PRISMA) methodology. In the context of this approach, the study looks at several kinds of documents, including reports and articles from Web of Science and Scopus. This inquiry is especially relevant as organizations navigate a period marked by an abundance of information, rapid technical breakthroughs, and a discerning consumer base (Vlačić, Corbo, Costa e Silva & Dabić, 2021).

This paper will explore the practical uses of AI in sales and marketing, explaining how intelligent algorithms enhance client interaction, optimize processes, and support strategic decision-making (Vieira & Magano, 2021). It will examine the future prospects, obstacles, and untapped opportunities that are expected to influence the course of AI in sales and marketing. Lastly, this research aims to understand the complex relationship between artificial intelligence, sales, and marketing. It offers valuable insights that are both academically enriching and practically relevant for enterprises operating in the current marketplace. The presence of Artificial Intelligence in sales and marketing is not just a trend; it is a tale of change, a narrative in which algorithms combine with human creativity to rethink how organizations establish connections, compete, and succeed in an era where adaptability is crucial. Hence, comprehending the intricacies of how AI revolutionizes sales and marketing techniques is not just a scholarly pursuit but a must for firms aiming to remain competitive and pertinent in an ever more digitalized industry.

The structure of the paper is as follows. The second section will examine the historical overview and development of AI in the business domain, establishing the foundation for a thorough understanding of its present importance, followed by an extensive literature review to support our case. The third section contains details on the methodology and materials the study uses. The fourth and the fifth sections contain a thorough analysis and discussion of the results of the study. The last section concludes and suggests future recommendations.

2. BACKGROUND LITERATURE

The implementation of artificial intelligence (AI) has resulted in a significant revolution in the marketing and sales operations of firms in all industries globally. Artificial intelligence is widely employed in marketing, namely in the domains of consumer data acquisition, brand development, and customer policy enforcement (MR, 2021). Furthermore, it has revolutionized digital marketing through enhancements in predictive marketing, consumer targeting, and customer analysis (Zaman, 2022). Artificial intelligence plays a crucial part in both the administration of client contacts and the understanding of customer behavior (Kiran, 2021). The utilization of artificial intelligence in marketing has significant implications for both the decision-making process and the future of the industry (Jabeen, 2022). Regarding marketing, the practical applications of

artificial intelligence are currently in the initial phases of advancement (Sirajuddin & Jagannadharao, 2020). The article also explores the challenges and potential advantages of incorporating artificial intelligence into digital marketing, highlighting the importance of ethical marketing strategies (Mazur, 2023). Artificial intelligence possesses the capacity to resolve issues pertaining to sales pipeline management, a component of the sales operation (Plank, 2020). Artificial intelligence (AI) has numerous benefits in the field of marketing, including the ability to understand customer behavior, automate tasks, reduce expenses, and improve workflows (Mitić, 2019).

Optimal utilization of artificial intelligence tools in marketing and sales can be achieved through many strategic approaches. Nirwana (2023) states that artificial intelligence can be employed to comprehend target consumers, customize marketing content, and oversee the effectiveness of advertising initiatives. Furthermore, according to Mitić (2019), it can enhance customer satisfaction by automating tasks, reducing costs, and improving workflows. Moreover, artificial intelligence can be employed to implement consumer analytics capabilities, particularly in the retail sector, by identifying factors that enhance customer satisfaction (Hossain, Akter, Yanamandram & Gunasekaran, 2022). The application of artificial intelligence in business-to-business marketing innovation can be classified into five separate areas, providing a framework for the strategic implementation of this technology (Han, Lam, Zhan, Wang, Dwivedi & Tan, 2021). Nevertheless, further research is required to explore the applications of artificial intelligence in the process of making strategic marketing decisions (Stone, Aravopoulou, Ekinci, Evans, Hobbs, Labib, Laughlin, Machtynger & Machtynger, 2020). Furthermore, it is important to develop a theoretical framework that outlines the strategic use of AI in generating corporate worth (Kitsios & Kamariotou (2021); D'Arco, Presti, Marino, & Resciniti (2019); Koroglu (2023)).

3. MATERIALS AND METHODS

The PRISMA approach was used by the authors of this study and have used articles categorized by document type. Only papers and reports from the Web of Science and Scopus databases are included in the study. Subsequently, the research was expanded upon and further in-depth details on the gray literature were included. The authors conducted this search in December 2023.

The processes that were followed and the requirements for inclusion in each phase were compiled in Figure 1. The writers started by including publications that dealt with sales and artificial intelligence, which may be found in the journal title, abstract, or keywords. Using the same search keywords once more, the authors incorporated a comprehensive screening procedure of the entire

articles, research, and reports that came from the first stage in a second phase. Because of this, the complete text of books, book chapters, editorial material, notes, and brief surveys were not included in the final screening.

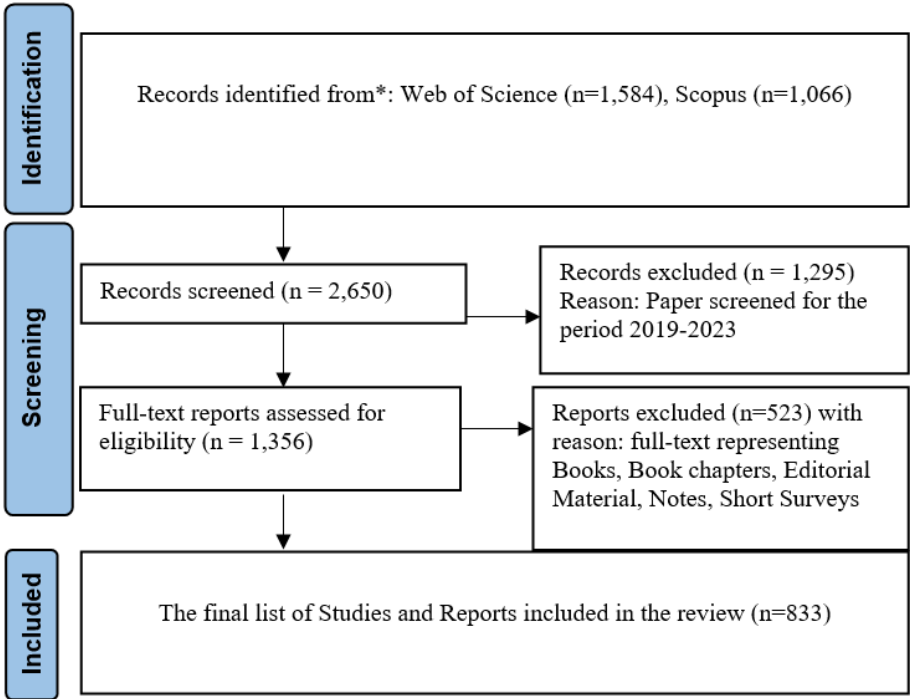


Figure 1. PRISMA flowchart of literature review process based on the combined search of two keywords: Sales and Artificial Intelligence

Note: Adapted by authors. (As shown, from a total of 2,650 records initially retrieved, only 833 records were included. All these articles were published during 2019-2023).

In the first phase, the search phrases "sales" and "artificial intelligence" produced 2,650 records. The authors then eliminated 1,295 items from the dataset during the check phase due to their publication dates falling outside of 2019–2023. Furthermore, 523 items that represented document categories other than articles and reports were eliminated. Sales and artificial intelligence (as the primary item title) were combined in a first meta-analysis based on the PRISMA technique, which was conducted in relation to the first key terms utilized in this review. Owing to the substantial amount of citations (more than 75% of total citations) found in the Web of Science, an analysis of the WoS was conducted using those two terms for the years 2019 through 2023, producing a list of 833 papers.

The subsequent phase of inquiries focused on an additional pair of concepts: marketing and artificial intelligence. Employing the identical PRISMA methodology, a subsequent meta-analysis was conducted. The schematic representation illustrating the progression of the literature review methodology concerning this amalgamation of keywords is depicted in Figure 2.

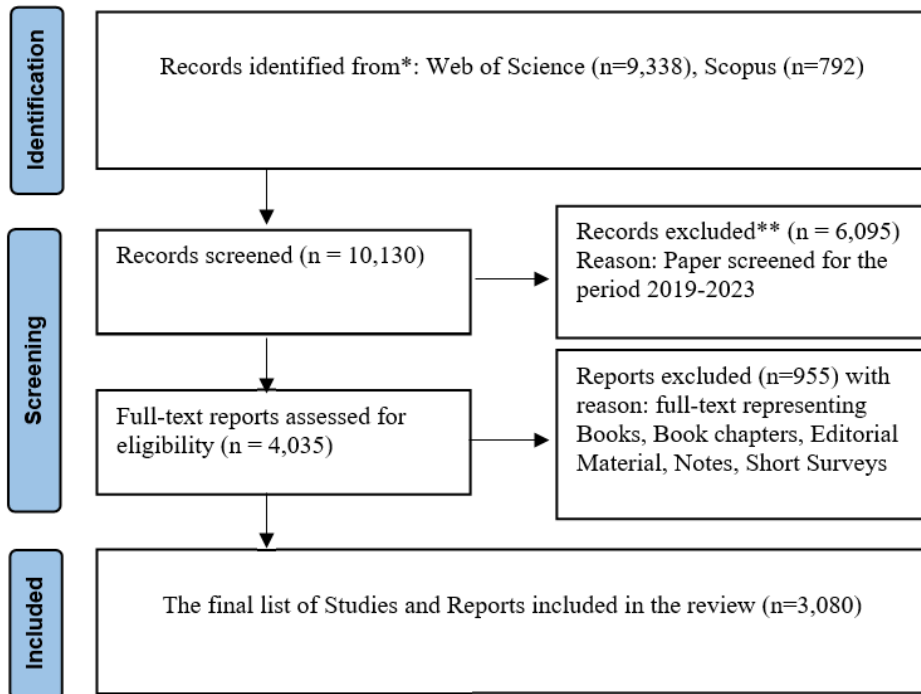


Figure 2. PRISMA flowchart of literature review process based on the combined search of two keywords: Marketing and Artificial Intelligence

Note: Adapted by authors. (As shown, from a total of 10,130 records initially retrieved, only 3,080 records were included. All these articles were published during 2019-2023).

In the second phase, the search phrases "marketing" and "artificial intelligence" produced 10,130 records. The authors then eliminated 6,095 items from the dataset during the check phase due to their publication dates falling outside of 2019–2023. Furthermore, 955 items that represented document categories other than articles and reports were eliminated. Two procedures were used to retrieve data from the chosen papers and research for the "Sales-AI" and "Marketing-AI" searches:

1. A structured template was formulated and employed as a condensed representation of the research findings, showcasing 10 publications categorized according to Web of Science (WoS) classifications.
2. Subsequently, a TreeMap Chart (presented in the following summary) was generated from the aggregate of utilized studies, providing an overview of the primary categories addressed by these publications. The significance of each category was quantified as a percentage relative to the overall number of publications.
3. Furthermore, a comprehensive examination was conducted through co-citation analysis and scrutiny of cited references. This process resulted in a graphical representation mapping the most frequently cited references, organized into clusters and items, thereby identifying the most referenced authors, journals, and related entities.

4. META-SYNTHESIS RESULTS

4.1. RESULTS FOR THE COUPLE: SALES AND ARTIFICIAL INTELLIGENCE

This discussion focuses on the initial findings of AI's impact on sales. It's essential to identify related topics and key issues from these studies. Selections should include the top ten most cited publications to understand the current relevance and future of AI in sales from 2019-2023. Each chosen study was critically analyzed based on the authors' theoretical interpretations of their findings and conclusions.

Table 1

Top 10 record count publications based on WoS Categories, for the couple: sales and artificial intelligence.

Field: Web of Science Categories	Record Count	% from 833 Articles
Business	200	26.506%
Management	150	15.361%
Computer Science Information Systems	100	15.060%
Computer Science Artificial Intelligence	75	8.735%
Engineering Electrical Electronic	70	7.229%
Telecommunications	60	6.024%
Computer Science Interdisciplinary Applications	50	5.422%
Engineering Multidisciplinary	46	4.819%
Information Science Library Science	41	4.518%
Physics Applied	41	4.518%

Note. Authors' presentation.

Simultaneously, employing the identical co-citation methodology while altering the unit of analysis to cited authors. By establishing a threshold of a minimum of five citations for an author, the authors derived a total of 286 instances distributed across five distinct clusters, as delineated in Figure 3b.

4.2 RESULTS FOR THE COUPLE: MARKETING AND ARTIFICIAL INTELICENE

The outcomes of the preliminary investigation into the intersection of marketing and artificial intelligence will be expounded upon. In conjunction with the examination of the ten most prolific publications, chosen for their record count, these selected focal areas serve the purpose of elucidating and comprehending the contemporary significance of conducted studies and the prospective trajectory of marketing and AI. Spanning the timeframe from 2019 to 2023, it is imperative not only to delineate the affiliated subjects to the undertaken research but also to elucidate the primary concerns emanating from these investigations. Consequently, each designated study underwent meticulous scrutiny and explication, wherein the theoretical constructs posited by the authors were scrutinized in relation to the content and findings expounded within their respective articles.

Table 1

Top 10 record count publications based on WoS Categories, for the couple: marketing and artificial intelligence

Field: Web of Science Categories	Record Count	% from 3.080 Articles
Business	512	14.730%
Computer Science Information Systems	428	12.313%
Engineering Electrical Electronic	394	11.335%
Management	360	10.357%
Computer Science Artificial Intelligence	261	7.509%
Telecommunications	246	7.077%
Economics	207	5.955%
Engineering Multidisciplinary	146	4.200%
Environmental Sciences	146	4.200%
Green Sustainable Science Technology	137	3.941%

Note. Authors' presentation.

Furthermore, an examination of affiliations associated with the principal entities within this intricate research subject reveals that the United Kingdom, the United States, and China emerge as the most prolific nations. Employing co-citation analysis and scrutinizing cited references, while considering the top

threshold for an author as 20, we identified 431 instances distributed among four distinct clusters.

5. DISCUSSION

To answer our main research questions, in this section the authors provide responses for each of them. Starting with the first question: How has the integration of artificial intelligence transformed marketing and sales practices across industries?

Bass (1969) explains that the timing of a consumer's first purchase of a new product is influenced by the quantity of previous customers who have already made similar purchases. This is a key factor in customer behavior that may be related to the literature that was assessed. This fresh insight provides a clear view of the social effect and diffusion dynamics that influence consumers' decision-making processes. Fethi and Pasiouras (2010) focus on the financial sector and emphasize the transformative capabilities of artificial intelligence (AI) in the context of Indian bank mergers. Their study illuminates the vast potential that arises for the utilization of artificial intelligence in detecting ambiguous situations, particularly in the realm of fraud detection. Consequently, this results in enhanced operational efficiencies by leveraging AI-driven expertise, ultimately leading to a boost in the overall effectiveness of institutions. However, Saad and Abida (2016) make a valuable addition to the current research by examining the impact of virtual agents on commercial websites. According to their research, the presence of virtual agents seems to positively impact the perceived level of involvement. This offers crucial insights into the impact of technological interventions on consumer perceptions and the enhancement of marketing strategies. Collectively, these studies provide a comprehensive perspective on various fields, such as consumer behavior, the intricacies of the financial industry, and the role of virtual agents in business transactions.

Second, in what ways can the strategic deployment of AI tools be optimized by sales and marketing teams to effectively enhance customer satisfaction, expand market share, and increase overall profitability?

The reviewed literature showcases the significant contributions made by different scholars in elucidating the transformative influence of Artificial Intelligence (AI) on crucial facets of business. Gacanin and Wagner (2019) highlight the need of creating intelligence networks and identifying key drivers of corporate value. These objectives can be achieved by incorporating artificial intelligence and machine learning (ML) technologies. More precisely, their research emphasizes that the implementation of artificial intelligence leads to a

noticeable improvement in consumer satisfaction. In their study, Seranmadevi and Kumar (2019) explored the positive consequences of incorporating AI User Interface capabilities in Customer Relationship Management (CRM) tasks. They notably emphasized the benefits that arise from the use of such skills. This exemplifies the vital role that artificial intelligence fulfills in enhancing the administration of customer relationships and interactions. Moreover, the research conducted by Chatterjee, Ghosh, Chaudhuri and Nguyen (2019) emphasizes the necessity of employing artificial intelligence (AI) technologies while analyzing intricate aspects of customer behavior. The customer's attributes encompass their behaviors, purchases, preferences, and dislikes. Collectively, these studies contribute to a more sophisticated comprehension of the varied impact that artificial intelligence has on crucial aspects of business. These characteristics encompass a wide range of factors, including value drivers, customer experience, CRM functions, and complete customer analytics.

Lastly, what current trends shape the landscape of AI adoption in marketing and sales, and what unexplored research paths offer insight into the future of these dynamic fields?

Several prominent themes are influencing the adoption of artificial intelligence in marketing and sales. Artificial intelligence is utilized in various domains such as consumer data analysis, personalized marketing campaign development, and the production of AI assistants (MR, 2021). The exploration of AI's possibilities in business-to-business marketing is currently underway (Han, Lam, Zhan, Wang, Dwivedi & Tan, 2021). However, there are unexplored fields of inquiry that offer valuable insights into the future of these subjects. These include the use of artificial intelligence in marketing tools that incorporate virtual and augmented reality (Vieira & Magano, 2021), the role of AI in Industry 4.0 and its impact on digital marketing (Figueiredo, Gonçalves & Teixeira, 2021), and the use of AI to understand customer behavior (Ricci, 2022). The ever-evolving fields of marketing and sales offer ample possibilities for further examination and advancement, providing several options for exploration and growth.

6. CONCLUSION

In conclusion, the transformative impact of AI on sales and marketing domains is unequivocal in the Fourth Industrial Revolution. The era marked by the dominance of intelligence underscores the critical role that exceptional customer experiences play in undermining the success of companies. This study has delved into the pivotal role of AI and machine learning in the context of big data analytics, demonstrating how these technologies enable the anticipation and delivery of tailored experiences aligned with evolving customer expectations.

Our comprehensive perspective on leveraging AI to elevate the customer experience reveals the strategic importance of AI and predictive analytics. These tools serve as a stable point for creating customer experiences that not only meet but exceed expectations, fostering advocacy and establishing long-term customer relationships. The integration of event-based architectures with AI and predictive analytics emerges as a visionary trajectory for the future in this domain. Within the intricate landscape of sales and marketing, AI stands as a transformative factor influencing the efficacy and triumph of professionals. The competitive environment has undergone significant transformation through the assimilation of AI technologies, reshaping strategic approaches and the attainment of success in these domains.

Employing the Preferred Reporting Items for Systematic Review and Meta-Analyses (PRISMA) methodology, this systematic literature review synthesized existing knowledge regarding the role of AI in sales and marketing professionals. The exploration of key aspects, including the influence of AI on sales performance, customer relationship management, marketing effectiveness, and decision-making processes provides a holistic view of how AI contributed to success in these fields. This research not only elucidates the multifaceted connection between AI and professional success but also offers valuable insights for enhancing recruitment, training and development strategies. By contributing to a deeper understanding of the vital role AI plays in the competitive world of sales and marketing, this paper provides a foundation for informed decision-making and strategic development in the industry. The synthesis of existing knowledge contributed to a comprehensive understanding of the impact of AI in these domains, paving the way for ongoing advancements and improvements in the pursuit of excellence.

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