

**AI HORIZON: ILLUMINATING THE FUTURE OF MARKETING****Ms. Rajeswari. K<sup>1</sup> and Dr. R.V. Suganya<sup>2\*</sup>**<sup>1</sup>Research Scholar (Part Time), Vels Institute of Science Technology and Advanced Studies<sup>2</sup>Assistant Professor, Department of Commerce and Assistant Director – Academic Courses (UGC), Vels Institute of Science Technology and Advanced Studies**INTRODUCTION**

"AI Horizon: Illuminating the Future of Marketing, Consumer Behavior, and Psychology" is a groundbreaking exploration into the transformative role of artificial intelligence in shaping the landscape of marketing, understanding consumer behavior, and advancing the field of psychology. As we stand at the intersection of technology and human psychology, this book delves into the profound impact that AI is having on these interconnected domains, offering a visionary glimpse into what lies ahead. In an era where AI has evolved from being a mere buzzword to a powerful tool that businesses, researchers, and psychologists can harness, this book serves as a beacon, guiding readers through the vast possibilities and potential challenges of this AI-driven future. From personalized marketing strategies that leverage AI's predictive capabilities to the ethical considerations surrounding data privacy and psychological profiling, "AI Horizon" navigates the complex terrain of AI's convergence with marketing and psychology. Readers will embark on a journey through the latest AI-driven innovations, exploring how machine learning, natural language processing, and neural networks are revolutionizing advertising, customer engagement, and market research. Additionally, the book delves into the ways in which AI is reshaping our understanding of human behavior, shedding light on the intricate workings of the mind through advanced data analytics and psychological insights. With expert perspectives, real-world case studies, and thought-provoking discussions, "AI Horizon" equips readers with the knowledge they need to navigate the evolving AI landscape. Whether you are a marketing professional seeking to harness the power of AI, a researcher exploring the frontiers of consumer behavior, or a psychologist interested in the evolving field of AI psychology, this book offers an illuminating glimpse into the exciting future where AI and human expertise converge to reshape our world.

**REVIEW OF LITERATURE**

**Marcello M. Mariani (2021)** this research represents a pioneering effort in presenting a comprehensive synthesis of the existing knowledge on artificial intelligence (AI) as it appears in the marketing, consumer research, and psychology literature. Through a meticulously conducted systematic literature review, employing a data-driven approach and quantitative techniques such as bibliographic coupling, this study offers a holistic view of the evolving intellectual landscape in AI research within these three interconnected domains. The study identifies and categorizes eight key thematic clusters that have emerged in AI research within these fields:

- Memory and Computational Logic
- Decision Making and Cognitive Processes
- Neural Networks
- Machine Learning and Linguistic Analysis
- Social Media and Text Mining
- Social Media Content Analytics
- Technology Acceptance and Adoption
- Big Data and Robots

Additionally, the research uncovers a total of 412 distinct theoretical frameworks that have been applied across these studies. The most frequently utilized theoretical lenses include:

### The Unified Theory of Acceptance and Use of Technology

- Game Theory
- Theory of Mind
- Theory of Planned Behavior
- Computational Theories
- Behavioral Reasoning Theory
- Decision Theories
- Evolutionary Theory

To further advance the scholarly discourse in AI research across these three disciplines, the study proposes a forward-looking research agenda. This agenda emphasizes the need for cross-pollination of theories between fields and highlights areas of inquiry that have been comparatively underexplored. This comprehensive review provides an invaluable foundation for future research endeavors in the dynamic and evolving intersection of AI, marketing, consumer behavior, and psychology.

**Liye Ma (2020)** Artificial intelligence (AI) agents, powered by machine learning algorithms, are swiftly reshaping the corporate landscape, sparking considerable interest among researchers. In this paper, researcher conduct a comprehensive review and advocate for the integration of machine learning techniques in marketing research. We present a comprehensive overview of prevalent machine learning tasks and methodologies, drawing comparisons with the traditional statistical and econometric approaches traditionally employed by marketing researchers. Researcher contend that machine learning methods possess the unique capacity to effectively handle extensive and unstructured datasets while offering adaptable model architectures that deliver robust predictive capabilities. However, it is important to acknowledge that these methods may sometimes fall short in terms of model transparency and interpretability. In light of this, we delve into the prominent trends and practices driven by AI in various industries, shedding light on the emerging body of academic marketing literature that has begun to incorporate machine learning methods. Crucially, the researcher introduce a unified conceptual framework and propose a multifaceted research agenda, structured around five pivotal dimensions of empirical marketing research: methodology, data, application, challenges, and theory. Within these dimensions, we outline several key research priorities, including the expansion of machine learning methods and their central role in marketing research, their utilization for extracting insights from vast and unstructured datasets, their transparent deployment for descriptive, causal, and prescriptive analyses, their application in mapping customer purchase journeys and enhancing decision-support capabilities, and their integration with human insights and established marketing theories. This research agenda underscores the abundant opportunities awaiting exploration in the realm of marketing through machine learning techniques. Our hope is that this multifaceted approach will inspire and catalyze further investigations in this dynamic and promising domain.

**Bozidar Vlacic (2021)** a growing body of research in the realm of Intelligent Systems and Artificial Intelligence (AI) within the field of marketing has demonstrated AI's capacity to replicate human behaviors and execute tasks in an 'intelligent' fashion. Given the surging interest in AI within the marketing community, this review aims to provide a comprehensive overview of the evolutionary path of research at the intersection of marketing and AI. By analyzing 164 articles from journals indexed in Web of Science and Scopus, this article endeavors to construct a specialized research agenda tailored to the context of marketing. Employing the Multiple Correspondence Analysis (MCA) procedure to scrutinize these selected articles, our investigation unveils several promising research avenues. These avenues encompass topics related to the adoption, utilization, and acceptance of AI technology within marketing, the pivotal considerations surrounding data protection and ethical

considerations, the influence of institutional support on the integration of AI in marketing practices, and the transformative impact of AI on the labor market and the skill sets demanded of marketers.

**Arnaud De Bruyn (2022)** this article delves into the potential drawbacks and opportunities associated with the integration of AI in marketing, examining these aspects through the lenses of knowledge creation and knowledge transfer. To begin, we explore the concept of "higher-order learning," which sets AI applications apart from conventional modeling approaches. We place particular emphasis on recent advancements in deep neural networks, providing insights into their underlying methodologies, such as multilayer perceptron's, convolutional networks, and recurrent neural networks, as well as their diverse learning paradigms, encompassing supervised, unsupervised, and reinforcement learning. Moving forward, the researcher address the technological challenges and potential pitfalls that demand the attention of marketing managers when embarking on AI implementation within their organizations. These challenges encompass the intricacies of defining objective functions with precision, ensuring safe and realistic learning environments, addressing biases within AI systems, enhancing the explain ability of AI outcomes, and exerting control over AI processes. Furthermore, the researcher recognize that AI has the potential to revolutionize predictive tasks that are amenable to automation and require minimal explain ability. However, we assert that the full realization of AI's promises in various marketing domains hinges on our ability to overcome the challenges associated with the transfer of tacit knowledge between AI models and marketing organizations. This represents a critical dimension in harnessing the true potential of AI within the marketing landscape.

**Sanjeev Verma (2021)** Disruptive technologies, including the internet of things, big data analytics, block chain, and artificial intelligence (AI), have ushered in profound changes in the operational landscape of businesses. Among these disruptive technologies, AI stands as the most recent and holds significant potential for transforming marketing practices. Across the globe, practitioners are actively exploring AI solutions that align with their marketing objectives. Nonetheless, a systematic literature review can shed light on the pivotal role of artificial intelligence (AI) in marketing and provide a roadmap for future research endeavors. The primary objective of this study is to deliver a comprehensive examination of AI's impact on marketing, employing bibliometric, conceptual, and intellectual network analysis of existing literature published from 1982 to 2020. The meticulous review of 1,580 papers has enabled us to discern the performance of prominent contributors, including influential authors and pivotal information sources. Additionally, through co-citation and co-occurrence analysis, we have uncovered the intricate conceptual and intellectual networks that underpin this domain. Leveraging data clustering, facilitated by the Louvain algorithm, we have successfully identified distinct research sub-themes and have outlined future research directions aimed at expanding the integration of AI in the field of marketing.

**Ming-Hui Huang (2020)** the authors have formulated a structured three-stage framework designed for strategic marketing planning, integrating the manifold advantages offered by artificial intelligence (AI). This framework encompasses the utilization of AI in three distinct capacities: mechanical AI, which focuses on automating repetitive marketing tasks and operations; thinking AI, which is geared toward processing data to facilitate decision-making; and feeling AI, designed for the analysis of interactions and human emotions. This comprehensive framework delineates the diverse ways in which AI can be harnessed across marketing functions, spanning research, strategy formulation (segmentation, targeting, and positioning, or STP), and tactical execution. In the initial marketing research phase, mechanical AI finds application in data gathering, while thinking AI is employed for in-depth market analysis, and feeling AI aids in comprehending customer behavior and emotions. In the subsequent marketing strategy (STP) phase, mechanical AI contributes to segmentation through segment identification, thinking AI assists in targeting by recommending appropriate segments, and feeling AI plays a pivotal role in positioning by assessing the resonance of the selected segments. Finally, in the marketing action stage, mechanical AI supports standardization, thinking AI enables personalization, and feeling AI facilitates the establishment of meaningful relationships with customers.

To elucidate the strategic utility of AI, we apply this framework across various facets of marketing, organized according to the traditional 4Ps (Product, Price, Place, Promotion) and the modern 4Cs (Consumer, Cost, Convenience, Communication). This serves to illustrate the versatile and purpose-driven use of AI in enhancing marketing practices.

**Ming-Hui Huang (2020)** devised a conceptual framework that revolves around the concept of collaborative artificial intelligence (AI) within the realm of marketing. This framework offers a structured roadmap, systematically outlining how human marketers and consumers can effectively partner with AI. Such collaboration holds profound implications, particularly within the retail sector, which essentially serves as the interface connecting marketers with consumers. This framework holds significant implications for marketers, consumers, and researchers alike. For marketers, it emphasizes the need to optimize the blend and timing of AI-HI marketing teams to maximize effectiveness. Consumers are encouraged to understand the complementarity of AI and HI strengths, aiding them in making informed consumption decisions. Meanwhile, researchers are prompted to explore innovative approaches and investigate the contextual boundaries that govern collaborative intelligence. In essence, this framework fosters a harmonious synergy between humans and AI, ushering in a new era of intelligent collaboration within the marketing domain.

**Patrick Van Esch (2021)** Artificial intelligence (AI) has ushered in a revolution in the realm of digital marketing, empowering organizations to transform how they create campaign content, generate leads, reduce customer acquisition costs, manage customer experiences, appeal to prospective employees, and engage their consumer base through social media channels. The practical application of AI in digital marketing is evidenced by numerous real-world instances, with organizations such as Red Balloon and Harley Davidson leveraging AI to automate their digital advertising campaigns. However, it is crucial to recognize that we are still in the early stages of AI adoption, both in the broader corporate landscape and within specific marketing functions. In fact, one could argue that the research efforts aimed at conceptualizing, theorizing, and comprehensively investigating the utilization and impact of AI in marketing are even more nascent. Importantly, the integration of AI in marketing not only prompts practical considerations but also raises ethical questions. The ability of AI to automate tasks that were traditionally performed by humans inevitably leads to discussions about whether marketing professionals will embrace AI as a tool that liberates them from routine tasks, enabling them to focus on higher-value activities, or if they perceive AI as a threat to their job security. Given the current state of research on AI in marketing, we are still uncovering the full spectrum of capabilities and limitations that this technology brings to the field. This special edition serves as a significant milestone in shedding light on what we currently understand and what we have yet to explore in this evolving landscape, bridging the gap between knowledge and the ongoing quest for deeper insights.

**Katharina J.Auer – Srnka (2012)** the primary objective of this research is to offer a comprehensive historical examination of the life cycle concept within the realm of marketing. This study endeavors to trace the evolution of traditional life cycle models and their connections to the life course perspective. In terms of methodology, the authors of this paper draw connections between consumer behavior and various life events and transitions that individuals undergo in their life trajectories. These encompass shifts in life status, role transitions, and the development of role identities. By doing so, the paper seeks to shed light on the critical determinants influencing consumer behavior. Furthermore, this research not only provides insights into the historical development of life cycle models but also highlights future research opportunities in this field. One of the key takeaways is the pressing need for life cycle models that are firmly rooted in empirical data. The authors also engage in discussions pertaining to methodological considerations in this context.

**Stan Maklan (2008)** one of the primary functions of market research has historically been to mitigate risks in the formulation of marketing strategies. However, the conventional approaches to market research are now facing the risk of becoming outdated, given the emergence of new methodologies in Sales, Marketing, and Business Development. These disciplines are evolving towards a more participatory model that involves greater



engagement of front-line staff and customers in collaboratively creating value for organizations. In this context, the authors highlight the potential of Action Research as a set of tools and methodologies that market researchers can leverage to support and enhance the co-creation process. This collaborative approach applies to both commercial enterprises and non-profit organizations. The implications of adopting Action Research for market researchers and the evolution of research practices in the realm of strategy development are also delineated.

#### DIVERSE ADVANTAGES OF ARTIFICIAL INTELLIGENCE

**Samuel Fosso Wamba (2021)** this editorial intends to introduce the papers that have been accepted for the special issue (SI) titled 'Industry Experiences with Artificial Intelligence (AI): Advantages and Obstacles in Operations and Supply Chain Management.' Initially, we offer a concise overview that explores the interplay between AI and operations and supply chain management (OSCM), with a focus on companies that have already adopted AI and the practical lessons learned from their experiences. Subsequently, we present the selected papers that constitute the core content of this SI. In the concluding section, we delve into thought-provoking and challenging avenues for research, shedding light on potential subject areas, research prospects, and the prospective benefits of AI in OSCM. Through this special issue, we aim to provide valuable insights and knowledge to industry professionals, policymakers, academics, and anyone interested in the field, facilitating a deeper understanding of AI applications and their implications for OSCM.

**Anne – Clarie Boury – Brisset** briefed, In the fast-paced military tactical setting, the efficient allocation of intelligence, surveillance, and reconnaissance (ISR) resources, as well as targeting assets, is essential to meet mission requirements. Given the presence of numerous competing tasks, resource limitations, complexity, and diverse constraints, there is a pressing need for automation and optimization. These processes aim to provide operators with robust decision support systems capable of deriving optimal collection and fire plans. Additionally, automation enhances the speed, accuracy, and responsiveness in planning and coordinating the entire spectrum of ISR assets and fires/effects. Furthermore, the realm of AI-enabled target recognition, identification, and situational awareness demands a combination of various AI techniques. These techniques should also consider and coordinate with all operational domains to offer comprehensive support to decision-makers. This paper introduces innovative decision support solutions designed to optimize collection planning and tasking, as well as weapon-target assignment. Simultaneously, it explores the use of AI and machine learning (ML) techniques for target classification, recognition, and the fusion of multimodal data. The paper also sheds light on the associated challenges, emphasizing their relevance in the context of hybrid warfare and multi-domain operations.

**Marc Ringel (2019)** from both a global and local standpoint, there are compelling rationales for advocating energy efficiency. These motivations have prompted leaders in both the European Union (EU) and nations within the Middle East and North Africa (MENA) region to implement policies aimed at encouraging their populations to adopt more energy-efficient consumption practices. Typically, energy efficiency policies are formulated at the national or transnational level, with policymakers endeavoring to incentivize microeconomic entities to align their decisions with macroeconomic policy objectives. Researcher propose an alternative approach to bolster energy efficiency by emphasizing individual advantages at the microeconomic level. Through the simulation of lighting, heating, and cooling operations in a model single-family home equipped with basic automation, we illustrate that individual actors can be guided towards pursuing energy efficiency driven by enlightened self-interest. We employ straightforward, user-friendly impact indicators that can be readily provided to homeowners. These indicators serve as intrinsic motivators encompassing economic, environmental, and social aspects, encouraging the pursuit of energy efficiency. The indicators reveal tangible benefits for homeowners attainable under both the market-based energy pricing structure in Germany and the state-subsidized pricing system in Algeria. These advantages are applicable in both the continental climate of Germany and the Mediterranean climate of Algeria, especially when considering cooling energy requirements. Our findings underscore that smart home technology offers an appealing avenue to advance energy efficiency

objectives. Additionally, the indicators we have compiled can assist policymakers in promoting the concrete benefits of energy efficiency to individual homeowners and in identifying public funding investments that best support individuals in achieving national and transnational energy objectives.

### THE AI-DRIVEN STRATEGIC FRAMEWORK

**Merlin stone (2022)** the objective of this paper is to conduct a comprehensive literature review regarding the utilization of artificial intelligence (AI) in strategic contexts. It aims to pinpoint the gaps in existing research and outline the need for further exploration in the realm of applying AI to strategic marketing choices. The methodology employed for this study entailed an extensive literature review. In addition, inputs were sought from marketing experts who were invited to contribute their insights to the paper. The study reveals a conspicuous dearth of research pertaining to the application of AI in strategic decision-making within the domain of marketing. This research void is of significant importance due to the evolving landscape of AI deployment, which is progressively transitioning from operational to strategic dimensions across various management sectors. Given the competitive nature of strategic decisions and the valuable insights derived from the application of AI in fields such as defense, it is imperative to shift our focus towards harnessing AI for strategic marketing decisions.

**Aline F.S. Borges (2021)** Artificial Intelligence (AI) tools have garnered significant attention from both the academic literature and business organizations, primarily driven by advancements in machine learning techniques. However, despite the immense potential that AI technologies hold for problem-solving, practical implementation still presents challenges. There exists a notable gap in knowledge concerning the strategic utilization of AI to generate value for businesses. This study seeks to bridge this gap by: Conducting a critical review of the existing literature, particularly focusing on the integration of AI into organizational strategies. Summarizing the various approaches and frameworks that currently exist, while also highlighting the potential benefits, challenges, and opportunities associated with the strategic use of AI. Engaging in a discussion about potential directions for future research in this domain. Through a systematic examination of research articles, this study not only identifies gaps in the current literature but also introduces a conceptual framework. This framework is examined through the lens of four distinct sources of value creation:

- Decision support
- Customer and employee engagement
- Automation
- Development of new products and services

The findings of this study contribute to both theoretical and managerial perspectives, offering significant potential for the development of novel theories and innovative management practices in the field of AI integration within organizations.

**Ashish Malik (2023)** Artificial intelligence (AI) is exerting a substantial influence on the domain of human resource management (HRM), leading to significant transformations in the dynamics of work, the roles of employees, and the structure of workplaces. As organizations increasingly view AI-assisted HRM as a strategic avenue for enhancing overall productivity, there remains an unaddressed gap in the academic literature—specifically, the absence of a comprehensive strategic framework to facilitate HR managers in the adoption and implementation of AI in HRM practices. Nonetheless, the existing body of research in this field provides an opportunity to develop such a framework. This systematic review, comprising an analysis of 67 peer-reviewed articles, endeavors to address this gap. It involves a critical examination of the consequences of AI-assisted HRM from both an organizational and employee-oriented perspective. Subsequently, based on the insights derived from this review, a strategic framework is formulated. This framework aims to serve as a guiding

structure for the practical implementation of AI-assisted HRM strategies and for shaping the trajectory of future research endeavors in this domain.

**Thomas Davenport (2019)** in the foreseeable future, artificial intelligence (AI) is poised to bring about significant transformations in both marketing strategies and customer behaviors. Drawing from an extensive foundation of existing research and substantial practical insights, the authors introduce a comprehensive framework that encompasses multiple dimensions for understanding the impact of AI. These dimensions encompass the levels of intelligence exhibited by AI, the types of tasks it is capable of, and whether AI operates within the framework of a robotic entity. Previous research typically delves into one or more of these dimensions in isolation, whereas this paper amalgamates all three into a unified framework. Subsequently, the authors put forth a research agenda that not only explores the forthcoming alterations in marketing strategies and customer behaviors but also underscores critical policy considerations related to privacy, biases, and ethical concerns surrounding AI implementation. Lastly, the authors advocate that AI is more likely to yield effectiveness when it functions as a complement to human managers, enhancing their capabilities rather than entirely supplanting them.

#### **DIRECTIONS FOR FUTURE RESEARCH**

**AI-Enhanced Customer Journey Analysis:** Investigating how AI can be leveraged to provide more comprehensive and real-time insights into customer journeys, helping marketers optimize touch points and improve customer experiences.

**AI and Predictive Analytics:** Exploring advanced AI-driven predictive analytics models that can forecast consumer behavior, market trends, and competitive dynamics with greater accuracy.

**Ethical AI in Marketing:** Researching the ethical implications of AI in marketing, including issues related to data privacy, algorithmic bias, and the responsible use of consumer data.

**AI-Generated Content and Creativity:** Assessing the role of AI in content creation, creative marketing campaigns, and storytelling, and its impact on consumer engagement and brand perception.

**AI and Customer Personalization:** Investigating how AI can enhance customer personalization strategies, ensuring that recommendations and communication are truly tailored to individual preferences and needs.

**AI and Multichannel Marketing:** Exploring how AI can optimize multichannel marketing efforts, ensuring consistent and effective messaging across various platforms and devices.

**AI in Customer Support and Chatbots:** Examining the use of AI-powered chatbots and virtual assistants in customer support and their impact on customer satisfaction and loyalty.

**AI and Marketing ROI Measurement:** Developing AI-driven models for more accurate measurement and attribution of marketing ROI, helping businesses allocate resources effectively.

**AI and Consumer Trust:** Studying how transparency and explainability in AI algorithms can build consumer trust and foster positive relationships between brands and customers.

**AI-Enhanced Market Research:** Exploring AI applications in market research, such as sentiment analysis, consumer sentiment monitoring, and trend prediction.

**AI in Emerging Technologies:** Investigating the integration of AI with emerging technologies like augmented reality (AR), virtual reality (VR), and blockchain in marketing strategies.

**Cross-Cultural AI Marketing:** Conducting cross-cultural studies to understand how AI-driven marketing strategies vary across different cultural contexts and regions.

**AI and Sustainability:** Researching the role of AI in promoting sustainable marketing practices, including eco-friendly product recommendations and green marketing strategies.

**AI-Enabled Marketing Education:** Developing AI-driven educational tools and resources for marketing professionals and students to stay updated on AI trends and best practices.

**AI and Marketing Regulation:** Examining the need for regulatory frameworks and guidelines to ensure the ethical and responsible use of AI in marketing.

**AI and Customer Behavior Insights:** Investigating how AI can provide deeper insights into consumer psychology, decision-making processes, and behavior patterns.

#### **CURRENT LIMITATIONS OF AI**

**Data Privacy and Ethics:** AI relies heavily on data, and the collection and utilization of consumer data raise concerns about privacy and ethical considerations. Striking the right balance between personalization and respecting privacy remains a challenge.

**Algorithmic Bias:** AI algorithms can perpetuate biases present in training data, leading to discriminatory or unfair outcomes. Addressing bias in AI models is an ongoing challenge to ensure fairness and equality in marketing practices.

**Lack of Transparency:** Many AI models are complex and challenging to interpret. This lack of transparency can hinder marketers from understanding why certain recommendations or decisions are made, impacting trust and accountability.

**Integration Complexity:** Implementing AI systems into existing marketing infrastructures can be complex and costly. Integration challenges may slow down the adoption of AI technologies.

**Data Quality and Availability:** AI's effectiveness depends on the quality and availability of data. Incomplete or inaccurate data can lead to suboptimal results, and not all organizations have access to high-quality data.

**Resource Requirements:** AI requires significant computational resources, including high-performance computing and large-scale data storage. Smaller businesses may struggle to afford and manage these resources.

**Human-AI Collaboration:** Finding the right balance between AI automation and human input is a challenge. Ensuring that AI augments human decision-making rather than replacing it entirely is essential.

**Consumer Trust:** Consumer trust in AI-driven marketing efforts remains a concern. Transparency, data security, and clear communication about AI's role are vital to building and maintaining trust.

**Regulatory Compliance:** Navigating the evolving landscape of AI-related regulations and ensuring compliance with data protection laws can be complex and requires ongoing attention.

**Scalability:** While AI can provide personalized recommendations and insights, scaling these efforts to reach a broader audience without losing personalization can be challenging.

**Interoperability:** Integrating different AI systems and tools can be challenging, as they may not always be compatible or easily interoperable.

**Cost of Implementation:** Developing and deploying AI solutions can be costly, and organizations may need to make substantial investments to see significant returns.

**AI Talent Shortage:** There is a shortage of skilled AI professionals, making it challenging for organizations to find and retain the talent needed to develop and manage AI initiatives.

**Dynamic Consumer Behavior:** Consumer behavior is continually evolving, making it challenging for AI systems to adapt quickly and accurately to changing preferences and trends.



**Measuring ROI:** Determining the return on investment (ROI) for AI implementations in marketing can be challenging, as it often involves long-term effects that may be difficult to quantify.

## CONCLUSION

The most transformative aspect of AI lies in its capacity to replace and enhance human cognitive abilities. A particularly groundbreaking feature of modern AI is its capacity for personalization through automated analysis of extensive datasets. This represents a significant advancement in marketing's capability to target individual customers. Marketing heavily relies on cognitive and emotional intelligence, areas where technology has had limited impact until now. With the rapid advancement of cognitive AI, it can assume many cognitive tasks in marketing and may eventually extend to handling emotional tasks as AI evolves. Researchers are already working on such developments. In practice, we observe that marketers who cannot wait for technology to fully mature are employing mechanical AI and cognitive AI for tasks that involve emotions, as true emotional AI is not yet fully developed. However, the utilization of AI intelligences may not always be optimal, such as indiscriminate data collection or unquestioningly accepting AI recommendations. Therefore, we have formulated this strategic framework to assist marketers in harnessing the advantages of various AI intelligences for effective marketing outcomes. This framework outlines how different AI intelligences can be employed in marketing research, marketing strategy (segmentation, targeting, positioning), and marketing actions (product, price, place, promotion), highlighting the strategic roles AI can play in marketing while also acknowledging the current limitations of AI. This guidance aims to help marketers make wise and effective use of AI in their practices.

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