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A Multi-Layer Analysis of AI Integration in Digital Marketing Strategy

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Abstract – The research is a systematic review of the literature related to digital marketing whose focus will be to outline the existing trends in the utilization of technologies and strategy implementation. To achieve the methodological rigor and appropriateness, evidence-gathering and filtration-controlled protocol was used; only articles published in peer-reviewed journals and conference proceedings were used. We examined 150 chosen articles, which reveals that the major research focus is the overwhelming reliance on AI-driven tools (30%), search engine optimization (25%), and social media platforms (20%); the strategic concepts of Big Data, customer relationship management, automation, and immersive environments receive comparatively less attention. The findings also reveal that the technologies have been used mainly to carry out predictive decision-making, customer engagement, and process optimization. The multilayered analytical framework converts such findings into practical recommendations that can be effective in guiding organizations to maximize the adoption of technology to ensure the attainment of sustainable competitive advantage.

Keywords – Digital Marketing, Artificial Intelligence, Strategic Reallocation, Emerging Technologies, Multi-Layer Analysis, SEO, Customer Engagement, CRM.

I. INTRODUCTION

Digital marketing is a term that originated in 1980 by a company known as the Channel erstwhile Soft Ad Group that carried out online commercials. This led to the creation of a number of digital marketing programs. In 1981, IBM launched a personal computer thus making computers the choice of enterprise, organizations and families in the world. The term "digital marketing" started to be used widely since 1990. By 1995, the number of people using the internet all over the world had reached 16 million. By 2002, the number had increased to more than 600 million and the average American now spends more time online with activities of about 11 hours a day, compared to half an hour a day in 1990 [1].

Limited broadband penetration and still slow speeds in many households were huge barriers to the comfortable use of the Internet by individuals. High Internet access costs also limited middle-income consumers from being able to afford Internet connection, as a result, stalling the growth of digital marketing from North America and delaying its spread across the globe. The centrality of the internet was confirmed in 2004 with the launching of Facebook by Mark Zuckerberg, which brought world connection to people; at the same time, Gmail was founded as a digital correspondence platform that replaced physical mail. In 2006, Twitter was introduced as a rival social media site, which expanded the digital communication landscape.

Technology, shifting consumer preferences and market forces have transformed digital marketing in the past few years in a significant manner. Data analytics and artificial intelligence (AI) have been significant components of this change, and they influence the process of acquiring the knowledge about the target audiences and communicating with them in a completely novel manner. This change in paradigm does not apply to the conventional implementation of marketing since it entails the application of advanced analytical tools and an AI-driven algorithm in the construction of highly customized and targeted advertising. Using the data analytics will give the marketers a detailed insight of how consumers behave, their preferences, and the new trends formed on the basis of analysis of the vast amounts of data gathered by different digital platforms. This data-based approach enables marketers to view the trends, future trends and modify their strategies to any specific needs and interests of specific segments of the audience.

The artificial intelligence also complements the skills of marketers as they have more advanced nature predictive analytics, ML (machine learning) algorithms, and NLP (natural language processing). Data analytics and AI combination have transformed the concept of digital marketing, turning it into a stagnant and the same to animated and extremely individualized customer experience. Consequently, marketers have the ability to deliver narrow-focused information, customized suggestions as well as individualized experiences within numerous touchpoints to enhance interaction and facilitate transactional selling points.

Artificial Intelligence (AI) can be described as the computation system that performs the tasks that human beings should carry out with the help of their cognitive processes (learning, problem-solving and decision-making). In the marketing environment, the analysis of data, trend discovery, predicting, and automating functions could be carried out using AI. The modern society, including the marketing world, is not an exception to the technology invasion in all spheres of our everyday life. It has been incorporated as a critical part of the marketing processes because of the creation of artificial intelligence as it represents ultra-complicated algorithms and ultra-complicated calculational models that can learn, reason, and carry out the tasks that used to involve instances of human mental functions. The evolving character of the AI in marketing has always remained transformative since its capacity to give the organizations an adequate competitive advantage cannot be ignored.

The importance of data analytics in digital marketing and its impact on the performance of corporations in the long run has been analyzed by many researchers. Data analytics usage has become the unavoidable instrument of digital marketers and the source of fostering a sustainable success and, simultaneously, mitigating the impact on the environment. The survey technique was used, and information was gathered on 273 marketing and business consultants who were chosen because of their knowledge of data analytics and digital platforms. After validation with the help of an expert review, and questionnaire pilot testing, the instrument investigated a connection between the use of data analytics and the resultant impacts on competitive advantage and organizational optimization. The SPSS version 25.0 was used to make statistical analysis, which includes descriptive and inferential methods.

Search Engine Optimization (SEO) is a powerful marketing tool that affects many issues including market share and brand equity. The literature review identifies several dimensions of marketing that are affected by the SEO, brand image, product information, brand loyalty, product pricing, brand awareness, user reviews, brand recognition, online consumer activity, and market share. Many studies have pointed out these characteristics singly or in combination. The study objective of Tatikonda et al. [2] was to enhance the advertisement of the products using the SEO approach. They employed exploratory and descriptive approach to evaluate marketing action plans through SEO and collected data through observation, interviews, and literature review. The use of an SEO strategy greatly helps in improving promotion of the product.

Our research is a systematic analysis of digital marketing research using a multi-layer analysis methodology, based on the identification of key technological constructs and their strategic implications. By mapping research emphasis to strategic importance, the study is aimed to help organizations optimize the use of technology, customer engagement, and less invested areas to maximize the effectiveness of marketing and maintain competitive advantage in the rapidly evolving digital ecosystems.

The rest of our study has been structured in the following manner: Section II is a review of related literature on AI in digital marketing, digital channels on branding or AR/VR in tourism. Section III will give a detailed report on our methodology since we are collecting data up to strategic reallocation. Section IV has given a critical discussion of our findings. Finally, Section V sums up our work by mentioning that automation and AI are two key elements of digital marketing research as they promote personalization, customer experience, and efficiency of operations.

II. RELATED WORK

AI in Digital Marketing

The application of the artificial intelligence has been extensively written in literature on different aspects of the marketing field, including customization, predictive analysis and client segmentation. However, a gap in developing coherent frameworks allowing the wholesome integration of AI in various phases of digital marketing processes (DMA) still persists.

Stone et al. [3] had a strategic plan on how AI (artificial intelligence) could be used in marketing research, planning and implementation, but the proposed strategic plan still leaves much to be desired in regard to the marketing life cycle. This gap demonstrates the necessity to develop a multi-faceted method of connecting AI applications of different digital marketing channels.

In the empirical studies, Gbadegeshin et al. [4] focuses on the technical side of digital marketing strategies as it is aimed to make digital marketing strategies more effective through the deployment of AI methodology. Despite the range of the

field, and a voluminous body of publications, there is a notable absence of scholarship that specifically interrogates the integration of AI and digital marketing. Nevertheless, there is a substantial amount of research within specific subfields such as SEO, web development, ranking factors, targeted advertising, and consumer behavior that provide optimistic clues about the prospective power of AI in the field of digital marketing literature.

According to Berestetska et al. [8], the implementation of DM automation allows uniting all the points of contact between the company/brand and the customer into a single comprehensive and dedicated process. Advertising automation is more of using dedicated software and technological solution to carry out marketing processes automatically and shift the current commercial processes of a company to digital services to conserve time and labor resources.

Table 1. Tools used for Marketing Automation

Ref.	Phase	Instrument	Purpose of Usage
Ho et al. [5]	Discussion of advertising campaigns.	Digital weblog, assistance; various analytical instruments (competitor analysis), landing page construction, doc management systems, SEMrush, Serpstat, Ahrefs, Majestic API, etc.	Systematically create and maintain revision of the contents of the website.
	Billing	Programmatic, advertising systems (e.g. LinkedIn Helper, Google Ads, Instagram Ads, Facebook Ads), visitor-generating systems, etc.	Identify the tools that would help to make the advertising process more effective.
	Lead management	Contact information collection instruments, communication methods (pop-up windows promotions on subscriptions, subscription campaigns, email, SMS, push, chatbot, etc.), etc.	Find tools to find user contacts.
Krishnan et al. [6]	Engagement with leads	Email, SMS, push, chat bots, calls.	Automatically reintroduce the prospect into the sales funnel through a mix of various contact mediums and warm him up with content without involving a human being.
	Lead conversion	CRM software, lead scoring, and technologies to move the leads through the steps (email, SMS, push, chatbots, calls).	Optimize sales by the enable managers.
Pleskach, Dmytrenko, and Zhyliuk [7]	Advertising campaign	Solutions that need to be integrated into CRM platform (PayPal and LiqPay) to accept payments.	Identify a remedy that will allow automated receiving of payment on the site and transfer this data to network.
	Content creation and promotion	Microsoft Power BI, OWOX BI, Google Analytics 4, Google Data Studio and so on.	Assess the indicators and evaluate the return of all the advertising sources/channels.

The main goal of advertising automation is to eradicate routine procedures that businesses do and substitute them with automation mechanisms, and, therefore, one of the reasons why people may not need to work on more challenging tasks is automation. Marketing automation is a complex project that consists of multiple steps. There are different instruments used in each stage (see **Table 1**).

Digital Channels for Branding

The social media, email, and websites are digital mediums that have transformed how companies interact with their buyers. Instagram, Facebook, and LinkedIn are the social media platforms that allow firms to communicate directly with customers and receive instant feedback, which becomes powerful tools of brand recognition. Furthermore, both SEO and content marketing make it easier to discover brands through search engines and thus increase visibility. Recent studies by Singh [9] revealed that SEO can attract up to 53% of overall traffic to the website, which proved it to be one of the most effective digital marketing strategies. The actual digital channels utilized in brand-building activities, their effectiveness are outlined in **Fig. 1** below.

As described by Shahzad et al. [10], the rest of the search engines that are competing against Bing, Google, and Yahoo are independent and seek users' attention; therefore, they are yet to agree on the terms of operation of a search engine. In that regard, every search engine contains proprietary operations or formula, an advanced mathematical computation known as an algorithm, developed by every search engine or firm to deliver maximum search output to users.

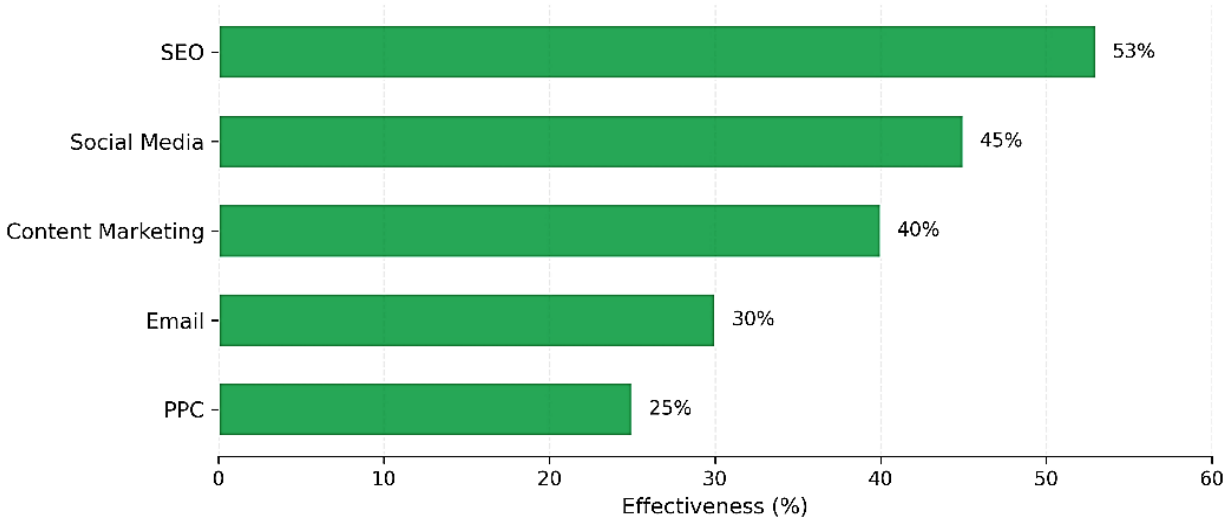

Fig 1. Leading Online Platforms in Brand Development.

The search engines are constantly evolving and tend to change their algorithms to increase the performance of search engines, which makes the specifics of how these mechanisms work transparent to ordinary people. However, Reiss et al. [11] discovered certain things with time passing and Google has also revealed certain functionalities. Search engines use three main processes: inspection and crawling which are the main processes of the search engine.

AR & VR in Tourism

According to Bretos, Ibáñez-Sánchez, and Orús [12], immersive advancements such as VR (virtual reality), and AR (augmented reality) have had a fundamental effect on the tourism sector, offering unparalleled opportunities to experience the tourism site differently, as well as changing the way passengers interact with it. However, as mentioned earlier, although there is a rise in academic contribution and application of AR and VR in the tourism industry, the literature is still disjointed, and there is an acute lack of in-depth literature reviews that would combine the existing research base. The section presents a brief review of the available literature research on AR and VR in the tourist industry, an analysis of their evolution over time and their role in understanding and application of AR and VR in the business.

The review analysis conducted by González-Rodríguez, Díaz-Fernández, and Pino-Mejías [13] is exclusively aimed at examining the impact of VR on tourism to improve the understanding of VR studies in this sphere. The authors state that the previous studies have not defined VR system leading to confusion and misunderstanding because the term VR includes systems that have different technological abilities. They divide VR systems in tourism according to the level of immersion: non-immersive (e.g., desktop-oriented VR), semi-immersive (e.g., many projection screens showing the material on the walls and floors), and highly immersive (the complete separation of the user by the environment; e.g., head-won displays). The authors clarify numerous articles on VR studies in tourism and apply the previous taxonomy in explaining the terminology and other studies. The development of VR devices is associated with the development of research: the study of non-immersive VR prevailed until 2013 and now modern research is dedicated to the full immersion VR.

In the paper, "Augmented Reality in Marketing: A Close Look at the Current Landscape and Future Possibilities", Javeed, Rasool, and Pathania [14] discusses the existing situation with augmented reality in the marketing field and also offers certain perspectives about future usage of the technology in marketing activities and its enhancement. In the article, "Augmented Reality Marketing: How Mobile AR-Apps Can Improve Brands Through Inspiration", Rauschnabel, Felix, and Hinsch [15] outlines the introduction of AR as a new approach that companies use to adopt marketing and ensure that consumers are interested. In the article, "Exploring the Implications of Virtual Reality Technology in Tourism Marketing: An Integrated

Research Framework", Huang et al. [16] addresses the issue of the potential employment of VR in advertisement and the significance of the technology. In a cohort study, Gastaldi [17] discusses the benefits and the results of using the technology in everyday marketing.

III. DATA AND METHODS

This paper implements a multi-layer analytical framework, which aims at extracting, structuring and strategically interpreting digital marketing studies in a systematic manner. The architectural idea of methodology has been designed to go beyond the shallow trend reporting by combining rigorousness in the selection of evidence, hierarchical hierarchy of thematic abstraction, and future strategic alignment analysis.

Formatted data collection and refining of evidence architecture

The informational basis of the current paper is achieved by using the controlled evidence-gathering and filtration protocol to reduce the impact of selection bias and maximize relevance based on the theme. The study materials were limited to peer-reviewed journals and scholarly conference publications that deal with digital marketing in a technological, strategic, or performance-based focus. The preliminary selection looked at keyword-concept differences over mere frequency of key word so that a study in which technology was used as an active decision-support or strategic component of a study as opposed to a brief reference was not included.

The decision flowchart of **Fig. 2** has four layers of the filtration, starting with conceptual relevance screening, and then methodological adequacy, thematic eligibility, and analytical usability. The successive layers symbolize binary decision points, with the researches that do not satisfy the specifications being filtered out. The flowchart will be in a cascading funnel format that will employ feedback loops enabling reassessment of the same when studies are found to be cross-domain relevant. Such architecture will guarantee that the resulting analytical corpus is characterized by thematic integrity and methodological soundness (instead of inclusion based on volumes).

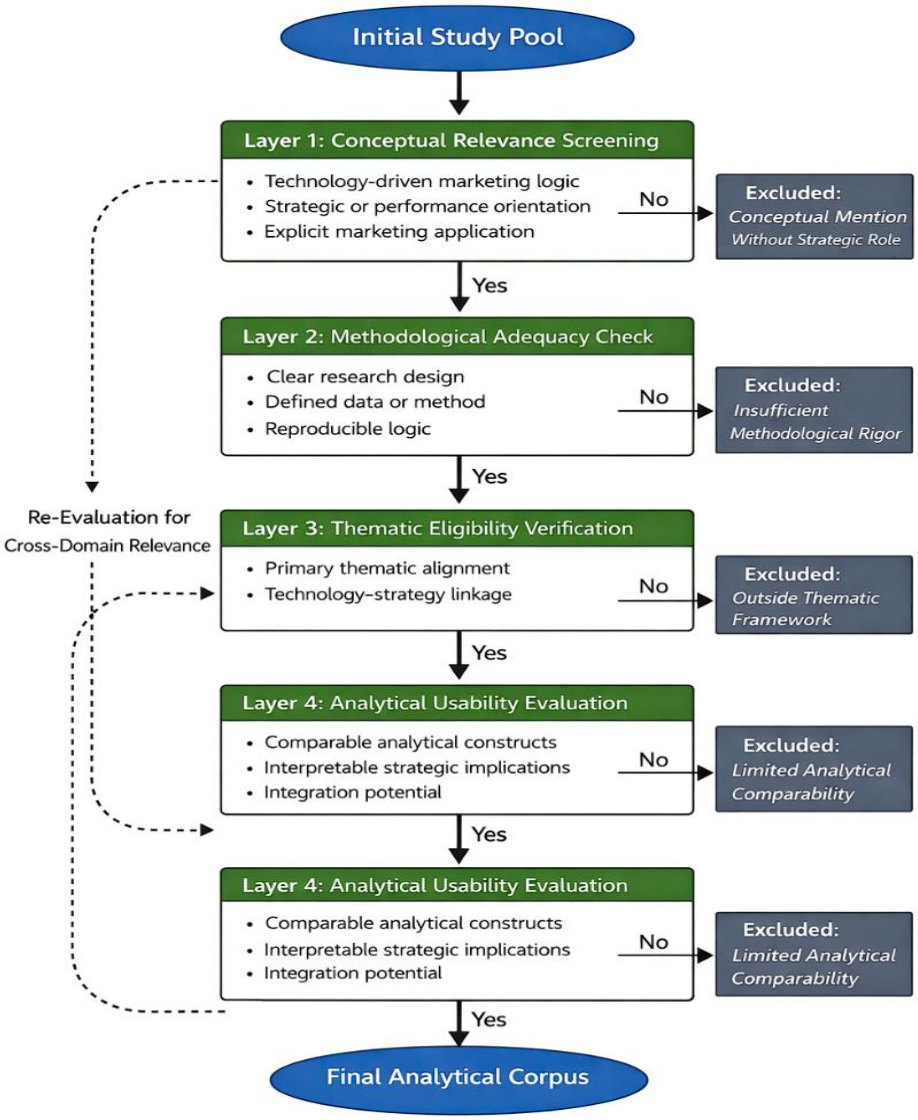

Fig 2. Four-Layer Decision.

A Hierarchical Thematic Decomposition and Analytical Framework Design

After the development of the analytical corpus, a hierarchical thematic decomposition methodology is applied in the study [18]. This approach does not consider research themes as planar categories but rather breaks them down into layers of interacting analysis. At the first tier, the research is divided into studies based on prevailing technology constructs, artificial intelligence, search engine optimization, social media systems, data analytics infrastructures, customer relationship management platforms, automation mechanisms, and immersive digital environments.

At the second tier, every technological construct will be cross-linked with its strategic role in marketing systems including predictive decision-making, engagement optimization, personalization, process automation, or customer lifecycle management. These strategic functions are connected with organizational results, such as competitive advantage, operational efficiency, customer value creation, and innovation capacity, by a tertiary abstraction layer.

This hierarchy is operationalized using a multi-tier conceptual framework diagram in **Fig. 3** which consists of vertically matched strata which interrelate directionally. The diagram is a clear modelling of dependency paths, feedbacks and cross-technology synergies and it can be used to analyze the amplification of strategic outcomes when combined technologies are used. This paradigm brings methodology to the level of categorical classification to systems level understanding.

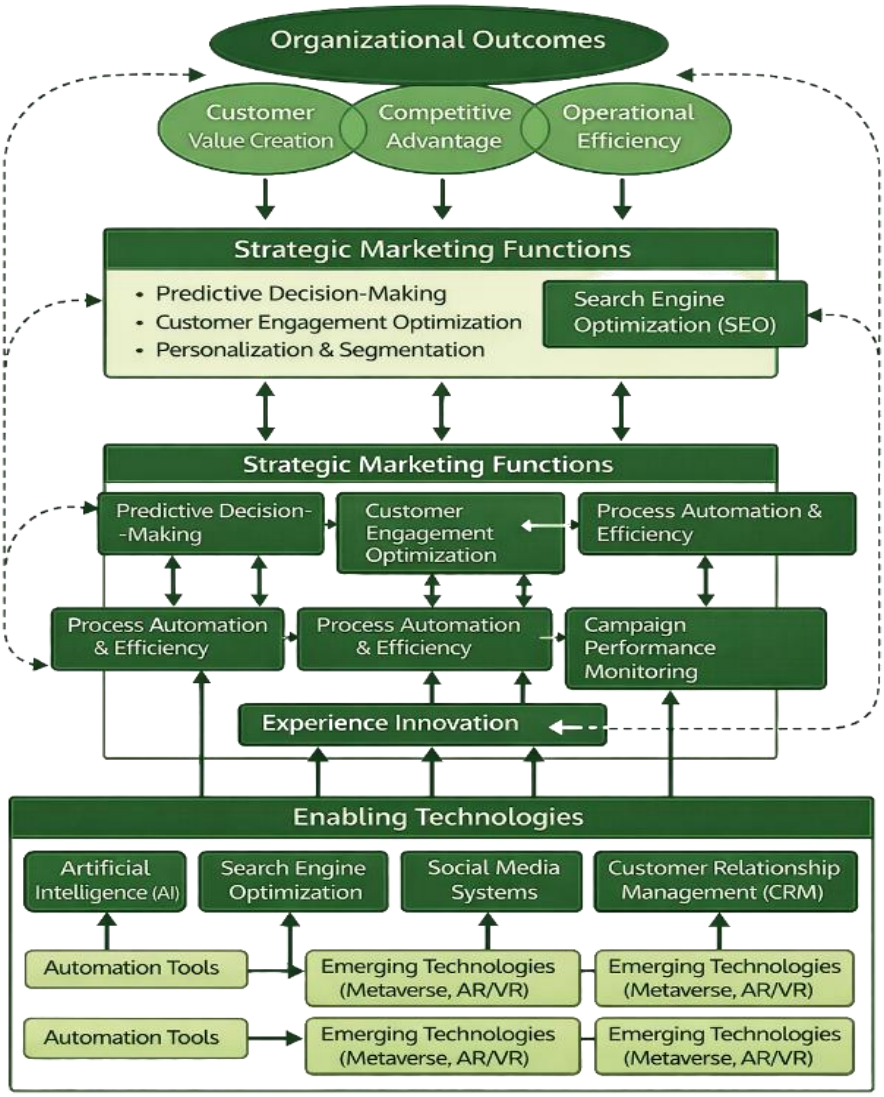

Fig 3. Conceptual Framework on the Multi-Tier Basis.

Modeling Analytical Synthesis, Gap Identification And Strategic Reallocation

The last step of methodology is undertaken to conduct analytical synthesis and strategic interpretation by an integrated approach to both quantitative and qualitative analysis. Proportional weighting of thematic categories is used quantitatively to evaluate the research concentration, dispersion and disproportion. Interpretive synthesis is a qualitative study of the role of technologies in strategic narratives, whether technologies are represented as instruments of operations or decision-support, or as mechanisms of transformation.

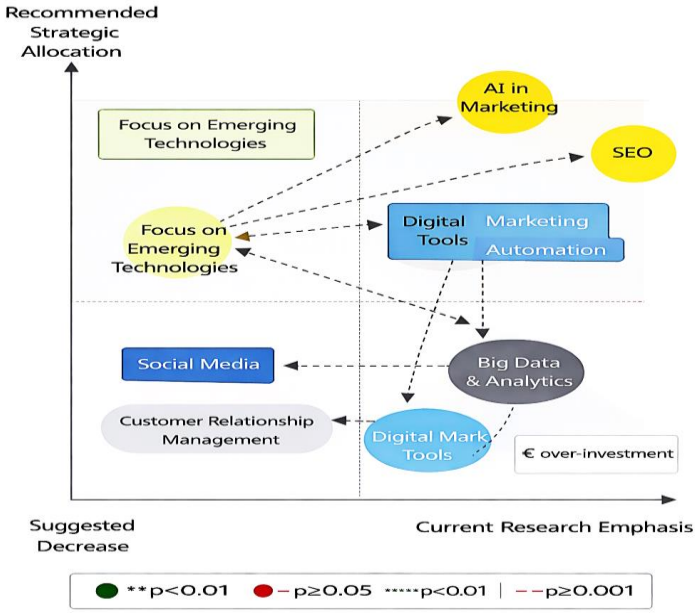

Fig 4. Strategic Reallocation Modeling.

To transform the intellectual learning about how to act upon analytical insights, the current study proposes a reallocation model of strategy as shown in **Fig. 4**. The diagram is arranged in the form of a two-dimensional matrix, the horizontal axis of which represents the current focus in research and the vertical axis represents the implied strategic priority. Dynamic nodes represent technologies; the resultant vectors of displacement identify the necessary changes of focus. The modelling framework allows a conclusive determination of over invested, under invested and emergent strategic areas and, thus, transforms descriptive tendencies into prescriptive strategic guidelines.

IV. RESULTS AND ANALYSIS

Fig. 5 outlines the key issues that are covered in the field of digital marketing. The figure presents seven thematic areas, including artificial intelligence in marketing, optimization of search engines, social media platform, big data, digital marketing tools, and tourism marketing. The search engine optimization that is considered the largest part of the sample (25% of the sample) accentuates its central role in promoting the presence of the websites on the search engine and generating organic traffic.

Social media and artificial intelligence share 20 and 20 percent respectively, which is evidence of a significant increase in their use in consumer communication and integrated marketing strategies. Digital marketing devices and big data could be viewed as examples of technological adoption supposed to determine the most appropriate marketing tools in promotion practices. Moreover, the 10%-contributing tourism marketing introduces a modern view of the sector-specific approaches to digital marketing, as well. As **Fig. 5** highlights, the researchers put a lot of focus on the different themes of digital marketing research, with a major focus on improving customer experience and using technology as the competitive advantage.

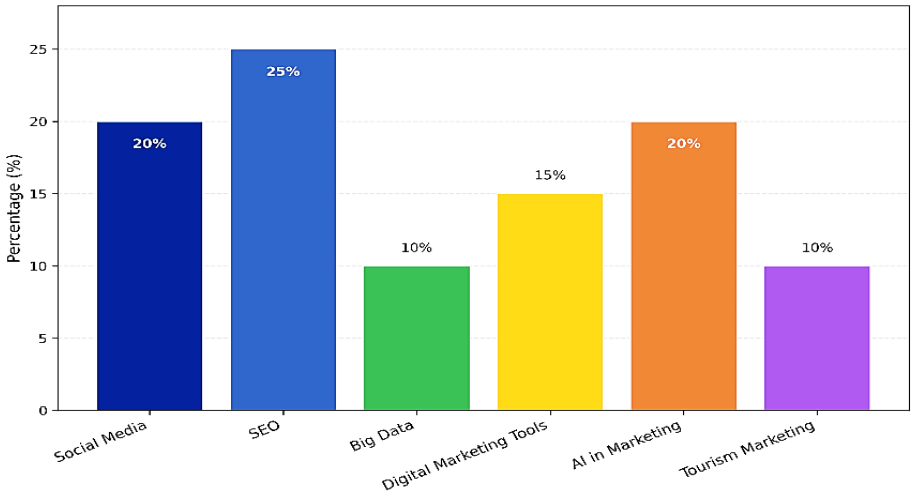

Fig 5. Areas of Focus in Digital Marketing Research.

Fig.5 illustrates how essential technologies have been incorporated in modern day marketing solutions. It highlights six areas, such as Artificial Intelligence, Big Data, social media, Customer Relationship Management, Automation, and the Metaverse which all affect the existing practice. The most common area is Artificial Intelligence, which represents 25 per cent of adoption, as facilitated by the implementation of machine-learning algorithms, predictive analytics, and improved consumer-engagement systems.

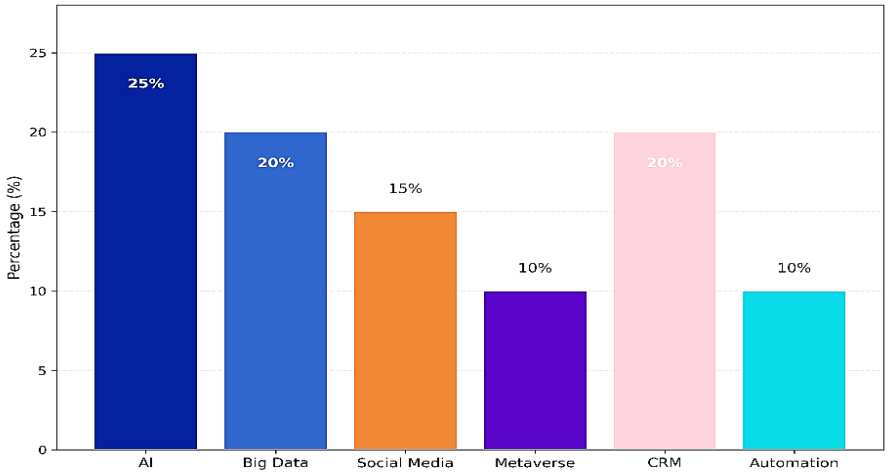

Fig 6. The Integration of Technology Solutions in Marketing.

Big Data, which is 20%, is the foundation of data-based decision-making and optimization of marketing projects. CRM, which also includes 20%, allows building long-lasting relationships with clients and strengthening brand loyalty. The 15% contribution of social media still helps to maintain active communication and improve brand awareness. The emerging Metaverse and Automation worlds, which takes up 10% each, are the future tendencies that will make consumer experience even more demanding and marketing activities smoother. **Fig. 6**, in general, reinforces the necessity of technology incorporation into the existing marketing paradigms and calls upon the reasonable integration of complementing tools and platforms.

Fig. 7 indicates that the largest share is Artificial Intelligence in marketing with 30%, due to its centralization in automating and managing the marketing efforts. The second most popular ones were digital tools, and they made 25% with their evidence of campaign performance improvement. Consumer behavior represented 15% and tourism marketing represented another 10% which expressed the attention of the participants to the consumer behavior and specific marketing practices in tourism. The two search engine optimization as well as the big data provided 10% respectively, highlighting the importance of the two data tools as the mainstays of the marketing business and their ability to enhance online presence.

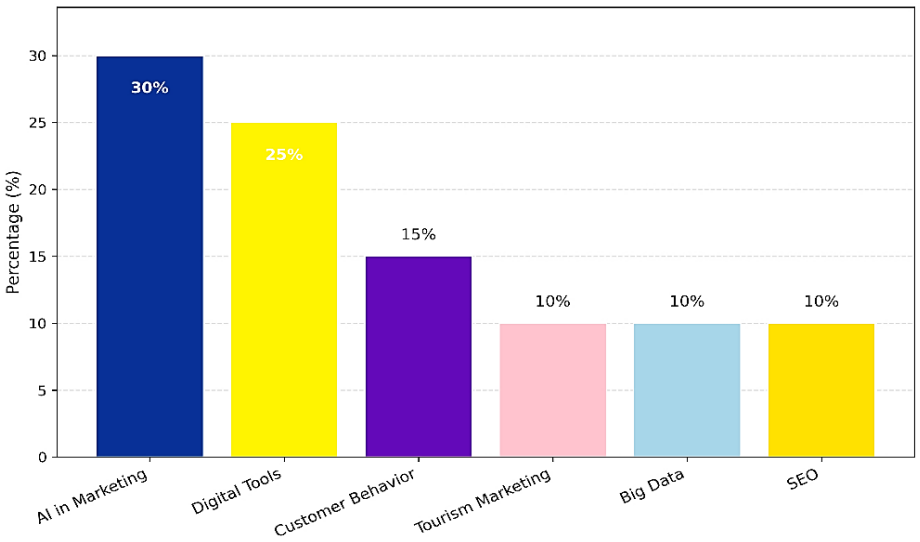

Fig. 7. Distribution of the Areas of Emphasis in Digital Marketing.

Artificial Intelligence has revolutionized modern CRM (customer-relationship management) models, which has changed how companies interact with their clients and how they optimize their operations. Combining the strong AI technologies, CRM systems have become not a simple data-management systems but highly developed systems offering actionable

information and enhancing customer experiences. The concept of machine learning is inherent to artificial intelligence-based CRM systems, which provide the opportunity to examine big data, detect patterns, and forecast consumer behaviors. This predictive attribute helps the companies to forecast the needs of the clients, tailor suggestions and correct emerging problems in advance thereby enhancing the engagement and retention plans.

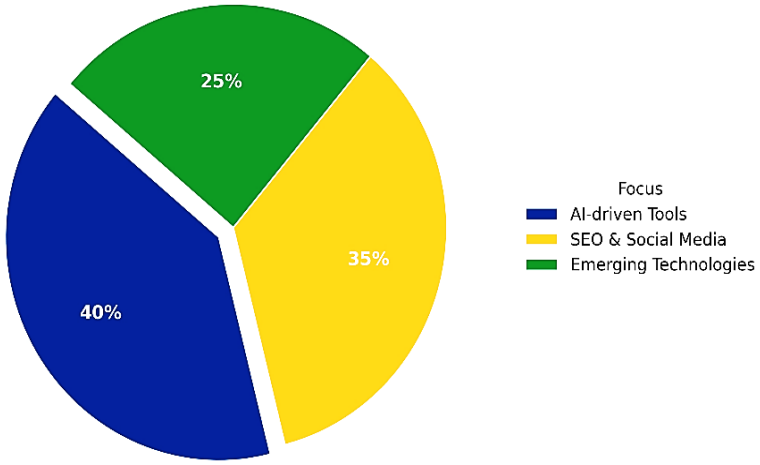

Fig 8. Areas of Concentration of Proposed Digital Marketing Strategies.

Predictive analytics is a development of machine learning that offers data-driven outcomes of consumer behavior that enables organizations to make well-informed choices on how to approach their marketing process, resource allocation, and sales forecasting. Such kind of information offers small and medium businesses the power to find out the valuable customers and prospects and thus maximize their investment. NLP is used to improve the CRM systems since it helps to understand and process human language. Sentiment analysis helps companies to determine consumer satisfaction, detect problems, and tailor its communication plan. NLP is also applicable to chatbots, which can offer real-time, automated consumer support; the virtual assistants have the ability to answer consumer questions, solve issues and guide consumers through the purchasing process.

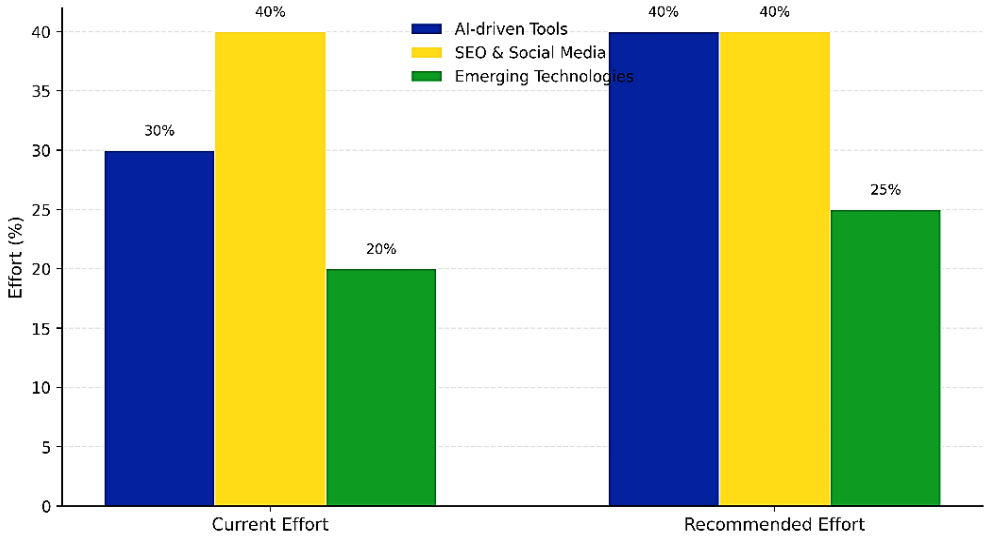

Fig 9. Comparison Between the Existing and Recommended Effort Allocation in Digital Marketing.

To enhance the relationships with customers and streamline business operations, business entities need to incorporate AI-based predictive analytics into CRM systems. The extreme necessity of using search engines and social media marketing to attain organizational success necessitates a heavy investment since the aspects help in creating exposure and gaining client interests. In an attempt to future-proof marketing, companies would focus on the joint use of the Metaverse and modern technologies of machine-automation. **Fig. 8** outlines the relative significance of the emerging technologies (25%), the search engine optimization and social media (35%), and the AI-driven tools (40%). **Fig. 9** represents existing allocations on the horizontal axis and proposed allocations on the vertical axis, and consists of four domains namely AI-driven tools, SEO and social media, and Emerging Technologies. Certain statistics indicate a tilted transition in the strategic focus with an emphasis on the relevance of AI and Emerging Innovations.

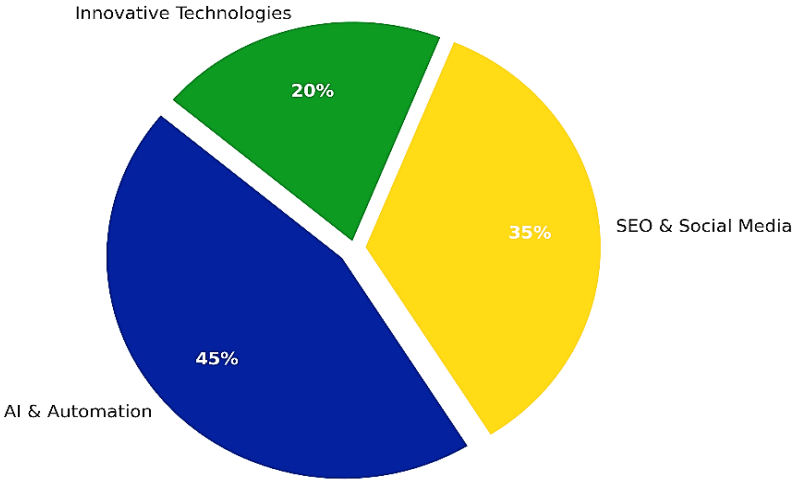

Fig 10. Proposed Areas of Concentration on Digital Marketing.

Fig. 10 outlines the key areas of focus to digital marketing including artificial intelligence and automation, search engine optimization, social media, and the latest technology. Robots and computer-generated intelligence take up a fifth of the area of focus, as they are considered to be essential since they can revolutionize the interaction with campaigns and the people. Artificial intelligence and automation are indispensable segments of communication with the customers, which can provide them with personalized insights to complement customer satisfaction. The AI-based analytics will allow companies to derive subtle insights into consumer preferences and behaviors, which will allow them to serve a tailored content that will appeal to a specific consumer. Automation ensures a high level of integration of such information on various platforms hence ensuring continuity of relationship with the clients. As an example, automated email messages can be activated only in case of the particular customer behavior (abandoned carts or product interest).

Recommendations may also be customized using artificial intelligence, and such organizations can offer suggestions of services or products based on the history of previous purchases or the browsing history. This individualized practice significantly improves communication and builds loyalty to customers. Furthermore, through chatbots that are driven by AI, there is a sense of instant customer service, whereby questions and problems are answered and solved in a timely manner [19]. This repetitive relationship makes the experience of the consumer better and creates brand loyalty. Combining artificial intelligence with automation, companies will have a chance to develop deeper and more sustained relationships with the customers and, thus, build long-term relationships.

Social media and SEO will cover 35% of the required coverage to the target population and can be applied to enhance the online perceptibility of the brand. The 20% of technologies involves the innovative technologies such as the Metaverse (and other emerging technologies) and augmented/virtual reality that have superior consumer experiences. The activities indicated in **Fig. 10** assist organizations in determining their strategic focus to ensure they have a competitive advantage through the methodologies that have been in use and new technical trends that can ensure they succeed in the digital age.

V. CONCLUSION

This paper shows that the AI and automation technologies are dominant in the body of digital marketing research due to their significant impact on the customer engagement, personalization and efficiency of operations. SEO and social media continue to play a vital part in increasing visibility and creating brand engagement; at the same time, the novel technology, such as the Metaverse and AR/VR, is set to serve as the strategic channels of innovative progress in the future. The multi-layered approach will provide descriptive and prescriptive knowledge thus explaining the research imbalances that may exist as well as prospects of strategic reallocation. Companies can be recommended to insert AI-based predictive analytics into CRM systems and research new technologies that can make their marketing strategies broader and less dependent on time.

CRediT Author Statement

The authors confirm contribution to the paper as follows:

Conceptualization: Mekdes Solomon and Wu Jing; **Methodology:** Mekdes Solomon; **Writing- Original Draft Preparation:** Mekdes Solomon and Wu Jing; **Visualization:** Wu Jing; **Investigation:** Mekdes Solomon; **Supervision:** Mekdes Solomon and Wu Jing; **Writing- Reviewing and Editing:** Mekdes Solomon and Wu Jing. All authors reviewed the results and approved the final version of the manuscript.

Data Availability

No data was used to support this study.

Conflicts of Interests

The author(s) declare(s) that they have no conflicts of interest.

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Competing Interests
There are no competing interests.

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