

THE USE OF ARTIFICIAL INTELLIGENCE (AI) TECHNOLOGY AMONG MARKETING AGENCIES IN THE REPUBLIC OF CROATIA

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Abstract

Purpose – Artificial intelligence is becoming increasingly significant in the field of marketing, enabling the automation of routine tasks, strategic planning, advertising optimization, social media management, large data set analysis and many other functionalities. These innovations provide numerous advantages in task execution. The aim of this paper is to analyze the use of artificial intelligence and the specificities of its application among marketing agencies in the Republic of Croatia.

Methodology – This paper analyses the manner and scope of artificial intelligence use in marketing agencies, exploring its impact on business efficiency. The research was conducted on a sample of 207 marketing agencies from the Republic of Croatia. A survey questionnaire consisting of 24 questions was used to collect data, of which 12 questions relevant to the selected topic were analysed for the purposes of this paper.

Findings – The research shows that artificial intelligence technology has a significant impact on the operations of marketing agencies in the Republic of Croatia. The results indicate the level of application, its contribution to overall business performance and other specific aspects of AI use in marketing agencies.

Contribution – This study provides new insights into the level of awareness among marketing agencies regarding the importance of artificial intelligence implementation. It also highlights key challenges and suggests possible strategies to improve their operations in the future.

Keywords artificial intelligence (AI), marketing agencies, Republic of Croatia

INTRODUCTION

The term artificial intelligence (AI) is difficult to define precisely and many authors throughout history have attempted to provide an adequate explanation. Among them, Elaine Rich proposed a definition in which artificial intelligence is described as a field that studies how to make computers perform tasks that humans are currently more successful at (cited in Ertel, 2017). This definition clearly and concisely captures the essence of AI research and remains relevant today and likely in the future (Ertel, 2017). For many years, very few experts and scientists in the field of marketing paid attention to artificial intelligence. However, after 2011, the number of papers on AI in marketing began to grow and since 2017 the topic has become increasingly prevalent among researchers in the field of technology (Feng et al., 2020). Artificial intelligence shows potential not only to reduce costs and improve efficiency but also to reshape the way companies interact with their customers. Research has shown that AI can be applied in

various marketing areas such as market research, segmentation and personalization, chatbots and advertising (Nair & Gupta, 2021; Ljepava, 2022; Haleem et al., 2022).

In line with the above, these developments brought about by artificial intelligence could lead to a significant transformation of marketing agencies. The appropriate use of powerful AI-based tools can enhance the efficiency of modern agencies and boost their competitiveness in the market. Moreover, the use of this technology is not merely an option but a necessity for survival in today's business environment.

In fact, the application of artificial intelligence has become a *conditio sine qua non* in today's economy. According to a Salesforce (2024) survey of 4,800 marketers from 29 countries, the best-performing marketers outperform their competitors by adopting AI technologies. In light of the growing influence of artificial intelligence on the operations of marketing agencies worldwide, it is necessary to examine whether marketing agencies are adapting to this technology and how it affects their business practices.

The aim of this research is to analyze the use of artificial intelligence (AI) technology among marketing agencies in the Republic of Croatia. The study focuses on the acceptance of this technology among agencies, the level of employee education required for effective use of AI tools and the use of specific technologies to improve various areas of marketing campaigns, such as data analysis, process automation and personalization. The research also considers the impact of artificial intelligence on campaign performance indicators, particularly customer satisfaction. Special attention is given to the challenges faced by agencies, including ethical concerns, data privacy and employee acceptance. Furthermore, it explores how agencies overcome these barriers and what strategies they employ to maximize the potential of AI in their operations. In addition to offering a comprehensive overview of the current state of AI use in marketing agencies, the paper proposes recommendations for further improvement and highlights ways in which the future of marketing agencies may be transformed. Moreover, new insights into the use of technology in marketing have been added to the existing body of knowledge.

1. LITERATURE REVIEW

1.1. Development and application of artificial intelligence in marketing

The foundations of artificial intelligence were laid with the development of the Turing test, which evaluates whether a machine can exhibit intelligent behavior indistinguishable from that of a human (Buchanan, 2005). This conceptual groundwork was further advanced at the Dartmouth Conference in 1956, where researchers proposed that every aspect of learning or any other segment of intelligence could be described so precisely that it would be possible to create a machine to simulate it (Charniak, 2024). Following this theoretical framework, the first practical applications of AI technology began to emerge in the early 1970s and gained momentum between 1970 and 1975. In the 1980s, artificial intelligence was increasingly adapted to solve real-life problems, marking the transition from theory to widespread real-world implementation (Mijwel, 2015).

The aforementioned technology has experienced dramatic growth and is becoming increasingly institutionalized in the 21st century (Liu et al., 2018). Companies recognize significant business opportunities arising from the adoption of AI, with the aim of increasing competitiveness, reengineering products or services and redefining business strategies (Campbell et al., 2020). Artificial intelligence (AI) is a disruptive technology that impacts a wide range of industries, from healthcare to retail, by enabling greater efficiency, personalization, automation and process optimization. It is widely applied in the food and agriculture industry, financial and banking services, manufacturing, transportation and logistics (Bharadiya, Thomas, and Ahmed, 2023).

According to a survey conducted in 2022 (Statista, 2024) among marketers worldwide, 62% of respondents stated that they use artificial intelligence in their digital marketing strategy. In 2020, this figure was 84%, which represents a significant increase compared to the 29% recorded in 2018 (Statista, 2024). Despite the growing interest in artificial intelligence in marketing, it is still a relatively new field with many unexplored research opportunities. It is assumed that artificial intelligence will bring about major changes in managerial activities and implemented marketing strategies, which will consequently have a strong impact on consumer behaviour. AI technology is increasingly being used to predict how customers will respond to specific advertisements (Bharadiya, Thomas, and Ahmed, 2023). It is also suggested that artificial intelligence should complement the work of managers rather than completely replace them (Davenport et al., 2019). Rai (2020) emphasizes the importance of trust in AI technologies among both managers and customers.

Since 2017, there have been numerous attempts to classify the application of artificial intelligence in marketing, with broader classifications based on marketing strategies such as segmentation, targeted advertising and positioning, as well as other activities related to the 4Ps (product, price, place and promotion). According to Jarek and Mazurek (2019), artificial intelligence has a significant impact on marketing management, requiring changes in how marketing teams approach their tasks. By automating routine activities such as data collection, analysis and image processing, AI enables greater focus on creative and strategic activities that offer a competitive advantage. Design innovations are redefining how value is delivered to consumers, while the use of AI requires the development of new skills within teams, such as data analysis expertise and knowledge of technological capabilities. These changes undoubtedly affect the functioning of marketing departments and organizations. They primarily require the introduction of new roles and competencies within marketing teams, such as proficiency in artificial intelligence, data analytics and the design and implementation of new solutions. In addition, it is necessary to develop new models of cooperation with entities that provide advanced AI solutions in order to achieve synergy between AI and other business functions.

A 2022 global survey found that 90% of marketers from 35 countries are using artificial intelligence (AI) tools to automate customer interactions, up from 88% in 2021 (Statista, 2024). In a survey conducted in July 2023, which included marketing and advertising experts from North and South America as well as Europe, over 75% of respondents stated

that they use ChatGPT in their work. Approximately 17% reported using Microsoft's AI tool Bing, while the same percentage mentioned Google's AI tool Bard. Among design tools, Midjourney, DALL-E 2 and Adobe Firefly stood out. Research has also shown that generative AI in marketing and advertising is most commonly used for content creation, idea development and market research (Statista, 2024).

1.2. Overview of marketing agencies in the context of AI

A marketing agency is composed of a team of trained marketing professionals who work together to provide marketing services to clients through various media, with the aim of attracting customers and improving the user experience (The Upwork Team, 2022).

According to a survey conducted by AgenciAnalytics (Khan, 2024), 85.7% of marketing agencies believe that AI will continue to grow, with no signs of slowing down. For this reason, 77% of agencies have already implemented AI-driven processes into their daily operations.

According to data from the Croatian Chamber of Economy (2023), a total of 1,617 entities are listed under the activity code M7311, which refers to advertising and propaganda agencies. Of this number, 265 agencies hold the status of "not blocked," meaning they are currently financially stable and actively operating in the market. Additionally, the Trade Register (2023) lists 11,819 business entities under the same activity code.

Marketing agencies in Croatia provide a wide range of digital services such as web design, advertising, social media management, email marketing, analytics and reporting. In addition to digital marketing, some agencies also offer support for traditional marketing, including the design of printed materials, event organization and promotion through radio and television. By combining digital and traditional marketing, companies are able to reach a wider audience and achieve better results (Sortlist, n.d.).

2. RESEARCH ON THE USE OF ARTIFICIAL INTELLIGENCE (AI) AND THE SPECIFICITIES OF ITS APPLICATION AMONG MARKETING AGENCIES IN THE REPUBLIC OF CROATIA

2.1. Research methodology

Although artificial intelligence is becoming increasingly present in business, especially in modern marketing, the issue addressed by this research is that there is still a lack of deeper understanding of the use of this technology in the operations of marketing agencies in the Republic of Croatia. In addition to the absence of concrete insights into the areas of its application and the specific tools being used, there is also a lack of information on how its implementation affects workforce needs, the expected level of employee expertise, and the necessity for education and training.

Accordingly, the aim of this research is to determine the extent of artificial intelligence (AI) usage and the specificities of its application among marketing agencies in the Republic of Croatia. The study examines the manner and scope of AI tool usage in agencies, identifies key advantages and challenges, and analyses the impact of AI technology on operational efficiency. The purpose of the research is to provide a concrete insight into the current practices of using artificial intelligence technology in marketing agencies in the Republic of Croatia, given the significant transformation this technology has caused in the field of marketing. Furthermore, the research aims to contribute to the understanding of different implementation approaches, which include the period of usage, key areas of application, most commonly used tools, impact on employees, perception of advantages and challenges, need for training and development, and considerations regarding its future application in business.

The research is based on a descriptive quantitative approach and was conducted using a questionnaire consisting of 24 questions divided into 10 thematic sections. For the purposes of this paper, 12 questions most relevant to the selected topic were analysed. These included dichotomous questions (e.g., yes or no) as well as statements evaluated using a 7-point Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree). Agencies were identified through Google search results for the key phrase “marketing agencies in Croatia,” as well as via the websites of the Croatian Chamber of Economy and the Trade Register. The sample was formed through purposive sampling, meaning that only marketing agencies registered under the activity code M7311 were included. According to the databases of the Croatian Chamber of Economy and the Trade Register, a total of 12,340 entities are registered under the activity code M7311, which encompasses advertising and propaganda. However, upon detailed verification, it was found that many of these entities were not marketing agencies or did not have active contact information. Accordingly, additional criteria in the selection process required that each entity under the mentioned activity code had to have an active website or social media presence clearly indicating the marketing services they provide, along with available contact details. Entities that did not meet these criteria were excluded from the sample. After excluding irrelevant entities, 705 agencies were identified as suitable for the research, and a survey was conducted using a questionnaire developed in electronic form by the authors. The survey was conducted from July 1 to August 10, 2024.

The initial method of contact involved sending the questionnaire to the official email addresses of the agencies. Due to the low response rate via email, the survey continued through LinkedIn, by directly contacting agency owners and employees, which proved to be more effective. To further increase the number of participants, agencies were also contacted by phone. Additionally, the survey was shared in the private Facebook group “Marketing & Graphic Design,” which has 13,700 members.

2.2. Research results

The results are presented in the form of graphs accompanied by descriptions that explain the key findings.

The research shows that 89.9% of marketing agencies use artificial intelligence in their operations, while only 10.1% have not yet started implementing it. Respondents who confirmed the use of AI technology were redirected to a follow-up question about the duration of its use. The largest share of respondents, 44.1%, reported using AI for between 6 months and one year, while 33.3% have been using it for 1 to 2 years. A further 13.4% started using artificial intelligence within the past 6 months.

These results indicate that the adoption of artificial intelligence technology is accelerating. The sharp rise in implementation over the last few months reflects growing trust in AI tools and a recognition of their benefits, suggesting that the use of AI in marketing agencies is likely to continue expanding rapidly in the near future.

Table 1: Time period of use of artificial intelligence (AI)

TIME PERIOD	PERCENTAGE (%)
Less than 6 months	13.4
6 months to 1 year	44.1
1–2 years	33.3
2-3 years	5.9
3-5 years	2.2
More than 5 years	1.1

Source: Authors

When asked about the impact of AI on workforce changes, 78% of respondents stated that the number of employees had remained the same. However, 18.3% reported a reduced need for employees, suggesting that AI technology has, in some cases, replaced specific functions and tasks previously carried out by staff. Conversely, only 3.8% of respondents indicated a need for more employees since the implementation of AI, pointing to the potential demand for specialized roles essential for managing AI tools.

Table 2: The impact of artificial intelligence (AI) on workforce needs

WORKFORCE	PERCENTAGE (%)
We need a smaller workforce	18.3
We need more workforce	3.8
The workforce is the same	78

Source: Authors

As many as 47.8% of respondents believe that it is extremely important for employees to be proficient in using artificial intelligence in their work. Therefore, AI literacy is no longer merely a desirable skill, but a necessary competence for employment in marketing agencies, as confirmed by the calculated weighted arithmetic mean ($\bar{x} = 4.27$). Moreover, the standard deviation ($\sigma = 0.85$) indicates a moderate spread of responses, suggesting a relatively high level of consensus among respondents regarding the importance of this competence.

Table 3: The importance of knowledge about the use of artificial intelligence (AI) among employees

IMPORTANCE	PERCENTAGE (%)
1- very unimportant	0.5
2 - unimportant	2.7
3 - neutral	15.1
4 - important	33.9
5 – very important	47.8

Source: Authors

The results related to employee education and training in the use of AI tools show that most agencies provide some form of training through various methods. The most common approach is online courses, cited by 38% of respondents. Internal training sessions and workshops are also popular, implemented by 34% of agencies. Participation in external seminars and conferences accounts for 18%, while mentoring programs aimed at developing specific AI skills are used by a smaller number of agencies (10%). Interestingly, a significant portion of respondents (34%) reported that the agencies they work for do not provide any training related to the use of AI tools.

Table 4: Education and training of employees

EDUCATION AND TRAINING	PERCENTAGE (%)
Internal trainings and workshops	34
Participation in external seminars and conferences	18
Online courses	38
Mentoring programs for the development of specific AI skills	10
Not implemented	34

Source: Authors

As many as 88.2% of respondents reported noticeable time savings since the implementation of artificial intelligence in their work. A further 6.5% were unable to assess the impact, while only 5.4% stated that they had not observed any time savings. These results clearly indicate that employees are now able to complete tasks more quickly than before, especially those that previously required significantly more time.

Tables 5: Time saving

TIME SAVINGS OBSERVED	PERCENTAGE (%)
Yes	88.2
No	5.4
Cannot Estimate	6.5

Source: Authors

To better understand the extent of time savings among respondents who answered affirmatively, a follow-up question asked them to estimate how many hours per day were saved. As many as 51.8% of respondents stated that the marketing agencies in which they work save between 1 and 2 hours daily, 22% reported savings of 2 to 3 hours, and 10.4% indicated more than 3 hours saved. These results confirm not only the presence of time savings but also suggest that such savings can be substantial. This is especially the case in agencies that have integrated artificial intelligence into their daily operations, allowing employees to shift their focus toward more creative and strategic tasks.

Table 6: **Time saving in hours per day**

TIME SAVING (HOURS PER DAY)	PERCENTAGE (%)
Less than 1 hour	11
1-2 hours	51.8
2-3 hours	22
More than 3 hours	10.4
Unknown	4.9

Source: Authors

The most frequently cited activity among marketing agencies using AI tools is "Generating and editing content (text, images, video)", selected by 93% of respondents. This is followed by "Automation of routine tasks" (50.5%), "Market research" (41.4%), "Creating visual content" (36%), "Analysis and data reporting" (33.9%), "Social media management" (30.1%), and "Content translation and localisation" (30.1%). Other notable activities include "Advertising optimization (e.g., Google Ads, Facebook Ads)" (26.9%) and "Audience segmentation and targeting" (24.2%). Additionally, "Optimization of SEO strategies" was also cited by 24.2% of respondents, indicating the role of AI tools in enhancing content visibility on search engines.

These results suggest that AI tools are widely applied in marketing agencies, ranging from basic tasks such as content creation to more complex functions like user experience personalization, advertising optimization and advanced data analysis.

Table 7: **Areas of AI tools application**

AREAS	PERCENTAGE (%)
Content generation and editing (text, image, video)	93
Automation of routine tasks	50.5
Data analysis and reporting	33.9
Market research	41.4
Audience segmentation and targeting	24.2
Predicting trends and user behaviour	16.1
Personalization of user experience	12.9
Social media management	30.1
Email marketing automation	18.8

Table 7 (continued)

AREAS	PERCENTAGE (%)
Advertising optimization (e.g., Google Ads, Facebook Ads)	26.9
Chatbots for customer support	17.2
Visual content creation	36
Translation and content localization	30.1
SEO strategy optimization	24.2
Multi-channel campaign management	5.9
A/B testing and campaign optimization	12.9
Competitor analysis	18.3
Review and customer feedback management	10.8

Source: Authors

ChatGPT is the most widely used tool, selected by as many as 96.8% of respondents, due to its wide range of capabilities. Canva Pro (52.7%) and Grammarly (45.7%) follow, thanks to their specific functionalities in visual content creation and text enhancement. Google Gemini is used by 27.4% of agencies, Midjourney by 26.3%, DALL·E by 23.7%, and Zapier by 15.6%. The data suggest that while marketing agencies use a broad variety of AI tools, most of them are applied to a lesser extent.

Table 8: Use of AI tools

AI TOOL	PERCENTAGE (%)
ChatGPT	96.8
Claude	8.1
Bing	18.3
Google Gemini	27.4
10Web	0.5
Durable	1.1
Zapier	15.6
Jasper	10.8
Chatbase	1.6
Tidio	1.1
Grammarly	45.7
Midjourney	26.3
DALL-E	23.7
Adobe Firefly	10.2
Canva AI	52.7
HeyGen	1.1
Synthesia	5.4
VEED.IO	11.3
Runway	4.3
Albert.ai	1.6

Table 8 (continued)

AI TOOL	PERCENTAGE (%)
Other (Aidbase, suno.ai, ElevenLabs, Adobe Podcast, CapCut, Leonardo AI, Midjourney, Freepik, QuillBot, originality.ai, SAS Viya, Microsoft Copilot, Perplexity, Captions, Descript, Photoshop AI element, Hubspot, Adobe Suite, Botpress, make.com)	9.7

Source: Authors

There are many benefits to using artificial intelligence in marketing strategies. By far the most commonly cited benefit is time savings, selected by 92.5% of respondents, followed by improved content quality (49.5%). Cost reduction was mentioned by 32.3% of respondents, while 19.9% highlighted enhanced data analysis. A smaller, yet still notable, percentage of respondents pointed out better audience targeting (16.7%) and increased engagement (13.4%) as key advantages.

Table 9: Advantages of using AI

ADVANTAGES	PERCENTAGE (%)
Time-saving	92.5
Improvement in content quality	49.5
Better audience targeting	16.7
Increased engagement	13.4
Cost reduction	32.3
Improvement in data analysis	19.9

Source: Authors

In addition to the benefits, marketing agencies also face challenges when using artificial intelligence in their operations. The most common challenge, identified by 81.7% of respondents, is the presence of inaccurate or imprecise information. This is followed by issues such as the integration of AI tools with existing systems (25.8%), lack of knowledge and training for AI usage (25.3%), legal and regulatory challenges (16.7%), and security and data protection concerns (14%). A less frequently mentioned but still relevant challenge is the cost of implementing and maintaining AI tools, noted by 8.6% of respondents.

Table 10: **Challenges of using AI**

CHALLENGES	PERCENTAGE (%)
Inaccurate or imprecise information	81.7
Security issues and data protection	14
Lack of expertise and training for using AI	25.3
Integration of AI tools with existing systems	25.8
Costs of implementing and maintaining AI tools	8.6
Legal and regulatory challenges	16.7

Source: Authors

As many as 42.5% of respondents believe that artificial intelligence will have a positive impact, while an additional 30.6% expect an extremely positive impact on business. According to the weighted arithmetic mean ($\bar{x} = 4.03$), most respondents are optimistic when predicting the influence of artificial intelligence on the future operations of the marketing agency they work for. The standard deviation ($\sigma = 0.779$) also indicates a moderate dispersion of responses, confirming a relatively high level of agreement among respondents regarding the anticipated positive impact of AI.

Table 11: **Predictions on the impact of AI on future business**

PREDICTIONS	PERCENTAGE (%)
1 - strong negative	0
2 - negative	1.1
3 - neutral	25.8
4 - positive	42.5
5 - strong positive	30.6

Source: Authors

3. DISCUSSION

According to the data collected, it has been established that artificial intelligence has only recently been implemented in the operations of marketing agencies. Therefore, it is understandable that the field of AI application in business remains relatively unexplored. However, due to a highly dynamic market, it is increasingly being adopted and researched. Had the research been conducted just six months earlier, the results would have likely been completely different and the same could be said if it were conducted a few months later.

In most of the surveyed agencies, there have been no changes in workforce size. However, some agencies reported a decreased need for employees, raising important concerns about the long-term implications for job reduction and the resulting social and economic challenges. Although AI technology is often perceived as a threat to employment, it can be a positive force if integrated properly. Instead of replacing jobs,

AI can enhance the workforce by allowing employees to focus on creative and strategically important tasks. Automating routine duties such as data processing, basic analysis and administration frees up time for more complex challenges that require higher levels of expertise.

The results of this study point to a significant issue. While many agencies do not offer employee training for AI tools, the majority of respondents emphasized the importance of knowing how to use them. Agencies that recognize the value of continuous education can reduce the risk of job loss and instead turn a potential threat into an opportunity for growth. Training helps employees become more productive and capable of working with advanced technologies, allowing them to take on roles that machines still cannot replicate. In this context, AI should not be seen as a threat to employment but as a catalyst for evolution, offering the chance to upskill or reskill existing staff.

To ensure successful integration, further adaptation of AI tools to the specific needs of marketing agencies is essential. Customization helps address unique client requirements while maintaining high standards of safety and quality. Alongside technical optimization, it is crucial to promote responsible AI use, especially in terms of data protection and customer transparency. Agencies must establish clear guidelines and standards to ensure that AI is used ethically, thereby building trust among employees, clients and the broader public.

This research confirms that AI is not limited to a few isolated functions but is becoming embedded across nearly all aspects of agency operations. The most common function is content generation and editing, followed by the automation of routine tasks and market research. However, fewer agencies currently apply AI to more complex areas such as SEO optimization, cross-channel campaign planning or user experience personalization. These findings suggest significant potential for expanding AI use in more advanced marketing domains.

ChatGPT is the most widely used AI tool among Croatian agencies, with 96.8% of respondents reporting its use. Canva Pro and Grammarly follow in popularity, reflecting the continued importance of visual and written communication in marketing. As tools and trends rapidly evolve, it is necessary for agencies to experiment with specialized AI tools that enable a more personalized approach to client needs and increase competitiveness in a saturated market.

Despite certain challenges that may arise from the inappropriate use of AI, respondents clearly appreciate the benefits, most notably time savings and improved content quality.

The success of future AI integration will depend on the ability of marketing agencies to strategically manage AI tools, continuously train their staff, explore innovations and remain adaptable in an evolving environment, while always operating responsibly to build long-term trust. Agencies that disregard the importance of AI may gradually fall behind.

These conclusions are aligned with global findings. Statista reports that 90% of marketers across 35 countries already use AI tools, which is consistent with the high adoption rates among Croatian agencies. Similarly, Khan found that 85.7% of marketing agencies expect AI use to grow, reflecting the optimistic outlook confirmed by this study. Furthermore, while Davenport and colleagues emphasized that AI should support rather than replace human roles, this research suggests that although most agencies have not experienced major workforce reductions, some have reported decreased demand for specific job positions. This indicates a shift in job structures rather than a loss of jobs, supporting Jarek and Mazurek's view that AI adoption demands new competencies and continuous learning within marketing teams.

Although this research has provided valuable insights, a key limitation is its national scope. It focuses exclusively on marketing agencies in the Republic of Croatia. Expanding future research to include agencies from other countries would allow for cross-national comparisons and a broader understanding of AI adoption. Additionally, incorporating related fields such as public relations agencies, digital platforms and media houses could offer deeper insights into the integration of AI across the wider marketing ecosystem. All of this would contribute to strategic planning and the continued development of this dynamic industry.

CONCLUSION

In the context of modern marketing, artificial intelligence is becoming crucial, allowing marketers to improve accuracy, speed and efficiency. One of the key ways AI is transforming marketing is by enabling marketers to process and analyze large volumes of customer data. With artificial intelligence, processes are highly automated, allowing marketers to gain insights into the current situation and adapt their strategies in a timely manner. In addition to automation, AI has advanced personalization in areas such as product recommendations, targeted ads and individually tailored messages, all of which make marketing campaigns more effective. Artificial intelligence is also essential in ad optimization, predictive analytics and task automation across all other areas of marketing.

Based on the conducted research, it is evident that the majority of marketing agencies surveyed in the Republic of Croatia use artificial intelligence in their operations. The high percentage highlights the importance of AI in modern marketing. According to the results of a 2021 study conducted by Statista, 80% of marketers had already implemented some form of artificial intelligence, which suggests that marketing agencies in Croatia are following global trends in the adoption of new technologies and recognize the importance of AI tools in improving efficiency and service quality. According to the collected data, the most common application of artificial intelligence in marketing agencies is content generation and editing (text, images, video), which is not surprising given the increasing importance of digital content in the marketing field. In addition, artificial intelligence is widely used in automating routine tasks, reducing the time needed to complete tedious and repetitive activities, thereby allowing employees to focus on more creative and strategic responsibilities. Key areas of AI application also include

advertising optimization, audience segmentation and targeting, and SEO strategy optimization.

While this explorative research offers relevant and applicable insights, especially in the context of marketing agencies operating in dynamic markets, the national focus on the Republic of Croatia represents a contextual limitation. Still, findings may be applicable to agencies in similar environments and future research could expand on these insights globally. In addition, the dynamic nature of artificial intelligence development means that certain tools or trends may have shifted even within a short period of time, which calls for continuous monitoring and updated research efforts.

ChatGPT emerged as one of the most widely used tools, followed closely by Canva Pro and Grammarly. This explorative research also highlighted the key challenges that marketing agencies face when implementing AI tools, including issues related to inaccurate or imprecise information, difficulties in integrating AI with existing systems, and a lack of specialised knowledge among employees. These findings underscore the importance of a cautious approach, further investment in research, and continuous employee education. By addressing these challenges, marketing agencies can enhance their operations and maintain competitiveness in an increasingly demanding market.

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Note on the use of artificial intelligence tools

No artificial intelligence tools were used to generate content in the preparation of this paper. ChatGPT was used solely as a language editing aid, to improve clarity, grammar, and expression. All text has been carefully checked and edited by the author. The content of the paper is entirely the author's own and the result of independent academic work.

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