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**ARTIFICIAL INTELLIGENCE IN CONTENT MARKETING:
SHAPING THE FUTURE OF DIGITAL STRATEGY**

This article rigorously investigates the significant influence of Artificial Intelligence (AI) on the field of content marketing, focusing on how AI technologies are revolutionizing traditional practices. The research discusses the advancements in generative AI tools, such as ChatGPT and DALL-E, and their capabilities in automating the production of diverse content forms including text, images, and multimedia. The paper delves into the paradigm shift in content strategy, emphasizing how AI's predictive analytics are replacing conventional methods with more proactive, efficient, and scalable approaches. A critical analysis of the recent surge in AI investments is presented, highlighting its far-reaching implications for the global market and signifying the escalating importance of AI in both technological development and adoption. The integration of AI in diverse marketing channels is explored, particularly its impact on user engagement, content customization, and personalization. The article also confronts the challenges and ethical considerations associated with AI-driven content marketing, stressing the necessity for a balanced approach that integrates AI's computational prowess with human creativity, insight, and ethical judgment. By presenting a comprehensive overview of AI's role in content marketing, this study aims to offer valuable insights into how AI is reshaping not only marketing strategies but also the broader landscape of digital communication and consumer interaction.

Keywords: Artificial Intelligence; content marketing; Generative AI; predictive analytics; investment trends; digital transformation; content strategy; user engagement; personalization; ethical considerations.

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**ШТУЧНИЙ ІНТЕЛЕКТ У КОНТЕНТ-МАРКЕТИНГУ:
ФОРМУВАННЯ МАЙБУТНЬОГО ЦИФРОВОЇ СТРАТЕГІЇ**

У цій статті ретельно досліджується значний вплив штучного інтелекту (ШІ) на сферу контент-маркетингу, зосереджуючись на тому, як технології ШІ революціонізують традиційні практики. У дослідженні обговорюються досягнення генеративних інструментів ШІ, таких як ChatGPT і DALL-E, та їхні можливості в автоматизації виробництва різноманітних форм контенту, зокрема тексту, зображень і мультимедіа. У статті розглядається зміна парадигми контент-стратегії, підкреслюється, як предиктивна аналітика ШІ замінює традиційні методи більш проактивними, ефективними та масштабованими підходами. Представлено критичний аналіз нещодавнього сплеску інвестицій в ШІ, який підкреслює його далекосяжні наслідки для світового ринку та свідчить про зростаючу важливість ШІ як у технологічному розвитку, так і в його впровадженні. Досліджується інтеграція ШІ в різні маркетингові канали, зокрема його вплив на залучення користувачів, кастомізацію контенту та персоналізацію. У статті також розглядаються виклики та етичні міркування, пов'язані з контент-маркетингом, керованим штучним інтелектом, і наголошується на необхідності збалансованого підходу, який поєднує обчислювальну потужність ШІ з людською креативністю, проникливістю та етичними судженнями. Представляючи всебічний огляд ролі штучного інтелекту в контент-маркетингу, це дослідження має на меті запропонувати цінну інформацію про те,

як штучний інтелект змінює не лише маркетингові стратегії, а й ширший ландшафт цифрової комунікації та взаємодії зі споживачами.

Ключові слова: штучний інтелект; контент-маркетинг; генеративний ШІ; предиктивна аналітика; інвестиційні тенденції; цифрова трансформація; контент-стратегія; залучення користувачів; персоналізація; етичні міркування.

Introduction. Recent advances in generative artificial intelligence are opening up new opportunities to automate and improve content creation. Generative AI tools such as ChatGPT can write long-form text content in a variety of formats based on user prompts. Other tools, such as DALL-E, Midjourney, and Stability AI, can create images, videos, and other multimedia files [1]. As these artificial intelligence models continue to improve in accuracy and relevance, they can complement or even replace certain human content creation tasks.

Several studies emphasize the strengths of generative AI in content creation - they can create content on a large scale, faster, and at a lower cost than human creators [1, 2]. However, there are limitations in terms of content quality, accuracy, and intellectual property that can negatively impact marketing results if not addressed properly. Thus, the successful implementation of artificial intelligence requires marketers to carefully evaluate and modify the system's results before publication.

Recent literature also points to emerging roles such as "cue engineers" focused on creating effective cues to produce optimal AI-generated content. The human ability to provide the right creative challenges to AI is likely to become a key skill even as AI handles lower-level content production. Research also highlights the continued need for human oversight by experts to ensure content quality, especially for high-engagement categories where accuracy is paramount [2].

While AI can automate repetitive elements of content creation, marketers will retain strategic roles in rapidly formulating, modifying deliverables, and generally overseeing AI-enabled content factories. Smaller companies in particular can benefit from low barriers to entry for AI to cost-effectively create content at scale.

Analysis of literary sources. The intersection of artificial intelligence (AI) and content marketing is a burgeoning research area, driven by the significant impact of AI technologies on marketing strategies. Key institutions and groups spearheading this research include IDC, McKinsey & Company, and tech giants' research divisions like Google Research, Microsoft Research, and IBM Research. These organizations provide vital insights into AI's role in content creation, distribution, and personalization.

Prominent scholars in this field, such as D. De Cremer, B. Nguyen, L. Simkin, Y.K. Dwivedi and others, explore various dimensions of AI in marketing. Their work ranges from examining generative AI tools like ChatGPT to consumer responses to AI-generated content and ethical considerations in AI's use.

Their research is crucial for understanding the evolving landscape of content marketing in the digital age, particularly the balance between AI-driven efficiency and human creativity. As AI continues to advance, its study in the context of content marketing remains timely and essential, guiding businesses in effectively leveraging these technologies to connect with and understand their audiences.

Aims. Thus, in the current study, the author proposes to assess the influence of artificial intelligence on content marketing and explore its future developmental trajectory.

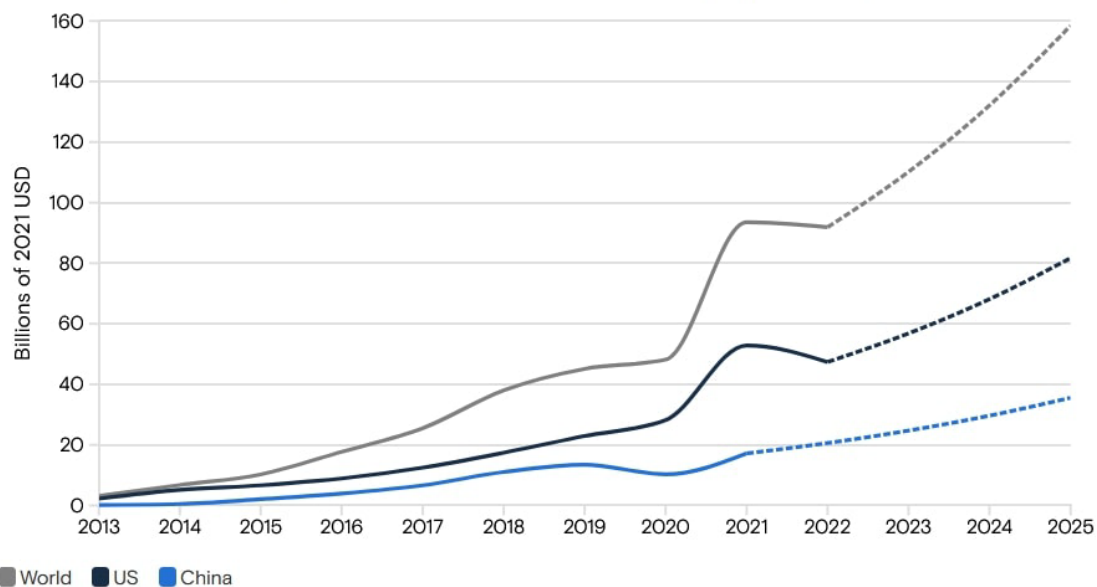
Research results. Artificial intelligence is not just a tool, it is a game changer in content strategy development. The traditional hit-or-miss approach is being replaced by predictive AI analytics, which predicts content trends and audience preferences with impressive accuracy. This

allows for a more proactive content strategy, where companies can anticipate and meet market needs before they become apparent.

In 2022, investments in artificial intelligence (AI) increased significantly by 24% compared to the previous year. This upward trend continued into 2023, marking a significant increase in AI investment, indicating its growing importance in technological development and adoption. According to a study conducted by IDC, the global artificial intelligence market is projected to grow by 31.4% year-on-year, reaching an impressive \$64 billion in 2023 [3].

The shift in investment focus is particularly noticeable in the United States, where more than 25% of all startup funding has been allocated to AI-related companies. This is a significant increase from the average of approximately 12% seen from 2018 to 2022. Large tech corporations, including industry giants such as Google, Microsoft, and IBM, along with a host of startups, are making significant investments in AI research and development, emphasizing the key role of the technology in the current and future technological landscape [4].

A comprehensive report by Goldman Sachs further underscores this trend, predicting that global AI investment will reach a staggering \$200 billion by 2025. This rapid growth in AI investment could have a profound economic impact. It is estimated that by 2025, this growth could reach 4% of the GDP of the United States and 2.5% of the GDP of other leading investor countries [5]. This level of economic impact is comparable to the transformative effects of historical technological revolutions, such as the advent of electricity and the widespread adoption of personal computers, which underscores the role of artificial intelligence as a key driver of modern technological progress and economic growth. AI investment is likely to grow in the next three years. Private AI investment (dotted lines show GS revenue projections) – Shown on Figure 1.



Source: [10–12].

Figure 1. Investments in AI

Digital platforms such as social media, search engines and e-commerce marketplaces are becoming increasingly important channels for reaching today's audience.

Different platforms have different content needs, infrastructure, and algorithmic biases. Marketers should evaluate each channel separately to determine the optimal AI strategy. For example, some platforms may discount generic, machine-generated content or mark it as spam. Others like highly optimized, SEO-friendly content that AI can potentially create with the right prompts.

Studies also emphasize that AI-generated content changes the very dynamics of the platform, significantly increasing the volume of content [6]. This can make it difficult to see all the content. However, unique, high-quality human-generated content can become even more valuable in a crowded environment dominated by AI. Overall, strategically managing the mix of AI-generated and human-generated content will be important.

The main goal of content marketing is to attract and convert potential customers. Here, too, AI is making a difference. Recent research highlights different consumer reactions to discovering that the content they encountered was created by AI. Issues such as lack of accuracy or personalization and perceived authenticity can negatively impact engagement [7].

However, factors such as product type, consumer demographics, and personality traits related to technology adoption or authenticity issues also play a mitigating role. Younger and more innovative consumers may, on average, respond better to AI content. Similarly, factual accuracy matters more for high-involvement utilitarian products than for emotional or low-involvement categories. Research also suggests that artificial intelligence can outperform unaided marketers in user engagement under certain conditions, such as creating viral meme content.

In general, marketers should carefully test and target AI-generated content. Adoption is also likely to increase over time with technological improvements and changing consumer comfort levels. But human oversight and an understanding of consumer psychology remain vital to success.

Using artificial intelligence for marketing can increase the perception of a technologically advanced brand, especially among innovative consumers. However, potential problems related to impersonality and lack of empathy can damage brand credibility. Marketers must develop a strategy to balance both factors.

Artificial intelligence is not just a tool, it is a game changer in content strategy development. The traditional hit-or-miss approach is being replaced by predictive AI analytics that forecasts content trends and audience preferences with impressive accuracy. This allows for a more proactive content strategy, where companies can anticipate and meet market needs before they become apparent.

Artificial intelligence technologies are increasingly being used to automate and improve the content creation process. Tools such as GPT (Generative Pre-trained Transformer) models have demonstrated remarkable abilities in generating human-like text that can be used to create blog posts, social media content, and more. In addition, artificial intelligence can analyze user engagement data to suggest topics and content formats that are most likely to resonate with the target audience [8].

AI is also transforming SEO (Search engine optimization) strategies. With the ability to analyze huge amounts of data, AI tools can identify trends, predict keywords, and suggest optimizations to improve search engine rankings. This not only improves the visibility of content, but also ensures that it reaches the most relevant audience.

The impact of artificial intelligence extends beyond textual content. Advanced AI algorithms are now capable of creating and editing images and videos. These tools can generate visual content that is consistent with textual content, creating a coherent and immersive experience for the audience. AI-powered graphic design tools enable marketers to create visually appealing content faster and more efficiently.

AI is also paving the way for more accessible and inclusive content. Through natural language processing and machine learning, AI tools can translate content into different languages, making it accessible to a global audience. They can also adapt content for people with disabilities, such as generating subtitles for videos or creating audio versions of text for visually impaired users.

Artificial intelligence tools can optimize the distribution of content across different channels. They can determine the best time to publish, the most effective platforms for different

types of content, and even the optimal frequency of publication. This ensures maximum visibility and engagement of the created content [9].

The role of artificial intelligence in analytics is key. It provides a deep understanding of content performance, allowing marketers to understand what works and what doesn't. This knowledge helps to improve content strategies and make data-driven decisions to increase ROI.

Beyond content creation and optimization, AI plays an important role in improving the overall user experience. AI-powered chatbots and virtual assistants are becoming commonplace on websites and social media platforms. These tools interact with users, provide personalized recommendations, answer questions, and guide them through content more engagingly and interactively.

Let's take a look at their effectiveness with examples. Dynamic content customization. The online news portal implements artificial intelligence algorithms to adapt the news feed for each user based on their reading habits, interests, and history of interaction with the site. A user interested in technology and science will see more articles in these fields, which will increase their engagement and time spent on the site.

A good example from Amazon and their AI-powered website personalization, which offers products based on browsing and purchase history, was a key factor in achieving a conversion rate of 13% for Prime members, compared to an average of 3.32% for online stores [10].

A Forrester report shows that predictive analytics can increase the return on investment in marketing campaigns by 200%. Spotify's artificial intelligence-based Discover Weekly feature, which generates a personalized playlist for each user, has become an important factor in the platform's engagement: more than 40% of users listen to it regularly [11].

Automated video content generation. The fitness app uses AI to create personalized video workouts for its users. The AI algorithm considers the user's fitness level, preferred training style, and previous participation in various exercises to generate personalized video content, improving the user's experience and interaction with the app.

A McKinsey & Company study showed that personalization can increase marketing ROI by five to eight times. For example, Netflix uses artificial intelligence to analyze viewer habits and preferences, which allows it to create highly personalized recommendations for shows and movies. This personalization strategy accounts for 80% of the content viewed on the platform, which significantly increases user engagement and satisfaction [12].

A Nielsen Norman Group study shows that users leave a web page in 10–20 seconds if they do not find interesting content. YouTube's artificial intelligence algorithms improve the user experience by offering videos based on viewing history and preferences, which contributes to the fact that viewers spend an average of 11 minutes a day on the platform.

Email marketing based on artificial intelligence. The online store implements an artificial intelligence system that analyzes the purchase history and behaviour of customers on the site. Based on this analysis, the system automatically sends personalized email recommendations with products that may be of interest to the customer, which leads to an increase in the number of clicks and conversions.

Chatbots for interactive content. A financial services company uses an AI-powered chatbot on its website. The chatbot interacts with visitors by answering their questions about financial products, guiding them through informative content, and providing personalized advice based on their financial goals.

Artificial intelligence in influencer marketing. A beauty brand uses artificial intelligence to identify potential influencers for collaboration. AI analyzes social media data to find influencers whose followers match the brand's target demographic. This leads to more effective partnerships and campaigns with influencers.

Real-time content adaptation. An online sporting goods store uses artificial intelligence to adapt the content of its homepage in real time based on ongoing sporting events. If a certain team wins an important match, the store immediately places relevant products on its homepage, capitalizing on the increased interest of fans.

Ethical and diverse content creation. An international corporation uses artificial intelligence to ensure cultural sensitivity and diversity in its content. AI checks the content for compliance with various cultural parameters and suggests changes to make it more inclusive and respectful of different audiences.

Microsoft's Artificial Intelligence for Accessibility program plays an important role in expanding the use of digital technologies for people with disabilities. One of the projects, Seeing AI, helps visually impaired people by describing people, texts, and objects in the environment. This use of artificial intelligence not only improves user experience but also promotes inclusivity.

Thus, the above examples demonstrate how artificial intelligence can be used to create content that is not only relevant and interesting but also anticipates and adapts to the changing preferences and behaviour of the target audience. As artificial intelligence technologies continue to develop, their role in the formation and implementation of content strategies will become more integrated and sophisticated.

Conclusions. The role of artificial intelligence (AI) in content marketing is not just transformative, but revolutionary. The future of content marketing, shaped by AI, is based on the pillars of personalization, efficiency, and strategic foresight. AI's capabilities in real-time data analysis, predictive analytics, and automated content generation are redefining the way marketers create, distribute, and optimize content.

The emergence of hyper-personalized content journeys promises a future in which every piece of content is tailored to the unique preferences and behaviors of individual users. This level of customization, achieved through AI's deep learning algorithms, will significantly increase user engagement and satisfaction, leading to higher conversion rates and customer loyalty. In addition, AI's contribution to advanced measurement and optimization will enable marketers to make more informed decisions, maximizing the ROI of content marketing.

In the future, seamless integration of AI across platforms and channels will provide a holistic and consistent user experience, which is vital in a fragmented digital landscape. Interactive and immersive content created by AI and new technologies such as augmented and virtual reality will open up new opportunities for creating engaging stories and interacting with brands.

However, this path is not without its challenges. The ethical use of AI and the importance of adhering to privacy-conscious personalization strategies will be crucial to maintaining consumer trust and complying with evolving data protection laws. Marketers will need to balance the power of AI with the creative and ethical considerations that define the human aspect of marketing.

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