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Journal of Development Economics and Management Research Studies (JDMS)
A Peer Reviewed Open Access
International Journal
ISSN: 2582 5119 (Online)



Crossref Prefix No: 10.53422
11 (19), 165-172, January-March, 2024
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Role of AI in Search Engine Optimization and Social Media Marketing

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Abstract

Artificial intelligence (AI) is any intelligence demonstrated by a computer, robot, or other machine that is similar to human intelligence. In this essay, the role of AI in social media marketing and search engine optimization is discussed. The paper provides a foundation for comprehending how artificial intelligence affects the social media marketing environment and SEO actions. In this study, the usage of AI in marketing is examined, along with the benefits and drawbacks of using tools that are powered by AI. The study searches the literature for scholarly articles that describe the many ways artificial intelligence is used in SEO based on this divide. The confidentiality limits our ability to conduct searches. The confidentiality of the algorithm utilised by SEO businesses as well as from the search engines themselves limits search efforts. The study uses secondary research to learn how businesses gain from early adoption of AI in their operations and comes to the conclusion that AI is now necessary for marketers who want to have a competitive advantage over their rivals. As a result, it encourages companies to embrace AI technology and, in particular, implores marketing managers to mandate AI training for their marketing employees.

Keywords: Artificial Intelligence, Search Engine optimization, Social Media Marketing Analytics and Algorithm.

INTRODUCTION:

Artificial intelligence is the "science of making machines smart," according to Demis Hassabis, CEO of AI company DeepMind. This suggests that we teach computers to mimic human intelligence. These abilities are demonstrated by the sophisticated hardware and software you use every day. AI is the driving force behind voice assistants and real-time navigation on smartphones.

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Two of your favourite companies, Netflix and Amazon, use AI to recommend shows and other content. Additionally, email clients like Gmail use AI to automatically write some of your emails for you.

Role of AI in SEO: With its numerous uses and assistance in resolving challenging issues, AI is transforming numerous sectors. Accepting the expansion of AI in marketing does not require proof. Marketers can identify new customers, produce content, and follow leads with the aid of AI. AI can help businesses, people, and advertising agencies increase the effectiveness of social media marketing. Over time, deep learning network algorithms, machine learning models, and advanced analytical tools may expand the advantages of using AI in social media. Artificial intelligence's capabilities and appeal are expanding daily. Over the past few years, AI has undergone a considerable evolution and found use in practically every industry. AI has expanded its influence across all spheres of life, but it has penetrated farther into the marketing industry. Over the past ten years, the marketing industry has experienced quick technical advancements.

Role of AI in SMM: social media artificial intelligence (AI) has the potential to change how brands market on TikTok, Snapchat, Facebook, Instagram, Twitter, and LinkedIn.

AI now produce your social media posts with design and target social media advertisements. It's possible to automate surveillance. Powers the majority of what you see on any given social network. The market for "AI in social media" is expected to increase from \$633 million in 2018 to more than \$2.1 billion by 2023, according to Markets & Markets. AI, however, is more than simply a trendy buzzword. Modern social media marketers may employ genuine technologies to produce amazing results.

LITERATURE REVIEW:

The literature review has been done in two parts where one part of the literature deals with the Artificial Intelligence and the other part deals with the digital marketing specified to SEO and SMM.

Java T point (2023) Artificial intelligence is being used more and more frequently in a wide range of sectors in our daily lives. As a tool to aid both teachers and students in their learning processes, AI has started to have an impact on the field of education. It will take time for this to happen because not all universities have fully embraced the use of AI in education. Research, however, suggests that AI will soon have a favorable impact on the education sector. It has not yet reached the full extent of its educational potential, despite the fact that it is currently altering the educational scene. It's also unlikely that technology will totally replace human instruction in schools and universities, despite the fact that computer-based learning can be quite advantageous.

Anandvardhan (2022) finds that the widespread uses of AI are transforming sectors and assisting in the resolution of challenging issues. Accepting the expansion of AI in marketing does not require proof. Marketers can identify new customers, produce content, and follow leads with the aid of AI. AI can help businesses, people, and advertising agencies increase the effectiveness of social media marketing. Over time, deep learning network algorithms, machine learning models, and advanced analytical tools may expand the advantages of using AI in social media. Artificial intelligence's capabilities and appeal are expanding daily. Over the past few years, AI has undergone a considerable evolution and found use in practically every industry. Over the past ten

years, the marketing industry has experienced quick technical advancements. There has never been a better time for marketers to begin utilising cognitive computing and AI-powered marketing solutions, among many others, to get the competitive edge.

Smitarani Satpathy, Srikanta Patnaik (2021): Role of AI may be some restrictions on social media and the use of AI on these platforms. We'll suggest a solution as a way to get around that issue in our future work. The study contains some survey data on social media and the application of AI by businesses and social media marketers. Social media has an unabating influence on how we live our daily lives. Companies should take the appropriate steps to ensure the privacy and security of customer data in light of the current scenario. Companies are more cautious and restrictive when it comes to allowing open access to their information for this purpose.

According to Syam and Sharma (2018), the fourth industrial revolution is fundamentally driven by decision-making. A person would have made marketing judgements in the previous decade, but in the second decade of the twenty-first century, artificial intelligence (AI) has taken the role of the evaluator and begun making decisions about company practices and market performance. In a study looking at the impact of AI on search engine marketing, this distinction is crucial. Additionally, it may be taken into account while making decisions on organizational development.

Yodhi Yuniarthe (2017) explains the study on the usage of artificial intelligence in SEO is hampered by the secrecy surrounding the algorithm that SEO firms use to conduct their business and the mysterious criteria employed by search engines to choose the site to rank. Even Nevertheless, several attempts to implement artificial intelligence in SEO were done, although in prototype form or as part of a commercial package. Artificial intelligence may be used to improve SEO, at the very least as a tool for data analysis in website design. Artificial intelligence (AI)-based tools will allow SEO optimization method analysts to make decisions about the best course of action for their website's structure, keywords, content, and links.

Objectives of the Study:

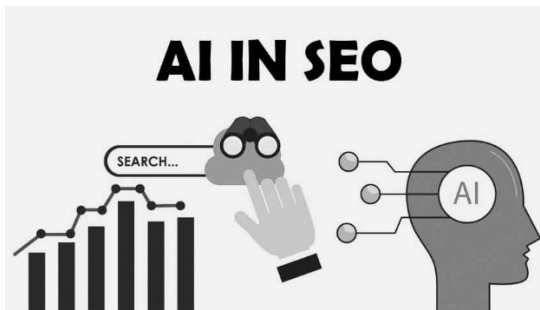
- To study the scope of artificial intelligence in SMM & SEO.
- To analyse the role of adaptivity through AI in current era.

Research Methodology:

This study is descriptive research an undertaking that combines quantitative and qualitative analysis. For the sake of this study's (literature review) objective, secondary data and information were carefully evaluated to create this report. An comprehension of the technical facets of the technology itself is provided by textbook books and journal publications. Other research sources, including white papers, case studies, and industry businesses, provide case-by-case information about the effectiveness of certain AI Marketing applications and a range of perspectives from marketers with prior experience using AI in marketing. Secondary data and information were acquired from numerous sources, such as published e-books, articles in various journals and periodicals, conference papers, working papers, internal newsletters, and internet blogs.

Investments in AI:

Many of the largest names in the tech sector have made significant investments in both AI-related acquisitions and R&D. Microsoft, IBM, Google, and Samsung have each submitted hundreds of AI patent applications, and funding for AI-related start-ups is bringing in dozens of billions of dollars annually.



Search Engine Optimization:

Nowadays, individuals just utilise Google to look up anything or to ask any questions. On average, Google handles more than 40,000 queries per second, which is a lot. Digital marketing is the only tool you have to stay competitive. If you want to succeed, you **MUST** optimize the content. Success now depends on having content that has been optimized for search engines.

Here is how AI is influencing SEO:

- AI helps create superior content
- AI helps create the ideal content strategy
- AI aids productivity growth
- AI facilitates quick reporting and analysis

Marketers can now use AI Search Engines:

In spite of artificial intelligence, search engines have made significant advancements. We can use search engines to locate the precise names we're looking for. With the help of artificial intelligence, it is now feasible to conduct more precise name searches and get results that are more pertinent. AI-enabled search engines can be used by our company brand to assist customers in finding the good or service they need. It is simple to carry out and will function even if the customer wrote a difficult term.

Marketers can use Artificial Intelligence for Market Forecasting:

As a marketer, it is crucial to deliver a satisfying consumer experience. Customer experience has become a big topic as a result of recent Google algorithm modifications. The new algorithm must be adopted by marketers if they want to surpass customers' expectations. Artificial intelligence enables marketers to more accurately forecast market structure, particularly demand. This provides them with the knowledge they require to develop the prospect or move on to the following opportunity. Artificial intelligence can be used by marketers to analyze consumer

communications and identify achievements and failures. They can make a decision on whether to work with the prospect further based on this information.

Through Content creation:

The key advantage of artificial intelligence, especially for marketers, is that AI systems can locate the most pertinent, beneficial material for our target audience. The content's information was derived from a variety of data sets. This is advantageous for marketers since it fits into their content strategy. AI systems are able to produce content that is appropriate, carefully vetted, and highly targeted for our target viewers.

Artificial Intelligence provides Chatbots:

The key advantage of artificial intelligence, especially for marketers, is that AI systems can locate the most pertinent, beneficial material for our target audience. The information utilized to create the content comes from different data sets. Since it fits into their content strategy, this is good for marketers. AI systems are capable of creating relevant material that is appropriate, highly targeted, and well-curated for our target viewers.

Chatbots are made possible by artificial intelligence:

Chatbots are seen as a key component of digital marketing, especially in contemporary digital marketing. Chatbots give advertisers the chance to keep a high retention rate. AI-enabled chatbots respond to client enquiries with written responses. Chatbots are also able to be utilized anytime, which is much more efficient than having humans serving as customer service representatives 24/7.

Artificial Intelligence provides the Market with good Advertisement Performance:

The only way a marketer can determine whether a marketing campaign is successful is to use analytics. Analytics can educate us of the components of our marketing strategy that work and those that don't. Our successful and failed commercials are thoroughly analyzed and given in-depth insights by artificial intelligence and machine learning. This can help us determine where to focus our advertising strategy efforts.



Social media marketing:

Only analytical tools were employed by social media managers to learn what people were saying about their company on social media. To ascertain what, when, and how individuals engage with their brand, businesses instead mix a variety of data. However, AI has now spread to practically all facets of social media marketing.

- Personalizing content
- Picking the right moment to post
- Scheduling content posting
- Addressing comments or direct messages
- Chatbot auto-replies, etc.

Demis Hassabis, the CEO of the AI company DeepMind, describes artificial intelligence as the "science of making machines smart."

AI in social media marketing is getting increasingly diluted as a result of the social media platforms' embrace of AI technologies. Nowadays, the vast majority of the most popular social media networks use AI algorithms.

AI in Social Media Benefits:

- ☼ AI can boost your creativity and save up time so you can focus on what really matters: getting to know your audience and interacting with them on social media.
- ☼ The focus on individuals and community is at the heart of social media marketing.
- ☼ Your effect will increase as you interact with and learn about the problems and objectives of your audience.
- ☼ We recognize that you might be subject to a posting quota. So, it's important to publish frequently on social media. You can use the time saved by AI to work on new, more worthwhile projects.

Future of AI in Social Media Marketing

- ✓ The possibility of using AI in social media marketing. AI has come a long way and will keep doing so. Like in the past, AI will continue to play a larger role in social media marketing in future.
- ✓ The power of AI content generation, predictable modeling, scheduling, and other goodies will be more embraced by social media marketers.
- ✓ Facebook uses cutting-edge machine learning for a variety of tasks, including content delivery, facial recognition in photographs, and advertising targeting.
- ✓ Instagram, a platform owned by Facebook, uses AI to identify photographs.
- ✓ LinkedIn makes job recommendations, suggests connections you might like to establish, and serves you specific content in your feed using AI.
- ✓ These are just a few instances of how AI works in the background to power features of the most famous social networks in the world. Snapchat, for example, uses computer vision to follow your characteristics and overlay filters that move with your face in real-time.

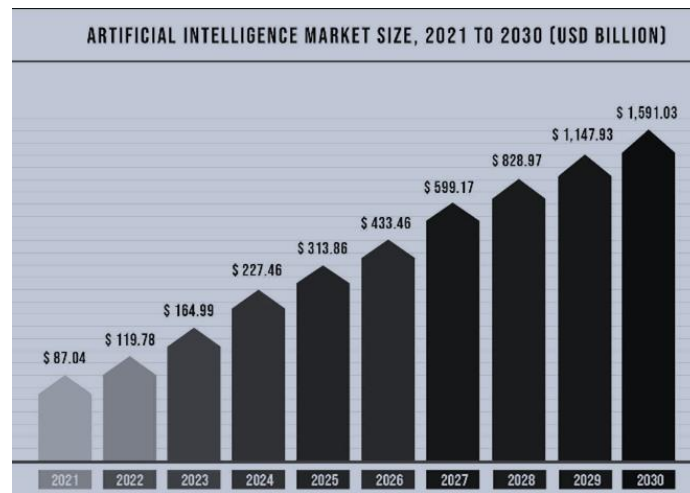
- ✓ All of this suggests that artificial intelligence (AI) is a crucial aspect of how contemporary social networks function, but that AI typically operates in the background of well-known platforms and purely at the whim of the company that owns the platform.

Future of Artificial Intelligence in social media: Artificial intelligence will be around for a very long time, as evidenced by the amazing benefits it is giving social media platforms. Given the growing number of its users, it makes logical to consider social media to be the largest marketplace in the future.

Technology will enable social networking companies to deliver a better customer experience, helping advertisers target the right customers and increasing conversion rates and return on investment. They will use graphics to engage their target consumers more deeply and observe their behavior.

Further study:

This study looks into the issue of reduced creativity while using AI tools due to knowledge gaps. Future studies can instead focus on defining creativity in SEM as opposed to the creative constraints imposed by AI's knowledge gaps. SEM. For instance, whereas one participant prioritize creativity, another participant placed more emphasis on quantitative perception.



The predicted size of the worldwide artificial intelligence (AI) market in 2022 was US\$ 119.78 billion, & by 2030, it is anticipated to grow to US\$ 1,597.1 billion, with a CAGR of 38.1%. In 2021, the artificial intelligence market was estimated to be worth USD 147.58 billion.

CONCLUSION:

AI- Top search rankings are more important than ever in a market that is more competitive than ever and where publishing methods that are data-driven, automated, and organically optimized will rule supreme. SMM cuts down on the time and resources needed for tasks like analytics analysis, performance report creation, social media post creation, promotion strategy creation, and many other things. Through the integration of AI technology into their social media marketing strategies, marketers have the chance to give their companies a significant and long-

lasting competitive advantage. The most advanced AI programs then gradually improve their forecasting precision. What makes AI so potent is its capacity to learn and grow, frequently without any direct human input. Enhancements for searches the relationships between websites, content pages, and search engine results are analyzed using AI. The results are practical techniques that may be used right away and even automated to exceed the competition. The way we optimize websites for search is changing as a result of search engine AI. By making use of these skills, you could improve the effectiveness of your social media marketing. Marketers and marketing firms successfully employ artificial intelligence. With the use of AI-enhanced advertising, marketers can use artificial intelligence to assess the success of their marketing campaigns. In addition, we will know where to invest our money to receive the best return. Furthermore, AI (artificial intelligence) improves and upgrade our SMM and SEO of Digital Marketing in easier way at fingertip.

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