# THE IMPACT OF ARTIFICIAL INTELLIGENCE IN MARKETING

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Abstract:

The core purpose of this paper is to examine elements that play a role in influencing Artificial Intelligence tools and algorithms with their implementation. The paper examines the impact of Artificial Intelligence on marketing, trends, and factors that have an effect on implementation and innovations. Topics include digital marketing, big data, ethical concerns and transparency in AI applications.

The paper is divided in two parts. In the first section, we are going to explain essential concepts and fundamentals correlating AI algorithms and models on marketing. An analysis is looking into which factors play a role in decision-making using AI in marketing. The second part investigates uses and trends in AI-driven marketing. Examples from practice are provided to show how artificial intelligence is applied in marketing in various industries and different ways.

Keywords:

Artificial Intelligence, Marketing, Ethics, Algorithm, Data.

## INTRODUCTION

Since marketing is something that surrounds us, it's no surprise that the hand of artificial intelligence grabbed upon it. Marketing is a versatile industry and a sphere of study that has a base in psychology and creativity. Marketing has a duty in providing customers with satisfaction, as in with various activities to promote different products. Artificial intelligence is widespread. The first thing that associates us with it is usage in a creative way. AI already has effective and positive results linked with marketing. AI is based on machine learning and deep learning with the help of human input. AI is still not in daily use, but it is not discriminated against. A lot of risks are still to understand and people are being very cautious. Often the reason it is avoided is due to not having a proper understanding of it and fear of the unknown. In some practices, it is not used because people are scared that it would be too obvious that it was used. Another reason is that AI has not explored its full potential yet.

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Other risks include privacy concerns and ethical regulations. For a company to have a data breach, especially one that manages sensitive user information, would be catastrophic, not only for the users, but for the company and their reputation. Even the data that is fed to the AI must be carefully filtered.

Marketing has many roles within a company, such as attracting customers, and achieving organizational goals with a focus to be the customers. The aim is to reach a widespread audience. Even with all the positive results, the risks are sometimes too high. Smaller companies can't take chances with the investment risk of implementing AI in their marketing solutions. They need to do further analysis and look at the wider picture before making any decisions. For example, Alibaba used AI to create text for advertisements. It is fully autonomous, without need for human input. AI chatbots are another example of AI being used in a safe way that has already been evaluated. They are taught to respond to customers' questions. AI is needed to be used when it comes to decisions that are data based, especially when it comes to understanding customers' needs and wants. The results have a positive effect on the sales. But blatantly using AI will not solve all the problems, especially when customers like personalized offers. AI is also used when it comes to setting up the prices for various products, while doing analysis of the market. The positive side of AI is that with nonstop use of it, you figure it out and gain expertise in it. [1]

Another instance of employing AI can be illustrated on the example of Coca Cola. Coca-Cola incorporates AI in marketing for personalized advertising campaigns, social media sentiment analysis and predictive analytics for pricing and consumer behavior. These applications have enhanced consumer engagement and optimized marketing strategies. [2]

The point relates to maximizing sales, profit and customer engagement, using artificial intelligence to ease the work is a normal and expected response. The writer pointed out the fact that AI can hold prejudice against some ethical groups. Some data and information are not accessible which leads to informational asymmetries. Customers often want to see emotions when talking to AI or else they will be unhappy. Newer models of AI have the ability of personalization for customers which happens to be one of the upper hands of AI marketing. AI also has the possibility to offer personalized offers which can be adapted to individual needs. Companies depend on artificial intelligence to analyze datasets that would take too much time for a person to do it. Psycho-

social traits are one of the patterns that can be predicted from those sets and used to create content catered to us. [3]

Overall, AI has been especially useful in marketing and industries that can afford it. By using it carefully and in the ways that have been previously proved as good practice, results are guaranteed to be positive. However, the effectiveness of AI-driven strategies depends on ethical implementation and regular updates. While AI offers powerful insights and automation, businesses must manage the risky side of it, consumers trust, ensuring transparency and data privacy. As technology evolves, companies that use AI have the possibility to gain competitive advantage while fostering long-term customer relationships.

## 2. FACTORS THAT PLAY A ROLE IN AI MARKETING

When implementing AI in marketing, a few components are in the focus, data collection being one of them. Large volumes of data are gathered from various sources, for example, customers interaction, social media engagement and purchase records. This data is called big data and is the core of AI marketing. Customer profiling is when AI analyses collected data for a better understanding of a customer profile. Then, a customer could be segmented into a specific group catered to their demographic characteristics. Machine learning algorithms are used to identify patterns and predict the future based on big data. Behavioural targeting is used when AI examines real-time user interactions and delivers personalized content and advertisements at the right moment to maximize engagement. By learning user behaviour, AI refines its targeting, making marketing strategies more effective and improving customers' experience. Predictive analytics continuously runs throughout the entire marketing process. A/B testing is a method known as split testing used to compare, for example two types of marketing ads to determine which one performs better. It is a useful optimization tool for making informative decisions. Cross-channel integration utilizes personalized AI content on different channels, for instance, social media platforms and web sites. Ethical considerations are a risky part of AI marketing strategies. Privacy regulations and user consent must be the focus when building trust. Key elements crucial for successful AI personalization are data quality and quantity, user privacy, user engagement, cultural sensitivity and others. [4]

Rapid advances in AI marketing could risk brand messages to be identical with the lack of human creativity. While AI can analyse vast amounts of data, it can not understand the emotional factors that play the role in customer behaviour. For example, to counter biases that AI has been trained on or spotted patterns in datasets, few organizations within the same industry would collaborate and share their representative datasets. That way, AI enhances fairness and efficiency. [5]

On the other hand, using generative AI can have positive effects on the marketing team. It can enhance creativity and productivity leading to better outcomes and improved marketing processes. Personalization is essential for creating more engaging content and capturing a wider audience's interest. [6]

When talking about understanding the algorithm of AI, we face transparency issues. AI algorithms operate in a way that is not easily understood. Based on inputs, AI produces outputs, but the reasoning and logic behind decision-making processes is unclear and unknown. Opaque algorithms are a type of algorithm in which users see the results but have no insight as to why the AI made these choices. This lack of transparency can lead to multiple issues with trust concerns, biases, regulatory and ethical problems. In marketing, having a bias or fairness complications can cause severe complications with the output and customer satisfaction. To ensure users are aware of what data is collected and how it's used, businesses opt to implement transparent privacy policies communicating about AI algorithms. Customers are allowed to choose which data can be collected. Providing them with this choice and control enhances their comfort. Nowadays companies are investing in algorithm accountability, monitoring if biases happen and solving challenges that emerge. This contributes to organization making sure that their AI systems are working properly assuring customers loyalty and trust. Marketers focus on explaining how AI operates and how it is incorporated into their strategy-driven decisions. AI-driven tools can help with automatization of repetitive tasks, making employees in marketing industry focus on higher-value tasks and strategies that can elevate their brand message. [7]

As shown in Table 1, there is a clear difference between traditional marketing and AI marketing. While traditional marketing relied on strategies and methods that are now considered inefficient and in outdated, AI marketing represents the future. Content personalisation refers to marketing messages and content based on personal preferences of a customer. In traditional marketing it used to be limited to broad segmentation. That means it was based on demographic data or geographic location. Broad segmentation means that marketing strategy was catered to a larger group of customers. If we import AI in this feature, results are highly customisable using AI algorithms, which indicates they are based on individual needs, preferences and wants. Data analysis used to be slow in traditional marketing, because it was based on manual methods. Marketers would collect data over time and then look through it. Since it was based on a human factor, it was time consuming and prone to errors. AI uses real-time automated processing and delivers results in no time. It can spot patterns immediately and organise results in an comprehensive manner. Cost efficiency in traditional marketing was expensive due to a few factors such as manual labor, different expensive channels and limited targeting. With the rise of automation, cost efficiency improved. Now AI can automate the tasks that used to be hand-operated, improve targeting and enhance marketing campaigns. Return on investment in traditional marketing was difficult due to issue related to tracking effectiveness of marketing campaigns. In AI marketing, ROI measurements are clear and precise, because of the algorithm that collects data and instantly provides insights.

Considering all factors, the implementation of AI in marketing can bring numerous benefits from customer profiling to boosting effectiveness of brand messages. With the help of machine learning and predictive analytics, businesses can improve their strategies and customer engagement. Regardless of positive aspects, that can't go without addressing problems like transparency, ethics and discriminations against social groups so the trust and loyalty can be built.

**Table 1.** Traditional Marketing vs. AI Marketing

| Feature | Traditional Marketing | AI Marketing |
| --- | --- | --- |
| Content Personalisation | Limited, broad segmentation | Highly customized using AI algorithms |
| Speed of Data Analysis | Slow, manual analysis | Real-time automated processing |
| Cost Efficiency | High campaign costs | Optimized through automation |
| ROI Measurement | Difficult | Precise through AI analytics |

On the one hand, AI can boost productivity, cut time in repetitive tasks using powerful tools, but on the other hand human touch and emotional connection can't be that easily replaced with full automation. By focusing on ethical practices and perfecting AI tools, along with other areas where it can provide assistance, AI can reach its fullest potential. With the development of AI, marketers must balance technological advancements with the principles of creativity, fairness, and clarity to create valuable and influential customer experiences.

## 3. EMERGING TRENDS AND APPLICATION IN MARKETING

With technology advancing, it's only natural for it to have application within various industries, including marketing. With continuous advancements of AI, new trends are rising. AI adapts to be used and personalized for different needs. Different ways of implementing AI is working in favor of businesses, cutting costs and time and increasing market rivalry.

AI has been used in green marketing. Green marketing is marketing that promotes practices in business that are environmentally friendly. The point is to attract customers who prefer sustainable options while caring for the environment and reducing the negative practices. "Green AI" focuses on environmentally friendly algorithms with the goal to minimize negative impact of AI on environment. This message fits customers wishes for brands that promote sustainability and only in products, but in technology too. AI also can optimize inventory, reduce waste and have a role in supply chain operations. [8]

Natural language processing is a part of AI that plays a big role in digital marketing. It is used to interpret human language. It can be applied in sentiment analysis, which is meant to evaluate clients' emotions. NLP is used in chatbots. Chatbots became a practice that is widely adopted, because of their capabilities to respond to inquiries, offer personalized suggestions and responding to questions. In return, chatbots gain data about customer preferences, which can be enforced in marketing strategies. Computer vision is a branch of AI that enables the analysis of images and videos to identify various elements. It can recognize different products in visual content and deliver targeted advertisements based on these items. Another way to use AI is in its generative form. It can produce text, photos and videos. This tool enhances productivity and helps marketers focus on strategy and reduces time and resources. AI can also be used in dynamic pricing. AI algorithms adjust prices

according to elements that influence them, such as demand, competition and other economic factors. Using algorithms for pricing allows companies to reach their audience easier and improve their return on investments. [9]

Following rapid advances, AI can be implemented in process of web design. It's possible to create sites that are engaging and user-friendly. This integration helps with the automation of web design tasks, including layout designs paired with content creation, which cuts the costs of website development. AI algorithms improve user satisfaction analysing website performance and user habits. [10]

Neuromarketing explains how the brain reacts to advertisements and brand-related content, combining neuroscience and psychology. The information gained this way can be further explored by AI. AI can identify which products are customers more likely to purchase and parts of brain influencing this decision can be revealed. [11]

Artificial intelligence plays a role in forecasting trends. Using this knowledge, marketers can optimise their budget and further analyse corresponding strategy. Any company that implemented AI in their marketing system can gain competitive advantage and their conversion of customers to be loyal has a higher chance. For the positioning of the brand and its message, AI that gathers data is appreciated. Thanks to different data, starting from demographic, such as age, gender, location to other data, like persons interests, the best target market for the brand is found. Marketers are using programmatic advertising, which is based on machine learning and real-time events. In that way, advertisements are catered to their ideal customers. AI helps minimise mistakes, as long as marketing specialists who are working with it provide monitoring and control. [12]

Using AI in marketing is one of the best practices available, but not everyone would agree. Businesses now face a problem into convicing stakeholders to invest in AI systems. To prove a point, tracking ROI is obvious, but showing how AI bettered user-satisfaction is hard. Stakeholders are scared of facing legal issues and damage that could happen to their image. [13]

There are a few hybrid AI models used for omnichannel personalisation. Omnichannel personalisation refers to the use of different communication channels, online and offline to provide personalised customer experience. Data collected from various channels is used to adjust content to customers taste. Multi-Modal AI combines text, image and engagement data to deliver

products that cater to customers preferences. Federated Learning is used for AI training. The data that is used in this training is decentralised, which means that if it comes to privacy breaches, most likely it won't affect personal information, since it is stored on different systems. Edge AI is technology that processes data locally and not on a cloud. That results in responses to be fast and effective. Data that is used in marketing comes from five sources. First-Party data is data that comes directly from customers interactions. Second-Party data is data that is shared between companies that work together. Third-Party data is external and comes from trends and social-media interactions. Sensor and IoT data is data that comes from different smart devices. Social media and sentiment analysis refers to AI analysing social media engagement. [14]

Including AI in CRM leads to automatization in sections such as email marketing, segmentation of customers and predictive analysis. AI cuts time and repetitive work in A/B testing and audience targeting. It achieves the possibility to forecast market changes before making a decision on marketing promotions. The main problem with including AI in email marketing is the authenticity of the message that is being broadcast to customers. AI can copy the way humans write, but can't express emotions. Other problems include plagiarism and issues with replacing human labor. The rise of AI is followed by integrations with augmented reality and virtual reality. [15]

Augmented reality is a technology that uses smart devices in a way that digital elements overlay onto the real world. It combines real-world environments with generated images and sounds. AR is nowadays combined with AI in a way that enhances personalization and interactive experiences. In tourism marketing, AR and AI can bring together a captivating experience. AR is increasingly being used in integrated marketing communications. With the help of augmented reality, all messages look more put together and bring a unique customer experience that makes a brand stand out. By integrating AI, customers feel more satisfied. [16]

With all this said, AI is emerging to be more and more used in marketing, in all processes. With development of technology, it is expected of AI to be even more important in the future, enabling faster adaptation to market changes. By implementing AI tools, businesses can enhance customers experience and improve competitiveness.

## 4. CONCLUSION

The core purpose of this paper is to research elements influencing AI tools and algorithms with their implementation in practice. The vast use of AI is helping marketers and business be cost-effective and efficient. To rely only on artificial intelligence with content creation and handling customers inquiries, can be a bad practice, since people want to see that human touch. On one hand, productivity and creativity of marketing team could be boosted, but on the other, human interaction and imagination is needed for the brand message to be unique, differentiating it from their competitors.

Different elements have a role influencing AI algorithms. One of them is big data which is a core factor. Without data, patterns, user-behaviour, customer profile and personalization couldn't be made. When collecting data, privacy policy and user agreement play a big role. Being transparent with data that is analysed can build trust with customers. AI in marketing presents ethical concerns, including data privacy and transparency. Many AI algorithms operate as "black boxes," where the logic behind decisions remains unclear. Ethical AI implementation requires:

- Transparent data collection policies
- Continuous algorithm monitoring to prevent biases
- Consumer control over shared data

For AI to be ethical in marketing, it's needed for consumers to be informed about data collection and provide their consent before data is acquired. Then, data collected should be limited to what is necessary and de-identified to make sure that the privacy of consumers stays protected. That data needs to be behind a lot of strong security protocols so the data-breaches are unable to gain access to it. Another issue that has to be resolved is AI black-box algorithms that generate output without providing clear context or revealing what had an impact on their decision. Algorithms providing outcomes should have straightforward explanations of their functionality, resulting in customers gaining trust in handing over their data. If consumers understood the logic behind targeted ads and personalized offers, that would influence their decision-making to be more knowledgeable. [17]

It is needed to constantly monitor and polish AI algorithms to ensure they remain accurate and productive. Following up with the feedback, adjusting data can help AI models to stay up to date. While AI can have

a positive impact, it is needed to balance its use with human engagement to maintain authenticity and avoid repetitions that could be caused relying on tech. By combining the power of AI with human insight, business can reach new highs of marketing efforts and build stronger, more lasting relationships with the customers. AI is revolutionizing marketing, improving efficiency and personalization. However, a balanced approach is essential, integrating AI tools while maintaining human creativity and emotional connection. Future advancements should prioritize ethical AI usage, ensuring trust and fairness in AI-driven marketing strategies.

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**523**