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HOW EFFECTIVE IS AI IN DIGITAL MARKETING

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Abstract: **AI has been used in marketing for decades, long before the term "AI" even existed. From providing valuable insights into customer behaviors to automating processes, AI has revolutionized the way marketers do business. But how effective is AI in digital marketing? Is it worth investing in a machine learning platform? In this paper, we will take a look at the advantages and disadvantages of using AI in digital marketing and explore the potential of this technology. This is also one of the first few initiatives to study the effect of AI applications on the sales data of real time businesses.**

Keywords: **AI, Digital Marketing, Automation in Marketing.**

I. INTRODUCTION

Digital marketing is the process of using technology to promote and sell products or services. AI, or artificial intelligence, is a type of digital marketing that uses data and analytics and algorithm-based technologies to automate marketing tasks. [1,2] AI can be used for a variety of digital marketing tasks, including email marketing, social media marketing, and targeted advertising. AI can help marketers save time by automating repetitive tasks and providing insights that would otherwise be difficult to obtain.

There is no one-size-fits-all answer to the question of how effective AI is in digital marketing. The effectiveness of AI depends on the specific task it is being used for, the quality of the data it has to work with, and the skill of the people who are using it.

In general, AI is most effective when it is used to supplement human expertise rather than replace it. For example, AI can be used to identify patterns in data that humans might miss, but humans are still needed to interpret those patterns and decide how to act on them.

In recent years, digital marketing has taken the world by storm.[3,4,5,6,7,8] As more businesses move away from traditional forms of advertising and embrace digital marketing, it's becoming increasingly important to be on top of the latest trends and technologies. One of these technologies is artificial intelligence (AI). AI has been touted as a game-changer for marketers, but how effective is it actually? In this paper, we will explore the role of AI in digital marketing and its effectiveness in helping brands reach their goals. We will also look at some key examples of companies that are using AI to get ahead of the competition.

1.1 Role of AI in Digital Marketing

Some common examples of AI in digital marketing include chatbots, personalization, and recommendations. Chatbots are computer programs that can simulate human conversation. They are commonly used to answer customer questions or provide support. Personalization is the process of tailoring content to individual users. Recommendations are suggestions for other products or services that a user might be interested in based on their current activity and buying preferences displayed.

AI can be effective in digital marketing because it can automate repetitive tasks, saving time and resources.[9,10,11,12] It can also provide customized content that is more likely to resonate with individual users. Additionally, AI can generate insights from data that humans may not be able to see. However, AI is not without its challenges. It can be difficult to create algorithms that accurately mimic human behavior, and there is always the risk of bias being introduced into the system.

1.2 How Artificial Intelligence powers the RACE

Artificial intelligence (AI) powers the RACE through data-based intelligent decision applications [9, 26].

Reach: The propensity of any marketing campaign to reach its target audience depends upon intelligent content curation that takes into account past purchases by the client. Artificial Intelligence powered algorithm can generate content optimized for a particular set of audiences, based upon their likes, dislikes, search history and behavior triggered by certain Call to Action (CTA) buttons and messages. Artificial Intelligence Algorithms have started predicting what search phrases will trigger a buying sentiment among a selected section of clients. Customer outreach can be increased through Natural Language Processing that applies to voice commands and voice searches. [11, 12, 13,14]

Act: Predictive modeling acts on previous user datasets and predicts buying cycle and behavior of clients in response to advertisements. Before even the customer has started the buying process and is in the stage of market research and evaluation, predictive modeling identifies the customer as a potential lead to be followed up with customized offers and packages that can lead to successful conversion.

Convert: Artificial Intelligence powered dynamic pricing introduces instant discounts to customers on the verge of converting and makes it up with surge pricing at some other sections

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of the website. Marketing techniques like re-marketing follows up with customers who had added products to carts without buying or those who have expressed similar interest while looking up a product on a website.

Engage: In the present day market, relationship with the client doesn't simply end with the buying cycle. Customer retention and customer loyalty are two prominent edifices of a business that is often handled by intelligent processes through coupons for future buying, loyalty points, bonus, and offers that help businesses maintain a good relationship with their clientele. The process of motivating a client to leave an honest business review is also handled by automated processes and plays an important part in influencing new buyers who depend on product reviews for last stage decision making.

II. DATA COLLECTION

We have collected real time data from two USA based websites, www.richardafkari.com and www.myaashis.com. Artificial Intelligence powered processes were used in the Digital Marketing processes for both the websites and the results were evaluated in the period of 2020-2021 to 2021-2022. While Search Engine Optimization data has been used for www.richardafkari.com, direct sales data from online ecommerce portal has been used for myaashis.com.

AI algorithms have been used for setting up an online query generator. Such generators are now freely available as an online tool over the web, so its development is not discussed here. The query generator keeps Digital Marketers and content generators at the top of their game by predicting the most probable questions when users are searching for particular products in a particular genre. The search listening tools provide the most probable voice search queries that are the primary sources of queries in search engines. It has to be underlined that typed in search phrases are quite different from search phrases generated from voice based searches. This saves long hours on manual keyword searches and helps generate targeted contents instantly.

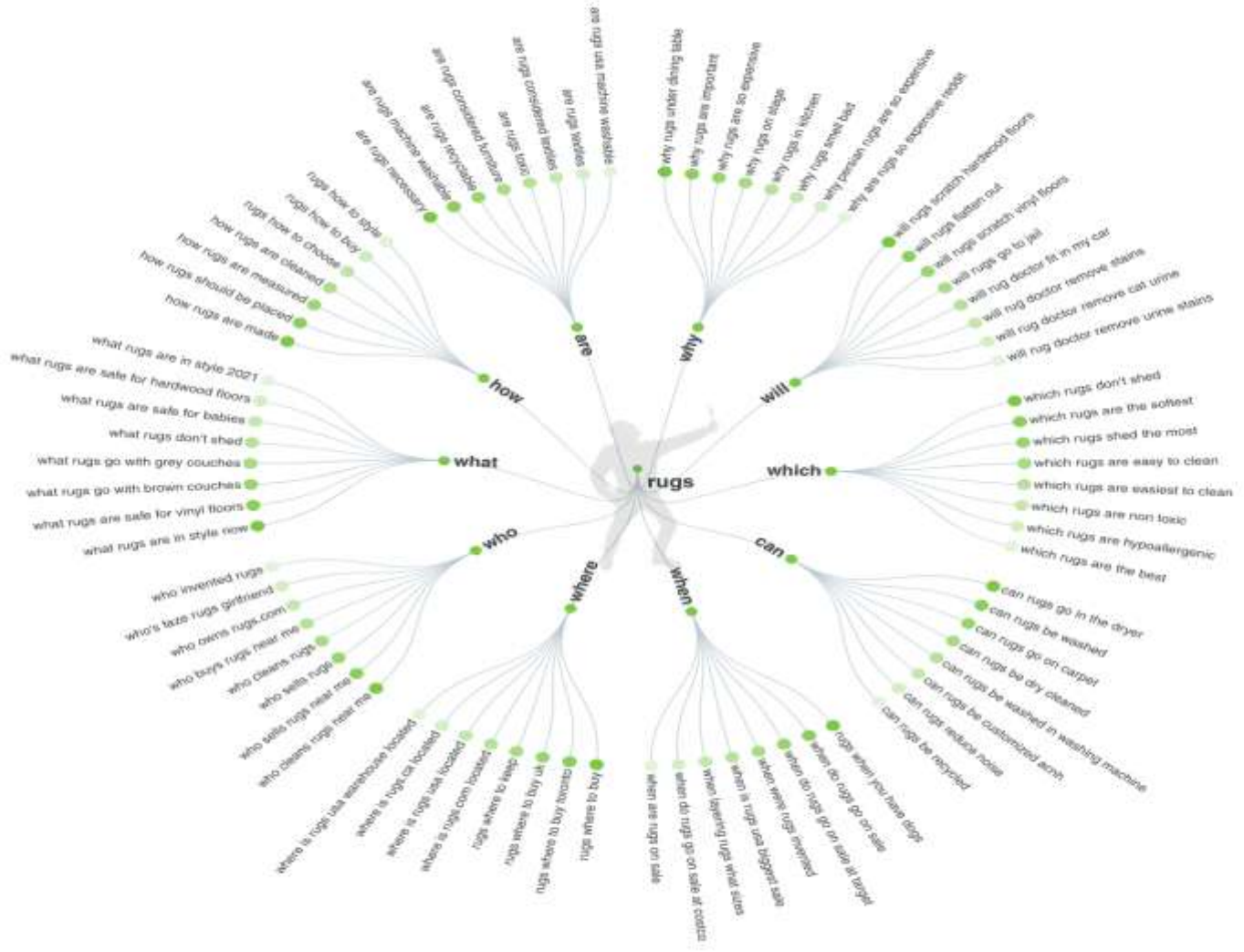


Fig.1. Most searched for long tail keywords for the word Rug in the USA.

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The search query based algorithm was again used with other keywords like with, without, near, far etc.

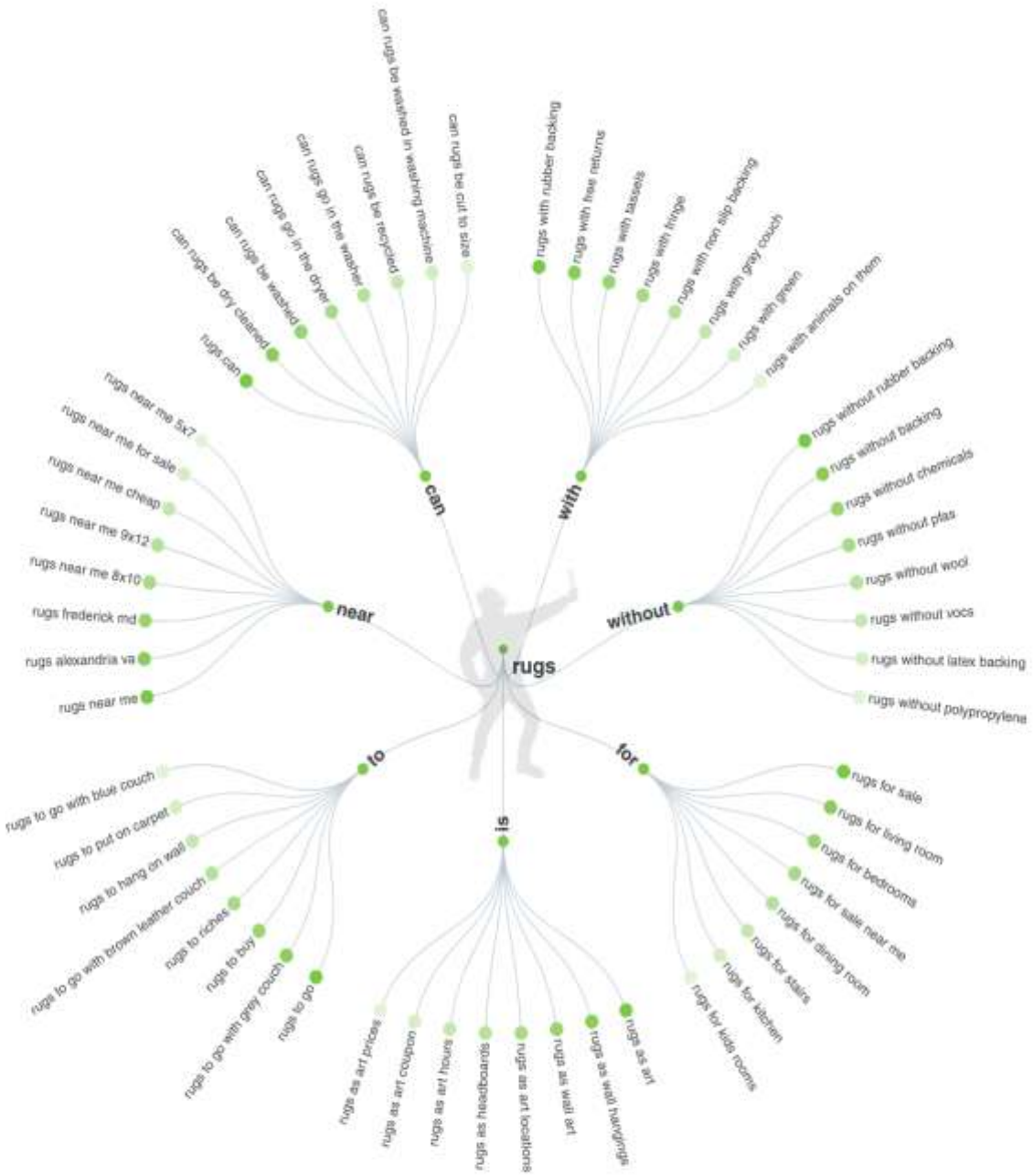


Fig.2. Residual keywords high on search list for rugs in the USA.

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III. EFFECT ON KEYWORD RANKINGS

Sustained use of AI generated keywords led to a sharp increase in website SEO rankings and currently the target website ranks above Amazon, Wal-Mart, eBay for over 20 keywords and the enhanced visibility has resulted in high business returns. Thus we see that a business has beaten all competition significantly by successfully predicting the future queries with the most search volume over the net.

	Keywords	website rank for keywords on 13/02/2023
3	**Buy Modern & Contemporary Art Deco Rug**	1
4	**Art Deco Carpets in New York**	1
5	Art Deco Rugs & Carpets in New York	1
6	**Art Deco Rugs in New York**	1
7	Art Deco Carpets for sale in New York	1
8	Art Deco Rugs NY	1
9	Buy Custom Rugs & Carpets in New York	1
10	**Buy Uniquely Modern Rugs in New York**	1
11	Modern Rugs in NY	1
12	**Shop Custom Rugs in NY**	1
13	Modern Rugs in NYC	1
14	**Buy Antique Carpets in New York**	1
15	**Modern Rugs in New York**	1
16	Modern Rugs New York	1
17	**Custom Rugs & Carpets in NY**	1
18	Shop Antique Area Rugs New York	3
19	**Antique Carpets in New York**	3
20	Custom Carpets NY	2
21	Vintage Rugs in NY	3
22	Antique carpets in NYC	3
23	**Vintage Rugs in New York**	3
24	Antique Rugs in NYC	3
25	**Buy Custom Rugs in New york**	3

Fig.3. Keyword Search Engine Rank Position for www.richardafkari.com

IV. EFFECT OF USING AI POWERED RACE ON ECOMMERCE WEBSITE

From the period 2021-2022, AI was actively used for the Reach, Act, Convert and Engage part of marketing segments on the website www.myaashis.com. Marketing got more personalized with exclusive offers for different segments of buyers along with segregated discount rates based upon the positive purchase sentiment of buyers. Sometimes in lean seasons, positive buying sentiments were artificially created through huge off season sales applicable only on select big-ticket furniture, implying that you lose when you miss out on a buy.

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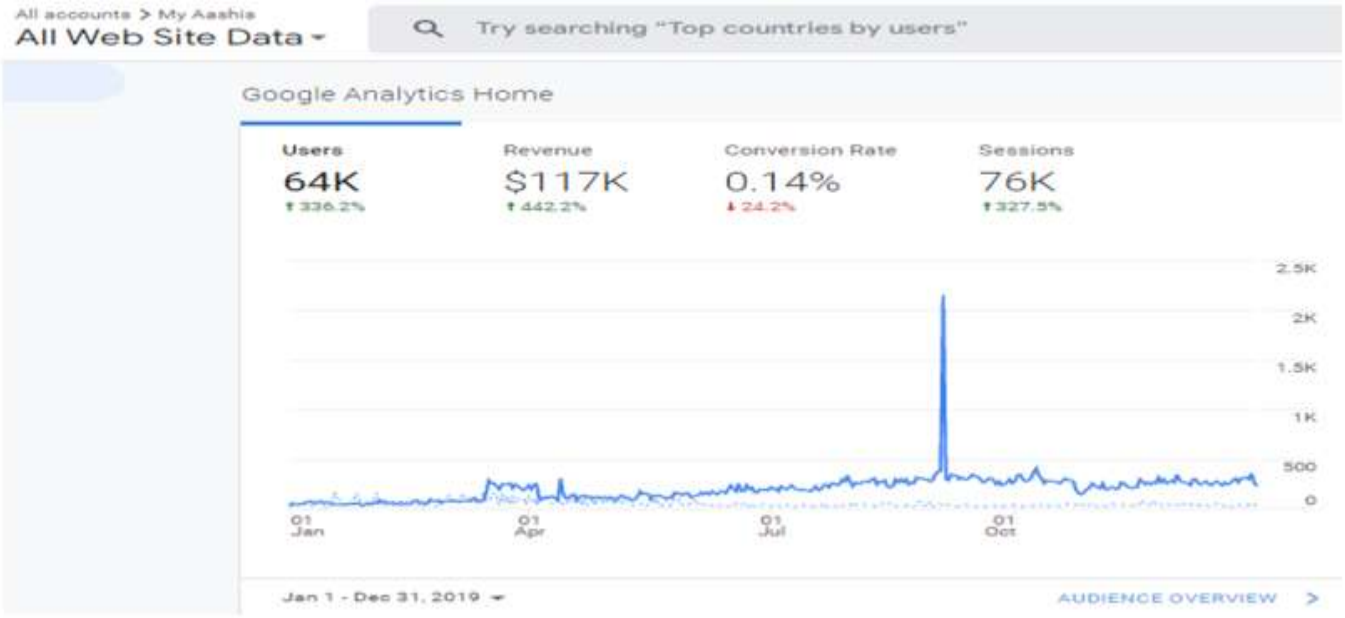


Fig.4. Google Analytics Traffic data for www.myaashis.com in 2019

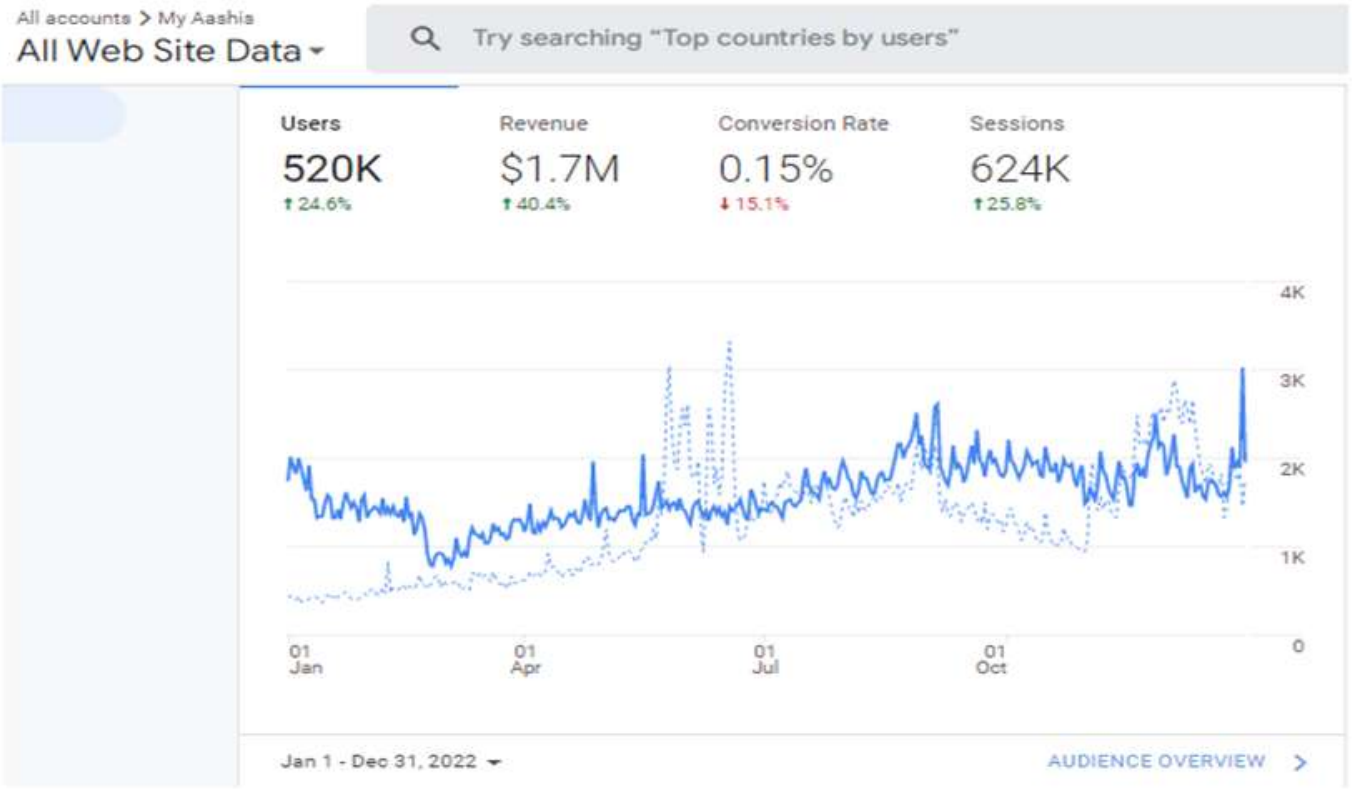


Fig.5. Google Analytics Traffic data for www.myaashis.com in 2022

Thus it is clearly evident that a change in marketing strategies and shifting to AI based personalized marketing resulted in an enhancement of revenue by over a 100 times in just over two years.

V. WHY AI REQUIRES HUMAN MONITORING

There are many potential benefits to using AI in digital marketing, but it is important to keep in mind that AI requires human monitoring. This is because AI is not yet able to fully understand or replicate human behavior and cognition. As a result, AI-powered digital marketing campaigns can sometimes produce unexpected or undesirable results.

AI also has the potential to create ethical concerns. For example, if a company uses AI to target ads based on users' personal information, there is a risk of violating user privacy. Additionally, AI-based decision making can be biased if the data used to train the AI system is itself biased. For these reasons, it is important for companies to have humans involved in the oversight and management of AI-powered digital marketing campaigns.

VI. CONCLUSION

The current study opens up a new dimension in the world of AI powered Digital Marketing. It clearly shows that AI can work well towards predictive marketing along with strongly powering the RACE elements in improving sales and business returns and fostering a strong bond with the clientele. This was predicted in numerous studies over the last decade and the results have vindicated previous predictions on the importance of AI applications in different facets of Digital Marketing. In the future days, incorporation of machine learning algorithms with Big data will result in significant gains for businesses who are quick off the block in implementing AI. Marketing Managers and decision makers will of-course not be left redundant and instead retain a critical position in decision making and intervention in deciding the direction of marketing campaigns. The data part will however be best handled with AI in the future with more and more finesse as critical thinking components are incorporated into the neural algorithms.

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