

Leveraging Artificial Intelligence for Effective Marketing Strategies

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AI800: Research Methodology in Computer Science

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April 2024

Abstract

Artificial intelligence has been implemented in several industries for decades. Companies have started to utilize artificial intelligence, and one of the critical industries today is artificial intelligence marketing. Marketing with the aid of artificial intelligence allows one to comprehend and pinpoint one's target markets. The paper focuses on the scope of AI in marketing, the impact of marketing on professionals, the progression of marketing in the future with AI, and how AI-powered tools and technology can be utilized to personalize marketing.

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Chapter 1: Introduction

The way we communicate, discover and consume various technological advances have influenced information. The internet and social media must be the foremost technological development which fuels this effect. Now, we reside in an era where a new wave of technologies has begun to change our way of living and is marking the dawn of a new technological revolution. The consumer adoption of these, particularly the smartphone, is already well underway. This has created the imperative for considerable impact on today's societies and economic systems. Data provided by the IDC in May of 2013 indicated that more than 50 per cent of US mobile phone users would be using a smartphone at the end of 2013. Estimates for 2017 forecast the worldwide use of smartphones will hit 2.5 billion. A platform shift of this magnitude has also driven another shift – how consumers approach the buying decision. On this rapid evolutionary trek through time and technology, marketing will continue to persevere for that competitive edge in an ever-changing landscape. Marketers will continue to adapt and overcome the new barriers as consumers' needs and demands evolve. To do so, marketing strategies must go through a revolution of their own. Today, customer-centric marketing has taken precedence, replacing the traditional way of mass marketing. It revolves around a process in which companies acquire data on consumer behaviour and analysis through multiple customer interaction channels. Followed using the results to improve customer communications, develop relationships, and provide positive customer experiences. Customer data warehousing giant, Teradata, has predicted that by 2015, marketing-driven data and intelligence will become the heart of company processes, thus expediting product innovation. This leads us to believe that an effective way of marketing in the future will be through utilizing data-driven methodologies. But exactly how can we ensure that this will be more effective in a data-rich future? This is where the technology revolution takes its full effect. Artificial intelligence (AI), a technology once thought to be science fiction, is on the horizon to take reign and change marketing as we know it today. And the methodology in equivalence has great potential to be a game changer. (Khan et al., 2023)

1.1. Background

This century is seeing a transformation in the way strategy implementation and monitoring are carried out in business, and one of the major drivers behind this is a big increase in data availability. This might involve data on the macroeconomic environment, sales or the success of marketing activities. Generally, it's believed that more informed decisions are better decisions, and thus, based on this, it seems that data-based decisions are better than those made without data. Thanks to new technologies for data storage and processing (cloud computing, big data, etc), it's now

easier and cheaper to store and process masses of data. As a result, it's easier for businesses to get their hands on large amounts of data, with data availability increasing annually; for instance, it is estimated that 90% of the data in the world has been generated in the past two years. Data is also an asset that doesn't depreciate: if it's stored well, it can be used indefinitely. (Bruni et al, 2021)

More specifically, the organization's marketing strategy, short- and long-term, must be guided by the organization's understanding of the market environment and conditions, and of its competitors. Using this understanding of the market, the organization must then select and implement a positioning that competitively enables them to provide a differentiated value proposition to an identified market segment by delivering perceived value. This entails the execution of the strategy and bringing it to reality as well as monitoring and controlling it. Assisting companies to do well is this iterative process of implementing marketing strategy, monitoring and controlling it to allow for revision and changes in marketing strategy implementation in the future if required for better performance. Marketing AI is about context dynamics of marketing activities and offerings and is concerned with improving the effectiveness of reality/implementation of strategy and monitoring through understanding and segmenting target markets, tailoring and delivering value to customers. (Anoop2021)

1.2. Problem Statement

Some of the ideas and suggestions in the following research may be more applicable to customers of some particular types of shops (such as SMEs and larger corporations) and this will be highlighted where appropriate, but in many cases, the focus will be more general, and SMEs will still find this useful. This line of research is consistent with the claim made above. The conclusions and how we get there might both be different at times, but the emphasis is consistent and reveals the seriousness and significance of the work being done in AI marketing.

First, AIM is a young field and many of its developments and implementations started only in the past decade. Second, the prevalence of big data, advanced analytics and AI makes marketing a good candidate for further development and emphasis in the AIM field. Marketing automation systems are already widely deployed, data-driven marketing is a key agenda, and marketing AI techniques are advancing at a rapid pace. The tools are on their way to maturity, the data is rich, and the opportunities are plenty. It is therefore the time to get serious about best practices for achieving the most from AI techniques in marketing. This paper is only the beginning of what will have to be a continuous effort in a changing field.

The business environment is getting more and more cut-throat competition, volatile, and uncertain with fast-changing customer habits, brand communications, and the exponential rapid growth of data and advances in understanding consumer behaviour in the past two decades. Furthermore, with the major strides in information technology and rapid growth of the Internet in the past decade, marketing and use of digital information are also growing at a phenomenal rate. If we add online-based marketing and e-business to the mix, this further explains why marketers must focus more on their data and analytics IQ.

Thus, there is an immediate need for a big data marketing system and emphasis on such needs. The reasons for such a push for big marketing in the context of globalization of marketing are further accentuated. Dealing with marketing in a global and or international setting adds complexity and challenges to the task. Big data is revolutionizing the advertising and promotion functions of marketing next. Big data, through its insights, has the power to refine marketing tactics for much greater effectiveness. This is taking place through tools and platforms for certain big data analytics, through AI-based technologies, including machine learning and automation, and the capabilities are vast. For example, AI can do much better ad targeting than human beings by the wisdom of big data systems' capacity to constantly make data-backed decisions compared with humans. Second, AI can also recommend what are the best actions to take after analyzing the content of the big data systems. Predictions and simulations can also help inform us as to the best direction to go, while optimization can give a clear sense of what is best for us to respond to the marketing situation.

1.3. Research Objective

Therefore, this research will discuss and explain the implementation of AI in marketing that will cover the use of AI in marketing activities, best practices, the benefits they can achieve using AI in marketing compared to traditional marketing strategy, and some organizations that implemented AI in marketing with several case studies. This research will also write a recommendation for the organization that wants to use AI in their marketing, such as where they have to start using AI for their marketing, what they have to prepare, etc.

Working on how AI can be successfully implemented to achieve these results in my conclusions would enable people. Conclusion: It is hoped that this research will help organizations, especially small and medium businesses, to realize what AI in marketing means and how they can effectively use AI in their marketing activities. Furthermore, it would reduce the cost and improve results in the sense of customer acquisitions, and customer retention. Additionally, it would help organizations to

offer a better customer experience in terms of more personal marketing campaigns and enhancing their services.

Considering the significance of marketing activities and the opportunity for more effective results for marketing costs, a great majority of organizations try to find marketing practices. This occurs because the acquisition of new customers or interest from prospective clients and retention of current clients require regular updating and compensation. “The fact is, it will cost you five times as much to acquire a new customer than to sell to the one you already have”, according to Kotler and Armstrong. Moreover, the marketing costs have also risen and continue to grow in different industries with higher competition. Looking at these conditions, I would say AI in marketing will be a beneficial solution for a great majority of organizations. They will be interested in using the opportunities to reduce the cost of marketing strategies, make optimal results of marketing activities, or improve a customer experience.

1.4. Research scope

The second part of the research conducted above involves an in-depth look into marketing and how AI will change the sector. The data helps the product to determine the level of knowledge that the target users possess and their thoughts on AI in marketing. This information is later used to see how much training is required in some areas. For instance, in areas where knowledge is scarce, AI in marketing can be a teacher in such cases and guide the decision-maker about assumptions and why certain decisions are reached.

One other major part of this research is to cooperate with the experts in the industry and come up with a list of heuristics. This list of heuristics is a good practice that a good decision-maker would follow while making good marketing decisions based on their expertise in the area. This list of heuristics could only be a tool of guidance and should be available to show the user how they should be making decisions and where they are making mistakes. As marketing is mainly involved with the consumer and the consumer user of segmentation targeting this research will find this concept and method used by the marketer and see if and how it can be automated and how the AI system can make the right target decision of the desired consumer.

Chapter 2: Literature Review

This chapter provides a comprehensive literature review on the subject matter and includes previous research and findings about Artificial intelligence, expert systems, decision support systems, and automation in marketing. In the process of presenting the work, chronological structuring is applied starting from the early 80s when expert systems started to be evident till recently with the application of expert systems. It is important to start with a focused chronological sequencing to offer an all-inclusive AI marketing background. In the literature review, the students provide the basic concept and background of artificial intelligence and its utilization of it in the marketing analytical tool. In 1982, according to Shaw and Ivens, expert systems were defined as the application of AI in management practice. Therefore, it developed as a computer package that is used to offer consultation services to the user and learn how to simulate human expertise in a particular field area of human competence while an expert system is considered as an extension of the DSS. It extended up to the mid-90s; however, Wind predicted that AI would drive a revolution in marketing research and marketing decision-making in 1982. At the same time, DSS was also born from then; in 1996, Morrison reported that DSS has been generally overestimated in practical usage in marketing. It is used to improve the quality of marketing decision-making for both consumer and industrial entities. The last application of an expert system was in 1996 by Samli, which tried to automate marketing decision-making by applying marketing doctrine.

2.1. Overview of AI in Marketing

AI in marketing – an overview. This method specifies the role of AI in marketing and subsequently explains the consumer mindset, and how AI created an impact in Maslow's hierarchy of needs. Therefore, it further explains AI-led areas and the future of AI in marketing. Artificial Intelligence is the most exciting human endeavour; it summarizes one of the most advanced in the general technology area. AI is the intelligence of machines that imitates intelligent human behaviour such as learning, reasoning, and self-correction.

The objective of AI is very broad and can generate huge success in countless fields. AI has been integrated into marketing and become crucial as it provides a service that can analyze the behaviour and pattern of consumers. Therefore, AI will provide insightful facts that will assist in targeting approaches and the market in the marketing segment. AI in marketing is costly in the short run but efficient and effective in the long run. The probability of thousands of data and tens of pattern recognition from AI can be less trial and error but more applied. AI could make marketing research a reality by "removing the guesswork".

This will highly impact the effectiveness of the future target market strategy. Precisely because of the general and broad nature of what AI can do, it is key to the term AI in marketing. According to Campbell et al.'s research, AI in Marketing is a system or method where the marketing content of content is intelligent and delivered from a deep understanding of the needs and demands of the consumer. It further specifies that AI in marketing is a method where the produced content is personalized or customized to the personal needs of the consumer. Behavioural targeting and predictive consumer analysis were pioneer methods led by AI. These targeting are obtained from the purchases and sale behaviour of the consumer online and use the generated data to improve the effectiveness of targeting specific ads to the consumer. In the latest years, AI involves big data and machine learning. This method applies data at a deeper and faster decision and results in engaging effective marketing strategies.

2.2. Applications of AI in Marketing

computationally intensive – for every single statement, it is possible to analyze after which interpret to know the emotions of the various statements: Sentiment analysis will also be utilized when it comes to a marketing viewpoint. Following AI sentiment drives company analysis concentrating on the most comment sentiment, it then cycles back into the greatest action needed to take proper care of the problem or into the opportunistic action to benefit from the momentum. Machine translation may be defined as enabling a system or computer to comprehend the natural language inquiry just like a human and respond in the same way as it is spoken through translation.

Machine translation AI's sophisticated algorithm in prediction can analyze the source sentence to come up with an intermediary representation and then the target sentence generated. This is then a process that can be applied to trying to understand a consumer's query and then using its translation capabilities to try and map the best possible response. An example is simple like the forums of global product companies. A user from maybe Mexico has the query input in Spanish on Energizer batteries. From the translation analysis given and created by AI on Energizer batteries, AI decided to create a Spanish version Energizer page. It has been detected this person and maybe many other consumers have one or so many things in common between the sentiment and the product purchase. This is a form of indirect marketing. A more complex example is mapping the sentiment potential for the purchase of a product through the query. An analysis that maps the consumer sentiment is given and the Consumer should act therefore making it simple and then more and more products for the consumer to have access to. This is a linguistic interpretation of the mapping for the maximization of (probability x value) to guide the best outcome.

2.3. Benefits and Limitations of AI in Marketing

The use of AI in marketing significantly helps a company's marketing strategies. However, the significant benefits widely spread on the specific use of AI and varying marketing strategies and techniques. AI offers unprecedented speed, precision, and quality of information. It is also a cost-effective factor to consider. Companies can benefit from this attire. Useful and valuable insights will be obtained from companies to understand their consumers.

From there, their products and services can be improved. In addition to that, automation and optimization of content performance can be done. Finally, it can be used to analyze consumer behaviour and search patterns, including data on social media and blog posts to understand how their clients find products and services. However, with the advantages stated earlier, there are limitations to using AI in their marketing strategies. The most critical factor is the cost.

The cost of using AI, especially in its developing times, can be very expensive. Companies would have to spend a lot of money on training the AI to get the results they wanted. The increase in automation and machinery would be decreasing the demand for human marketing demand, hence, job losses. Finally, privacy and security are always an issue. The customer may not like that their data is being analyzed and used to induce their buying patterns. In the future, we may have difficulty distinguishing the behaviour of humans from machines, and ultimately, AI may reach a point that could compel strategic creativity. It is contrary to the original purpose of AI to stimulate creativity, and it could be too invasive.

Chapter 3: Research Methodology

3.1. Data Collection and Analysis

The other process of should also be addressed is machine learning, where there is a questionnaire. Here, too, there is no question of a theory of good practice – and, further, machine-learning techniques are generally well suited to exactly the kinds of data sets that are highly prevalent in marketing. Those are data sets with many variables and many possible relations between those variables, where the degree of complexity involved might make manual analysis virtually impossible. Take, for example, data on consumer behaviour on the internet based on click data, or ad data and sales data to model the joint effect of the many distinct marketing actions on sales. In all such cases, a system that can apply advanced, mathematical calculations automatically to data is highly appropriate.

Despite its widespread use for analysis, it is still not easy to use off-the-shelf machine learning methods on data from marketing. One of the major differences is that the usual outputs of interest for marketing data are either continuous for instance, by how much different advertising strategies increase sales or categorical for instance, which segment of consumers is likely to defect if contacted. In this scenario, predictive analytics is used such that the ability is to predict the value of a given variable in terms of the values of other variables or to try different marketing actions by comparing the values of the salient variables before and after the initial action.

Machine learning, despite providing a lot of insights, leads to a massive atmospheric expense. Farnam Jahanian states: “The first error is that people spend massive amounts of resources applying techniques such as machine learning to pre-existing marketing data...It lets us ‘know the truth’ about how field X variables interact and relate to one another”. As a result, the knowledge created in such a case is much less than the knowledge that could be created from the opportunity cost of what data could’ve been collected and what could’ve been done with it.

3.2. AI Tools and Techniques Used

The category of the tools used in the integration of the AI application and its derivation into marketing strategies has been identified as a fascinating category. As the name suggests, these tools are based on AI and are AI-enabled. The category of AI-enabled software and tools is vast and choosing the right ones requires a decision on which AI technology to opt to proceed with integration and subsequently into the marketing strategies; however the overall categories are relatively the same. In usage terms, it is related to client data understanding, data interpretation, communication, pattern recognition, and market automation etc. An AI-enabled tool or software client

data understanding uses AI-related intelligent software, which is potential enough to hand data and interpret the hidden client needs and their usage toward the respective product. It is helpful in the product building or modifying the product as per client requirements. The data interpretation, pattern recognition set, tool software, and kit are also used in the category, which is concerned with a statistical software solution that enables the stat software to process the data and represent the interpretation of the data in the form of human interests. The data sources could be anything, but they should be related to the market and comprise how much market share we can achieve etc. This helps a lot for the marketing personnel how to market the product. The most considered pattern recognition software is software. This software is AI-integrated and successful in developing the intelligence module related to product marketing.

3.3. Implementation of AI in Marketing Campaigns

AI is also a huge asset for creating better marketing campaigns. AI technology interaction and or utilized in the following ways: other ways of implementation and utilization include predictive consumer behaviour, personalizing consumer experience and interaction, and automating and optimizing advertising platforms. Predictive consumer behaviour is quite a new way to do something. It's using AI technology to predict exactly how your consumers would react in general and respond to anything. However, it can also show your company how to expect your buyers to react when you create a new product or if you make changes to the sales of a few. It does this by analyzing your data and by its mistakes, letting it learn. Its importance is it saves your company many lost sales as it can identify multiple possible problems well before they can happen. Example – AI software of Netflix: the use of it takes the previous shows that the sub watched and would look up new shows on the site and suggests the ones to the film or the subscriber.

3.4. Expected Outcomes

3.4.1. Improved Targeting and Personalization

On the other hand, artificial intelligence helps track consumer behaviour and the journey from being strangers to converts. An enormous amount of data allows the algorithm to recognize patterns, deduce conclusions, and find some targeting formula more evident for machines in the personalization process. AI helps analyze customers' behaviour patterns, online searches, social media activity, and other digital footprints. Much of this data can be connected. AI uses this data to evolve and continuously adjust a complete profile for each person and then solve the best offer for each customer so that this person will take in each point in time. It is a new level for personalization as AI is evolving and adjusting a predictive and prescriptive approach that helps the firm find the best offer for the customers. The effect of wow

occurs when customers receive perfect offers or content in timing and relevance to their situation and it doesn't feel like they are being sold to. It is innate and needed. Moreover, the ultimate targeting happens when AI learns from experimentation and quasi-randomized control trials to assume the incremental impact of the treatments delivered to the customers. Although it is not ethical, the progress of AI in targeting and personalization is huge and undeniable.

3.4.2. Enhanced Customer Engagement

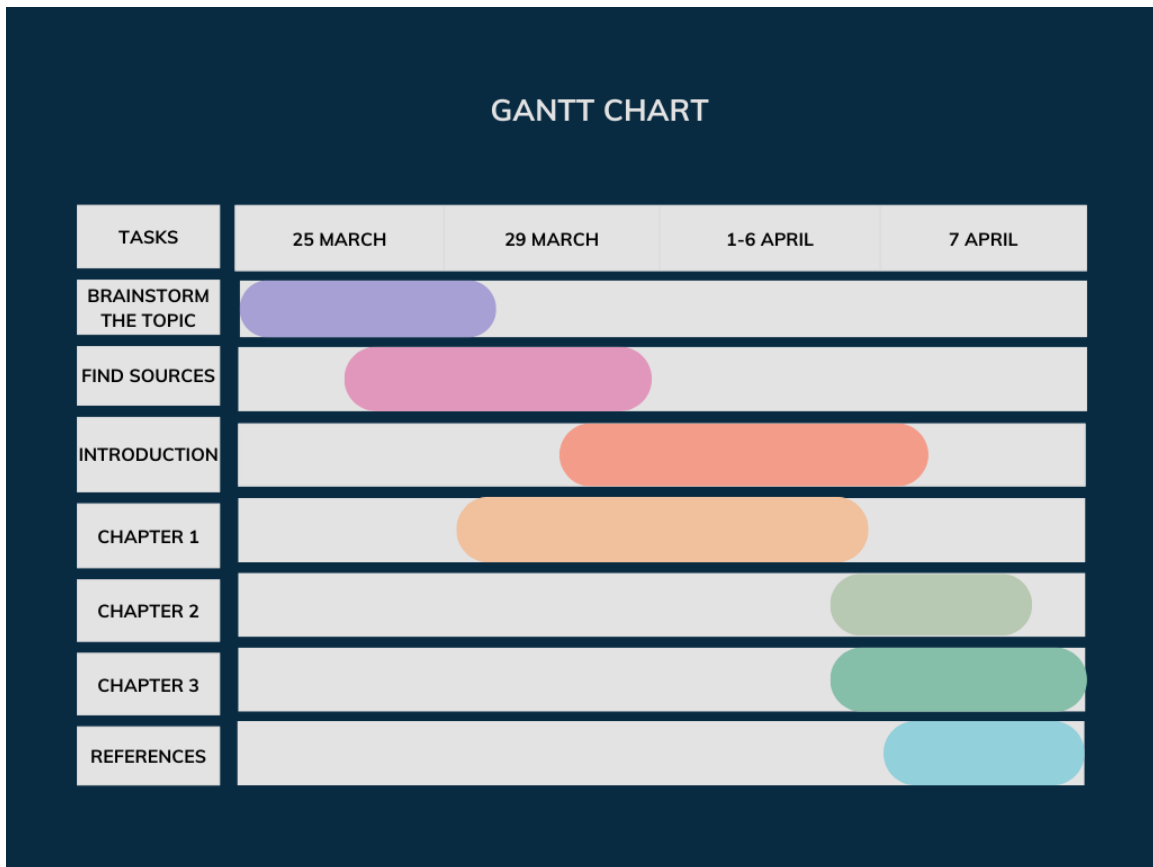
Further, increased customer engagement will be a critical issue, as marketing organizations always seek to encourage loved ones. Using AI for customer engagement can mean anything from a chatbot recommending a product for you based on natural language processing to machine learning helping us predict the best product offer to present at an optimal time. So it means that customer experiences may start to feel almost magical but are orchestrated and delivered in a very strategic way. This is also a simple question: "How is your solution helping me better understand my customer"? And then help me act on that understanding? If your solution directly helps us better understand our customers, it's likely to get us to better engage as the engagement is all about enabling desired customer behaviours. Picking this as the bar for complexity because acting on customer understanding usually means changing how our customers are currently interacting with our products – the goal is to make more customers more successful. Things always multiply because if, for example, a predictive analytic model is used to autonomously distribute the best offers we've learned through testing work for certain customers, the odds are that those customers are more likely to be brand loyal. It is because customer engagement has nothing to do with the data and analysis is linear. It is a highly complex and open activity. Whom, our customers may have many different choices and paths available when they interact with us. AI-based simulation and modelling can help us understand the probable result of actions, and multivariable testing can help us tune that question. This lets us use our marketing power, money, and time to build our brand bright in the spaces building customer impressions and our marketing savvy to optimize customer actions.

3.4.3. Increased Marketing ROI

At all these levels, AI helps you increase marketing ROI in a few good ways. A few examples: Hyper-personalization: When Coca-Cola's content started speaking person-to-person, it alone saw a \$8.1 million increase in revenue in Australia. It is quite literally impossible to market 1-to-1 to consumers other than with AI. For increasing marketing spend efficiency: According to an Accenture study, 78 per cent

of consumers retract loyalty at profits of 12-15 per cent and their top complaint was relevance. Machine learning can now predict what a consumer should be marketed and at what time and I can assure you it is not today at 1:00 p.m. AI marketing technology can increase marketing spending by spotting insights in data. For example, Zeta Global discovered that their financial client's intended targeting segment for their credit card campaign was only 20 per cent likely to sign the credit card with AI on creative, media spending, and opportunity cost savings, this AI insight saved this client, potentially, tens of millions of dollars in advertising that wasn't going to work. Predictive customer analytics: AI works on a big data scale to predict customer behaviour. Forrester Consulting Total Economic Impact Research studied AgilOne's predictive analytics and customer data platform yet to see positive results that a possible 504 per cent ROI, 3 months to break, and a 50 per cent increase in digital marketing revenue in 3 years. Lastly, let's make an important note regarding statistical significance. Many of the ways that AI helps increase marketing ROI listed above were possible with traditional methods of analysis is possible but AI can do them with unprecedented speed, scale, and accuracy. AI increases the volume of marketing optimization measures and learns from multi-dimensional data interactions for quick "on-the-fly" insights. AI has the potential to "overpower" marketing that's firing on the same measures. results. AI can mistakenly declare lift on ineffective marketing. There is an opportunity for AI "to break it, but you better have a control group just in case!" as said by any good scientist.

3.4.4. Gantt Chart



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