Adoption of Artificial Intelligence in Marketing: Glimpses of Current Practices

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Abstract - An exponential rate in technological advancement of the Fourth Industrial Revolution is redefining the way the people are engaged with this world. Artificial Intelligence and Machine Learning are two such technological breakthroughs hold tremendous potential for vastly altering the pattern of modern marketing.

Artificial Intelligence based marketing application took a rapid and wide leap in the twentieth century due to accumulation of rich consumer data, generated from popular social engines. The consumer data so obtained are analyzed to improve customer satisfaction and enhance sales by predicting consumer behavior. Data mining techniques are used by marketers to predict customer consumption patterns. Artificial Intelligence and machine learning help to automate the search pattern, and in identifying the processes to enable personalized and one-to-one digital marketing to deliver individualized messages and product offerings to existing and new customers.

Artificial Intelligence being a crucial area for current day research; an attempt has been made in this paper to present a multifaceted perspective on Artificial Intelligence based Marketing, mainly by presenting glimpses of current practices.

Key Words: Artificial Intelligence, AI marketing, Digital marketing, Customer Life-cycle Stages

1. INTRODUCTION

Artificial Intelligence (AI) is an expanding resource that has many practical applications in present day business environments including in the realm of digital marketing. AI referred to the theory and development of computer systems that enable it to perform tasks normally requiring human intelligence. It imitates the way humans think and can deliver experiences with a seemingly human touch, but with the scale and efficiency of a machine. To perform tasks like humans it learns from experience; then to mimic better, it uses machine learning and automate those tasks.

The data it receives, guides what it learns and how it learns. The more data it has, the faster it can adapt and tailor itself to an audience. The ability to perform complex functions of these kinds has made AI a powerful tool for a marketer. Recent advancements in AI technology have garnered excitement amongst marketers, owing to the growing numbers of use cases, demonstrating its effectiveness; though its inherent sophistication requires necessary skill for effective implementation to reap the benefit.

The advanced era of 'AI Marketing' is instrumental in changing the manner in which marketers interact with customers and it carries the potential to change the very nature of marketing drastically. Thus, AI in marketing requires in-depth research and analysis to exploit its full potential. A detailed analysis of customer life cycle stages, as presented subsequently, is adopted here to showcase the increasing use of AI in the domain of marketing.

2. CUSTOMER LIFE CYCLE STAGES AND MARKETING

The various stages a consumer goes through before, during and after they complete a transaction describes the customer lifecycle. In the 1950s and 1960s, researchers proposed the analysis of customer lifecycle stages as a way to understand customer, product and industry dynamics (Palmatier, R. W. et al., 2019). A lifecycle perspective has been applied to many levels of analysis to generate customer, product and industry life cycle models, depending on the focus of the research. A matrix has been developed by marketing analysts Jim Sterne and Matt Cutler that breaks the customer lifecycle into five distinct steps: Reach, Acquisition, Conversion, Retention and Loyalty (Cutler, M. et al., 2000). The process starts with getting a potential customer's attention and continues toward making them as loyal customers whose satisfaction with the product or service urges other customers to join the cycle. The process even recommends the types of communication required at different stages and to close the deals.

The following section deals with the application of AI in different stages of the customer life cycle with some of the prominent cases presented against each stage.

3. ADOPTION OF ARTIFICIAL INTELLIGENCE IN CUSTOMER LIFE CYCLE STAGES

3.1 Reach

This is the first stage of the life cycle when marketers struggle for the attention of their target audience to create their association with the product/brand through social media, advertisements or by word of mouth from friends and others. The main tasks of a marketer here are to identify the prospects, i.e. lead generation and to attract them through effective communication, preferably through advertising.

During the lead generation phase and for Ad creation and management, marketers need to handle huge datasets while understanding the interests and preferences of the prospects; thus AI system can be of real help for them in several ways mentioned below:

3.1.1. understanding the 'leads' better- AI system helps marketers understand leads better by analyzing the visual content from social media platforms. The system creates a clear picture of buyer personas using this information and also recommends the types of communication which are more likely to close the deals.

3.1.2. finding new 'leads'- AI systems find new leads for marketers based on the data they already have and by establishing connections between people, companies, products, and places on the web. 'Siftrock' (Hill. 2017) integrates this with the marketing automation software to find new leads from out of office replies, replacement contacts.

3.1.3. advt. creation and management – These days, AI is increasingly used in digital advertising platforms; it dictates how Ad performs to boost performance and to substantially reduce the work that goes into building Ad campaigns (Kaput. M. 2020). AI can automatically optimize advertising expenditure and targeting; for example, an AI marketing platform, 'Albert' was able to identify ways to optimize spend and targeting, that dramatically raised return on Ad spend and significantly beat out human agencies.

AI can be used in advertising by allocating the pay-per-click budgets, where machine-learning algorithms can help advertisers find new ways for optimizing their layout, copywriting, targeting and bidding. Moreover, AI-powered image recognition is used by brands like Amazon, Facebook to identify people and objects from images and videos. Automated image recognition can result in a better sync between online content and store visits, where, facial recognition software is used to trace customers' in-store visits and link this information to customers' profiles. Table 1 presents the cases of a few companies providing AI solutions to design Advertisements for their clients:

Table-1: Companies Using AI Solutions for Advertising Design

Companies providing AI solutions	Benefits to Clients
Albert Technologies - a cloud-based artificial intelligence platform that get into a digital marketer's existing solution stack and operates it. It makes AI solutions for brands and agencies, in which the software operates along entire customer lifecycles across channels like Google Ads, Facebook, Instagram, Youtube and Gmail. Albert delivers insights from cross channel data and executes campaigns.	Harley-Davidson of New York City (a curator of the iconic Harley-Davidson brand, a leading retailer of the trusted motorcycles and related products) - a prominent Albert client, saw a significant increase in website views and after just six months, Harley-Davidson NYC credits 40% of its motorcycle sales to Albert, at the three-month mark, Harley-Davidson NYC had already seen an increase of 2930% leads/month and several other Harley-Davidson franchises have begun working with the AI digital marketer after implement in recommendations (Albert. 2020).
Invoca - An AI-powered call tracking and analytics platform that provides call tracking and analytics services for marketers, crediting inbound calls to specific digital campaigns. It simplifies attribution by analyzing live phone conversations and creating predictive models to give accurate views of actionable data and conversations.	An online selling destination 'Microsoft Store' receives purchasing calls in large volumes, but customer data for attribution purposes is often unavailable thereafter. This platform enables Microsoft to track calls and attribute the resulting revenue to channels, from which those calls came. This has resulted in a significant percentage of revenue increase for Microsoft.

3.2 Acquisition

In the acquisition stage, the association between the brand and the customer is deepened and the marketer learns more about the needs and requirements of individual sales-leads to send them personalized messages. Here, segmentation plays a vital role, but when done manually, it can be time-consuming and repetitive in nature; thus, marketers can automate the process of segmentation and target marketing through the use of AI and chatbots. Chatbots can ask personalized questions and make a prospect's profile. Once the profile is ready, chatbots can send personalized offers and recommendations to each prospect.

For example, H&M (Hennes & Mauritz), the Swedish fashion giant, makes use of its own bot KIK, deployed on an app or a server infrastructure that handles tasks like login and message management for finding and engaging leads. It asks a set of questions and automatically generates a user profile. This user profile is then used to custom outfits and send offers to individual sales leads.

Moreover, AI can provide sales assistance by finding the prospects, uncovering their buying intentions, pairing them with marketers' representatives and creating personalized communications for them. Table 2 presents the cases of few companies using AI solutions for their clients in the Acquisition stage.

Table -2: Companies Using AI Solutions in Acquisition Stage

Companies Using AI solutions	Benefits Gained
Amazon - a multinational technology company uses AI for the implementation of better search approaches and also for dynamic pricing.	By inserting any query on the Amazon search engine, many possible suggestions would pop up. This is the courtesy of Machine Learning, which is part of AI strategy. Similarly, in the E-commerce website, relevant results relating to a particular search are immediately prompted, which optimize the chances of increased sales. Amazon uses dynamic pricing to determine the price of items during different search instances, which is a good use case of Artificial Intelligence.
The Economist - an international weekly newspaper printed in magazine format and published digitally adopting Programmatic Advertising	The Economist is a real example of a company that is benefited from programmatic advertising. It also optimizes local campaigns and ad placement. It realized that they were not attracting many readers. For a better target of their prospects, the Economist managed to identify reading preferences by analyzing web/app usage. To achieve robust segments and create lookalike audiences they also focused on matching cookie, subscriber and other data sets.

3.3 Conversion

Conversion is the stage of finally purchasing the product or service, which imparts an understanding of customers' key purchasing criteria, thereby help in positioning products with a competitive advantage. However, if the pre-qualified potential buyers are not properly followed up, the actual sale may not happen. Thus, AI can be used to enhance a customer's shopping experience; for example, some businesses are now using facial recognition to capture customer dwell times in the physical store, capture their specific interest for a particular product and develop individualized offers for them.

For E-Commerce AI-based personalization takes the multi-channel approach, where AI engines, sit on top of the multiple customer touchpoints to help the business to analyze, how customers are interacting online. AI engine is continuously monitoring all devices and channels to create a universal customer view. This view enables e-commerce retailers to provide a seamless customer experience across all platforms.

The next time a customer is browsing marketers' website, they may receive a push notification on their device, informing them about the flash sale. This can reduce the required efforts from both parties.

Moreover, retargeting (also known as remarketing) - a form of online advertising, that can help marketer keep their brand in front of bounced traffic after customers leave their website; which is also largely getting benefited with the use of AI. The techniques adopted here are Site Retargeting, Social Media Retargeting and Video Remarketing. In the first case, marketers consider grouping visitors together and retargeting them based on the area of the website they have visited; in social media retargeting, the location of the ads is restricted to social media platforms and largely follows a personalized technique, displaying only products a user previously looked at; whereas, video remarketing deals specifically with video content and actions of people, including watching a video, viewing a channel, subscription to a channel, liking a video and more. The Table 3 presents some cases, where brands are using AI for Remarketing:

Table -3: Companies Using AI Solutions for Remarketing

Company	Remarketing Strategy
Nike-largest marketer of sports footwear worldwide	Their remarketing ad lets users scroll through several items "suggested for me" based on their previous activity on Nike's website; it included a call-to-action (CTA) button to direct them back to Nike's site to finish shopping.

Airbnb - an American online marketplace which lets people rent out their spare rooms or properties to guests	Their remarketing ad contains a photo of a user viewed with a CTA button to 'Book Now'. Airbnb can customize their ads based on visitors' activity on their site or on social media pages. To complete the desired action this is a great way to remind people of the offerings and for directing them to their site.
Expedia Group - an American company of online travel shopping	Marketers can set automated remarketing emails to reach people right in their inboxes. For example, a user after browsing Washington flights on Expedia's mobile app received a remarketing email with a button to view the latest ticket offers. The email copy and fun boarding pass graphic are personalized with information for flights the user viewed on the Expedia app, they include an eye-catching CTA button to invite the user to go back to Expedia's site to view the latest tickets and book a flight.

3.4 Retention

In the highly competitive market, Personalization is the weapon of customer retention; but, to provide this, companies have to learn the demand of their audience as precisely as possible. While many administrative processes have already been automated with the help of sophisticated systems like CRM, CMS, ERP, and other tools; these still do not provide any help on the process of personalization. Thus, AI-based solutions have started finding their ways in such spheres, and analyzing multiple factors precisely, marketers are offering personalized solutions to their customers.

World-famous companies such as Airbnb, PayPal are actively using AI technologies to provide personalized suggestions, shown in Table 4.

Table - 4: Companies Using AI Solutions for Personalization

Company	Personalization Strategy for Retaining Customers
Airbnb's Personalized Search	Airbnb operates an online marketplace for lodging, primarily home-stays for vacation rentals, and tourism activities. With three million unique listings and more than two hundred million guests in total, Airbnb focuses their efforts on the enhancement of the tailored search experience. Their ML algorithm named Embedding Listings - looks at the wish list as well as collected data from the user's previous search history and combines it with desired listing features, which include location, availability, amenities, and other options. To show the most suitable variants, the system ranks the results in a "Real-Time Personalization Search". This AI-fuelled search mechanism was proved successful as booking percentages were increased significantly.
PayPal's AI technologies for Cyber security	PayPal, electronic payment services, with 227 million registered customers in 2017 have processed 7.6 billion transactions with revenues of more than \$13M; no wonder is a desirable platform for hackers. PayPal's' engineers reinforced their security system with AI to identify unusual activity and analyze user behavior across transactions. If behaviour is reported as fraud; the system flags it and if the pattern repeats, the fraudulent transaction is prevented.

Moreover, disengaged customer segments that are about to churn or leave for a competitor are identified with the help of machine-learning algorithms. AI-powered tools here can help gather data, build a predictive model, test and validate that model on real customers to provide information to indicate the current stage of customer churning. Quick-churn customers are difficult to re-engage, late-churn customers can be incentivized to keep using marketers' product. Artificial-intelligence based Vidora (the machine learning platform for consumer data) keeps churning customers engaged with its intelligent churn prediction automation, leading to higher lifetime value and profits.

3.5 Loyalty

This is the stage when highly satisfied customers become the advocates of the brand and do a lot of referral marketing. Here, customers expect continuous engagement on social media from brands they patronize, with content that reassures them about their correct purchase decision and helps them make the most out of their purchase. At this point, social content should foster customer loyalty by creating positive experiences after the sale and converting customers into brand advocates. The Table 5 presents the cases of 'Advocacy Marketing', adopted by some world famous business houses:

Table -5: Companies Using AI Solutions for Advocacy Marketing

Company	AI Powered Advocacy Marketing Strategy
Tesla - an American electric vehicle and clean energy company.	Tesla mobilized its loyal customers to attract even more clients, Tesla implements referral packages that provide existing customer and referred person, amazing discounts of $1,000 on a new order. It also offered existing customers the right to buy a limited Founder Series of the brand's Model X SUV, which wasn't selling to the public, if they refer 10 people.
Starbucks - an American multinational chain of coffee-houses and roastery reserves headquartered in Seattle, Washington.	Starbucks' advocacy marketing campaign was called Tweet-A-Coffee; it allowed customers to buy a $5 gift card for their friends through Twitter. Customers just had to Tweet @tweetacoffee handle alongside the recipient's own Twitter handle. The first 100,000 people who joined the program got a $5 gift card for themselves. Besides being a profitable strategy (generating around $180,000 in sales for Starbucks), it allowed the brand to identify both loyal advocates (over 27,000 brand advocates alone participated) and potential customers, who may boost future sales.
Apple - an American multinational technology company that specializes in consumer electronics, computer software, and online services.	Apple being well-known for its appreciation to user-generated content based own advocacy marketing strategy. Apple's "Shot on iPhone" campaign sourced dozens of pictures from Apple users from all over the world; they asked users to share these photos on social media, using a designated hashtag. Apple settled on shots from 77 people from 24 countries, they had lots of material for ads now, and hardly any editing required on their part (the photos were the ads, with only the "Shot on iPhone" phrase over them). The company picked the photos it liked the most and used them on public transit and billboard ads.

4. RESULTS: ASSESSING THE FUTURE POTENTIAL OF AI IN MARKETING

Having understood the ever-increasing use of AI in marketing, by analyzing the recent cases, the paper now attempts to assess the future potential of AI through a hypothesis testing, from the findings of a primary survey, conducted over a group of key informants. Here, the confirmatory statistical technique used is 't-test' and the hypotheses taken are:

H_0 -AI cannot provide the same levels of customer service as a human can.

H_1 - AI can provide the same levels of customer service as a human can.

The derived Values of 't-Test' presented below in Table 6 (at 95% level of confidence) signifies that the Null Hypothesis (H_0) taken, should be rejected and the Alternate Hypothesis (H_1) is accepted; revealing AI to be equally potent in providing customer service as human, thus having enormous future potential in the domain of marketing.

Table -6: Values for t-test

Mean ($\bar{x}$)	6.931034483
Standard deviation (s)	2.150985649
Count (n)	58
Standard error of mean (SEM)	0.282438253
Degrees of freedom(df)	57
Hypothesized mean (μ)	3.8
t-statistic	11.08573096
p-value	7.516E-16

5. DISCUSSIONS

The era of Artificial intelligence carries the potential to drastically change the nature of marketing and carries with it far-reaching implications. As AI application continually becomes all-pervasive and technologically upgraded, the marketers' capacity to assimilate as well as effectively implement and manage AI solutions also gets more and more challenging, requiring expertise on special skill sets. As AI automates repetitive tasks, marketers can increasingly align their efforts towards value-generating activities that improve the lives of customers, allow for higher workplace satisfaction, and empower creative thinking for business and societal benefit at-large.

Basically, the whole pattern of marketing and sales is changing, as the marketers with the help of AI and ML have started a more extensive and precise reading of the minds of customers, that is ushering in a completely different environment for the marketplace.

This study has put some light on the different aspects of marketing, where AI has started contributing enormously; it has traced the gradual shift in the pattern of advertising, revealed the way of tracking customer insights, becoming

instrumental in grasping and retaining the customers and creating a loyal base through advocacy marketing and enhancing customers overall experience with the business to finally escalate the overall profitability for the marketer. A deep insight into such a trend of developments of AI applications in marketing would be essential not only for embracing such changes but also for designing strategies and formulating modalities of newer scopes for customized application of AI in the interest of the growth of the business.

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