

Project Dissertation Report on

ANALYSIS AND IMPACTS OF NARROW ARTIFICIAL INTELLIGENCE IN GLOBAL MARKETING

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CERTIFICATE

This is to certify that the work titled '**Analysis and Impacts of Narrow Artificial Intelligence in Global Marketing**' as part of the final year Major Research Project submitted by gairik Chatterjee in the 4th Semester of MBA, Delhi School of Management, Delhi Technological University during January-May 2020 was conducted under my guidance and supervision.

This work is his original work to the best of my knowledge and has not been submitted anywhere else for the award of any credits/ degree whatsoever.

The project is submitted to Delhi School of Management, Delhi Technological University in partial fulfillment of the requirement for the award of the degree of Master of Business Administration.

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DECLARATION

I hereby declare that the work titled '**Analysis and Impacts of Narrow Artificial Intelligence in Global Marketing**' as part of the final year Major Research Project submitted by me in the 4th Semester in MBA, Delhi School of Management, Delhi Technological University, during January-May 2020 under the guidance of Mr. Dhiraj Kumar Pal is my original work.

The report has been written by me in my own words and the results embodied have not been submitted to any other University or Institution for the award of degree.

Gairik Chatterjee

(2K18/MBA/028)

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I have put all my efforts to ensure that the project is completed in the best possible manner and also ensured that the project is error-free.

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EXECUTIVE SUMMARY

Artificial intelligence (AI) is a technology, industry, and a developing field of study. While levels of interest with respect to marketing applications have not yet translated into widespread adoption, AI has enormous potential to greatly alter the way marketing is conducted. As such, artificial intelligence in marketing is a critical issue for research. By examining your modern applications, feasible use cases in the near future, how to execute it, and areas for improvement, we can accomplish a high level of knowledge of the long-term associations of AI in marketing.

AI offers development on current marketing tactics, along with providing completely new ways to create and distribute value to customers. For example, social media marketing and programmatic advertising can allow a more absolute view of customer behavior, and deeper insights predictive analysis through integration with AI. Innovative marketing tools such as voice, biometrics, and conversational user interfaces suggest new ways to add value to both brands and consumers. All these innovations have similar characteristics of scalable experiences, in-depth knowledge. super personalization and efficient spending.

There are major issues that must be approached before the comprehensive implementation of the AI, including the potential for malicious use, its effects on the movement of workers and the technology itself. The contemporary progression of artificial intelligence in marketing is so significant that it will be fostered by most companies sooner than later. It is crucial to consider the long-term implications of a large implementation since the industry is driven by artificial intelligence involves structural changes in the form of skill sets to thrive, ways of the marketers and brand emphasizing.

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1 INTRODUCTION

AI or Artificial Intelligence is a technology and a vast field of research that has been around for a long time but was not feasible to implement until now. Even though Artificial Intelligence is in its infancy stages, AI has already shown tremendous results in various industries, especially in domain marketing. This recent effective advancement of this technology in various areas of business has gained a lot of attention and excitement in the marketing world. But this attention and excitement have not transcribed into the complete perception of how this technology works, its real-life implications, and how potential AI as a technology is in the business world.

Since Artificial Intelligence is quickly becoming a major technology and widely used in various areas, it has become a very crucial skill for marketers to efficiently execute and endure it. Companies and individuals are realizing the importance of AI is driven workplaces and tools for the success of a company, this technology may change even the nature of marketing as we know it now.

As Artificial Intelligence is affecting and changing all the areas of business, it also has a huge impact on marketing. This technology may even change the fundamental way of how companies interact with their customers. The magnitude of change in the nature of marketing this technology will bring in is perceived as huge. This is a reason why this topic needs through research and dissection to adjust the changes.

1.1 Explaining Artificial Intelligence

As quoted by Demis Hassabis, founder & CEO of Google's AI company DeepMind, artificial intelligence is the "science of making machines smart". As per definition given, it is justified because the term Artificial Intelligence has been used as an umbrella term for a broad varieties of exhibitions. But beneath this umbrella, there are few subcategories such as deep learning and machine learning which translates into the real-world implications of Artificial Intelligence, such as image recognition, voice identification, search recommendations, and virtual assistants. These

are classes of narrow AI or weak AI. The meaning of general AI or strong AI which is very superior to the weak AI is far away from being available to marketers and real-world to employ. The term “AI” used in this report denotes weak AI.

1.2 Artificial General Intelligence or Strong AI

Theoretically, an Artificial General Intelligence or a Strong AI can perform anything an intelligent being could perform or maybe with the computing power more than what a natural intelligent being can do. And when it says more, it means more to an extent which we can't even imagine, thanks to the computing power of sophisticated processors which can run billions of algorithms in a microsecond. Given the complexities of the human mind and how less we actually know about this, there has been no successful attempts of a strong AI till now. So we won't be discussing more about strong AI in this report as it does not carry any practical assumptions or direct application in the sample size taken for the research.

1.3 Narrow Artificial Intelligence or Weak AI

Narrow AI is very competent at executing and implementing particular tasks. It primarily concentrates on growing in an advanced manner in the area of cognitive abilities, example image verification, comprehending voice searches, predictive analysis, and creating different assortments of end customers. It is one of the most familiar kind of AI and is observed in our daily lives as recommendation systems on websites and spam mail bots, such as e-commerce websites product suggestions like Amazon and Flipkart and Netflix's recommended personalized entertainment show as per the interest of the end user.

1.4 Machine Learning

Machine learning can be described as a subset of AI which utilizes computing power and programs to discover and develop itself and treat a huge amount of data. Machine learning is that part of AI which lets it detect automatically without actually coding a program to do so. It is the fastest growing and holds huge relevance for marketers in the present world. In major circumstances, a compilation of the training data that is being used to train the Machine Learning system to make it recognize the suitable output for the given input, then continuously updates itself over the time as per numerous data points are prepared. There are various different algorithms practiced to develop Machine Learning systems.

1.5 Deep Learning

A subcategory of ML that allows for an efficient way of learning through the use of neural networks. These neural networks are modeled as per the brain of human and then are being utilized by a network of interconnected “neurons” or nodes to understand data in a non-linear way. Deep Learning was first created and implemented in the 1900’s however it was not thought to be feasible at that period of time. With the increasing rise of computing power, especially the development of graphics processing units (GPU’s), DL has again regained the forefront of AI innovation. The importance of creating a way to analyze the unfathomable amounts of data developed through technology each day has made the superior performance of DL as one of the most popular applications of AI.

1.6 Natural Language Processing (NLP)

A subfield of AI focused on the understanding of human language. NLP often uses machine learning algorithms and allows voice applications (‘Siri’ and ‘Alexa’) to interpret human voice

into data. It is this category of AI that will enable computers to understand the hierarchical structure of language and how components of a sentence relate to each other. NLP lets computers understand the complexities of human language that influence a sentence's meaning, which is a tricky problem in computer science. The multi-directionality of NLP has shown way for a wide range of practical applications, such as chatbots, converting speech to text, correcting grammar, identifying the sentiment of a string of text, and much more.

1.7 Natural Language Understanding (NLU)

NLU is nothing but a subset of NLP that provides the computers the capability to comprehend meaning and the context of text or speech figures. We can describe that NLP concentrates on altering human language inputs into data in which a machine can act. On the other hand, NLU strives a more thorough understanding of the user given inputs. This technique is a decisive factor in building technologies that permit users to interact directly with computers in a significant manner.

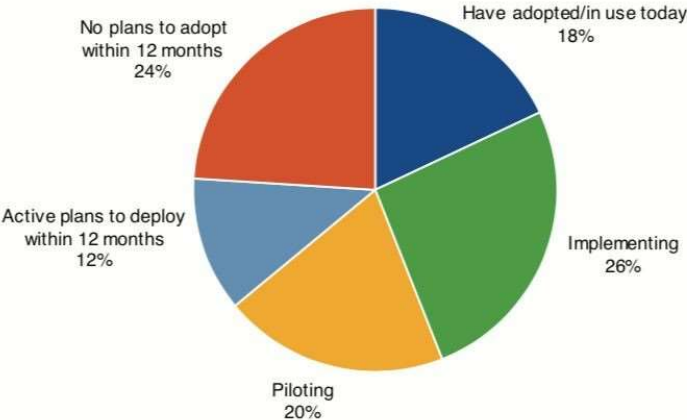
1.8 Computer Vision

The intelligence for computers to “see” imagery through graphical representations of three-dimensional shape and appearance, is called the vision. Whereas image recognition allows computers to identify the subject matter and the rawness embedded in an image, computer vision allows it to comprehend and contextualize similarly to humans. Capable to understand the meaning of an image is such a simple task which comes naturally to most people at a young age. However, reimagining this ability in computers depicts a considerably more daunting task than just processing an image, though it is considered an integral component in creating AI that results into practically visible benefits to marketers.

1.9 AI in Today's Marketing

Presently, there is high level of excitement around AI but its not matched up by the actual implementation. But this difference is decreasing as marketers and companies who was interested in AI started implementing it. Only 20% of companies and marketers have actually implemented any one or more AI based applications at their organization as a large scale as of 2018. This difference in the excitement and implementation shows us that its not at all late for marketers to start implementing now, usually seeing an hype like this, people tend to think that the technology is already behind and they are late to implement. It is not the case with AI, there is this level of excitement because of the potential of this technology to change the fundamentals of how business is done in our world. Many say that we are about to go through an AI revolution and AI is the next big thing in technology and world. Nevertheless, applications of AI in marketing are swiftly advancing to add to the broad diversity of the state-of-the-art software and assistance available for brands to execute. It aims to attain that in 2019 and the upcoming 24-48 months it might reach a vital location to make the penetration of AI in marketing happen.

Figure 2.9.1: Artificial Intelligence/Machine Learning Adoption Status



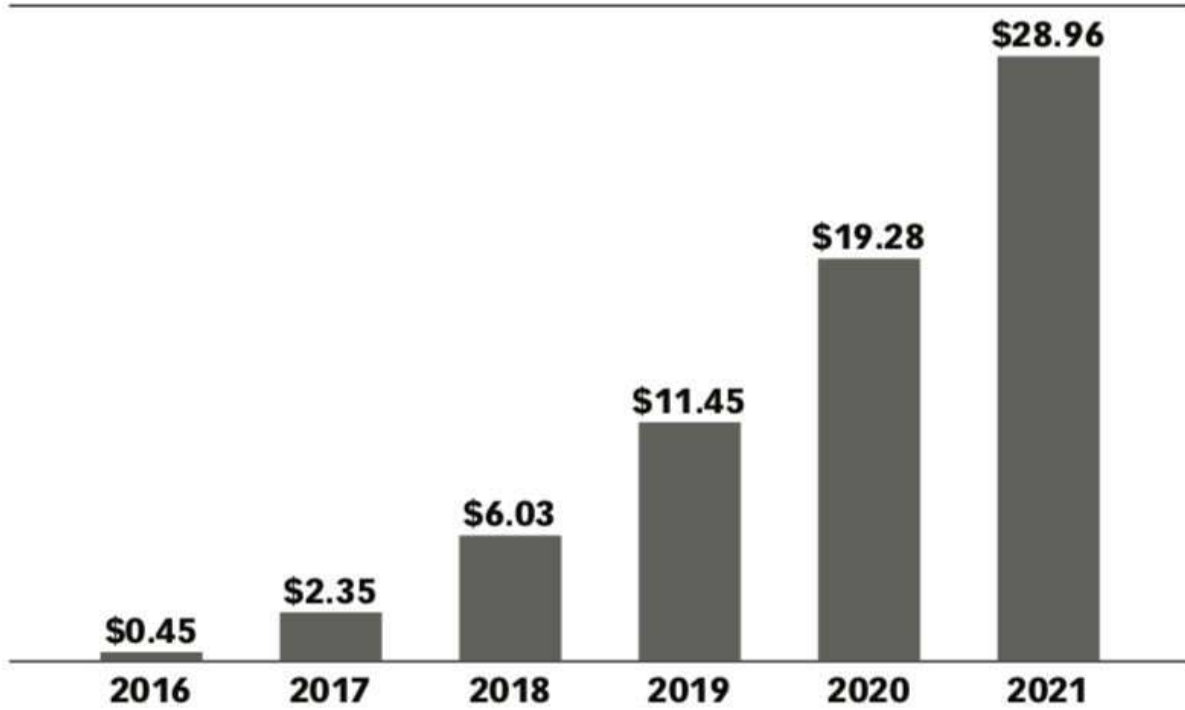
Base: Number of respondents = 923 involved in decisions for IT services and sourcing; excluding "Don't Know."
Q. "Please indicate your organization's adoption status regarding the following IT initiatives."
Source: Gartner (May 2017)

Source: Gartner

Marketing is currently the fourth best use case domain when it comes to AI use cases and marketing is the sixth in adoption of AI, with around 2.55% of industry investments in AI. Even though AI was there in marketing for decades, recently the interest and feasibility to massively implement it increased because of the advancements in the computing power to run AI algorithms way cheaper than ever. And with technology advances we have and are exposed to a lot of data which needs a lot of optimization to make it useful, here comes the ability of AI and highly capable computing systems to do so. The recent enthusiasm encompassing AI has produced \$11 billion in venture funding toward the operations of AI startups.

Figure 1.9.2: Artificial Intelligence Technology Spending Worldwide, 2016-2021

billions



*Note: includes consulting and within company implementation; *cognitive computing, intelligent automation, machine learning and deep learning*
Source: Gartner as cited in press release, Dec 15, 2016

Source: Gartner

1.10 Objectives of the study

The key objectives of this study are:

- To understand the impacts of Narrow Artificial Intelligence or Weak AI in the field of marketing globally
- To get insights on the future potential of Weak AI in marketing
- To get insights on the actual implementation rates of Weak AI in the present and to understand the relevance of this technology to a marketer.

1.11 Scope of the Study

This study can be further elevated to a deeper level by analysing more factors which can affect the impacts and the future potential of this technology in marketing. This is a study and research topic which need to be updated or revisited more often because of the rapidly advancing technological changes and business environment, so this study have a tremendous further scope which should be addressed effectively. The study also can be elevated to more qualitative and quantitative full fledged research and including not just the impacts but also other factors as negative sides, actual adoption rate, the next phase of this.

2 LITERATURE REVIEW

AI for Marketers: Amassing Beyond The Hype

The arrival of modern algorithms, more agile processing, and extensive cloud-based data sets are getting it possible for companies in various industries to research with artificial intelligence (AI). As we know, marketing and sales are especially prime for innovation, it's still early days for choosing. Agencies and Brands are working concurrently to steer a web of quickly emerging solutions.

Investment and stakes in AI remain high, through large-scale adoption, But the pace its adopting is a bit on the slower side. Still, many companies have aggressive plans for AI practices and are viewing to improve as quickly as possible to enhance their business operations.

AI technologies— including deep learning, natural language processing, machine learning, and computer concept—are beginning to show real commitment, despite notable hype and uncertainty in the marketplace.

A healthy ecosystem of vastly extensive open- source software, APIs, and cloud-based platforms are supporting to fast forward the AI adoption, guiding distinct aptitudes to balance and personalize marketing drives by speeding up and being effective in most economical ways.

Agencies and consultants are marching up the ladder, feeding their technical supplies, and producing technological collaborations to chalk-out their clients operations in the form of highly sensitive methods of AI and tech solutions in marketing.

Best exercises for marketers combine understanding the technology, determining business goals, thoroughly planning for the coming days, obtaining the correct data, and implementing the AI most ethically.

An Immature Market In Growth Mode

Now, computer scientists have been promoting AI for a long period since the late '70s, but it is now that the technology is just beginning to unveil to its true potential. Despite the hype, deep learning, machine learning, natural language processing, and computer perception have inaudibly become rooted in many people's daily routines. New innovations have produced new capabilities to analyze data and regulate tasks.

Without even apprehending it, we as users have become habitual to expecting AI in the utmost technical advancement. "When you use Facebook or Google or Apple, you're using it," said Karim Sanjabi, executive director of 'Cognitive solutions' at independent media agency, 'Crossmedia'. "It's recommending your picture, it's reading your email and giving you relevant ads back against that in Gmail. You probably interact with AI 30 or 40 times a day and may not know it.", he quoted.

A Disruptive Megatrend

According to the most novel "Hype Cycle for Emerging Technologies" report, technology consulting firm Gartner identified AI as a "megatrend" for 2017, assuming that AI "will be the most disruptive class of technologies over the next 10 years due to radical computational. power, near-endless amounts of data and unprecedented advances in deep neural networks." The firm, as per the report hopes to translate this combination of factors to help unlock AI's potential in almost the industries.

In December 2016 study, a consulting firm 'NewVantage Partners' defined AI as a "disruptive technology" and discovered that near about 88.5% of US business executives surveyed considered that it would transform their company over the next decade. other complementary and enabling technologies— which includes the internet of things (IoT) and cloud computing —were also on the list. "The whole emerging tech scene is not just confined to AI. All of these technologies are connected and suddenly paving the way for each other in terms of awareness," said Jessica Chapplow, platforms manager at media agency 'MEC'. "They are giving us the capability to

access so many data points, to the point where we need sophisticated technology to pass through that amount of data.”

WHY NOW?

Majorly, the expense of computing is falling while processors are growing more powerful. Graphics processing units (GPUs), initially formed to run video games, have demonstrated proficiency at mastering machine learning algorithms and aiding them to understand, evaluate, and “learn” from patterns in big data. “Computing power is so much faster, so much more plentiful and cheap now,” Sanjabi said. “We used to be able to look at a thousand rows of data—now we can look at a trillion.” Along with this, there has been an eruption of internet-connected devices receiving and sharing multiple types of structured and unstructured data (including text, speech, videos and images) that can teach AI systems. “We’re seeing massive amounts of data from many channels,” said Dilip Keshu, CEO, Born Group. By curing and employing this data, these practices can produce sophisticated modeling and judgment that wasn’t feasible a few years ago. Many of today’s most extensive global tech businesses—including Facebook, Google, Microsoft, Amazon, Apple, Alibaba, and IBM—have also yielded their noteworthy influence behind AI technologies, with attempting to both streamline their operations and matching those to algorithms ready-to-use. By open-sourcing their software and allowing their cloud-based systems free, also producing a whole food chain of smaller firms and startups that are formulating unique AI solutions for specific utilities and industries. Early experimentation is also returning positive results, and companies are gaining more confidence based on these successes. A June 2017 survey by ‘Capgemini’ noticed the majority of global business executives who have performed AI as their innovative outlook said it has appeared to provide new insights and more reliable data-analysis. Not only this, but also it has helped creative organizations to make management decisions in a more subtle manner.

The Next Big Thing In The World

The new age era of Marketing that is AI has been exponentially increasing and brings with it far sighted connotations. AI has increasingly been more sophisticated and has been widely embraced in marketing, the skill for marketers to efficiently perform and manage all the AI solutions that will become a much more important and crucial skill set. Furthermore, the perception of an employee or an individual about their role and how widely they can implement AI at the workplace is not only the success of the individual but also the success of the company.

Despite the serious concerns that need to be solved before widespread adoption, artificial intelligence offers immense benefits to marketers, consumers or clients, and our society at large by introducing marketers' ability to create and distribute value at scale to the right set of people at the right frame of time and in the correct and effective way. This ability can be realized through a blend of improved emotional quotient within employees like empathy and creativity, and a constant focus by the firms on how to provide enhanced quality data driven culture in their organization. AI has the ability to automate tasks repeatedly, marketers can increasingly align their efforts for the activities that can generate value and can ease the daily lives of consumers, allow for increased satisfaction at workplace, and enable unique thought process for societal benefit overall.

The new age Marketing Era AI, enable fundamental developments of the ways by which a marketer can interact with its customers, their efficient ways, and tools they will be using to achieve their ultimate goal, the type of craft that are valued in the workplace, and the nature of their daily responsibilities. Similar to the magnitude of development brought forth by the increasing usage of computers, artificial intelligence have the great potential to change the way of marketing unimaginably

3 METHODOLOGY

3.1 Data Collections Methods

Types of data were collected:

Secondary data – Data which was already present in open sources which was collected through internet searches, articles, e-books, journals, published research papers.

Observation - Data which was collected with my personal observation on the various aspects of how companies implement AI and conduct their marketing

This project is an exploratory qualitative study conducted with the help of secondary data and observation method to gather information. Since the objectives of the survey is as such that it requires secondary data and observations in various aspects of marketing especially in digitally enabled marketing globally. Secondary data, which mainly are observations were made from the various services provided from global technological companies and other companies which specialize in AI and companies which have implemented AI based programs. Secondary data is collected from already published journals, research papers and articles from credible sources to maintain the authenticity of the data collected. The data has been collected within a span of 2 months.

The basic qualitative data was collected by going through research journals, company websites and app interfaces. While websites use AI to understand their customers, app interfaces focuses on personalization of their targeted audiences by collecting more detailed information.

Narrow AI captures the primary needs of the consumers to serve them in the form of recommendations and final results. Big players like Amazon, Flipkart always asks the user about its preferences first, then adjusts the content as per the liking of that individual, This shows their intent to serve them better. I went through such portals related to books, clothing, entertainments,

etc. and found the algorithm quite similar. One common point was that they allowed the customer to roam around their platform first and then the AI gathers the information and then enables its algorithm. The most popular video watching platform, YouTube also curates their content just by following this method.

Now, coming to new age products like home assistants, smart home appliances, it encompasses the narrow and strong AI both by using Speech-to-text and speech-to-action methodology.

Researchers have also mentioned in their works that AI gives a lot more control over the technology in these matters by forcing the user to allow his/her information to the system.

Thus, in the next section I have mentioned all my findings in respect to numerous aspects of enabling and handling AI to develop a quantitative study of how the companies built their framework based on AI.

These pointers in the next section will give a holistic analysis of my findings and will also provide a through knowledge of how proper implementations of various key performers make the change and bring uniqueness to the system.

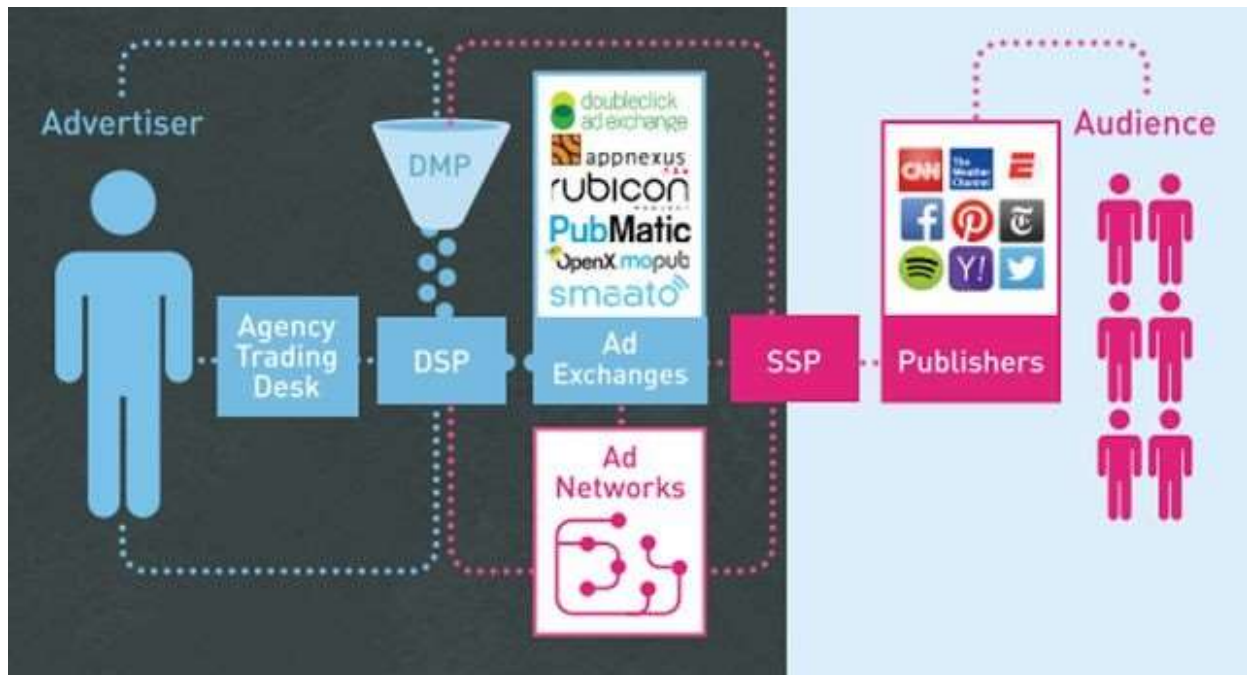
4 FINDINGS AND DISCUSSIONS

4.1 Programmatic Advertising

Programmatic advertising is the buying of media advertising through digital means. Traditionally for marketers to buy media, there would be a labor intensive process of buying media such as pricing, placements and many other details which have been a great problem or efficiency for marketers to do so. Now programmatic advertising has changed the entire landscape of media buying for companies, its automatic media buying which is backed by insights derived from vast customer data is enabling marketers to provide highly targeted and personalised advertisements in a large scale.

Programmatic advertising has a lot to do with widths underlying technology which is AI and machine learning. More than 75% of mobile and digital advertising is spend is happening on platforms which utilize these technologies and chances are it will go higher in the coming years and further improvements in these technologies can take programmatic advertisements into the next level. At this moment, Artificial Intelligence in programmatic is used for customer segmentation (e.g., through pattern recognition, behavioral analysis, etc.) and initiating the automation of various domains within programmatic itself (example : real-time, automated advertisements purchase, automated personalization of ad content, etc.). More advanced features of Artificial Intelligence that allow for customer conversion prediction or campaign optimization of creative assets are now able to see adoption as well. Marketers might be soon benefited from Artificial Intelligence in programmatic related to more advanced customer segmentation, improved levels of transparency, interactive advertisements unit and reduced ad fraud and as well.

Figure 4.1.1: Programmatic Advertising Flowchart



Source: Google

4.2 OmniChannel

Companies of today want to conduct their marketing communication or interaction with the customers through multiple channels to give the higher experience to the customers and trigger their buying decision, so brands are more focused than ever to provide consistent and relevant communication to their customers through every channel. Customers use an average of 2.8 points of contacts before buying a product so, therefore a brand's ability to optimize the frequency, positioning, and contextualization of their marketing efforts across all channels is evermore difficult. Paired with AI, companies can provide a well efficient and relevant omnichannel programmatic advertisements to generate the right experience for the customer to enable or influence the buying decision.

Properly implementing an omnichannel plan has been proven a bit difficult for marketers for

many reasons. The number of varied ways used by consumers on a regular basis continues to increase rapidly with the introduction of voice assistants like Amazon Alexa, chatbots, conversational user interfaces and more, providing instant marketing messages in a 1:1 manner becomes evermore complicated yet necessary in today's world.

The main concern is that programmatic advertisements need to be synchronized to where a customer enters into the sales funnel. At the foundation of optimizing for omnichannel synergy is improving how data is traced, organized, and applied into programmatic campaigns. There are many advertisers or marketers who uses as many as fifteen channels while tracing attribution of their campaigns, which is an amount of data that requires considerable effort to manage. The much more complicated issue is the increasing demand to implement the real-time data and to ignite the pragmatic advertisements. Message Marketing can become obsolete in a short period of time while a customer is connecting with a brand. As a customer moves from researching about their options for a particular product to intending to shop with a brand, their determination of what a "relevant" marketing message is will change. Thus, in today's world any marketer is being able to deliver marketing messages in real-time can exponentially improve advertisement performance. People are 3X more likely to buy a product post exposure to an advertisement during their research phase.

4.3 Retargeting

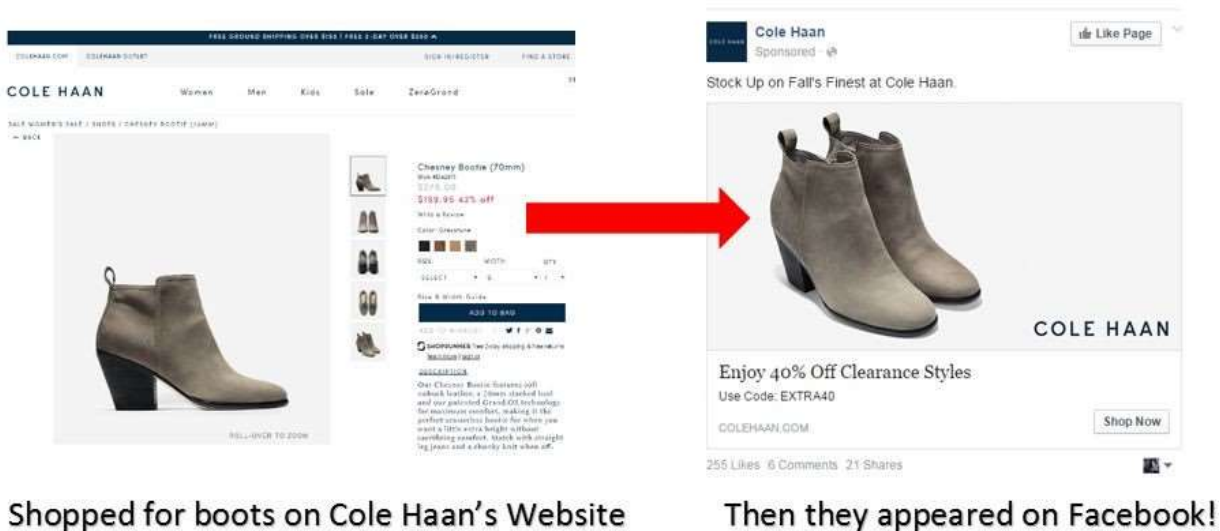
Retargeting is a method of advertising which is closely linked with programmatic advertising and machine learning. This is done using the customer data such as customer search history, search cookies, past purchase data and other online behaviors. One common example of retargeting can be of facebook or instagrams ads. After we visited a website lets say amazon.com, and when we go to facebook or instagram, we can see the ad of amazon.com with the same product. Retargeting is highly targeted and personalised in a way that it enhances the customers experience and customers will feel that the ad is more relevant than a random ad which the customer doesn't even care about. Retargeting have shown increase in the conversion rates and click through rates compared to traditional ads (Abramovich, 2012).

Figure 3.3.1: How Retargeting Works



Source: Google

Figure 4.3.2: Retargeting - Facebook Example



Source: Pinterest

4.4 Organizational Structure

Effectively introducing AI in programmatic ad requires a lot of transparency and combination of the insights, analytics, and information of the different employees or departments which may have been required within a company. As per the study from the Accenture reports (2017), the main challenge that any firm face while using customer data for better reach or targeting is the existence of internal organization silos. AI will not provide value to a company if it is used within a silo, so organizing the internal structure of a company to harbor a cross-functional, data-focused environment is necessary. In all this means that for an effective result the system of the organization should be in place to initiate the sharing of data within the organization to achieve a complete picture of its customers. Now even, the firms will have to unite in their strategic direction and messaging to be in line with real-time customer data. If the firms are unable to do so, AI might affect their brand image, as 70% of customers named consistency across channels as a factor that affects their loyalty to a brand (Infosys, 2013). People might be sharing their opinions about brands, offering insights into how one should use a brand's products or services in their daily life and other deep insights without there being a way for marketers to track and measure it effectively. over 75% of all the images that are shared or posted without any relevance to context or hashtag (Metaeyes, 2017).

Again, marketing in the new digital age is mostly about the interaction and relationship of companies and its customers. The billions of people who use social media possess the powerful ability to co-create and interact with brands through viral content, user-generated content (UGC), influencers, and facilitating word-of-mouth (WoM). Marketers' ability to understand and analyze the impact of these organic interactions can be crucial to their overall performance, and the ability to do so can be enhanced using AI.

One being able to relate with the sentiment, understand candid consumer behavior, and trace different attributes accurately on any social media platform has been limited to surface-level analytics. Marketers can use the tools to measure the effectiveness and profitability of their social campaigns via tracking engagement rates, impression counts, clicks per link and much more, however these measures may be limited to basic ways of understanding customer behavior and understanding sentiment accurately. Traditional social media measures are limited to tracing

specific behaviors that do not always provide insightful information and might include people who do not like participating in those behaviors.

4.5 Segmentation and Targeting

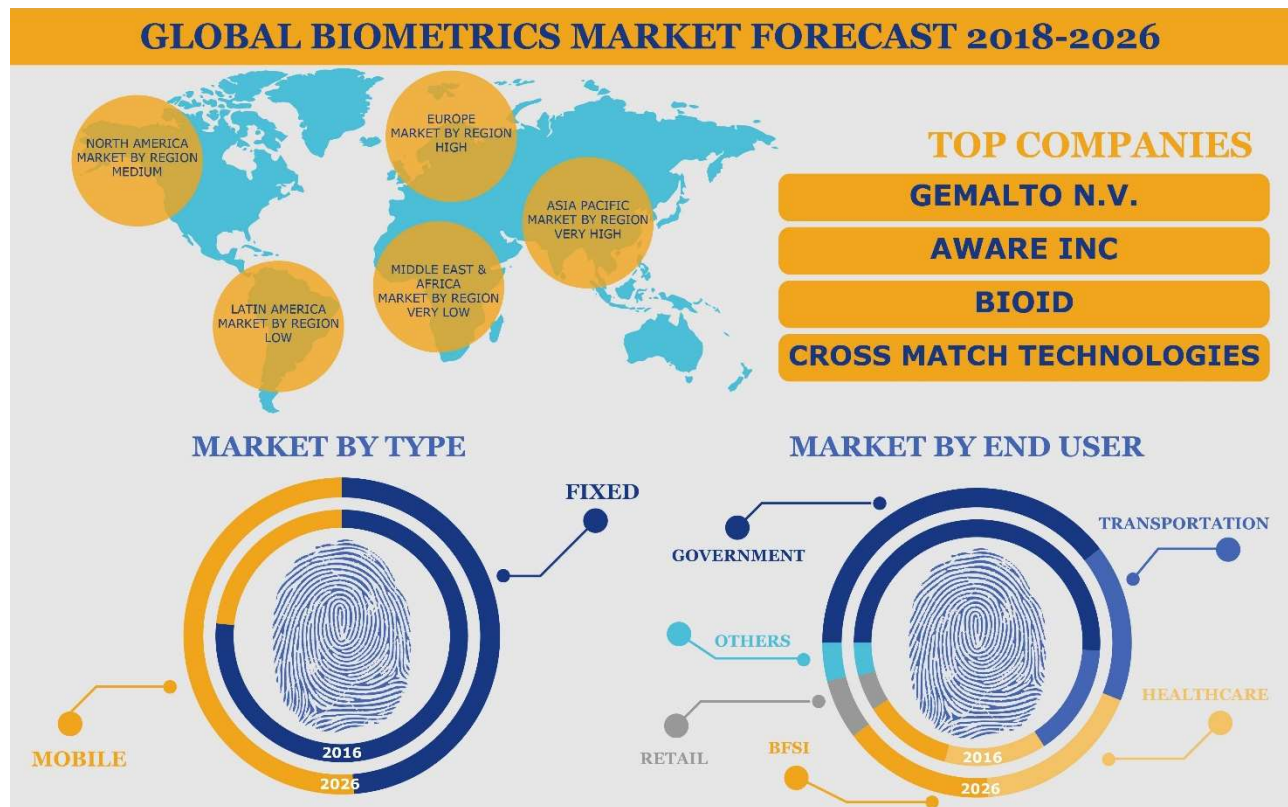
Image recognition and computer vision allow companies to attain a insightful understanding of their customers, and segment accordingly. As per the above discussion in the previous section, the pictures or the post that an individual shares reveal valuable insights into what exactly makes them right. That information can then be used to differentiate customers that are to be targeted with personalized ads. By understanding and analyzing the customer behavior in a systematic format, marketers then can create an increasingly accurate and valuable customer segments that could have a much higher chance of a marketing message resonating with them. Some companies have already initiated and started this strategy into their marketing efforts for better results. For example, Coca-Cola's Gold Peak iced tea brand used the image recognition technology to scrub through Facebook and Instagram, then find customers who are drinking iced tea and shows happy emotions. These indicators in their images served as self-customer segments that Gold Peak then used to target advertisements to the target audience. once users exit from their social media platform, they were targeted with ads for Gold Peak on mobile and desktop sites. The output of this strategy was crystal clear as the brand was able to measure a click-through rate of around 5%, which represented a 5x increase over its previous advertisement performances.

4.6 Interactive Marketing Through Biometrics

Interactive Marketing is a good use case for facial recognition and the AI technology behind it. It works by using facial recognition by scanning the biometrics of the persons face and finding out the sentiment of the person to give a personalized experience to the customer. one relevant example of this can be Expedia's Discover your Aloha Campaign Expedia's campaign works through having the customer switch on their webcam, and then allowing them to be engrossed in a tropical paradise as they are being led through the scenario beauty of Hawaii, where one's facial

recognition is used to understand which part of the whole experience brought out the maximum positive reactive on the person’s face. Now as soon the visitor left the working site they were being introduced or given the coupon for the particular area in Hawaii for responding most positively to (Duran, 2016). This way of interactive marketing done by Expedia proved to be very effective in providing relevant and highly personalized experience to the customers and to provide right discounts to them for the places which they liked in Hawaii.

Figure 4.6.1: Global forecast of biometric marketing



Source: Pinterest

4.7 Analytics

Analytics is a domain which AI and Big Data plays a very greater role than anything. The immense quantity of data which is being collected by the companies are having a lot of optimization problems. And it is not possible to analyze or learn this data by traditional technologies to come up with insights which is useful for a marketer, this is where AI and ML steals the show. AI and machine learning algorithms can solve this optimization problems of vast amount of data and bring out useful insights out of this. A well-advanced AI can even predict what exactly the customer is going to purchase next, it can even predict when and where and how a customer is going to do his/hers next purchase. This level of understanding of the customer can enable marketers to exactly know where the customer is at his/hers purchase cycle. And also this helps the marketers to provide a well personalized and relevant interaction with the customer to trigger the buying decision.

Creativity

As marketing is both analytical and creative field, marketers are supposed to be very creative and proactive with their communication efforts to indulge relevant interactions with the customers in a consistent manner. Advancements in AI will take over the repetitive works done by a marketer and lets him fully concentrate on the creative works to generate more ideas to implement in the company's marketing function. In addition to this, soft-skill cliques such as creativity and compassion will frequently assist as sources of competitive differentiation. Brands that hold high image among their customers with real content, meaningful stories, immersive experiences, and customer-centric approach will rapidly become the table topper in the AI Marketing field.

4.8 Localization

Artificial intelligence can be used as a tool to improve the laborious task of editing and optimizing marketing campaigns to meet the needs of the local market. The location of a marketing campaign has been used mainly by large brands that carry out multinational campaigns that wish to adhere to the rules and customs in a specific geographic location. However, both large and small brands can benefit from locating their marketing efforts using AI.

Instead of manually locating campaigns, AI can automate the hassle of handling of specific variables, like creating attractive call to action more suitable to a geographic area (for example, teaching customers to buy a new product release on their site). specific local mall), changing the copy of the ad to match cultural norms (eg, individualism in Western cultures extensively use "yourself" against attending to collectivism in Eastern cultures using "your family") and alter the visuals of ad-content (eg, generate objects or artifacts in a video scene to attract diversified audiences). By combining AI software solutions for unique and meaningful production such as 'Adobe Sensei', 'campaign optimization' solutions and 'A/B' testing such as 'IBM Watson' and 'Salesforce Einstein'. Along with these the list goes on of other solutions that allow automatic video editing or video analysis, marketers can perform the localization with tools that are already on the market.

4.9 Image Curation

AI has the ability to automate process of curing images for using in campaigns and marketing strategies. Healing the image is directly related to intelligently find stock images that meet the marketing professional's criteria when determining whether a particular image is a good choice for a particular use, and then collect the images that replicates the brand image. As an example I can include EyeEm- a company that uses ML algorithms to automate process of curing images. Adding to this I can mention Everypixel, a service that enables intelligent searches of stock images and automatic perspectives on how well a image to its intended purpose.

4.10 Chatbots

Chatbots are text-based conversation applications which allow an user to speak with a bot which responds to them automatically. They note a fast growing interest with almost 95% of executives who indicate that their use of chatbots will only escalate in the near future, however, a study conducted by SAP stated that only 9% of Fortune 500 companies are fulfilling chatbots (SAP

Hybris, 2018). With hands-on applications in customer service, e-commerce and more, chatbots deserve, duly, their maximum efficiency. Basically, there are two major forms of chatbots. The first are the rule-based chatbots which only respond to specific commands. Unless the user enters the correct command, chatbot cannot understand the warning. The second form of chatbots is driven by AI. AI-powered chatbots use NLU, machine learning, NLG, and NLP to allow human-like conversations. This form of chatbot gains automatically from past conversations with a particular user and evaluates important information to store as a reference in future conversations. AI-driven chatbots are the form of chatbots that analyze in depth, since they are becoming ideal for commercial use ('Pratt, 2017').

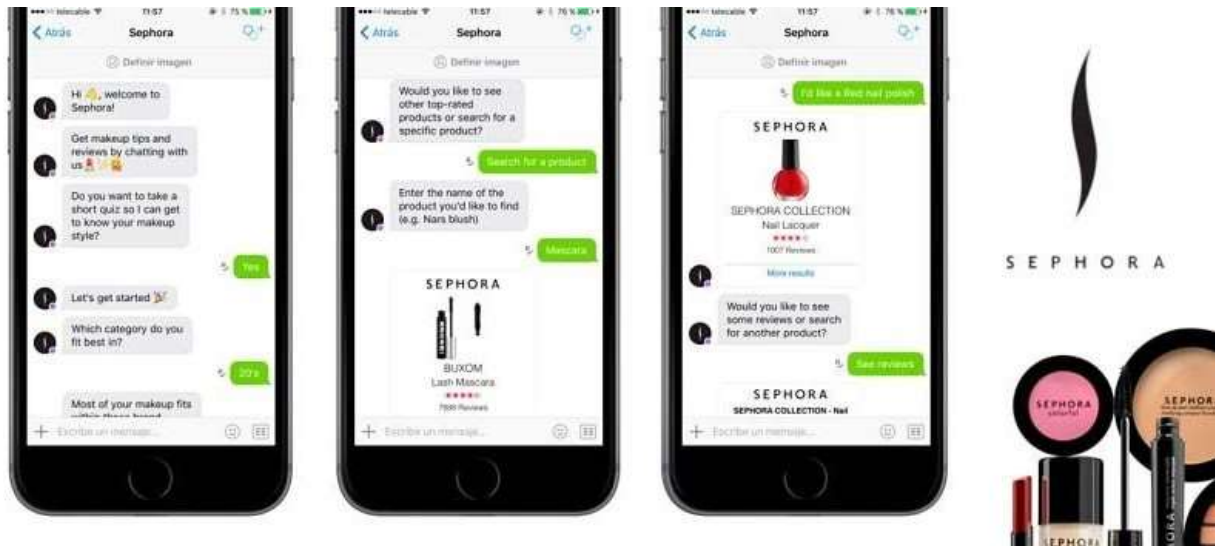
AI-driven chatbots use NLU, NLG and NLP to comprehend the user input and respond as a human. The user, as input writes a message to the chatbot, and then the chatbot applies its algorithm to use predictive analytics and other supportive algorithms to "generate information proactively" (Nguyen, 2017). The advance of artificial intelligence technology to the point where chatbots can respond in a more humane version to provide relevant and precise information. This gives customers the freedom to contact the brands at his convenience, 24x7.

This form of AI has possessed traction considerably in recent years. once a technology used mainly for recreational purposes, such as AOL AIM software, now deceased, is extensively applied in business and is greeted by consumers. With more than 30,000 different forms of chatbots available only on Facebook and 63% of consumers say they are compliant to communicate with a chatbot of a brand or business (Eaton-Cardone, 2017), different from others, this form of AI that Advertisers can use through many different scenarios. Zendesk reports that the adoption of chatbots has increased from 30% in 2009 to 52% in 2013, and customers say they have the highest satisfaction rate (73%) when using them in other forms of customer service technology such as telephone or e-mail (Zendesk, 2016). Looking beyond near future, Deloitte Digital quotes a prediction from Forrester Research, "chatbots will save businesses \$ 8 billion per year by 2022 with consumer adoption at a pace where people chat with chatbots rather than their wives." (Robinson, Gray, Cowley and Tan, 2017).

The benefits of an intelligent technology is well equipped ability of communicating with customers in a similar way to human provides many opportunities for sellers. Chatbots can be used

to attract customers as soon as they arrive on a company's website, influence decisions at strategic points along the customer's journey and contribute value and satisfaction to the overall experience. In recent trends, the main use of chatbots in marketing are customer service, e-commerce and personal assistants.

Figure 4.10.1: Chatbot example - Sephora



Source: Sephora

4.11 Personalised UI and UX

AI's ability to customize customer interaction at the highest level can be applied to the user interface (UI) and the user experience design. Engrossing AI in the way that customers interact with online brands, companies can optimize their websites in real time and adapt to the behavior of individual consumers. As of now and till near future, personalized UI and UX are AI applications with tremendous potential.

Companies such as Netflix, Google, Facebook and Amazon use smart product recommendations and real-time personalization based on user behavior to create more appropriate expertise. An

example of this can be studied about Nivea personal care brand. By the help of Alibaba's strong personalization capabilities, Nivea managed to adapt its customers' eagerness to the previous unsuccessful behavior. By introducing low-price offers to the visitors for the first time to promote brand engagement and exposing fans to high-value item baskets to increase average order sizes, Nivea has been able to increase its conversion rates around 70% and a hike in transactions by 150% (Abraham, 2017).

Marketers can get a tremendous advantage from this AI application by providing more useful experiences for their clients. Through services such as Optimizely and Convert, marketers can develop deeply customized online experiences which holds the ability to change in real time based on customer's behavior. By doing so, it provides them with the content that is most relevant to their needs. If a customer has previously seen a pair of shoes on a website, then when they come back next time, they will be welcomed with content related to the shoe or the specific product they were viewing. Instead of being exposed to marketing gimmicks that seem irrelevant to him/her, the customer will only enjoy content specifically curated for their needs. The positive side of personalized UI/UX in real time is also enormous for brands, as they can maintain their customers' attention for longer and see higher conversions. For example, the case of Ustream, a client of Optimizely that enjoyed a 12% increase in clicks on its homepage after optimizing by the gained data of only 12,000 visitors.

Customized UI/UX represents more than the personalized happenings for the customer. AI-driven optimization can be achieved by applying comparatively small sets of real-world datasets. If a brand is looking to launch a new product, it can test a multitude of different factors in its marketing communication to observe which works justifiably in the real world, and then optimize efforts accordingly. Perspectives such as e-commerce site banner designs, color combinations, button positioning, page layout and more can be optimized using this AI-based A / B test form. Instead of speculating and expecting a guessing game about whether your choices will perform well or if the results of a focus group will translate into market-ready performance, brands should go for trying a huge number of different combinations to find which one offers the best results.

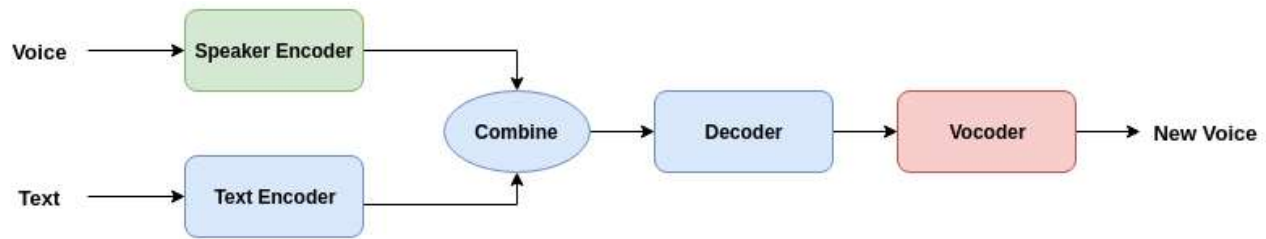
4.12 Voice

Artificial intelligence utilized in voice applications is already in the grip of millions of consumers, but it still has gigantic untapped potential. From hassle-free shopping to the ever-changing dynamics of search engines caused by personal assistants such as Alexa and Siri, the voice is frequently becoming an influential tool for marketing professionals to integrate into their efforts. Voice technology driven by AI is already in use by 500 million people as of 2016 (Hull et al., 2017), and is predicted to represent 50% of all online searches by 2020 (Olson, 2016). As of 2017, voice search has been embraced by 55% of adolescents and also by 41% of adults (Iwasiuk, 2017). While currently a niche subject for marketing professionals to fulfill virtually as a focal spot of their integrated marketing channel efforts, the voice has extensive potential to empower brands to interact with consumers in a more natural method for the way that humans react and communicate.

Searches led by voice are different from typing. A study directed by Search Engine Watch (SEW) explained that voice searches are more than twice the average text searches (Tabeling, 2014). Obviously, voice search provides consumers to be more honest instead of focusing on relevant keywords for exact searches that meet the requirements of the text search engines. We may perceive how consumers in search of information become franker, which has connections for brands while adapting their content to be online friendly in order to be tracked by search engines.

Consumers, sometimes wish to apply the voice to fetch particular information, thus applying the convenience of not having to draft lengthy sentences along with the expectation of obtaining precise and relevant results. A study conducted by Google Research (2010) gave ideas on how voice search will probably be used in the coming years. The study suggested that voice searches lead to be "the go-to" searches for topics linked with local businesses, necessary information on the fly and were not managed for confidential information such as medical information or adult topics. Brands can profit by storing confidential information in strictly text-based interfaces and providing customers to seek for more general information using voice.

Figure 4.12.1: How voice AI works



Source: Google

4.13 Personal assistants

Personal assistants are currently the primary area of focus when interpreting AI voice applications. Amazon Alexa, Apple's Siri, Microsoft Cortana, and Google Home are a few examples of personal assistants that are publicly available in the market. Given its broader outlook, personal assistants express a crucial tool for marketers to buy advantage while counting adding voice as an attribute to their marketing communications mix. Millions of people are now utilizing them, but marketing is yet to take advantage of the fullest potential.

4.14 Limitations of Study

This study focuses only on the impacts of Narrow AI in marketing and not is not doing deeper into the technical side of how Narrow AI is conducted. This study is not going in details about the negative impacts of Narrow AI and Strong AI in the future.

Problem of rapid change - In this technological era, technology is advancing very rapidly, it is very difficult to analyse and understand the future prospects and actual effects of a technology. This research is meant for immediate use and understanding of the subject to satisfy the objective. The relevance of this study is uncertain in the future.

Effect of external factors: There are other external uncontrollable factors which affects the future prospects of this technology in marketing, the impact of these factors are not estimated with this study which can play a vital role in affecting the future potential of the this technology.

5 CONCLUSION AND SUGGESTIONS

The AI Marketing era is fast approaching and has far-reaching implications. As AI grows to be more sophisticated and universally adopted in marketing, the understanding of marketing professionals to implement and effectively control AI solutions will be an such a key skill set that will always be taken into consideration. Thus, an individual's perception of their role in the creation and distribution of value in a modern workplace driven by AI is not only critical to their success, but also towards the success of the company..

Despite the major problems it must be solved before extensive adoption as artificial intelligence offers large benefits to marketing professionals and consumers in general by helping the effectiveness of marketing professionals to create and assign value to the right audience at the right time and path. This facility can be obtained through a combination of enhanced emotional abilities within employees, namingly empathy and creativity. A steady focus on data-driven culture within organizations serves the purpose at a larger perspective. As AI automates repetitive tasks, marketers can enable frequent alignment of their efforts toward value-generating exercises that improve the lives of consumers, Thus, allowing greater satisfaction in the work, creative thinking and incresing results for overall benefits.

The age of AI marketing involves basic changes in the way marketing professionals communicate with clients. The tools and tactics are extensively used to accomplish the goals and the kind of skillsets they posses are always valuable to the work environment and daily objectives. Similar to the degree of the change produced with the help of the introduction of computers, artificial intelligence has the inherent quality to shift the reality of marketing in a drastic way and that will bring a huge make-shift.

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