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Use of Artificial Intelligence in Sales and Marketing

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***Abstract* -Artificial intelligence is impacting the sales and marketing in an unparalleled way. AI is expected to grow performance across all sectors, especially those with a high proportion of predictable tasks. Companies like Walmart, Amazon are heavily investing in AI because of which Sales and marketing reps are facing a grim future. In this paper, a literature review of how artificial intelligence-based systems is used for sales and marketing purpose, how AI has evolved from time to time with special focus on organization which are presently using this for industrial marketing is covered. This paper also includes a survey which is aimed at gathering information from organizations on how they are using artificial intelligence. This paper therefore tries to address the use of AI cases in sales and marketing and also aims to determine the future scope of artificial intelligence in different marketing activities.**

***Keywords*- Artificial intelligence, predictable, grim, information.**

I. INTRODUCTION

Artificial Intelligence (AI) is a genre of techniques and there is research going on related to this. Despite its relative market infancy, AI apps already boast remarkable industry-wide effectiveness, especially in marketing. Recent developments in AI technology and increased use cases have gained enthusiasm among marketers showing their efficiency. This enthusiasm has not entirely translated into a divine knowledge of how the technology works, its practical implementation, and its long-term consequences. Sales and marketing experts use statistics from sales assessment to customer surveys in a multitude of circumstances.

Artificial intelligence can process structured and unstructured information with a velocity and precision that is exponentially greater than any human could. Companies struggling to organize their customer information in a straightforward manner are a main point of concern. In order to obtain insights into their client base, marketers leverage the capacity of machine learning to connect information points. These technologies can evaluate speech to determine spoken language emotion, generate visual renderings to demonstrate trends in social media, and crunch information to predict.

Your favorite voice/digital assistant, like Alexa or Siri, understands your words just like someone else, and then answers in kind — using AI. Amazon and Netflix use AI suggestions engines to give products and entertainment/movies that you may want, assuming things about your choices just as a fellow product or film enthusiast might. The "3 D's" of AI are that it can detect, decide, and develop. Detect AI can find out which components or characteristics are the most predictive in a subject matter domain. Even with a lot of noisy data and a wide range of data types, it can recognize the most revealing features, figuring out what to listen to and what to overlook.

1. Decide

AI can infer information laws from the information and weigh against each other the most predictive characteristics to create a choice. It can take into account a huge amount of features, ponder each's significance, and reach a conclusion.

2. Develop

With every iteration, AI can develop and mature. Whether it is considering fresh data or experimental outcomes, it can change its views on the setting and how it evaluates the environment. It is able to program itself. AI can undertake mundane duties so that sales experts can concentrate on more significant job. Most sales teams spend a large part of their time doing repeated duties. Things like qualifying leads that take them away from more precious efforts like sales closure and sales goals meeting.

Artificial Intelligence revolutionizes sales by assuming the repeated duties of finding and sorting leads, tracking the necessary orders, and interacting with clients and prospective clients so that your sales team can concentrate on raising their conversion rates. Sales force officials expect their AI adoption to grow quicker than any other technology, according to the recent State of Sales report from Sales force. Sales force also discovered that high-performance teams are 4.9X more probable than underperforming teams to use AI. However, AI is not a substitute for salespeople. Quite the opposite, the vast majority of businesses using AI or planning to also plan to

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raise employees over the next two years. That's because AI creates practical value for marketing teams by automating, increasing, and supercharging their way of working with multiple real-world usage instances and instruments used today.

II. OBJECTIVE

1. To study the impact of artificial intelligence on sales and marketing.
2. To analyze the change in business pattern to achieve customer satisfaction.
3. To analyze how AI techniques have affected customer satisfaction in a good cause.
4. To study how business leaders, find AI techniques useful for their business growth.

III. LITERATURE REVIEW

Artificial intelligence is used in sales forecasting applications [1]. Sale and marketing professionals use artificial intelligence package which are there in microcomputer software. Examples of programs are Forecast plus, smart forecast II, the wizard forecaster, the forecasting edge. The paper mainly focuses on smart forecast II in which historical revenue and cost data can be imported from a model of financial and forecast into the future. There is an option called eyeball forecasting which allows to make maximum use of their business judgment by inputting their own forecasts. It has the capability to create several alternative forecast from the same set of data, dummy variable regression.

How Criteo solved the problem faced by monoprice? So what criteo does is they used their predictive search which is based on artificial intelligence. Monoprice was using a seller for feed management, automation tool for bidding, and internal resources for analytic and decision. They are looking for a technology that will optimize the entire program [2]. Monoprice enlisted predictive search of criteo to optimize all aspects of google shopping through machine learning and end-to-end technology. The software has changed the platform by directly bidding on both goods and clients. This was done by making SKU level bids, transforming remarketing lists to allow each returning user to bid on granularly learned algorithms to set optimum bids.

Chatbots were mentioned as the next frontier for customer service in one of the readings. Artificial Intelligence fully drives Chatbots so that consumers can target products based on personal taste [3]. Chatbots helps customers find their product more efficiently like US chain Macy's has a bot which would guide to find a product anywhere from the shop. Also, AI would help customers to solve their problems rather than selling of the products. Also, customers prefer bots more as more preferred and satisfying answer is obtained to them. Main reason behind more use of Chatbots is that according to research, 68% of people are already using a voice assistant service and 81% people say that they would engage with an intelligent virtual assistant because of which Chatbots are growing and developing more speedily. Also because of bots, it has made easier the jobs of customer care executive by giving them less burden of work.

In another research, it has been found that AI is used in negotiations and also for online auctions, in which conflict between seller and customer is solved [4]. A lot of restaurants and pub where there is change in price according to the crowd rush, AI is used for price variations accordingly. For auctions, configurable agent techniques are generally used to represent users in online auction. The agents can be configured, initiated, and monitored from an online interface.

In one of the white papers by IBM, it talks about their Chatbot cum personal assistant IBM Watson [5]. Talking about the ME-Commerce era, 45% of customers prefer to have same options as that in online as in retails while 94% wants to invest in AI for better customer satisfaction. 91% of retailers believe that AI will play a disruptive role in their organization in the coming future. Also, it is shown how AI can transform one's business in 4 steps:

1. Branding and new customer recruitment.
2. Lightning up the path to the success and customer engagement.
3. Personalization and Loyalty.
4. Boosting efficiency.

Also, examples of several organizations are explained like KIA motors and DHL and it is shown how use of AI has changed its way of doing business efficiently. 270 billion service calls are made annually of which 33% waits for one 1-3 minutes of time to get a response and then they switch to next website for purchasing stating the investment in AI to make organization efficient. In one of the papers it talks about the different Implementation levels of AI.

There are multiple ways in which business can apply AI and a broad range of AI alternatives are already available to assist different marketing goals [6]. Determining which alternative is best needs a thorough business assessment needs to be done. For now, the following spectrum offers an overview of the features between low and high participation at different points.

1. Low Involvement

Low participation AI consists of 3rd party alternatives that don't involve the implementation and management of big quantities of assets (money, time, knowledge, etc.). At the expense of less powerful technology, AI offers the advantage of reduced entry barriers.

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Examples-User-focused search functionality: Google Image Search, Google

2. Medium Involvement

AI apps with medium participation make use of moderately robust technological capacities in particular company fields. These types of AI give more narrow-focused apps defined by customer-to-brand interactivity instead of playing an essential part in the high-level approach of the business.

Examples- Customized Chatbots for e-commerce and Custom voice assistant applications (through Alexa)

3. High Involvement

Implementation of high participation AI includes the most sophisticated, essential technology accessible to companies. These can be extremely tailored, in-house AI systems that are explicitly constructed for the business used in key choices and activities. High participation AI means that the technology is component of the company's key value proposition and directly affects its output.

Examples- IBM Watson

IV. RESEARCH DESIGN

Research methods for this study would be case based and survey based. Case based method would contain an in-depth analysis of all the relevant articles, research paper and case based on artificial intelligence. While for the survey-based methodology, a form will be sent to people working in that field. Questions would consist of some technical questions to some general questions.

Research will mainly focus on artificial intelligence-based techniques used currently in different sector and that too in sales and marketing: Chatbots, personalized recommendations, ease in supply chain and etc. Based on the survey responses, analysis would be carried out and different statistical techniques like regression analysis, etc. would be used which will help to determine how much one factor is dependent on other factor and what would be the impact on others if one factor in impacted.

1. Qualitative Analysis

One of the methods for the analysis part was case based approach where there will be certain points highlighted based on the references we have. Analysis part for the same is as follows:

2. Predictive Forecasting

Artificial intelligence systems exist that can predict or forecast outcomes using historical data to inform future results. Common predictions that sales AI systems can make include:

1. Deals or prospects most likely to close.
2. Deals or prospects to target next.
3. New customers that may be interested in what you're selling.

Now, the accuracy of those predictions depends on the system being used and the quality of the data.

3. Lead Scoring and Prioritization

Artificial intelligence can look dispassionately at large datasets from a number of sources and tell you which lead you should prioritize, based on the scores the AI has given them.

4. Expert Recommendations

Beyond prediction and prioritization, some AI systems may actually recommend sales actions, going so far as to tell sales teams which actions the system thinks make the most sense, based on your goals and insights from the data. These recommendations may include advice on how to price a deal, who to target next, or which customers to target first with up sells or cross-sells.

5. AI based sales process

Integrating AI with the management system of customer relationships is an effective solution for sales management. It enabled AI enables a CRM system to respond to customer requests, fix their problems, and sometimes even identify new sales team opportunities. Customers will no longer be given unwanted products and services for their online purchases.

6. Real-time product targeting

E-Commerce Companies seek to provide their customers with the best offline shopping experience in the online space by providing consumers a trouble-free way to discover the items they want. Machine learning can help make personalized product recommendations, discounts and promotions accessible to online shoppers.

7. Customer-Centric Advertisements

To deliver customer-centric advertising, artificial intelligence systems can be created.

Other fields where e-commerce can be applied:

1. Predictive merchandising
2. Sentiment Analysis
3. Customer segmentation
4. Product categorization

8.Virtual Assistant

Digital e-commerce assistant is a technology operator specialized in technical and business support services. It can also perform an individual's tasks or services. You can also use the term "ChatBot" to refer to the virtual assistant. Lenovo has also recently announced that its virtual assistant is now competing with Google and Cortana. CAVA assistant is focused on deep learning that is driven by AI. It has the advantages of face and voice recognition to help manage information and other events.

9. Quantitative Analysis

For this analysis we have taken survey of people who are working in industries about how are they using AI in day to day use and their future usage. Some online research about how these companies are using AI has also been done. Companies which are surveyed are HDFC, Amazon, LTI, Axis Bank, TCS, Accenture, Good work labs, Fabindia and Swiggy.

Analysis of the surveys is given below:

Q1. Is your company currently using AI? If yes, How.

HDFC:

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They have built a tool called Eva, which is India's first AI bank agent, this AI tools allow retail banks to micro-segment customers into granular segments to offer highly personalized products and services to customers, thereby increasing overall stickiness and increasing overall customer lifetime value. Offering personalized financial services and product bundles for each customer. Benefits of these automated customer service platforms include faster response times, better customer satisfaction and reduced costs associated with customer service. In addition to facilitating better customer interactions, other benefits in this domain include more efficient data acquisition and better analysis of customer needs.

Amazon- Amazon uses Amazon Personalize as a machine learning service that makes it easy for developers to use their software to generate individualized recommendations for customers. Machine learning is increasingly being used to improve customer engagement by encouraging recommendations for customized products and content. Amazon Personalize allows users with no previous machine learning knowledge to easily build advanced customization capabilities into their applications and they are also doing some improvements in voice assistant Alexa.

LTI- They are helping their clients to use AI in elevators (client is an elevator manufacturer). Large amounts of elevator sensor data can be monitored, analyzed and shown in real-time, enhancing equipment efficiency, reliability and safety. Since more data is collected and processed in the cloud, artificial intelligence can make better decisions and decide when maintenance should be done and what action technicians can take to solve the problem. Use artificial intelligence to detect has helped to reduce elevator failure in the long run as technicians can recognize and address the potential problem in a single visit beforehand.

Axis Bank- For KYC, axis bank gives tablet to its sales agent for immediate authentication of new customers. The AI reads the scanned, uploaded documents and is able to detect if there are any identity theft or inaccuracies in the data. If there are none, then an account gets opened in 5 to 10 minutes, instead of 3-4 working days. In Axis Bank, cheque authentication today is largely done not done by humans but an AI system.

TCS -They are helping their most of the clients by making a questionable and answerable Chabot. They have created a HR bot also for their in-house use. This bot helps employee with most of the HR related activities like leave, reimbursements process etc. Employee can use this bot through their TCS Facebook login.

Accenture- They help their customer use AI in their existing system to gain insights from millions of customer interactions and then use machine learning and AI to make ongoing and reliable predictions of customer's needs, preferences and habits, a company gains the ability to create more engaging customer experiences. They also helped client in creating a new data lake, The Hadoop Big Data platform includes extraction, transformation, loading and management capabilities. With this large data in place, they built a 360-degree view of each customer securely and applied a series of machine learning designs to drive digital banking marketing data analysis across a range of dimensions. They helped the company develop new capabilities in the design, implementation of campaigns, helping their marketing professionals to ensure that none of their new insights driven by AI would be wasted.

Good work labs- Their clients had a travel app for its users. Their task was to make the mobile app engaging, intelligent, and personalized. By using Machine Learning models, they had to create recommendation systems as an advanced feature. The nature of these recommendations had to be like: users will be recommended to visit places based on their previous travel history, surrounding tourist attractions when they visit a place, places based on their choices and tastes. We equipped the algorithm to analyze key data form customer sign-up stage, customer previous visits, user ratings collected in the form of reviews to build an effective recommendation system.

Fab India- They have started using AI to offer personalization of services, making smarter decisions around pricing and promotions across channels. They have made use of AI for the men's kurtas section on their website, where one can create their own uniquely styled kurta. Once you've decided on your style and choice of kurta, they get down to making it to the desired specifications. They are using Oracle Commerce Cloud and another technology to help render the live imagery of the kurtas.

Q2. How artificial intelligence will improve my organization's sales performance.

50% of the respondent use AI to Predict the revenue of the next quarter with a high degree of accuracy, which in turn would help the company to better manage inventory and resources from an operational point of view or to check who all are their existing client who would like to purchase the newer version of product and with AI, the algorithm will collect historical customer information, social media posts and customer interaction history of the salesperson, and rate the pipeline opportunities or leads according to their chances of successful closure.

Q3. What do you think are the top industries which are benefited by AI in sales and marketing?

Most of them agreed that e-commerce, banking, and retail are the industries that are highly benefited by AI.

Q4. What are your views on whether artificial intelligence will replace sales reps in the next 5 years?

Majority of the respondents believe that AI will not replace sales reps but it will instead help them to provide better services to customer on regular basis. Listening, understanding, persuading and negotiating these are some of the traits that a sales rep has and AI can't replace these. All the buying and selling process is based on trust and trust comes from building relationships that's what a sales

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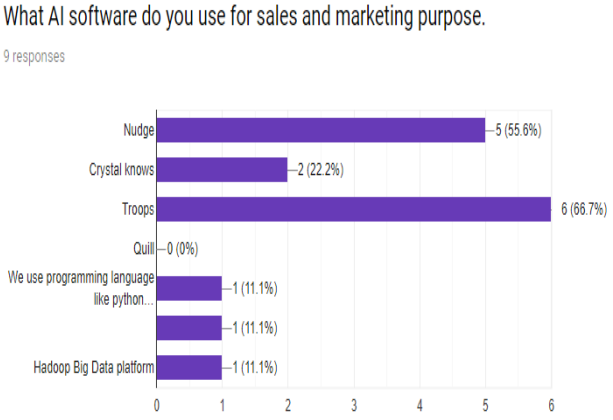
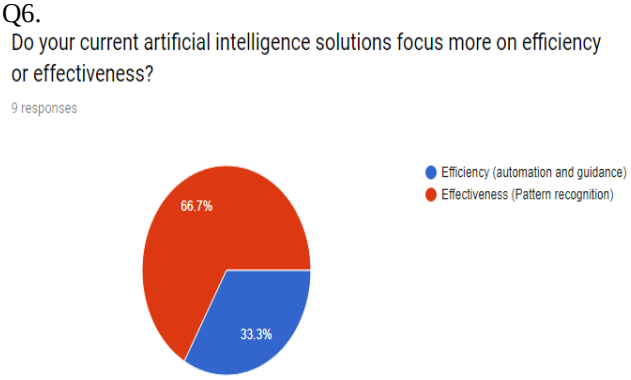
rep do and for high level sales human touch is very essential.

Q5.



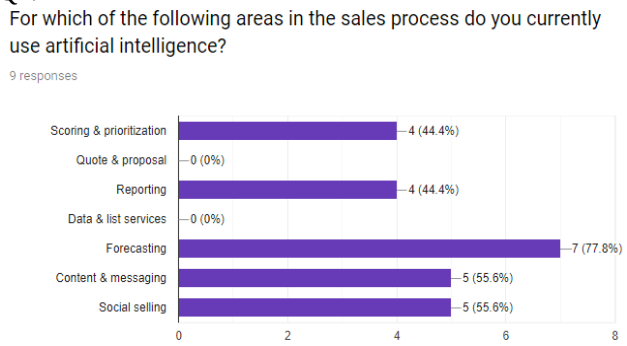
Nudge and Troop are the mostly used software for sales and marketing purpose.

Q6.



Most respondents use AI tools for efficiency that is for automation and guidance.

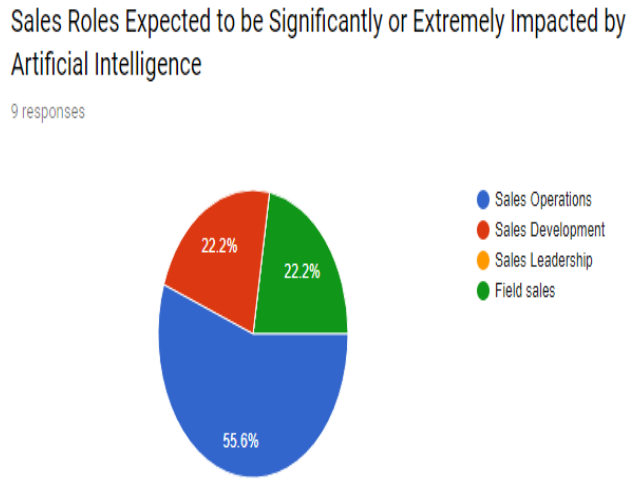
Q7.



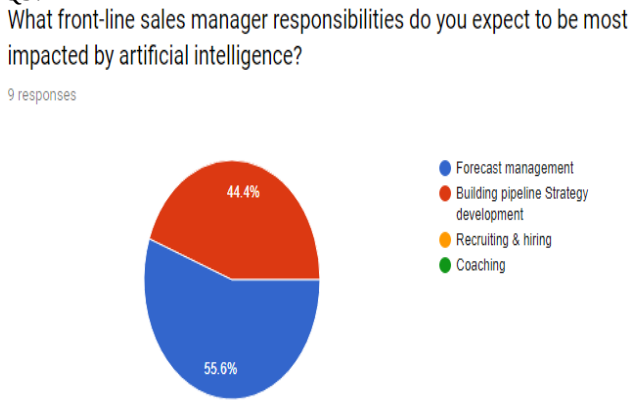
77.8% of the respondents says that they use AI for forecasting and this is followed by content and messaging prospects (55.6%) and social selling (55.6%).

Q8.

55.6% of respondents believe that sales operation role is mostly impacted because it includes creating, evaluating, and optimizing datasets.

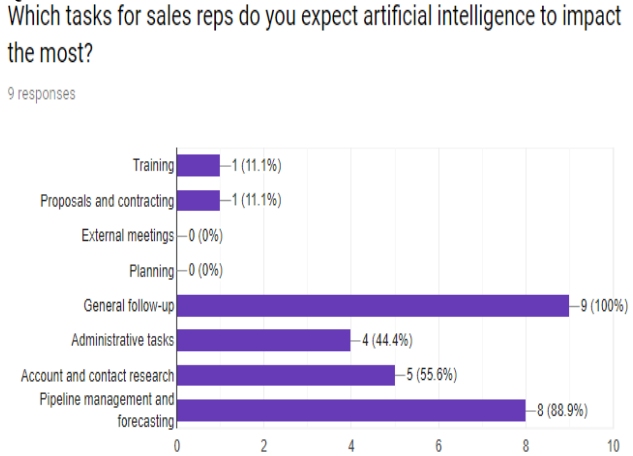


Q9.



People we surveyed they believe that artificial intelligence will affect the way managers do their jobs. 55.6% of respondents in our study expected forecast management to be mostly impacted, followed by building pipeline strategy development with 44.4%

Q10



All respondents believe that AI will be helpful in general follow-up like messaging or emailing the customer about the new offers, or asking them to fill the reviews about the product which they have purchased.

Q11.

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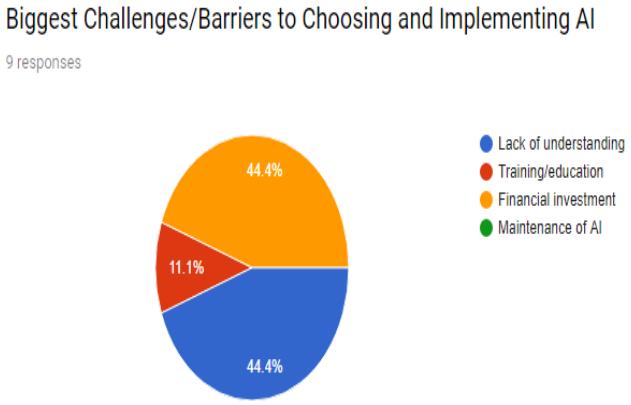
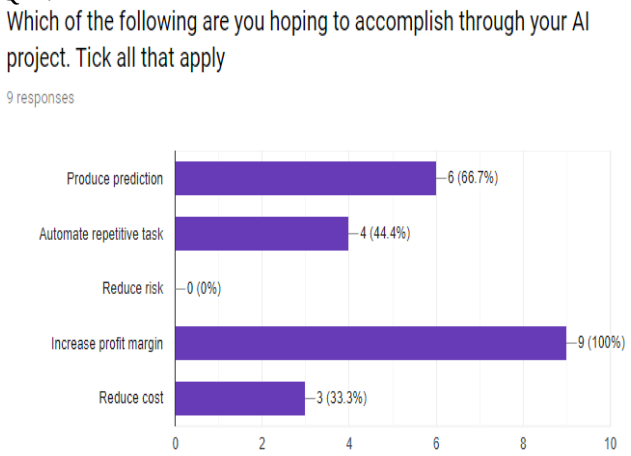


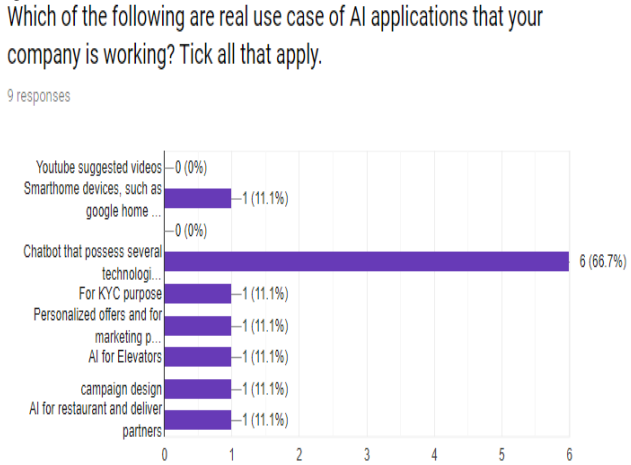
44.4% thinks that financial investment is a barrier in implementing AI in an organization followed by 44.4% believe that even though they have huge amount of data but they lack in understanding that data using AI.

Q12.



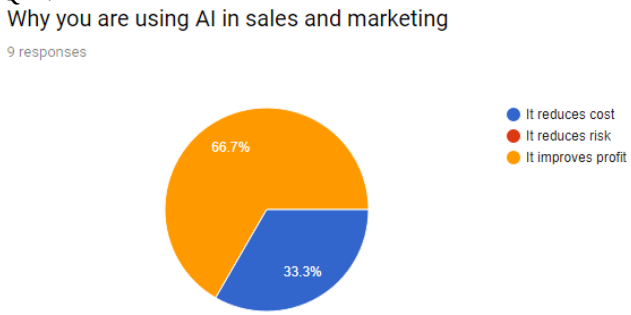
All the respondents are hoping that by using AI they will be able to increase profit margin AI will help automating some repetitive task as well.

Q13.



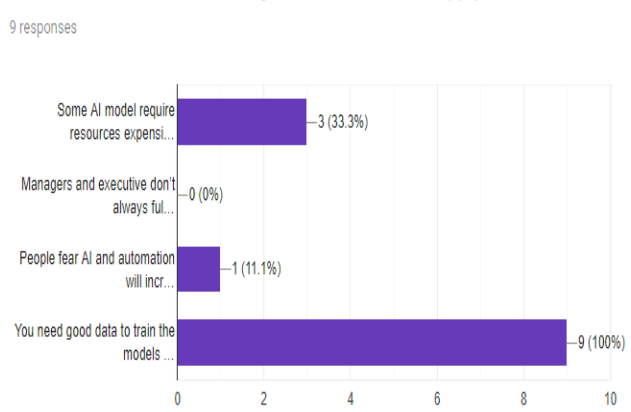
66.7% of the respondents are working on chatbots followed by KYC process, AI used in elevators, some it to make personalized offer to customers.

Q14.



66.7% of the respondents are working on chatbots followed by KYC process, AI used66.7% of the respondents use AI to increase profit while 33.3% use it to reduce cost in sales and marketing. in elevators, some it to make personalized offer to customers.

Q15.



For AI to work properly requirement is good amount of data and all respondents agree with that because then only useful insight will come out of that data.

V. CONCLUSION

Based on the qualitative and quantitative approach, it can be concluded that organization has been affected by the introduction of artificial intelligence and has bought some changes in various processes within it. From the customer centric point of view, it has impacted customer behavior and has enriched customer experience up-to certain extent. Because of the advancement in the process by the introduction of technology in it, many sub processes are optimized resulting in automation.

Due to data gathering process, it had helped the analytics team to serve customer better by enriching their experience with a feature called personalized recommendations and providing them with various options to choose from. Features like voice search and personal assistant has served customer with a separate employee all together for better customer experience.

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Artificial intelligence is a helping hand for marketers in many ways like taking timely decision, showing the way for hyper personalization, predictive customer service. AI technology offers excellent prospects for in-house collaboration and it drives customer engagement. AI can aggregate data, streamline customer accounts, pick and submit content to leads in the next step, and more. With the help of this, the company's sales and marketing team will focus on what they do best i.e. developing strategies that will create valuable customer experience.

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