

**AI in Marketing**  
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**Week 9**  
**Lecture-44 Role of AI in Advertising-I**

Welcome to this NPTEL online course on artificial intelligence in marketing. Now, it is time for module 44. So, as you can see from this slide, in these two modules, 44 and 45, we will be talking of the role of AI in advertising. So, let us start with module 44 and part 1 of this topic. Now, these are the things that we will be talking about in this module. That is, what is marketing communication and the role of AI in advertising, benefits and applications of AI in advertising with industry examples.

So, these are the three things that we will cover in this module. So, now, let us talk of marketing communication using AI. But before that, let us first understand what marketing communication is. It is the means by which firms attempt to inform, persuade and remind consumers.

So, one is to inform, then the second is to persuade and the third is to keep on reminding consumers directly or indirectly about the products and brands they sell. In a sense, they represent the voice of the company and its brand. They want to speak. So, they are means by which the firm can establish a dialogue and build relationships with the customers. Now, what is marketing communication mix? It consists of seven major modes of communication talking to the customer.

The first is advertising, second is sales promotion, the third is public relations and publicity, the fourth is online and social media, fifth is direct marketing, the sixth is personal selling and the seventh is events and experiences. So, these are the seven modes by which companies they speak with their customers. Like in so many industries, the use of data and AI is transforming advertising at a fast pace. So, now, the companies and industries, they have lots of data about their customers and that is being used to communicate with them. So, consumers are seeing these changes in the in the personalized ads on their web browsers.

The chatbots that help them making buying decision, but what exactly is AI powered advertising? AI in advertising refers to the simulation of human intelligence in machines that are programmed to think like humans and mimic their actions based on the information that is fed to them. They use historical data to learn from past experiences and use it to make smarter decisions in the future. Advertisers can use AI to create more personalized experiences, target the right audience and make decisions faster. AI is

changing advertising and the surrounding landscape. Advertisers want to optimize the vast amount of data at their disposal to create better campaigns and drive more impact.

So, better campaigns, more efficient campaigns. The importance of AI in advertising continues to increase. Before the assistance of AI, it was difficult to measure the effectiveness of campaigns and where to allocate the spending. However, media spending is not the only sector of the advertising industry being affected. AI also affects the planning, analytics and creative.

AI based cognitive advertising can therefore revolutionize a company's approach to marketing and advertising. When combining AI, machine learning and big data, advertisers can make better decisions with their budget to maximize their return on investments. Cognitive advertising is driven by AI and involves computer algorithms that analyze the information. Automatically improving the experiences. Devices that utilize machine learning can analyze new information based on the relevant historical data.

This then informs the decision based on what has or has not worked in the past. Now, let us look at the benefits of using AI in advertising. So, the first benefit is more personalized experiences. Personalization in advertising refers to the use of data or consumer insights to increase an ad's relevance to its intended audience. This can be data related to demographic information, interests, buying intents and behavior patterns.

Personalized ads allow you to establish relationships with consumers across the touchpoints. So, one consumer is moving from one touchpoint to another. And there are so many customers in this journey, and they are moving from one touchpoint to another. So, these personalized ads allow the companies to establish relationship with consumers across the touchpoints. Whether it is using conventional marketing or optimizing creative messaging to create to better connect with audiences.

Increasing the relevance of ads and making them personalized is becoming a top priority with 80% of those who classify themselves as frequent shoppers saying they only shop with brands who personalize their experience. 80% of frequent shoppers only with the brands that personalize their experience. 47% of business to consumer consumers note that the brand could do a better job aligning their engagement activities with their preferences and 56% of consumers expect all of their interactions with brands or vendors to be personalized. Recently Zomato rolled out a brilliant, personalized ad on YouTube which has garnered a lot of positive responses from the viewers. So, YouTube viewers are coming across a specific ad by Zomato starring Bollywood actor Hrithik Roshan where he is ordered as he craved at the moment.

The only catch is that his orders change pace on the viewers GPS location on their phones. So, this is the ad that we are talking of. This is Mankiya toh Zomato Kiya. So,

Hrithik Roshan is craving for eating something and then that is why he did Zomato. The name of the dish, restaurant and city changes depending on where the ad viewer is located.

The ad uses the location of the viewers to personalize the ad using deepfake and AI personalized technology. Cadbury released a similar kind of ad for Diwali featuring Shahrokh Khan where the users could see the actor mentioning local shops in their area. In the Zomato ad, viewers can see Hrithik inside a truck with his team members ready to go on a mission. And just then a Zomato delivery arrives. The actor mentions the dish and the local joint.

With this campaign, Zomato has given a larger platform to the local restaurants and cleverly played on viewers craving for their favorite dishes from the restaurant in their vicinity. For the uninitiated, with the help of deepfake technology, a video of someone's face or body can be altered. And as artificial intelligence helps in learning a person's speech patterns and facial expressions, both the technology helped the brand to geo-target the ad with Hrithik Royan mentioning local restaurants and their famous dishes. The next benefit of using AI in advertising is segment before ads are served. By leveraging machine learning, a form of AI, advertisers can find patterns based on audience behavior and message resonance.

Machine learning does this by considering all information they have about a given individual, such as demographics and online behavior, to make an informed decision on the type of content. A niche segment actually wants to see. Understanding an audience is imperative to increase engagement, which is why irrelevant content is the first reason consumers do not engage more often because they find lot of content to be irrelevant. Proper segmentation and audience targeting lead to more relevant advertising, which is reflected in a recent survey by McKinsey Analytics and found 14% of users adopted AI for customer segmentation purposes. By delivering messages that relate to the end-user, advertisers can expect higher engagement rates and therefore more conversions.

The third benefit of using AI in advertising is to target the right audience. One of the biggest challenges for marketers is ensuring that the right people are targeted. AI can analyze different data sources to determine the probability of a user taking a specific action, making campaigns more effective and actionable. AI can create look-alike audience based on past campaigns to target new contacts and build the sales funnel. We can also leverage artificial intelligence and location data to target individuals in the vicinity of high distorts to increase foot traffic or drive personalized recommendation based on weather triggers.

Molson Coors Brewing Co. has begun experimenting with allocating its advertising dollars in response to weather trends. Molson's experiment is part of a growing use of

data to make advertising work, especially among the audience who tap into social media multiple times a day from their phones. The tool was built into the programming interface on the online forecasting service Weather Underground. Using the service's coding, it checked into the weather of 8 Canadian cities every 15 minutes. When the weather was above 23 degrees and sunny, it triggers delivery of Facebook mobile ads for the products that mention the weather for example summer heat, simply say, see there.

Engagement with its weather-related ads was higher, as were the click-through rates on those ads. So, this is how you see that this engagement is going up. That matters. The way Facebook ads work, higher engagement leads to lower cost per click for the advertisers. The cost per click rate for Molson weather specific ads was 67% lower than the generic ads.

And the weather relevant advertising also did a better job persuading people to spread the brand's message. For the SIDR, people were 93% more likely to share a brand's post when it spoke to how hot it was outside. Google has stepped up the ad game big time by using AI to make its ad more personal and on point. Google's AI uses all sorts of info like what users search for, where do they click and their online history to make some pretty accurate guesses about what kind of ads will hit home with them. For example, if someone is looking up gym gear, Google AI might show them ads for home workout sets, gym memberships and even fitness classes.

The magic of this method is all about relevance. By giving user ads that vibe with their interests, Google makes them happier and more engaged. Plus, it is a win for advertisers too because they get more clicks on their ads. The fourth benefit of using AI in advertising is make better decisions faster. AI provides insight and recommendations to facilitate both tactical and strategic decision making more accurately and at speed.

This is only possible because machine driven intelligence is able to process huge data sets and patterns from a wide range of elements involved in advertising today such as users browsing history, past purchase online, previous interactions with ads at a much quicker pace than humans can. As such AI can help marketers maximize their ad spend. Allocations quickly improve campaigns, fine tune marketing strategies, reach previously undiscovered audiences and therefore boast return on investment. When the ad campaign is running, the stakes are high, and the time is limited. In a matter of seconds, Facebook needs to match an ad with the people that are most likely to act on it.

Manually, it would be very tedious to connect users and ads given that Facebook has over 2 billion users. It would be nearly impossible for developers to program the platform to make the optimal decisions each time. With machine learning, Facebook delivers relevant AI powered ads fast and effectively. Facebook ad algorithms automatically analyze such information as the business objectives of an advertiser and the user's behavior to

understand how likely a person is to take the target action, visiting a website, signing up for an event or making a purchase. The fifth benefit of using AI in advertising is using artificial intelligence for ad creation.

Heinz, with the help of marketing agency Rethink Ideas decided to launch the first ever ad campaign with visuals generated entirely by artificial intelligence. Rethink Ideas noticed that prompts related to Ketchup like ketchup in outer space and Ketchup scuba diving frequently produce results in AI image generator DALL.E 2 that looks just like bottle of Heinz. So, they urged consumers to share their own AI prompts for Ketchup based imagery with the best creation appearing in social media post and print ads. So, now you see that there are so many examples here.

Heinz Ketchup. So, this is again looking like a rocket. Let us talk about the Lexus video ad. To produce a spot for the Lexus ES executive sedan launching in Europe, the automaker enlisted its creative agency, The Partnership London along with technical partners Visual Voice. The agencies collaborated with the IBM Watson team to use AI to analyse 15 years' worth of footage, text and audio for car and luxury brand campaigns that have won Cannes Lions awards for creativity as well as range of other external data. The 60 second spot was directed by Oscar winning Kevin McDonald working from a script that was developed by IBM Watson AI system.

Watson identified elements common to award-worthy commercials that were both emotionally intelligent and entertaining according to IBM. The AI engine formed the script flow and outline from which the creative agencies built the story. In creating the storyline, IBM Watson also was primed with data by online video marketplace unruly to learn which movements connected more strongly with users. In addition, the AI were further coached with data from a custom experiment conducted by Mindex, the Applied Science Division of University of New South Wales in Australia, which analyzed how people who have high levels of intuition respond to car advertising. The next benefit is programmatic advertising.

Imagine creating the old school laborious ways of buying ads with quick, efficient automatic systems. That is programmatic advertising in a nutshell where AI does all the work, sifting through the huge chunks of data to spot who will be interested in our ads the most, then bids on ad spaces on the fly. It saves time and money by taking out human mistakes while still letting us tweak things on the go. Spotify is using AI to level up programmatic advertising, improving, making it more personal and efficient. They dissect things like what tunes you are into, your go-to playlist and when you are most active to show ads that you will actually care about.

Say you are an advertiser selling running shoes. Spotify AI would point you towards users who are all about that high-energy workout music. With a whopping 345 million

active users, that is a pretty diverse crowd to pick from. Another benefit of using AI in advertising is optimizing ad spend. Performance optimization is one of the key cases for AI in advertising.

Machine learning algorithms are used by commercially available solutions to analyze how your ad performs across specific platforms that offer recommendations on how to improve performance. In some cases, these platforms may use AI to intelligently automate actions that you have, that you know you would be taking based on best practices saving you significant time. In other cases, they may highlight performance issues you do not even know you had. In the most advanced cases, AI can automatically manage ad performance and spend optimization, making decisions entirely on its own about how best to reach your advertising KPIs and recommending a fully optimized budget. In another case, there exists at least one platform that allocates ad dollars automatically across all channels and audiences.

So, human beings can focus on higher value strategic tasks rather than all these mundane tasks. So rather than manual guesswork about what works and what does not. Improving return on investment. So, artificial intelligence helps boost return on investments in the following way. Protecting people that have high purchase intent with highly personalized ads including people similar to your client and or website visitors.

Processing the data on the previous performance together with market situations to give you a better understanding of which campaigns and audiences work best for your goals. Cross-selling and upselling the products to people based on their purchase history by tracking people's activity on your website. In one high-profile example, an AI advertising system held an e-commerce company achieve a 3000% return on ad spend while reducing costs. Entrepreneur Naomi Simpson, a host at Shark Tank Australia, owns a company called Red Balloon which sells gifts and experiences online. She was spending \$45,000 per month on ad agencies alone to run digital advertising for the brand.

She was paying over \$50 to acquire a single customer at the time. Then she found an AI tool for advertising called Albert. The tool uses sophisticated AI to analyze ad campaigns, then manage targeting, testing and budgets. The tool was able to do things humans could not. In one day alone, it tested 6500 variations of a Google text ad and learned from the experiment.

Over time, the tool was so effective at learning from data to improve performance that it skyrocketed Red Balloon's returns on ad spends. At one time, the company was getting a whopping 3000% return on ad spends. This also cut marketing costs by 25% thanks to the improved efficiency because of the use of this this AI engine. Next is the next benefit of using AI in advertising is Interactive ad. Vacant shop fronts are a problem for city centers, landlords and neighboring businesses.

Digital agencies Department and Hello Monday came up with an AI-powered shoe mirror to turn empty stores into interactive revenue-generating ads. The shoe mirror analyzes what passersby are wearing, finds shoes that match their output and places them on their digital feet through augmented reality, creating an experience personalized to each viewer. The technology even uses motion capture to replicate the user's movement so when they walk past a store, the mirror matches their actions. But this is not just a fancy creative piece. The digital storefront incorporates a QR code which users can scan to buy physical versions of their new digital shoes from within the display.

Whereas other brands might be content with using existing AI technologies in their marketing, Coca-Cola launched its own AI platform built exclusively for the brand by OpenAI and Bain and Company. Dubbed Create Real Magic, the platform combines GPT-4 used to produce human-like text from search engine queries and Dall E which turns text prompts into images. So, these are the various ads that Coke has made using this. The resulting campaign saw Coca-Cola prompt fans to create their own digital artwork based on dozens of branded assets such as brand's distinctive contour bottles and script logo. Most were allowed to download and submit their creations with their best results appearing on digital billboards in New York Times Square and London's Piccadilly Circus.

Yet another benefit of using AI in advertising is sentiment analysis. Sentiment analysis is one of the crucial aspects of artificial intelligence used in the field of advertising. Essentially, sentiment analysis allows businesses to understand the emotional tone behind words. This is incredibly important in social media monitoring as it helps brands understand their customers better and react to both positive and negative feedback more effectively. Twitter uses AI-powered sentiment analysis to provide business insights into public opinion about their brands or products.

This involves analyzing tweets and comments to determine whether the prevailing sentiment is positive, negative or neutral. For instance, after the launch of a new smartphone model, Twitter's AI can examine related tweets to understand the public reactions. Brands can use these insights to adjust their marketing strategies, address concerns or capitalize on positive feedback. Twitter reported over 330 million active users indicating the immense potential of sentiment analysis for gaining consumer insights on this platform. Now you see that from these active users, then comes this sentiment analysis.

So how important and deep this analysis will be. Then ad performance analysis is yet another benefit of using AI in advertising. Artificial intelligence is changing the game of analyzing ad performance. It gives marketers super tools to achieve smart decisions based on data. AI is all about handling enormous amounts of data, finding the best patterns and telling us what is going to happen in the future. AI-powered systems can keep an eye on

the important things in real time like how many people are clicking on ads, that is click-through rates or CTRs, that is the click-through rates, how many are actually buying the product, that is the conversion rate and how engaged people are with the ads.

They dive deep into the ad campaigns to show what are working best and what are not performing as per expectations. Adobe has an AI tool called Adobe Sensei which is like the ad performance expert across different platforms. Adobe's AI tool knows which ads are working and why and it even suggests ways to make not-so-great ads more awesome. By automating the whole analysis thing, Adobe Sensei saves marketers tons of time.

Plus, it finds insight that human might miss. Adobe's Sensei is a big part of their Adobe Experience Cloud which had good revenue growth of over 21% year after year. Then AI can also be used for driving A-B testing at scale. The idea behind it, A-B testing is highly effective to optimize various on-page elements from images to menu layouts to CTA's buttons. But there is an obvious problem. As the name suggests, A-B testing involves pitching two variants against one another to find the winner.

It could take months of testing to arrive at an optimal result. But AI has a solution. Unlike traditional A-B testing, platforms like Evolve AI use massively multivariate testing to find the perfect combo from thousands of variants. And it goes even further by dividing experiments into generations and testing only the top performing variants from each generation until it identifies the best possible combination. One company to benefit from this AI-driven approach to A-B testing is Euroflorist which ran an 11-week experiment that underwent 4 generations of testing.

The winning combo boosted website conversion rates by 4.3% helping the florist generate more sales and revenues. So, this is the example of this company. So, to conclude in this module we have first discussed what is marketing communication. Then we went through the roles of AI in advertising and finally we have discussed the various benefits and applications of AI in advertising with industry examples. And these are the 10 sources from which the material for this module was taken. Thank you.