

INFLUENCE OF ARTIFICIAL INTELLIGENCE IN ADVERTISING EXPERIENCE

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ABSTRACT

Artificial intelligence is making advertising simpler, more astute and increasingly proficient. When automatic promotion purchasing was advanced in 2014, it acquainted us with AI reasoning-based advertisement purchasing successfully with manual errands of looking into target markets, financial plans, inclusion requests, and layers of extra examination following also significant expenses. AI is a prospering innovation, industry, and field of study. While premium levels with respect to its applications in advertising have not yet converted into far reaching reception, Thus, AI in advertising is an essential subject to inquire about. By breaking down its present applications, its underlying capacity use cases sooner rather than later, to execute it and its zones for development we can accomplish an elevated level comprehension of AI's drawn out suggestions in promoting. AI offers the development to current promoting strategies just as totally better approaches for making and appropriating an incentive to clients. Automatic promoting and social media promoting can progressively complete perspective on client conduct, prescient investigation, and experiences through coordination with artificial intelligence. The objectives of the present article are to evaluate the impact and influence of artificial intelligence in advertising experience and also to analyze the various applications of AI in the advertising sector. The researcher used ANOVA and Chi-square test to analyze the data.

Keywords: Artificial intelligence, Advertising, Marketing, Influence

Introduction

According to John McCarthy, founder of Artificial Intelligence terms artificial intelligence as "The research and engineering of smart machines, especially smart computer programs". Artificial Intelligence is a way to build a machine, a computer-controlled robot or software thinks intelligently and the educated humans think in a common way. AI is done by researching how the human brain works and how people know, decide and make decisions. It is very much required during practice when trying to solve a problem and then using the findings of this analysis as a basis for developing Smart Software and Systems. In general definition, Artificial Intelligence is

an approach to make a computer, a robot, or a product to think how smart human. AI is a study of how human brain think, learn, decide and work, when it tries to solve problems. And finally, this study outputs intelligent software systems. The aim of AI is to improve computer functions which are related to human knowledge, for example, reasoning, learning, and problem-solving. During the 21st Century, AI techniques resurged following rapid advances in computing resources, vast volumes of data and scientific understanding and AI techniques became a critical part of the technology field helping to address a wide range of problems in information science, digital development and organizational analysis.

Review of Literature

Lehman-Wilzig, S. N. (1981) explores the legal implications of Artificial Intelligence with specific focus on 'humanoid' criminality. Mintz, Y. and Brodie, R. (2019) emphasis on the possibility of machines being able to simulate human behavior and the ability to estimate new data according to previously assessed data in real time. Also explained that Artificial Intelligence is assimilated into our daily lives in many forms, such as personal assistants, automated mass transportation, aviation and computer gaming. Dobrev, D. (2005) formalize the definition in terms the level of intelligence as AI is compared to the intelligence of a human being. It assumes that for some level of intelligence the respective AI will be more intelligent than a human being. Dobrev, D. (2012) offer a formal definition of Artificial Intelligence and it directly gives an algorithm for construction of the object. According to him a newly born baby also is an Intellect. Kok, J. N. et al. (2009) elucidate some expert systems that is able to compete on a specialist-level in narrow areas, but there is no general artificial intelligence program yet that is proficient of functioning in everyday situations. Further, it confers some recent trends in Artificial Intelligence. Also mention some techniques and some case studies with overview of AI's history. Rodgers, S. (2021) described the definition of AI advertising as brand communication that uses a range of machine functions that acquire to carry out tasks with intent to influence with input by humans, machines or both. The term artificial intelligence largely refers to a range of machine functions that learn with the help of humans or completely on their own. (Kaput, 2020). Shah, N. et al. (2020) clarified that advertising is a way in which a company presents possible customers to a company's product or services. Advertisement is now through with the help of not so newfound helping hand that is Artificial Intelligence & Machine Learning. Further, the article focuses on the future of advertising which is going to be even better than before as artificial intelligence and machine learning will bring more control of Advertising to companies for a noticeable and substantial change. Vakratsas, D. and Wang, X. (2020) propose a creative advertising system for the generation and testing of advertising creative ideas, founded on artificial intelligence principles and outcomes of which should be assessed based on a set of rules. The said system can be used both as a replication and a generation tool for advertising creators and offers promising prospects for interdisciplinary research. Richards, J. I. & Curran, C. M. (2002) used the Delphi method, which developed for financial forecasting, to involve a different group of advertising experts in a dialogue to reconsider the elements and constructing a new definition of advertising. Kerr, G., & Richards, J. (2021) pursues

to redefine advertising by replicating Richards and Curran (2002) study. In the article, they come up with five key dimensions of advertising i.e. paid, mediated, identifiable-source, persuasion and action.

Choi, Y. K. et al. (2001) contributes to advertising theory and practice. In theoretical aspect to understand and predict the relationships between presence and advertising effectiveness employing an anthropomorphic agent in the web advertisement. Conclusion indicates that an anthropomorphic agent on the web site can increase a sense of social presence and telepresence to influence some of the favorable advertising effectiveness. Kumar, V. et al. (2019) explores the role of artificial intelligence in sustaining personalized engagement marketing such as to create, communicate, and deliver personalized offerings to customers. It proposes that AI is a tool for limitless options and information can be narrowed and curated in a personalized way also provides estimates AI-driven environment on branding and customer management practices for managers. Adams, R. (2004) explores how digital advertising is becoming important for advertisers to demographic target consumers. Also, the impact of smart systems and artificial intelligence (AI) on advertising. Johar, G. V. et al. (2001) analyzed the creative process and its relationship to the created advertisement. Wu, L., Dodoo, & all (2021) analyzed people's posts on Twitter about AI in advertising using natural language processing and formulated modelling and sentiment analysis in the Python environment to identify what people posted on Twitter about AI in advertising. Chan-Olmsted, S. M. (2019) examines the utilities of AI in the media industry and role with reference of value chain and conclude with the eight areas of AI applications in media: audience content discovery, message optimization, audience insights, audience engagement, augmented audience experience, content management, content creation, and operational automation. Lee, H., & Cho, C. H. (2020) defines digital advertising by examining current and future perspective. They identify key trends of digital advertising, like data-driven marketing communication, the impact of artificial intelligence on advertisement production and the effect of big data on advertisement execution. Ma, L. (2021) focused on new era of smart media with the development of new technologies and applications of 5G technology. Davenport, T. et al. (2020) propose a multidimensional framework for understanding the impact of AI, it integrates intelligence levels, task types, and whether AI is embedded in a robot in a single framework and concludes that the artificial intelligence will be more effective than human managers. Rust, R. T. (2020) explore the nature of change, generalize marketing practice into the future, and examine the implications for marketing education, marketing managers and academic research in marketing. Schultz, D. (2016) postulates the three scenario for the future of advertising i.e. creeping incrementalism, reversal of buyer / seller roles, and reinvention of the field and he suggests that these scenarios will develop with the acceptance of the various technologies. Taylor, C. R., & Carlson, L. (2021) outline various forces like cluttered environments, digital advertising, technological advancements, privacy, corporate social responsibility, and return on investment that led to changes in the advertising industry in recent years. De Jesus, D. S. V. (2021) analyzed the present concept that marketers moved from a product focus to a sales focus and the possible future of the concept of advertising which is related to the

growing customization of strategies based on the nature of the product category and the new technologies connected to the fourth industrial revolution.

Research Methodology

In order to accomplish the aims of the study, researcher has used questionnaire tool as a means of primary data collection. The present analysis uses secondary data to record information, using journal articles and websites, to support the research objective. The type of research that is used in this research is of descriptive nature. Descriptive research describes the current state of affairs. The main characteristics of this type of research are that there is no control over the variables. The non-probability sampling technique is adopted for the study. The respondents were chosen on the basis of Convenience sampling. The present study considered the samples as 208 customers.

Objectives of the Study

- To evaluate the impact and influence of artificial intelligence in advertising sector.
- To analyse the various applications of AI in the advertising sector.
- To comprehend effect of AI on decision making, problem solving and understand human communication.

Hypothesis of the Study

- 1) H1: Education is a factor in enriching customers experience with AI.
- 2) H0: Safety, Security and Privacy is not a factor in enriching customer experience with AI.

Data Analysis and Interpretation

1. The best way to receive advertisement

Table 1: Descriptive statistics				
	Min	Max	Mean	Std. Dev.
Best way to get Ad on Mobile	1	5	3.56	1.493
Best way to get Ad By Internet	1	5	3.38	1.305
Best way to get Ad by Newspaper	1	5	3.18	1.341
Best way to get Ad is TV	1	5	3.17	1.574
Best way to get Ad is By Mail	1	5	2.97	1.298
Best way to get Ad Through Magazines	1	5	2.97	1.15
Best way to get Ad is Radio	1	5	2.32	1.097

Table 1 summarizes the ratings given by the respondents as to which medium is the most preferred to get advertisement. Visual and Audio media are the most preferred than print ads because of the details that can be explained about the products.

2. Frequency to get advertisements directly.

Table 2: Frequently to get Ad

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Every Day	112	53.8	53.8	53.8
	couple of times a week	39	18.8	18.8	72.6
	Once A week	29	13.9	13.9	86.5
	Couple of times a month	22	10.6	10.6	97.1
	Once A Month or Less	6	2.9	2.9	100.0
	Total	208	100.0	100.0	

The data in table 3 shows frequencies of the advertisements received by the respondents, it shows that the number of competitors has increased and the digital technology has enabled quick creation of ads and also has made it more affordable to marketers.

3. Place of receiving advertising.

Table 3: Place of receiving Ad

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	At Work	76	36.5	36.5	36.5
	At Home	65	31.3	31.3	67.8
	While Shopping	30	14.4	14.4	82.2
	At Theatre	23	11.1	11.1	93.3
	Others	14	6.7	6.7	100.0
	Total	208	100.0	100.0	

From the Table 4, it can be concluding that people are not willing to give their leisure time for advertisements.

4. Format to receive advertisement.

Table 4: format to receive the Ad

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Video	68	32.7	32.7	32.7
	Picture	53	25.5	25.5	58.2

	Audio	41	19.7	19.7	77.9
	Text	25	12.0	12.0	89.9
	GIF	21	10.1	10.1	100.0
	Total	208	100.0	100.0	

From the respondent's response, as the pictures & video are more informative and gives real experience about the products they wish to buy, the GIF format is not understood or easily accessible to many users as a technology and hence very few like it.

5. Opinion about AI impacting advertising

Artificial Intelligence impact on advertising. It is evident that the respondents perceive that AI is in fact helping the Ad industry in creating actual Advertisements, helping decide on ad spends, Image recognition and helps in programmatic advertisements. We conclude that people are seeing the effect of AI in advertisement industry in all areas.

	Min	Max	Mean	Std. Dev.
Opinion of AI help in Creating Actual Ad	1	5	3.28	1.204
Opinion of AI help in Optimum Ad-Spend	1	5	3.26	1.172
Opinion of AI help in Programmatic Advertising	1	5	3.21	1.256
Opinion of AI help in Image recognition	1	5	3.13	1.173
Does AI help in Choosing Right Audience?	1	5	3.02	1.32

Table 5 summarises the opinion of the respondents with respect to the help of Artificial Intelligence (AI) in Advertisements. The respondents have given a rating of more than 3 for all the options like Image recognition, Selection of Target Audience and Optimising the Ad spends by marketers.

6. Preference of receiving mobile advertisements in phone.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	122	58.7	58.7	58.7
	No	49	23.6	23.6	82.2
	Maybe	37	17.8	17.8	100.0
	Total	208	100.0	100.0	

From Table 6, a majority are willing to see advertisements in their mobiles. This is because of advancement in technology and mobile penetration as a communication and entertainment device.

7. The risks related to the use of AI. (max three choices)

	Responses		Percent of Cases
	N	Percent	

Risk associated with AI ^a	Safety	84	14.9%	40.4%
	Freedom	66	11.7%	31.7%
	Privacy	77	13.6%	37.0%
	Integrity	67	11.9%	32.2%
	Dignity	56	9.9%	26.9%
	Self Determination	48	8.5%	23.1%
	Non- Discrimination	43	7.6%	20.7%
	Security	74	13.1%	35.6%
	Data protection	50	8.8%	24.0%
Total		565	100.0%	271.6%
a. Dichotomy group tabulated at value 1.				

The Data in table 7 is multiple response set where respondents can tick more than one option here. All the options point to safety and security concerns as the risk that people perceived in artificial intelligence in advertisements.

8. AI is being used in Advertising and marketing.

Most of the respondents strongly disagreeing to the use of AI in Marketing for content curation, SEO, writing platforms, social semantics, email marketing and programmatic advertisements campaigns. This probably because of the perception of the people that AI is still is in its nascent stage, in terms concept or technology. Many researchers are still experimenting about its use and efficiency and adoptability.

	Min	Max	Mean	Std. Dev.
AI Use Content Curation	1	5	2.54	1.506
Use of AI in SEO	1	5	2.74	1.497
Use of AI for writing platform	1	5	2.75	1.475
Use of AI in Social Semantics	1	5	2.8	1.469
Use of AI in creating Programmatic Ads	1	5	2.76	1.487
Use of AI in Email Marketing	1	5	2.69	1.505

Table 8 summarizes the uses of AI in creating and promoting Advertisements. The respondents are neutral with respect to these points like content creation, social semantics, Email marketing etc. The respondents feel that AI is still in its initial stages of usability in Ad industry.

9. Digital advertising is trustworthy advertising tool compared to traditional advertising tools.

	Frequency	Percent	Valid Percent	Cumulative Percent

Valid	Agree	101	48.6	48.6	48.6
	Neutral	42	20.2	20.2	68.8
	Disagree	32	15.4	15.4	84.1
	Strongly Disagree	20	9.6	9.6	93.8
	Strongly Agree	13	6.3	6.3	100.0
	Total	208	100.0	100.0	

People are trusting Digital Ads, they don't find any issues of trust.

10. AI used for Advertising.

There are many areas in Advertisements where AI can contribute more as technology develops.

	Min	Max	Mean	Std. Dev.
AI will give attractive features	1	5	3.43	1.31
AI will give Fast Response	1	5	3.41	1.221
AI will Enrich personal Experience	1	5	3.25	1.166
AI will give Accurate Information	1	5	3.22	1.133
AI will Enrich Customer Experience	1	5	2.9	1.32

Table 10 summarizes the advantages of AI in creating and promoting Advertisements. Over the conventional technology. The respondents are neutral with respect to these points like customer experience, personal experience accurate information, fast response and attractive features. The respondents it looks like are yet understand technology and the advancements fully. It might take time for the concept to percolate and see the benefits that AI will bring to the Consumers. Then, the advertisers also have to push the idea of AI and its benefits to the consumers by adopting these features in their advertisements more frequently.

11. Usage of Artificial intelligence enriching advertising experience.

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Agree	108	51.9	51.9
	Strongly Agree	44	21.2	73.1
	Neutral	33	15.9	88.9
	Disagree	16	7.7	96.6
	Strongly Disagree	7	3.4	100.0
	Total	208	100.0	100.0

From the table 11, it leads to conclude that AI indeed has enriched the customers experience of Advertisements.

12. Hypothesis Testing: (ANOVA)

H1: Education is a factor in enriching customers experience with AI.

Ho: Education is a not a factor in enriching customers experience with AI.

	Min.	Max.	Mean	Std. Dev.
AI Use Content Curation	1	5	2.54	1.506
Use of AI in SEO	1	5	2.74	1.497
Use of AI for writing platform	1	5	2.75	1.475
Use of AI in Social Semantics	1	5	2.80	1.469
Use of AI in creating Programmatic Ads	1	5	2.76	1.487
Use of AI in Email Marketing	1	5	2.69	1.505

One-way ANOVA

Has AI Increased your Ad Experience					
	Sum of squares	df	Mean Square	F	Sig.
Between Groups	6.245	4	1.561	1.675	.157
Within Groups	189.274	203	.932		
Total	195.519	207			

Table 12.2 displays the ANOVA output where the dependent variable is the Customer Experience through AI and Independent factor is Education. It is observed that Significance value is 0.157 which is greater than significance level for the Hypothesis which is 0.05. Hence, we accept the Null hypothesis and conclude that there is no relationship between education and the customer experience with AI.

13. Hypothesis - Chi Square Test (A test between 2 categorical Variables)

H1: Safety and Privacy is a factor in enriching customers experience with AI.

Ho: Safety and Privacy is not a factor in enriching customers experience with AI.

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	9.094 ^a	4	.059

Likelihood Ratio	9.264	4	.055
Linear-by-Linear Association	1.366	1	.242
N of Valid Cases	208		
a. 2 cells (20.0%) have expected count less than 5. The minimum expected count is 2.83.			

From the Table 13, analyses the Chi-Square output of SPSS which shows relationship between Safety and Privacy with AI increasing Ad Experience. The Significance values is 0.059. We conclude that perception of Safety and privacy are not related to AD experience.

Findings and Discussion

Mobile is the most preferred mode of getting the advertisements whereas, radio & print media was no longer preferred. AI actually creates Advertisement due to negative attitude in mobile advertisements and lack of trust about mobile Advertisements which people do not like mobile ads. Personalized communication and map based interface are two most important features that the respondents wish to have in the App in the mobile regarding tourism apps. The Numbers and ratings are similar for Writing Platforms, Social Semantics, Creating Programmatic Ads and Email marketing.

The study points to some clear actions that marketers in the advertising industry have to carry out to improve the customer experiences thereby improve the impact of the advertisements on the consumers purchase, hence marketing returns, sales and profitability. The market is right now cluttered with many competitors and hence effective advertisements are the need of the hour to get a place in the minds of the consumers which can then translate to sales. In an era where options are too many and information is available of the whole world at the fingertips of the consumers in their mobile, the consumers are all the more discerning in their purchase. They also have become very price conscious a typical Indian consumers mind set. Advertisements should therefore create differentiation of the products in the mind of the consumers. The customers have now accepted mobile advertisements but also very concerned about their safety security, privacy and data protection. This has therefore now given birth to what is called Digital Marketing, pushing traditional or conventional marketing behind. This also has given the opportunity for the marketers to identify their target segment easily and drive ads targeted at niche segments effectively.

The Ad experience are also being customized to the individual needs. All these have therefore thrown challenges to the marketers who are faced with new competition who are starting their firm as digital firm. The old, classic firms have to adopt to this, by changing their and their employees outlook to markets and customers by adopting these game changing technologies if they have to survive in the modern economy. With the economy and GDP growing, there is a lot of Disposable income with the people. The demographics of our country being that it has a higher percentage of young people who are more tech savvy than the older generations are

the key to survival of the firms but might also accommodate a large number of players. But finally, the winners in the Business will have to do the following

- Consumers do like to receive advertisements hence try and improve the Ad experience.
- Consumers would like to see ad on TV Mobile and Internet; therefore, we should create content suitable for this media not print ads anymore.
- Consumer don't mind seeing advertisements at work and home, but not sacrificing their Entertainment or privacy. Marketers therefore should not advertise which encroaches upon the leisure of consumers.
- Consumers would like to see more of Video and pictures than text, the ad creators have to keep this mind while creating the advertisements.
- While the consumers will like to see ads with AI in it they still are concerned about safety, security and data privacy. The marketers should address these concerns if they have to make people look at their ads more.
- Since ever body today uses mobile, this could be powerful platform to customize the advertisements using AI.

Conclusion

The younger crowd looks at technology to enrich their Advertisement experience, they use internet, smart phones and would like to see the advertisements at work or home and through digital platforms. They use mobile phones to see the Ads but are concerned with safety and security of their data and privacy. Since respondents travel quite frequently which is thrice or more. This leads to the conclusion that the current generation is mobile as they travel more than thrice in a year. In India we still in the early stage where people would travel for leisure. Most of the people travel to meet friends and relatives. This is in line with the current demographics of our economy where young population has moved out of their home towns, and hence has necessity to travel to home towns. This information need has given spurt to many technologies which have taken advantage of Internet and mobile technology to make their product advertisement plan easier and cost effective.

Therefore, the way forward for the marketers is to adopt to digital mobile platforms to advertise their products and enhance their experience using AI. This also could be used for budget planning and also for improving the experience by customizing the advertisements. This will ensure that the ad spend will give the necessary returns by on boarding customers. This is the way forward for Organizations to survive and succeed.

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