

A STUDY ON THE IMPACT OF AI DRIVEN AD CREATIVE UPON CUSTOMERS OF DEEPPENSE DIGITAL SOLUTIONS PVT.LTD.

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ABSTRACT

This study explores the profound transformation in communication throughout human history, with a specific focus on the digital revolution's impact in recent decades. Tracing the trajectory from ancient methods to modern digital platforms, the research highlights how the advent of the internet, social media, and new media has drastically altered human interaction. Emphasizing the shift from traditional, unidirectional communication to interactive digital mediums, the study examines the increased potential for user engagement and feedback in the current media landscape. A significant portion of the research is dedicated to understanding the role of artificial intelligence (AI) in reshaping the advertising sector. It delves into the development of AI, from its conceptual beginnings to its pervasive presence in various modern applications, including data analysis, content creation, and automated decision-making processes. The study evaluates AI's superior efficiency in data processing and strategy development in advertising compared to traditional human-led approaches. The paper also discusses the implications of AI integration in various aspects of advertising, such as programmatic advertising, video editing, augmented reality, and virtual reality applications. Attention is given to emerging technologies like the Metaverse and their potential to revolutionize advertising strategies further. The study concludes by contemplating the future role of AI in advertising, addressing its capacity for creativity, the ethical considerations of its use, and its potential to redefine the advertising industry.

INTRODUCTION

In the dynamic landscape of digital marketing, staying ahead of the curve is crucial for businesses aiming to capture and retain the attention of their target audience. One of the transformative forces driving this evolution is Artificial Intelligence (AI). This project delves into the realm of "AI-driven Ad Creative," where the fusion of advanced algorithms and creative content aims to revolutionize the way advertisements are conceived, designed, and delivered.

This project aims to explore the fundamental dimensions of AI-driven ad creative, seeking to understand how AI can play a pivotal role in crafting compelling and tailored advertisements. By leveraging AI algorithms, this initiative aims to address key aspects such as automated ad copy generation, image recognition for visual optimization, dynamic personalization, real-time performance monitoring, and automated A/B testing.

NEED FOR THE STUDY

In today's world, where we are bombarded with advertisements everywhere we look, it's crucial for businesses to create ads that really grab people's attention and make them want to buy. But doing this isn't easy, especially when every person is different and likes different things. That's where Artificial Intelligence, or AI, comes in. AI is like a super-smart computer that can learn about people and use that knowledge to make ads that are personalized just for them. This study is all about understanding how AI can help businesses make better ads that people actually want to see and engage with. It's like having a personal assistant who knows exactly what you like and shows you ads that you're actually interested in, making advertising more effective and enjoyable for everyone involved.

OBJECTIVES OF THE STUDY

Primary Objective:

To study the impact of AI-driven ad creative on enhancing customer engagement and conversion rates in digital advertising campaigns.

Secondary Objectives:

- To understand consumer perception, user interaction & perception of AI generated ads.
- To evaluate cross-channel consistency in AI-driven ads

- To evaluate impact of AI-driven ad creative on user engagement metrics such as click-through rates and conversion rates.
- To assess the adaptability of AI-driven ad creative across diverse cultural and demographic audiences.
- To assess the manual campaigns vs AI driven campaigns by A/B testing.
- To assess the performance and optimization.

SCOPE OF THE STUDY

The scope of the "AI-driven Ad Creative" project involves a comprehensive exploration into the application of Artificial Intelligence (AI) in digital advertising. The study focuses on leveraging AI algorithms to personalize ad content, automate A/B testing, optimize visual elements through image recognition, and enable real-time performance monitoring. It encompasses investigating consumer perceptions and ethical considerations associated with AI-generated ads, ensuring cross-channel consistency, and assessing the long-term impact on customer engagement. The research aims to provide insights into the effectiveness and challenges of AI in ad creative, benchmarking against industry standards to establish best practices for successful implementation in contemporary digital marketing landscapes.

REVIEW OF LITERATURE

Tae Hyun Baek (2023)

Digital Advertising in the Age of Generative AI: Artificial intelligence (AI) is significantly reshaping branded content delivery and consumer engagement in the advertising industry. Generative AI, exemplified by ChatGPT, is anticipated to have a substantial impact on all digital advertising domains worldwide. This special issue delves into the exploration of future trends in global digital advertising in the era of generative AI.

Pearson, Andrew (2023)

The rise of CreAltives: Using AI to enable and speed up the creative process. The ancient Greeks invented the concept of the muse goddess to be a vessel that would enter a human's life and spark long-desired creativity. In this paper, we will look at how modern creative AI technologies can be viewed through the lens of five groups. We will also explore how recent advances in creative AI offer users the ability to create images, compose music, animation and

even video in ways never before possible — and then wrap up with final takeaways on the future of artistic creativity in the era of AI.

Stacey Lynn Schulman (2023)

Creativity and innovation in the age of AI: This chapter explores the increasing role of Artificial Intelligence (AI) in enhancing innovation. They include challenging the status quo, engaging with customers, generating innovative solutions, setting objectives for innovative initiatives of all value creation activities, expanding the scope of innovation to the entire organizational architecture, designing, and implementing an innovation strategy, and cultivating a culture of experimentation. The chapter argues that AI can act as a powerful engine for not only inspiring innovation but also enabling and accelerating it. It can help organizations stay ahead of the competition and meet the evolving needs of customers by creating new products, services, and experiences that can improve people's lives and solve important social and economic problems.

Hye-Kyung Lee (2022)

Rethinking creativity: creative industries, AI and everyday creativity: This commentary reflects on how creativity is dehumanised (and rehumanised) and how its labour aspects are hindered (and highlighted) in the three recent developments in our understanding of arts, culture and creativity: the creative industries; AI creativity; and creativity in everyday life. The creative industries discourse instrumentalises and dehumanises creativity by hiding labour perspectives and treating creativity as human capital and a generator of IP.

Nisreen Ameen (2022)

Toward advancing theory on creativity in marketing and artificial intelligence: Creativity has been identified as the future of marketing; at the same time, artificial intelligence (AI) is enabling more automation in this field. The theories and frameworks in the literature have not yet sufficiently explained the impact of AI on creativity in marketing. To assist academics and practitioners we propose a typology of the key skills required for creativity in marketing and the impact of specific AI capabilities on these skills. This article serves as a foundation for researchers by providing a holistic understanding of the integration of AI into creativity in marketing.

RESEARCH METHODOLOGY

Research methodology is the specific procedures or techniques used to identify, select, process, and analyse information about a topic. In a research paper, the methodology section allows the reader to critically evaluate a study's overall validity and reliability. It is a design or plan as a guide for conducting research and to systematically solve the research problem. It includes research design, sampling procedures, data collection method and analysis procedure.

DEFINITION

“Research is defined as a process of enquiry and investigation” (Jill Collis and Roger Hussey).

RESEARCH DESIGN

Research design is a blue print framework which specifies the details of the procedures necessary for obtaining the information needed to structure or solve research problems. The research design refers to the overall strategy that you choose to integrate the different components of the study in a coherent and logical way, thereby, ensuring you will effectively address the research problem.

DESCRIPTIVE RESEARCH

Descriptive research is a research method that describes the characteristics of the population or phenomenon that is being studied. This methodology focuses more on the “what” of the research subject rather than the “why” of the research subject. The idea behind this type of research is to study frequencies, averages, and other statistical calculations. Although this research is highly accurate, it does not gather the causes behind a situation.

SAMPLING TECHNIQUES

Simple random sampling is used for this study. The population size is 132. The responses are collected by circulating the questionnaire through email and WhatsApp.

SAMPLE

A selected group of some elements from the totality of the population is known as the sample. Some populations are so large that their study would be expensive in terms of time, effort, money and manpower. Sampling is a process by which a relatively small number of individuals or measures of objects or events is selected and analyzed in order to find out something about the entire population from which it was selected. It helps to reduce expenditure, save time and energy, permit measurement of greater scope, and produce greater precision and accuracy.

DATA COLLECTION

PRIMARY DATA

A Set of question related to the topic was formulated and response has been collected by circulating the questionnaire through email and WhatsApp.

SECONDARY DATA

Secondary research was done to build an in-depth understanding about the topic.

Many research papers were gone through to gather information about the research topic.

CHARTS

A chart is a graphical representation for data visualization, in which "the data is represented by symbols, such as bars in a bar chart, lines in a line chart, or slices in a pie chart". A chart can represent tabular numeric data, functions or some kinds of quality structure and provides different info.

NORMALITY TEST

H₀: The data follows normal distribution.

H₁: The data significantly deviates from normal distribution.

Tests of Normality						
	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Cross-Channel & Personalization	.121	132	.000	.975	132	.014
Engagement & Conversion Rates	.122	132	.000	.977	132	.024
Perception of AI generated ads.	.120	132	.000	.975	132	.015
A/B Testing and Optimization	.120	132	.000	.941	132	.000
Performance Monitoring and Optimization	.119	132	.000	.961	132	.001

a. Lilliefors Significance Correction

INTERPRETATION:

From the results of Kolmogorov - Smirnov test, Since P (Sig) value < 0.05, We reject the Null Hypothesis. It infers that the Data is significantly deviated from the Normal Distribution. Hence, non-parametric tools are applied for this study.

TOOLS USED:

To analyse the data collected from the questionnaires, Non - Parametric Statistical tools such as U- Test, H- Test and Spearman's Rank Correlation were used.

The U- test and H- test are used to compare the means of two or more groups for the Independent and Dependent variables.

Spearman's Rank Correlation will be used to determine the strength and direction of the correlation between two variables.

SPEARMAN'S CORRELATION ON DIMENSIONS:

H₀: There is no relationship between dimensions.

H₁: there is relationship between dimensions.

Correlations

			Cross- Channel & Pers onalization	Engagement & Conversion Rates	Perception of AI generated ads.	A/B Testing and Optimizati on	Performance Monitoring and Optimization
Spearman's rho	Cross-Channel & Personalization	Correlation Coefficient	1.000	-.015	.178*	.202*	.202*
		Sig. (2-tailed)	.	.867	.041	.020	.020
		N	132	132	132	132	132
	Engagement & Conversion Rates	Correlation Coefficient	-.015	1.000	.130	.302**	.292**
		Sig. (2-tailed)	.867	.	.138	.000	.001
		N	132	132	132	132	132
	Perception of AI generated ads.	Correlation Coefficient	.178*	.130	1.000	.148	.274**
		Sig. (2-tailed)	.041	.138	.	.091	.001
		N	132	132	132	132	132
	A/B Testing and Optimization	Correlation Coefficient	.202*	.302**	.148	1.000	.241**
		Sig. (2-tailed)	.020	.000	.091	.	.005
		N	132	132	132	132	132
	Performance Monitoring and Optimization	Correlation Coefficient	.202*	.292**	.274**	.241**	1.000
		Sig. (2-tailed)	.020	.001	.001	.005	.
		N	132	132	132	132	132

*. Correlation is significant at the 0.05 level (2-tailed).

INTERPRETATION:

Cross-Channel & Personalization vs. Engagement & Conversion Rates:

- The correlation coefficient is very close to 0 (-0.015), indicating essentially no correlation.
- This correlation is not statistically significant (Sig. = 0.867).

Cross-Channel & Personalization vs. Perception of AI generated ads:

- There is a moderate positive correlation (0.178), suggesting a weak to moderate relationship.
- This correlation is statistically significant at the 0.05 level (Sig. = 0.041).

Cross-Channel & Personalization vs. A/B Testing and Optimization:

- There is a moderate positive correlation (0.202), indicating a weak to moderate relationship.
- This correlation is statistically significant at the 0.05 level (Sig. = 0.020).

Cross-Channel & Personalization vs. Performance Monitoring and Optimization:

- There is a moderate positive correlation (0.202), suggesting a weak to moderate relationship.
- This correlation is statistically significant at the 0.05 level (Sig. = 0.020).

MANN-WHITNEY TEST ON GENDER:

H₀: There is no significant difference between the mean rank of gender with respect to Cross-Channel & Personalization, Engagement & Conversion Rates, Perception of AI generated ads, A/B Testing and Optimization, Performance Monitoring and Optimization.

H₁: There is significant difference between the mean rank of gender with respect to Cross-Channel & Personalization, Engagement & Conversion Rates, Perception of AI generated ads, A/B Testing and Optimization, Performance Monitoring and Optimization.

Ranks

	Gender	N	Mean Rank	Sum of Ranks
Cross-Channel & Personalization	Male	72	63.05	4539.50
	Female	60	70.64	4238.50
	Total	132		
Engagement & Conversion Rates	Male	72	71.07	5117.00
	Female	60	61.02	3661.00
	Total	132		
Perception of AI generated ads.	Male	72	73.76	5310.50
	Female	60	57.79	3467.50
	Total	132		
A/B Testing and Optimization	Male	72	71.40	5141.00
	Female	60	60.62	3637.00
	Total	132		
Performance Monitoring and Optimization	Male	72	69.13	4977.50
	Female	60	63.34	3800.50
	Total	132		

Test Statistics

	Cross-Channel & Personalization	Engagement & Conversion Rates	Perception of AI generated ads.	A/B Testing and Optimization	Performance Monitoring and Optimization
Mann-Whitney U	1911.500	1831.000	1637.500	1807.000	1970.500
Wilcoxon W	4539.500	3661.000	3467.500	3637.000	3800.500
Z	-1.145	-1.520	-2.411	-1.628	-.872
Asymp. Sig. (2-tailed)	.252	.128	.016	.104	.383

INTERPRETATION:

From the above analysis it is inferred that $P(\text{sig}) > 0.05$. Hence, H_0 is accepted. There is no significant difference between the mean rank of gender with respect to Cross-Channel & Personalization, Engagement & Conversion Rates, A/B Testing and Optimization, Performance Monitoring and Optimization.

From the above analysis it is inferred that $P(\text{sig}) < 0.05$. Hence, H_0 is accepted. There is significant difference between the mean rank of gender with respect to Perception of AI generated ads.

KRUSKAL-WALLIS TEST ON EDUCATIONAL QUALIFICATION:

H₀: There is no significant difference between the mean rank of gender with respect to Cross-Channel & Personalization, Engagement & Conversion Rates, Perception of AI generated ads, A/B Testing and Optimization, Performance Monitoring and Optimization.

H₁: There is significant difference between the mean rank of gender with respect to Cross-Channel & Personalization, Engagement & Conversion Rates, Perception of AI generated ads, A/B Testing and Optimization, Performance Monitoring and Optimization.

Ranks

	Educational Qualification	N	Mean Rank
Cross-Channel & Personalization	UG	34	69.84
	PG	82	65.02
	Others	16	66.97
	Total	132	
Engagement & Conversion Rates	UG	34	63.01
	PG	82	69.20
	Others	16	60.06
	Total	132	
Perception of AI generated ads.	UG	34	68.56
	PG	82	67.15
	Others	16	58.81
	Total	132	
A/B Testing and Optimization	UG	34	69.47
	PG	82	67.17
	Others	16	56.75
	Total	132	
Performance Monitoring and Optimization	UG	34	61.96
	PG	82	70.15
	Others	16	57.47
	Total	132	

Test Statistics^{a,b}

	Cross-Channel & Personalization	Engagement & Conversion Rates	Perception of AI generated ads.	A/B Testing and Optimization	Performance Monitoring and Optimization
Chi-Square	.390	1.170	.783	1.293	2.146
Df	2	2	2	2	2
Asymp. Sig.	.823	.557	.676	.524	.342

a. Kruskal Wallis Test

b. Grouping Variable: Educational Qualification

INTERPRETATION:

From the above analysis it is inferred that $P(\text{sig}) > 0.05$. Hence, H_0 is accepted.

There is no significant difference between the mean rank of gender with respect to Cross-Channel & Personalization, Engagement & Conversion Rates, Perception of AI generated ads, A/B Testing and Optimization, Performance Monitoring and Optimization.

FINDINGS OF THE STUDY

SPEARMAN'S CORRELATION:

- Cross-Channel & Personalization vs. Engagement & Conversion Rates:
- The correlation coefficient is very close to 0 (-0.015), indicating essentially no correlation.
- Cross-Channel & Personalization vs. Perception of AI generated ads:
- There is a moderate positive correlation (0.178), suggesting a weak to moderate relationship.
- Cross-Channel & Personalization vs. A/B Testing and Optimization:
- There is a moderate positive correlation (0.202), indicating a weak to moderate relationship.
- Cross-Channel & Personalization vs. Performance Monitoring and Optimization:
- There is a moderate positive correlation (0.202), suggesting a weak to moderate relationship.

MANN-WHITNEY TEST: From the above analysis it is inferred that $P(\text{sig}) > 0.05$. Hence, H_0 is accepted. There is no significant difference between the mean rank of gender with respect to Cross-Channel & Personalization, Engagement & Conversion Rates, A/B Testing and Optimization, Performance Monitoring and Optimization.

H-TEST: There is no significant difference between the mean rank of gender with respect to Cross-Channel & Personalization, Engagement & Conversion Rates, Perception of AI generated ads, A/B Testing and Optimization, Performance Monitoring and Optimization.

SUGGESTIONS

- **Utilize AI-Powered Analytics:** Leverage AI-driven analytics tools to gain deeper insights into customer behavior, preferences, and trends. Use this data to optimize your marketing strategies and personalize content for different audience segments.
- **Implement AI-Powered Chatbots:** Integrate AI chatbots into your website or messaging platforms to provide instant assistance to customers, answer queries, and guide them through the sales funnel. AI chatbots can enhance customer engagement and satisfaction while reducing response times.

CONCLUSION

Incorporating artificial intelligence (AI) into your digital marketing campaigns offers a opportunities to enhance efficiency, personalization, and effectiveness. By leveraging AI-driven analytics, chatbots, ad targeting, content recommendations, predictive lead scoring, email marketing automation, and SEO optimization, businesses can gain deeper insights into customer behavior, provide instant assistance to users, optimize ad spend and targeting, deliver personalized content recommendations, prioritize high-quality leads, automate marketing workflows, and improve search engine visibility. Ultimately, integrating AI technologies into digital marketing strategies enables businesses to drive better results, increase engagement, and maximize return on investment (ROI) in the ever-evolving digital landscape.

Throughout the project, it became evident that AI has revolutionized advertising by leveraging insights from past data. AI algorithms have transformed the way ads are targeted, personalized, and delivered to audiences. By analyzing previous interactions and behaviors, AI enables marketers to tailor their advertising efforts to individual preferences and interests, resulting in more relevant and engaging experiences for consumers. This data-driven advertising has empowered businesses to optimize their ad strategies, increase ROI, and ultimately, enhance the effectiveness of their marketing campaigns.

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