ROLE OF ARTIFICIAL INTELLIGENCE ACROSS VARIOUS MEDIA PLATFORMS: A QUANTITATIVE INVESTIGATION OF MEDIA

Abstract

Artificial intelligence (AI) is any human-like intelligence illustrated by a computer, robot, or other machine. This study examines the relevance of AI's role in various social media platforms. AI has the capability of helping transform how businesses market on social media sites such as Instagram as well as Twitter. It has the ability to automate numerous time-consuming social media management chores and even do large-scale social media monitoring. AI allows social media advertisers in order to be connected to their intended audience as well as discover more about their inclinations. This enables businesses to more precisely target their adverts and create content. Social media platforms are actively helping businesses acquire new clients and maintain ties with existing ones. By posting their thoughts, photographs, or videos on these sites, users, both companies as well as individuals, are continually contributing an unimaginable massive quantity of data that is growing rapidly with each passing year. Artificial intelligence (AI) is a new concept that is rapidly gaining traction in the realm of suggestions and ads. It is extensively utilized and incredibly efficient at having an impression on social media, allowing businesses to discover, interact, and learn from their followers more effectively. Now, managing these massive platforms is not a simple process. Sample of 341 people from different media platforms to know the role and compare the significance of artificial intelligence across various media platforms. It is found that there is a significant difference between traditional media, Core digital media and Mixed media for role of artificial intelligence.

Keywords: Artificial Intelligence, Corporate Operations, Financial Technology, Machine Learning Social Media Platforms.

Author

Dr. V. Gajapathy
Professor
Business Analytics and Blockchain
School of Management
Presidency University
Bengaluru, India
vgajapathy@presidencyuniversity.in

I. INTRODUCTION

AI, according to the researchers, "refers to programmes, algorithms, systems, as well as computers that indicate intelligence," is "manifested by machines that exhibit characteristics of human intelligence," as well as entails machines replicating "intelligent human behavior." It is built on a multitude of core technology, including machine learning, natural language processing, rule-based knowledge - based systems, neural networks, deep learning, physical robots, as well as Automation of robotic processes. AI uses these techniques to "properly understand external input, learn from such data, as well as display flexible adaptability." Another method to define AI is through its marketing as well as business applications, such as automating corporate operations, getting insights from data, as well as involving customers as well as employees. They build on this latter viewpoint.

Nunavath & Goodwin (2018) investigated and stated that to begin, AI algorithms execute jobs that are well-defined and need little or no human involvement to computerize business processes, such as transmitting data from email or call centres into recordkeeping systems, substituting lost ATM cards, incorporating simple market transactions, or "reading" transcripts to retrieve relevant aspects making use of natural language processing (NLP) . Second, AI can derive huge volumes of customer as well as transactional knowledge, comprising textual, audio, image, as well as facial expressions information. Organizations may then deploy AI-enabled analytics to forecast what a consumer is likely to buy, identify credit forgery before it occurs, or implement Real-time aimed multimedia marketing.

According to **Vedapradha, et al. (2019)**, AI may interact with clients both before as well as after the transaction. The Conversica AI bot moves consumer transactions around the marketing funnel, whereas 1-800-Flowers' AI bot handles both sales and customer service. AI bots have benefits that go beyond simply being available 7 days a week, 24 hours a day. These AI bots not only having lower inaccuracy rates, but they could free up human personnel to deal with greater issues that are difficult. Furthermore, when demand ebbs or flows, AI bot deployment may be increased or decreased as required.

Zerfass, et al. (2020) offer a paradigm to assist consumers as well as enterprises forecast how AI would progress, based on ideas from marketing social sciences, as well as computer science/robotics. They look at three aspects of AI: intelligence levels, task type, as well as whether the AI is incorporated in a robot. AI advancements in recent years will continue, driven by commercial applications as well as facilitated by continuous improvement in algorithm development, increased availability of low-cost computer power, as well as broad data collecting. Furthermore, there are significant barriers to fully utilizing AI's potential, such as the lack of transparency of some AI algorithms, which are unable to completely explain the logic behind their judgments. When making difficult judgments, society has not yet developed the same degree of confidence in AI systems as it has in people. There is a possibility that bias will be incorporated into AI systems by including biased data or code in the unconscious prejudice of human engineers.

II. LITERATURE REVIEW

Wijayati, et al. (2022) conducted research and concluded that various AI-powered solutions assist various firms in examining their brand's social media profiles as well as analyzing their

visits. Using these technologies allows organizations to better understand their customers' Behaviour as well as how they feel about the brand. This data may also assist companies in understanding their worldwide brand equity, recognizing new trends, targeting new audiences based on their interests, as well as identifying new methods of social media marketing. AI helps businesses to do things like interact with individuals as well as targeted audiences, run sponsored adverts based on behavioural targeting and demographics, estimate market expansion and thus increase ROI, as well as obtain more organic consumers for your company.

Chintalapati & Pandey (2022) researched and concluded that Artificial intelligence is an intriguing as well as useful tool for identifying early coronavirus infections as well as tracking condition of those who have been affected. By developing beneficial strategies, it can significantly improve therapeutic uniformity as well as decision-making. AI is useful not just in the medication of patients infected with COVID-19, but also in their health monitoring. It is possible to track the COVID-19 problem on several dimensions, including medicinal, molecular, as well as applications in epidemiology. It is also effective in helping viral research by evaluating accessible information. AI can aid in the creation of successful treatment regimens, prophylactic measures, as well as medication and vaccine development.

Micu, et al. (2021) conducted research and concluded that technologies that are disruptive such as the internet of things, big data analytics, block chain, as well as artificial intelligence have altered the way firms function. Artificial intelligence (AI) is the most recent technology disruptor, and it has enormous commercial transformation potential. Practitioners all around the world are attempting to identify the finest AI solutions for their marketing operations. A thorough literature review, on the other hand, may emphasize artificial intelligence (AI) and its importance in marketing as well as guide future research routes. The current study seeks to provide a complete assessment of AI in marketing by analyzing existing literature utilizing bibliometric, conceptual, as well as intellectual network analysis. A detailed analysis of 1,580 publications aided in identifying the scientific players' performance, such as the most significant authors and sources. Moreover, the conceptual as well as intellectual network was exposed by co-citation as well as co-occurrence investigation. The Louvain method data clustering assisted in identifying study sub-themes as well as further research paths to develop AI in marketing. Artificial intelligence (AI) is intelligence demonstrated by machines, as contrasted to human intelligence. A system of intelligent agent robots is used to represent artificial intelligence that observe the environment in order to accomplish its goal.

Misra, et al. (2020) define artificial intelligence as "devices (computers) that imitate cognitive as well as emotional aspects of the human mind." Artificial intelligence growth has been tremendous, and specialists have worked relentlessly to expand AI principles over the last few decades. The endeavour resulted in substantial breakthroughs in a range of areas and settings, such as big data analytics as well as machine learning applications.

Varsha, et al. (2021) examined and concluded that the artificial intelligence system gathers as well as interprets enormous volumes of data based on the needs. Organizations such as Google as well as Amazon handle large volumes of data that individuals cannot understand. Furthermore, an artificially intelligent system maintains information on different individuals and devices from various sources. All of this displays asynchronously or concurrently on the system. AI-powered systems are programmed to notice as well as react to their surroundings.

They study their environment as well as behave properly, keeping potential future outcomes in mind circumstances. For example, AI can anticipate a machine's failure time based on previous data. It can alert individuals to imminent action.

Vlačić, et al. (2021) conducted research and concluded that an artificial intelligence-based marketing analytics tool may evaluate the appropriateness of product design in response to customer requests as well as a consequence, customer happiness. Topic modelling enhances the system's innovation capabilities as well as build services. Weighted preferences for product attributes supplied aid marketers in understanding the goods during product search recommender system as well as aligning marketing tactics for effective product administration. Deep learning can assist to tailor point of interest recommendations and explore new areas. Artificial intelligence enables the customization of services to match the needs of the consumer.

Ghouri, et al. (2022) investigated and concluded that pricing entails the consideration of various contributes into pricing determination as well as being a calculation-intensive operation. The complexity of pricing is boosted by real-time price changes based on changeable desire. In a real-time context, an artificial intelligence-based multiarmed bandit programme can programmatically change the pricing. In a dynamic pricing context, such as an e-commerce platform, Bayesian inference in machine learning algorithms may rapidly modify pricing points to compete with the competition's price. Appropriate response pricing algorithms, according to them, include consumer preferences, competitive strategies, as well as supply network to improve dynamic pricing.

Nadarzynski, et al. (2019) explored and clarified that industry and government to detect unexpected financial risks early as well as prevent malevolent behaviours such as market manipulation, fraud, and strange transactions may use artificial intelligence. Many AI approaches, such as artificial neural network as well as support vector machine, are utilised by commercial bankers as well as business consultants to anticipate insolvency and financial hardship in companies. AI approaches are also commonly used to create intelligent financial solutions that facilitate people's investments by delivering high-quality financial assistance services. Another AI-based financial technology that has demonstrated benefits in enhancing efficiency and lowering transaction costs is financial automation transactions.

Khatua, et al. (2021) examined and concluded that virtual platforms (e.g., Siri from Apple, Alexa from Amazon, as well as Google Assistant from Google) are very complicated as well as advanced artificial intelligence (AI)-based technologies. Individuals can utilize digital assistants for both simple daily activities as well as complex capacities. Moreover, the functional as well as topical usage of a digital assistant varies per individual. The research describes the respondents' contextual perspectives. There is little empirical proof of client satisfaction with digital assistants at the moment. To investigate this research gap, PLS-SEM was utilized to analyse 244 survey responses. The findings indicated that consumer satisfaction with digital assistants is positively as well as significantly related to expectations as well as verification of expectations.

Sun, et al. (2021) examined and asserted that the Internet of Things (IoT) is a a connection of objects that incorporate electronics, software, sensors, and actuators, allowing these objects/things to connect, communicate, and share data. Users, sensors, as well as networks

create massive volumes of data, which governments may exploit to develop applications and acquire knowledge through the use of Artificial Intelligence (AI) approaches. Thus, IoT and AI have the potential to allow the development of important services for individuals, corporations, as well as government agencies in a variety of sectors, including transportation, energy, healthcare, education, as well as public safety.

Cheng (2018) analyzed and asserted that consumers are more worried about artificial intelligence technology as well as uses. The majority of respondents had positive sentiments of AI physicians and believed that they will entirely or temporarily substitute physicians. In comparison to past surveys on medical practitioners, the wider population is more positive towards medical AI. Some individuals still have a difficulty view about medical AI due to a lack of faith in AI as well as the lack of humanistic concern aspect. Instead of focusing just on technical difficulties, they believe practitioners should focus more on establishing the trustworthiness of technology businesses and satisfying patients' emotional requirements.

III. OBJECTIVE OF THE STUDY

1. To examine the role of Artificial Intelligence across various media platforms.
2. To compare the significance of Artificial Intelligence for various media platforms.

IV. RESEARCH METHODOLOGY

Sample of 341 people from different media platforms were surveyed with the help of a questionnaire particularly designed for this study to know the role and compare the significance of artificial intelligence across various media platforms. The primary data for this quantitative investigation is collected through random sampling methos. The statistical tools like comparative mean and ANOVA are applied to evaluate the data and get the end results.

V. FINDINGS OF THE STUDY

Table 1: Demographic Details

Variables	**No. of respondents**	**%age**
Gender		
Male	223	65.4
Female	118	34.6
Total	**341**	**100**
Age groups		
Below 38 yrs	97	28.5
38-44 yrs	127	37.2
Above 44 yrs	117	34.3
Total	**341**	**100**
Media platform		
Traditional Media (Newspaper and TV)	90	26.4
Core Digital Media (social media)	137	40.2
Mixed Media (Websites)	114	33.4
Total	**341**	**100**

Table 1 showing the demographic details of total 341 respondents in which 54.4% are male and 34.6% are female. Among them 28.5% are below 38 years of age, 37.2% are from the age group 38-44 years and rest 34.3% are above 44 years of age. 26.4% of the respondents are from Traditional media platform (Newspaper and TV), 40.2% are from Core digital media (social media) and rest 33.4% are from mixed media (Websites).

Table 2: Comparative Mean between Various Media Platforms

Sl. No	Role of Artificial Intelligence	Mean Value			
		Media Platforms			
		Traditional Media	Core Digital Media	Mixed Media	Total
1.	AI helps to gather the content and understand the data pool	3.34	3.75	3.68	3.62
2.	AI maintains information on different individuals and devices from various sources	3.24	3.93	3.85	3.72
3.	AI run sponsored adverts based on consumer behavior and estimate market expansion	3.72	4.00	4.01	3.93
4.	AI are used to draft and target the social ads	3.79	3.97	4.05	3.95
5.	AI allows media advertisers to connect with their intended audience and discover more about their inclinations	3.70	4.00	4.06	3.94
6.	AI do large-scale social media monitoring	3.80	4.06	4.18	4.03
7.	AI automate numerous time-consuming media management chores	3.79	3.98	4.19	4.00
8.	AI protects and safeguards the information and data of the user	3.64	3.96	3.93	3.87

Table 2 is demonstrating comparative mean for role of artificial intelligence for various media platforms. It is observed that the respondents of core media platform have given highest mean value for most of the statements mentioned above followed by mixed media platform. It is also seen that the respondents of traditional media have given lower mean values for all the statements.

Table 3: ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
AI helps to gather the content and understand the data pool	Between Groups	9.684	2	4.842	7.924	.000
	Within Groups	206.516	338	.611		
	Total	216.199	340			
AI maintains information on different individuals and devices from various sources	Between Groups	28.177	2	14.088	16.514	.000
	Within Groups	288.357	338	.853		
	Total	316.534	340			
AI run sponsored adverts based on consumer behavior and estimate market expansion	Between Groups	5.264	2	2.632	4.608	.011
	Within Groups	193.047	338	.571		
	Total	198.311	340			
AI are used to draft and target the social ads	Between Groups	3.596	2	1.798	3.223	.041
	Within Groups	188.556	338	.558		
	Total	192.152	340			
AI allows media advertisers to connect with their intended audience and discover more about their inclinations	Between Groups	7.357	2	3.678	6.928	.001
	Within Groups	179.470	338	.531		
	Total	186.827	340			

AI do large-scale social media monitoring	Between Groups	7.283	2	3.641	6.141	.002
	Within Groups	200.424	338	.593		
	Total	207.707	340			
AI automate numerous time-consuming media management chores	Between Groups	8.322	2	4.161	6.644	.001
	Within Groups	211.678	338	.626		
	Total	220.000	340			
AI protects and safeguards the information and data of the user	Between Groups	5.997	2	2.998	4.924	.008
	Within Groups	205.798	338	.609		
	Total	211.795	340			

Table 3 shows the significance of Artificial Intelligence for various media platforms. It is observed from the table that there is a significant difference between all the three media platforms (traditional media, Core digital media and Mixed media) as the value under significant column for all the statements is below significant value 0.05. Further, to find that which set of categories significantly differ, the Post Hoc Test was applied.

Table 4: Multiple comparisons

Dependent Variable	(I) media	(J) media	Mean Difference (I-J)	Std. Error	Sig.
AI helps to gather the content and understand the data pool	Traditional Media	Core Digital Media	-.40738*	.10606	**.000**
		Mixed Media	-.33977*	.11022	**.006**
	Mixed Media	Core Digital Media	-.06761	.09909	.774
AI maintains information on different individuals and devices from various sources	Traditional Media	Core Digital Media	-.68256*	.12533	**.000**
		Mixed Media	-.60643*	.13024	**.000**
	Mixed Media	Core Digital Media	-.07613	.11709	.792
AI run sponsored adverts based on consumer behavior and estimate market expansion	Traditional Media	Core Digital Media	-.27778*	.10254	**.019**
		Mixed Media	-.28655*	.10656	**.021**
	Mixed Media	Core Digital Media	.00877	.09581	.995
AI are used to draft and target the social ads	Traditional Media	Core Digital Media	-.18191	.10134	.173
		Mixed Media	-.26374*	.10532	**.034**
	Mixed Media	Core Digital Media	.08183	.09469	.663
AI allows media advertisers to connect with their intended audience and discover more about their inclinations	Traditional Media	Core Digital Media	-.30000*	.09887	**.007**
		Mixed Media	-.36140*	.10275	**.001**
	Mixed Media	Core Digital Media	.06140	.09238	.784
AI do large-scale social media monitoring	Traditional Media	Core Digital Media	-.25839*	.10448	**.037**
		Mixed Media	-.37544*	.10858	**.002**
	Mixed Media	Core Digital Media	.11704	.09762	.455
AI automate numerous time-consuming media management chores	Traditional Media	Core Digital Media	-.18921	.10738	.184
		Mixed Media	-.40409*	.11159	**.001**
	Mixed Media	Core Digital Media	.21488	.10032	.083
AI protects and safeguards the information and data of the user	Traditional Media	Core Digital Media	-.31176*	.10588	**.010**
		Mixed Media	-.28538*	.11003	**.027**
	Mixed Media	Core Digital Media	-.02638	.09892	.962

Table 4 is showing Multiple Comparisons between various categories of media platforms (traditional media, Core digital media and Mixed media) for role of artificial intelligence. It is observed from the table above that there is a significant difference between

traditional media and Core digital media & Mixed media for almost all the statements except for the statements AI are used to draft and target the social ads and AI automate numerous time-consuming media management chores where there is no significant difference between Traditional Media and Core Digital Media. It is also found there is no significant difference between Core digital media and Mixed media for all the statements regarding role of artificial intelligence.

VI. CONCLUSION

The research provides a framework for comprehending how artificial intelligence may influence the future of marketing, particularly how AI may influence marketing methods as well as consumer behavior. They make use of prior work as well as crucial contact with practitioners. First, researchers develop a multidimensional framework for AI evolution, emphasizing the importance of intelligence levels, types of tasks, as well as whether the AI is implanted in a real-world robot. As a result, they present the initial effort to incorporate all three dimensions into a unified structure. They also want to make two points. Firstly, the short- to medium-term effects of AI may be more restricted than popular media suggests. Secondly, they believe that AI will be more efficient if it is used to supplement human management. The survey program should be considered by academics, businesses, as well as policymakers, while keeping in mind that, although AI has already had an influence on marketing, it will have a considerably greater influence in the future, and hence there is much more to discover. They hope that this research agenda inspires and drives AI research in the future.

The study concludes that AI gather the content and understand the data pool, maintains information, run sponsored adverts, draft and target the social ads, allows media advertisers to connect with their audience, do large-scale social media monitoring, automate numerous time-consuming media management chores and protects and safeguards the information and data. It is also found that there is a significant difference between various media platforms like traditional media, Core digital media and Mixed media for the role of artificial intelligence.

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