IMSU Journal of Communication Studies
Volume 8, Issue 2, 2024
ISSN: 2682-6321, E-ISSN: 2705-2240
www.imsujcs.com

IMPACTS OF ARTIFICIAL INTELLIGENCE APPLICATION ON CONTEMPORARY BROADCAST MEDIA PRACTICE IN NIGERIA: A STUDY OF BROADCAST MEDIA PRACTITIONERS IN SELECTED STATES IN SOUTH-EAST, NIGERIA

[1]ANYANWU, Belinda
[2]IHEONYE, Assumpta Uju

[1]Dept. of Mass Communication, Federal Polytechnic, Nekede, Owerri. Imo State, Nigeria
[2]Dept. of Mass Communication, Owerri, Imo State University, Owerri, Nigeria

Corresponding author: Anyanwu Belinda, anyanwubelinda@fpno.edu.ng

ABSTRACT

The paper examines the impact of artificial intelligence application on contemporary broadcast media practice in Nigeria. The concept of (AI) artificial intelligence application has continued to generate controversy and attention from different scholars and professionals alike. AI as the world most newest technology came on board via the fourth industrial revolution. It is a machine intelligence capable of mimicking human cognitive functions such as learning, understanding and problem solving. AI has the ability to write articles, news stories as well as effecting editing process. The study objectives were to ascertain the level of understanding of AI application among the Broadcast operators, to find out the role played by AI contents creation and communication and the impacts of AI applications in the broadcast media outlets in Owerri, Imo state, Nigeria. The study adopts a survey method of research by using questionnaire and interview as a research instrument for data gathering to engage media practitioners and academics on discussion on their levels of understanding of AI technology. The sampling size for the study was 399 according to survey monkey, an online sample size formula. The sampling technique adopted was simple random sampling. The data were presented in tables and simple percentage. Findings from the study revealed that 181 respondents strongly agreed to have an understanding about the new technology and its functions ability as AI is increasingly becoming part of our daily lives. Other finding showed that AI application is rapidly developing in the media sector. Consequently, the researchers concluded that the media organizations and the professionals should embrace the technology and utilize it for improvement of the media practice.

Keywords: Artificial Intelligence, broadcast media, technology, content creation.

Introduction

Artificial Intelligence application is a new technology that was made possible through the fourth industrial revolution which took place in the mid-2010s. It is characterized by the integration of digital, biological and physical innovations and the convergence of technologies such as artificial intelligence, gene editing, robotics and 3D printing. The era is also marked by the automation of manufacturing processes and the use of advanced technologies such as augmented reality, machine automation and advanced analytics (Russell, 2019).

AI is defined as a machine intelligence or intelligence demonstrated by machines, in contrast to the natural intelligence displayed by humans. The term AI is often used to describe machines that mimic human cognitive functions such as learning, understanding, reasoning or problem-solving (Russell & Norvig, 2016).

Artificial Intelligence is a new development that is progressing rapidly through the computer and machines empowerment to solve problems and simulates human intelligence. As a technology, it has the

tendency of performing task that originally needed human ability and intellectual capacity to function. As a system application, it has the potentials of developing AI algorithms of learning from available data, making predictions based on the data collection through analysis processes.

Artificial Intelligence as a discipline adopts both machine learning and deep learning algorithms through the use of artificial neural networks (ANN) that helps to facilitate learning from huge amounts of data. Artificial Intelligence applications have a wider spectrum of usage ranging from speech recognition, computer vision, supply chain, customer service, anomaly detection as well as weather forecast.

Anyanwu (2021) expressed that artificial intelligence applications is the ability of computer system which has undergone training to execute functions similar to how human brain will execute or in some cases better. Artificial Intelligence is however, categories into two separate divisions known as Weak Artificial Intelligence and Strong Artificial Intelligence. Weak AI is also known as artificial narrow intelligence (ANI). It is trained and focused to perform specific tasks. It also enables robust applications such as Apple's, Amazon's and self-driving vehicles. Strong AI on the other hand is made up of artificial general intelligence (AGI) and artificial super intelligence (ASI).

AGI is another form of artificial intelligence where machines would have an intelligence of a human being having the ability to solve problems, learn and plan for the future. Artificial Intelligence is vested with unlimited capacity to perform various tasks as well as to coordinate information and allow data to flow in different direction across different networks.

It applications have various impacts in the media practice in the contemporary broadcast media. The advent of artificial intelligence application has witness variety of visual material appeal and has also increased interactivity between the mass media and the audiences. Artificial intelligence application can as well write articles and news stories and at the same time effect editing processes on the information content. Broadcast media can make use of artificial intelligence application to extract events and incident from diverse sources for use. Furthermore, it can automate media rich content that can deliver a more personalized experience needed for information dissemination (Blagoj, et al 2020).

Muhammed et al (2023) opined that in the profound influence of media industries in boosting the society's knowledge, trends and behaviors, compounded with the creative nature of the field of work in the media, the artificial intelligence applications have gained much significance. The use of the applications in the media environment, although limited, has been accompanied by rapid development.

Artificial Intelligence in today's media practice offers eminent benefits in the area of getting faster news materials and applying same in the production process, automated fact checking, sentiment analysis for audience feedback and also being able to mount a gatekeeper on the amount of data by filtering the needed data from unwanted materials. That could enable the process of accuracy, efficiency and the overall quality of news reporting. Broadcast media is predominantly saddled with the responsibility of information dissemination to the anonymous audiences. The concept of feedback is relevant to mass media because it helps to ascertain whether the messages are appreciated. Obviously, the mass media would have been boring and straitlaced without color if not for the outstanding roles performed by the media. Thanks to the panoramic dynamism of life that the mechanism of technology has actually evolved by changing the dynamics of media routine. The task of gathering information for onward dissemination to the larger audiences' sometimes leaves an untold hardship on the reporters and even when the beats returns, the issue of gate keeping becomes a bottleneck. Most times, the editor prevails over which information should be allowed or disallowed. Hence, the impacts of Artificial intelligence on contemporary broadcast media practice in Nigeria.

Statement of the Problem

The development of Artificial intelligence application appears handy to eliminating the challenges that often stares the reporters on their faces. Anyanwu 2021 opined that AI application is a new technology that is rapidly progressing through computer and machines empowerment to execute functions similar to how human brain will execute or in some cases better. Artificial Intelligence application has the capability of speech recognition, computer vision, customer service and detection of any anomalies.

Despite the positive attributes that the artificial intelligence application may have accomplished, there are still some negative impacts of adopting the new technology known as artificial intelligence. Mohammed, et al 2023 expressed that the use of artificial intelligence applications in media environment, although limited in its infancy, has been accompanied by rapid developments in the media. What then is the impact of artificial intelligence application on contemporary media practice in Nigeria? This study therefore, aimed at identifying the possible impacts that the new technology may have in the broadcast media operations and the challenges that the use of artificial intelligence may have brought.

Objectives of the Study

The main objective of this study is to examine the impacts of Artificial Intelligence application on the contemporary media practice in Imo State. Specifically, the objectives were to:

1. Ascertain the level of understanding about Artificial Intelligence application among the broadcast media operators in Owerri, Imo State.
2. Find out the role played by AI in contents creation and communication in the broadcast media practice in Owerri, Imo State.
3. Identify the impacts of AI applications among the broadcast media outlets in Owerri, Imo State.

Literature Review

History of Artificial Intelligence (1950s – 1990s)

Artificial Intelligence began with a professor at Dartmouth College Conference in 1956, where AI got its first name and mission. John McCarthy coined the term “artificial intelligence” which became the name of the scientific field**.** The primary conference declaration was: "Every aspect of any other feature of learning or intelligence should be accurately described so that the thinking machine can simulate it” (Russell & Norvig, 2016).

Among the conference attendees were Ray Solomonoff, Oliver Selfridge, Trenchard More, Arthur Samuel, Herbert A. Simon, and Allen Newell, all of whom became key figures in the field of Artificial Intelligence.

People were excited because for the first-time computers were solving problems like humans and that seemed intelligent. The wider AI research community shared an initial optimism making bold claims and boosting popularity. For instance, where AI can solve problems such as algebraic application problems, language translation, geometric theorem proving, etc.

Another stage of artificial intelligence in the 1990s was known as “expert system” which emanated from the IT lexicon, and was referred to as the second AI. One of the main problems in expert systems was knowledge acquisition. Knowledge acquisition captures expert knowledge and represents it in a symbolic language. Obtaining domain for expert time and expertise was difficult since they were in

constant need by their organizations. Hence, expert system research focused on tools for knowledge acquisition, to help automate the process of designing, debugging, and maintaining rules as defined by the experts (Blagoj, et al 2020).

Impact of Artificial Intelligence on Content Creation and Curation

Artificial Intelligence is playing significant role in content creation and curation from news articles to video contents. AI is being used to create, curate and distribute contents that resonate with the target audience (Mayowa, 2023). The most popular cases of AI use in content creation is natural language processing (NLP). Natural language processing is a branch of AI that focuses on the interaction between computer and humans in natural language. NLP algorithms are used to analyze, interpret and generate human like language. It is also used to create is playing significant role in content creation and curation from news articles to video contents. AI is being used to create, curate and news articles and product descriptions (Mayowa,2023).

The media industry has experienced a revolution in content creation thanks to automation of content development and the streamlining of production processes made possible by AI technology. AI systems can create text, graphics, and even films based on predetermined criteria and patterns (Das et al., 2015)

The creation of headlines, concepts for social media posts, and thumbnail images are all tasks that AI-powered content generating systems assist content creators with (Thakkar, et al, 2020). These technologies use image recognition, natural language processing, and other AI techniques to create engaging and excellent content components. Post-production and video editing are two steps of content creation that are sped up by automation powered by AI (Moran & Shaikh, 2022). AI systems have the capacity to review video content, identify scenes, and instantly create edited versions or highlight reels.

AI-assisted editing and post-production techniques can enhance the efficiency and quality of media production operations. AI algorithms can evaluate audio and video data, automatically detect and correct errors, and improve the quality of the finished product (Yang, et al, 2020). For instance, AI-powered technologies can enhance visual effects, reduce background noise, and stabilize shaky footage.

There is another type of AI-assisted editing which is automated scene recognition through which computers can identify significant transitions or spots in a movie program (Anantrasirichai & Bull, 2021). Content creators can quickly and easily navigate through the film and speed up the editing process by concentrating on the most important portions of a large amount of footage.

AI algorithms can also access and comprehend user feedback and engagement metrics in order to offer insights on content success (Campbell, et al., 2020). With the aid of this data-driven approach, video artists can enhance their editing and post-production processes in order to better satisfy audience expectations and preferences (Paschen, et al, 2020).

AI-driven content recommendation systems have significantly altered how media content is chosen and delivered to users (Shin, 2021). These systems give recommendations that are individually tailored to each person's likes and consumption patterns by using user choices, data, and behavioral patterns.

Content recommendation systems use machine learning algorithms that look at user activities like clicks, views, and ratings to determine preferences and deliver accurate content recommendations (Chu & Park, 2009). These resources help users find new content, increase engagement, and improve their user experience as a whole.

Beyond suggestions, content curation is a part of customization provided by AI. Media platforms and streaming services utilize AI algorithms to filter material based on user preferences, demographics, and previous usage information (Dwivedi et al., 2021). By providing consumers with specialized content streams and personalized playlists, media businesses may increase user satisfaction and increase content consumption.

AI-enabled tailored content also has the ability to change dynamically in response to user responses in real-time. Media platforms can utilize AI algorithms to improve content suggestions continuously, responding to changing user preferences and improving recommendation accuracy over time. Since AI makes it possible to generate content automatically, enhances editing and post-production workflows, and provides customized content recommendations, it has a big impact on content creation and curation. These innovations raise the standard of the material, simplify the steps involved in producing media, and boost user engagement in the media industry.

Understanding the Dynamics of Artificial Intelligence

Because AI has been incorporated, the media sector has seen significant changes in job roles and skill needs. As certain tasks and procedures are automated by AI technology, some employment categories may evolve while others may become obsolete. By eliminating the requirement for manual content creation, for instance, AI-powered content generating solutions free up content creators to focus on strategy and original ideation (Verganti, et al, 2020).

In addition, AI has created new job roles and skill requirements in industries including data analysis, algorithm development, and AI system administration (Jaiswal, et al, 2021). Media organizations are now looking for specialists with skills in data science, machine learning, and AI technology to fully harness AI's potential in their operations.

In order to succeed in an AI-enabled media sector, professionals must master a number of technical skills, such as data analysis, programming, and comprehension of AI algorithms, in addition to having domain-specific expertise in media and content production. Additionally, critical thinking, creativity, and adaptability skills are required to work effectively with AI systems and use their possibilities (Alan, 2021).

The automated potential of AI technology has raised concerns about job displacement in the media industry. Automation-driven methods could replace some of the repetitive and routine tasks that have historically been carried out by people, such as content creation powered by AI or automated data analysis (Healy, et al, 2017).

Though automation may replace some job responsibilities, it can also create new opportunities and roles inside media businesses, which is something that must be kept in mind. The deployment of AI frequently requires human oversight, management, and decision-making. It is necessary to develop hybrid job roles that combine technical expertise in AI with strategic thinking and creative problem-solving skills (Chowdhury et al., 2022).

Gulen (2023) opined that AI is an interdisciplinary field of study that involves creating intelligent machines that can perform tasks that typically require humanlike cognitive abilities such as learning, reasoning and problem solving. The basics of AI include understanding the various subfields of AI such as machine learning natural language processing, computer vision and robotics. It is also crucial to comprehend the fundamental concepts that underlie AI, including neural networks, algorithms and data structures.

Theoretical Framework

This research study is rooted within the Technological Determinism Theory as propounded by a Canadian philosopher of communication theory Marshall Mcluhan in the twentieth century and Artificial Theory of Mind as propounded by Premack and Woodruff in 1978. The main thrust of the technological determinism theory is that invention in technology invariably caused a change in cultural pattern as well as the way we live as a function of the way we process information. A common expression from the theory is that "we shape our tools and our tools shapes us" which implies the way humanity controls the transmission of information through technological equipment can automatically influenced humanity. Mcluhan is known for his statement "the medium is the message" and the concept of a "global village" and also for the prediction of the World Wide Web (WWW) before its invention. The idea of the global village which is a part of the theory lies in the fact that the media, particularly the electronic media including the internet would bring people closer together in proxy. The theory is a popular dominant theory of the relationship between technology and the society. It is observed that technology takes on an active life of its own and is seen as a driver of social phenomena (Jumbo et al., 2023). McLuhan believed that the new electronic media have radically adhered to the way people think, feel and act. Technological determinism expresses that; technology would invariably cause a dynamic change in the pattern of information dissemination.

Artificial theory of mind as postulated by Premack and Woodruff in 1978, affords a structure by which a socially intelligent agent could be imbued with the ability to model their human counterparts and engage in effective human-agent interaction. The theory can be used by an ASI (Artificial super intelligence) to support transparent communication with humans, improving trust in agents so as to better predict future system behavior based on their understanding of artificial intelligent agents. Theory of mind artificial Intelligence systems has the ability to understand and interpret the emotions, beliefs and intensions of other agents. It is essential for creating more humanlike interactions between machines and humans. Theory of mind AI has applications in social robotics, virtual assistants and other areas that require interpersonal communication. The theories adopted for this study finds expression in reconciling the fact that technology has the capability of defining workforce dynamics and job roles within a system.

The relevance of these theories to the study therefore, lies in the fact that the theories provide a unique viewpoint about the concepts of AI as a new technology as having a relationship between technology and the society with its ability to define the job roles within the workforce.

Review of Related Works

In the study of the impact of artificial intelligence Applications on Media Industries: A prospective study, it analyzed stakeholders and experts' opinions. That is, stakeholders and experts were interviewed either in person or online. Thus, the Method Delphi was adopted in which the respective academicians in various disciplines were interviewed for once (Al-Saadi 2011, p. 167). The study connected with the field of media; academicians' contributions were used as the most appropriate means for making expectations. Moreover, the nature of the study required the use of the qualitative method, not the quantitative one, to address various aspects of media phenomena. The researchers avoided the qualitative method as it is not appropriate for prospective media studies investigating cognitive data and mechanisms of human mental awareness (Hamid, 2004, p.127).

In another study on the roles of artificial intelligence applications in media, participants listed several potential roles for the applications of artificial intelligence in media, which are as follows:

- The use of algorithms to develop audience measurement methods and proposed logical solutions, and playing the role of a gatekeeper (Hermann, 2021).
- Cloud computing to provide instantaneous sources and endless information, and they represent an unlimited archive for communicators.
- Ability to use drones for filming events from angles that photographer cannot reach and collecting information.
- Internet of things to execute series of commands related to publishing, broadcasting, distributing, and receiving within the framework of the communication process. TVs can also work with smart audio systems, over-the-top content OTT systems, smart lighting systems, and game controlling. For example, American Syfy TV, owned by NBC Universal, has partnered with Philips Electronics to develop smart synchronous lighting technology, whereby Syfy Sync application allows users to coordinate lighting colors with movie scenes that they watch on television.
- Robot can be used in some communication processes instead of humans to produce more creative works (Muhammed, 2023).

The findings from the study revealed that the applications of artificial intelligence in the media are distinguished in the ability to process big data quickly and accurately. That corresponded with the study "understanding the dynamics of artificial intelligence". Verganti, et al (2020) revealed that certain tasks and procedures are automated by AI technology and that some employment categories may evolve. Also, Jaiswal, et al (2020) expressed that media organizations are now looking for specialists with skills in data science, machine learning, and AI technology to fully harness AI's potential in their operations. in data science, machine learning, and AI technology to fully harness AI's potential in their operations. The study recommended conducting of training courses to qualify the professional cadre to get the optimal use of these applications in media industries.

In another study on" the impacts of artificial intelligence on content creation" the participants observed that the use of artificial intelligence applications in media will cause substantial transformations in all aspects of media industries. Thakkar, et al (2020) which suggested that these technologies use image recognition, natural language processing and other AI techniques to creates engaging and excellent contents components. The study therefore recommended the process of conducting training courses to qualify the professional cadre to get the optimal use of these applications in media industries.

Some studies published to date have attributed the difficulty of implementing AI in the media to factors linked to investment costs, both for the development of proprietary applications and for the purchase of external tools. The cost of (AI) Artificial intelligence application as being very high, even for large media operation (Simon, et al, 2023).

Methodology

Research Design

For the purpose of this study, survey design was adopted to extract information on the impact of AI application on contemporary broadcast media practice from media practitioners and academics. The population of this study however, consists of people of different gender, religion, economic, social and ideological leaning cutting across four media organizations in the south eastern state, Nigeria. They includes:

a. Nigerian Television Authority Owerri with a total number of 21 staff
b. Nigerian Television Authority, Enugu with a total number of 126 staff,
c. Nigerian Television Authority, Aba with a total number of 97 staff and;
d. Federal Radio Corporation of Nigeria, Owerri with a total number of 176 staff.

Therefore, the total population is 399 staff of the selected media organizations.

Due to the manageability of the population, the census sampling method was used to study the entire population. According to Damico (2016), when a population is small and well defined, the entire population is usually studied. Therefore, the sample size of this study was 399. The questionnaire was the instrument of data collection. The questionnaire was structured in Likert scale format. This structure of question was adopted to provide respondents the latitude of expression in every item. The questionnaire was administered and retrieved with the help of the survey Monkey (online survey tool). Data generated were analyzed using tables, simple percentage and mean analysis.

Results

Research Question One: What is the level of understanding about Artificial Intelligence application among the broadcast media operators in Owerri, Imo State?

Table One: Respondents Understanding of Artificial Intelligence applications

Option	SA	A	D	SD	Total	Mean	Decision
I have a knowledge about the new technology called Artificial intelligence	181	159	18	12	370	3.3	Accept
I am aware that AI can perform human like functions in the media organization or even better	181	159	18	12	370	3.3	Accept
I am aware that AI application is rapidly developing in the media sector	148	126	50	46	370	3.0	Accept
Average mean						**3.1**	**Accept**

Source: Field Survey, 2024

From the table above, the study revealed that 181 respondents strongly agreed and 159 agreed on their understanding about the new technology*'s* ability to enhance visual effects, reduce background noise, and stabilize shaky footage.

The respondents are also aware that AI is rapidly developing and it can perform humanlike functions. The table reveals that at an average mean of 3.1, which means that most of the respondents (Journalists and academics) confirmed that they have understanding and are aware of AI tools performing skills.

Research Question Two: What are the roles played by AI in content creation in the broadcast media operators in Owerri?

Table Two: Respondents opinion on the role played by AI in content creation in the media sector.

Option	SA	A	D	SD	Total	Mean	Decision
I am confident that AI application is used in the media practice in Nigeria.	17	34	161	158	370	1.7	Reject
I believe that AI application uses image recognition to create message.	17	34	164	155	370	1.7	Reject
The use of AI in the broadcast sector has brought some problem.	18	33	169	150	370	1.7	Reject
Average mean						**1.6**	**Reject**

Source: Field survey, 2024

Table 2 above, the result revealed that at an average mean of 1.6, most of the respondents studied disagreed about the use of AI application in the media practice in Nigeria. The respondents also disagreed with saying that AI application uses image recognition to create messages. Seeking to know if the use of AI applications has brought any form of problem to the media sector and its practitioners, the respondents refute completely about such happening in the media organization.

Research Question Three: What are the impacts of Artificial Intelligence applications among broadcast media operators in Owerri?

Table 3: Response on the Impact of Artificial Intelligence application in broadcast media practice.

Option	SA	A	D	SD	Total	Mean	Decision
AI application seems to pose a threat that may be difficult to predict.	18	33	159	160	370	1.7	Reject
Deployment of AI in the broadcast sector will result to job loss among workers.	00	00	188	182	370	1.5	Reject
The development of AI application could spell the end of human race in the future	00	00	192	178	370	1.5	Reject
Average mean						**1.6**	**Reject**

Source: Field survey, 2024

Table 3 above shows an average mean of 1.6, which means that most of the respondents confirmed journalists and media organizations in the south east do not accept that AI applications in the media practice can pose unpredicted threat that could result to job loss nor spell the end of human race in the future.

Discussion of Findings

In answering the research question on the level of understanding Artificial Intelligence applications in broadcast media practice, the finding reveals that the respondents comprising journalists and academics have an understanding about the new technology called AI and its ability to perform humanlike functions in the media organization or even better than human ability as well as having understanding that AI application is rapidly developing in the media sector as that is helping to facilitate media reportage and gathering of information and disseminating same to the audiences meaning that it has the ability to enhance visual effects and stabilize shaky footage. That, in essence, means that certain tasks and procedures that were carried out by people in the media can be taken over by the machine automated AI which has the tendency to render humans redundant in the media profession. This collaborates with Gulen, 2023 who expressed that machines can perform tasks that typically require humanlike cognitive abilities such as learning, reasoning and problem solving as well as the basics of AI including understanding the various subfields of AI such as machine learning natural language processing, computer vision and robotics.

In a similar response to a research question on the roles played by AI in content creation in the broadcast media sector, most respondents strongly disagreed with the use of AI applications in the media practice and equally refute the concept of using the AI applications images recognition to create messages meant to be disseminated to audiences. In overall, at the average mean of 1.6 most respondents refused to accept that the use of AI in the broadcast media sector has brought any form of problem. That countered the study by Hermann, (2021) which pointed several potential roles capable of being played by Artificial intelligence applications.

In another study on the "impacts of Artificial intelligence applications in broadcast media practice", the respondents disagreed with any form of unpredicted threats of AI that may likely result in job loss among media practitioners as well as posing a spell on the end of human race in the future to counteract Thakkar, et al (2020) also presumed that, the AI technologies uses image recognition and natural language processing to creates engaging contents components. Relating the discussion to the theories adopted for the study (artificial theory of mind), states that artificial intelligence can be used to support transparent communication with humans and as well improved trust in agents so as to predict future system behavior based on their understanding of artificial intelligence agents.

Conclusion

Artificial intelligence application technology has come with a revolution into the media practice which automatically will lead to transformation of the system operation. The finding reveals that the respondents comprising of journalists and academics have an understanding about the new technology called AI and its ability to perform humanlike functions in the media organization or even better than human ability as well as having understanding that AI application is rapidly developing in the media sector as that would help to facilitate media reportage and gathering of information and disseminating same to the audiences. The advent of the new technology may not be without some difficulties which need to be addressed even though, many people are not envisaging any problems to be caused by the AI technology.

Recommendations

Based on the findings from this study, the following recommendations have been put forward:

1. Broadcast media outlets and practitioners in the process of adopting artificial intelligence technology should take into consideration the ethical implications as well as creating avenue for justice, diversity and inclusivity.

2. Machine intelligence should not usurp the intelligence displayed by humans. In whatever capacity the technology manifest, the media professionals should display human capability and professionalism.

3. Professionals in media practice and journalism should consider training manpower in the aspect of operating the AI machine and should not take the advent of the new technology for granted because of its peculiarity and ability to perform duties that were originally performed by human.

References

Hamid, A M. (2004). Scientific research in media studies. (1st Edition). Cairo, World of Books for Publishing and Distribution.

Agner, L., Necyk, B., & Renzi, A. (2020) Recommendation system and machine learning: Mapping the user experience: Design, user experience and usability. Design for contemporary Interactive Environment. Doi:https://doi.org

Alan, A. (2021). *Possibilities and Apprehensions in the Landscape of Artificial Intelligence in Education*. [online] IEEE Xplore. doi:https://doi.org/10.1109/ICCICA52458.2021.9697272 *and Usability. Design for Contemporary Interactive Environments*, pp.3–17. doi:https://doi.org/10.1007/978-3-030-49760-6_1.

Anantrasirichai, N. and Bull, D. (2021). Artificial intelligence in the creative industries: a review. *Artificial Intelligence Review*, 55(1). doi:https://doi.org/10.1007/s10462-021-10039-7.

Anyanwu, C. J. (2021) The Application of Artificial Intelligence to Real Estate Valuation in Nigeria: Unpublished work. An undergraduate project of school of Environmental Technology, Federal University of Technology, Minna.

Asika, N. (2010) Research Methodology in the Behaviorial Sciences. Lagos: Extorise Nigeria Limited.

Al-Saadi, R. (2011). Future: an introduction to the science of future studies. (1st Edition). Baghdad: Al-Farahidi for Publishing and Distribution.

Blagoj, D., Chrisa, T.,& Uros, K. (2020) AI Watch:Historical evolution of AI: Analysis of the three main paradigm shifts in AI, Luxembourg. Doi:102760/801580,JRC120469.

Campbell, C., Sands, S., Ferraro, C., Tsao, H-Y (Jody) &Mavrommatis, A. (2020) From data to action: How marketers can leverage AI Business Horizons, 63(2). Doi:https//doi.org/10.1080/21670811:2014.976412.

Chowdhury, S., Dey, P., Joel-Edgar, S., Bhattcharya, S., Rodriguez-Espindola, O,, Abadie, A. & Truong, L. (2022) Unlocking the value of Artificial Intelligence in Human Resource Management through AI capability framework: Human Resource Management review, 33(1),p.100899.

Chu, W. & Park, S.-T. (2009). Personalized recommendation on dynamic content using predictive bilinear models. *The Web Conference*. doi:https://doi.org/10.1145/1526709.1526802

Damico,(2016) What conditions justify studying the entire population instead of selecting a sample.https://www.researchgate.net/post/what_condition_justify_studying_the _entire_population_instead_of_selecting_a_sample Retrieved 24/5/24

Das, S., Dey, A., Pal, A.& Roy, N. (2015). Applications of Artificial Intelligence in Machine Learning: Review and Prospect. *International Journal of Computer Applications*, [online] 115(9), pp.31–41. doi:https://doi.org/10.5120/20182-2402 2

Dwivedi, Y.K., Ismagilova, E., Hughes, J., Salo, J., Tran, G.A. & Wang, Y. (2021). Setting the Future of Digital and Social Media Marketing research: Perspectives and Research Propositions. *International Journal of Information Management*, [online] 59(1), pp.1–37. doi:https://doi.org/10.1016/j.ijinfomgt.2020.102168

Gulen, K.. (2023) Understanding the basics of AI https://www.dataconomy.com/2023 retrieved on 13/5/2024

Haleem, A., Javaid, M., Asim Qadri, M., Pratap Singh, R. & Suman, R. (2022). Artificial Intelligence (AI) Applications for marketing: a literature-based Study. *International Journal of Intelligent Networks*, [online] 3(3), pp.119–132. doi:https://doi.org/10.1016/j.ijin.2022.08.005

Healy,J., Nicholson, D., & Parker, J. (2017) Guest editors introduction: technological disruption and the future of employment relations. Labour and industry: A journal of social and economic relations of work, 27(3) pp157-164 doi:https//doi.org/10.1080/10301763.2017.1397258.

Hermann, E. (2021) Leveraging Artificial Intelligence in Marketing for social Good- an Ethical Perspective. Journal of Business Ethics, (online) 179(1). doi:httpsdoi.org/10.1007/s10551-021-04843-7.

Ijwo, A.& Omula, E. (2014) More Than Theories of Mass Communication. Makurdi, SAP Publishing House.

Jaiswal, A., Arun, C.J. and Varma, A. (2021). Rebooting employees: upskilling for artificial intelligence in multinational corporations. *The International Journal of Human Resource Management*, 33(6), pp.1–30. doi:https://doi.org/10.1080/09585192.2021.1891114

Jumbo C.N., Asemah E. S., Anyanwu, B.J.C., Onyebuhi, A.C., Etumnu, E.W. & Anyi, O.S.A (2023). Utilisation of new media in communicating insecurity in Southeast Nigeria. Commicast, 4 (1), 25-36. https://doi.org/10.12928/commicast.v4i1.7604

Mayowa, L. (2023) Digital Earth Observation and Communication. SDGs https://www.linkedin.com/pulse/ef Retrieved 6/5/2024

Mcluhan,H.M. Technological determinism theory. https://www.wikipedia.org/wiki/marshallmcluhan retrieved 8/5/2024

Muhammed, N. A., Mahmoud, M. A., Abdallah, R., Abokhoza,R. and Sawsan, T. (2023) The Impact of Artificial Intelligence Applications on Media Industries. Journal of Namibian Studies,33: 721-734

Moran, R.E. and Shaikh, S.J. (2022). Robots in the News and Newsrooms: Unpacking Meta-Journalistic Discourse on the Use of Artificial Intelligence in Journalism. *Digital Journalism*, pp.1–19. doi:https://doi.org/10.1080/21670811.2022.2085129

Paschen, J., Wilson, M. and Ferreira, J.J. (2020). Collaborative intelligence: How human and artificial intelligence create value along the B2B sales funnel. *Business Horizons*, 63(3). doi:https://doi.org/10.1016/j.bushor.2020.01.003

Peña-Fernández, Simón; Meso-Ayerdi, Koldobika; Larrondo-Ureta, Ainara; Díaz-Noci, Javier (2023). "Without journalists, there is no journalism: the social dimension of generative artificial intelligence in the media". Profesional de la información, v. 32, n. 2, e320227. https://doi.org/10.3145/epi.2023.mar.27

Russell, S. & Norvig, P. (2016) AI : A modern Approach. Pearson Education Limited.

Russell, S. (2019) Human compatible AI and the problem of control. Penguin.

Shin, D. (2021). The effects of explainability and causability on perception, trust, and acceptance: Implications for explainable AI. *International Journal of Human-Computer Studies*, 146, p.102551. doi:https://doi.org/10.1016/j.ijhcs.2020.102551

Su, Z., Togay, G. and Côté, A.-M. (2020). Artificial intelligence: a destructive and yet creative force in the skilled labour market. *Human Resource Development International*, 24(3), pp.1–12. doi:https://doi.org/10.1080/13678868.2020.1818513.

Thakkar, D., Kumar, N. and Sambasivan, N. (2020). Towards an AI-powered Future that Works for Vocational Workers. *Proceedings of the 2020 CHI Conference on Human Factors in Computing Systems*. doi:https://doi.org/10.1145/3313831.3376674

Verganti, R., Vendraminelli, L. and Iansiti, M. (2020). Innovation and Design in the Age of Artificial Intelligence. *Journal of Product Innovation Management*, [online] 37(3). doi:https://doi.org/10.1111/jpim.12523

William, J. Stephen, F.M., and Jentsch, F. (2022) Theory of Mind in Humans and in Machines. https:// www.frontiersin.org/articles>frai.2022.750763Retrieved 9/5/2024

Wimmer, R, Dominick, J.R. (2006) Mass Media Research – An introduction, Wadsworth Publication Company.

Yang, C., Huan, S. & Yang, Y. (2020). A Practical Teaching Mode for Colleges Supported by Artificial Intelligence. *International Journal of Emerging Technologies in Learning (iJET)*, [online] 15(17), pp.195–206. Available at: https://www.learntechlib.org/p/218012/ Yuliia, K. (2022) Artificial Intelligence in the New Media Industry. www.labelyourdata.com