

The Transformative Influence of Artificial Intelligence on Digital Media Communication and Connectivity

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ABSTRACT

In current times, where the world is impacted and ruled by digitization, technology can be the most potent magical tool that provides wings to our pigeons. Multiple mass media platforms involve news media, newspapers, and TV. Artificial intelligence offers a unique identity and shape to all these platforms. This modern technology is usually categorized through the replica of human intelligence for use in machines and programming. We were thinking about things related to humans and copying their complete actions. This technology of Artificial Intelligence can be used for multiple actions in resemblance to digital media communication and connection.

KEYWORDS: Digital media, Artificial intelligence, Digitalization, Technology, social media.

INTRODUCTION

Intelligence can be the simulation of the processing of human intelligence through machines, specifically computer systems. The utilization of artificial Intelligence can be constant and ever-evolving in multiple life sectors. Now, I will offer a brief overview of using artificial intelligence in the media. As it rapidly shifts towards a world characterized by digitalization, the power of artificial intelligence also gets expanded and stretches till not only the media industry has escaped its clutches. Artificial intelligence applications will also know the ideal online platform to post, the day and time for scheduling and publishing the content, the best content format, and the suitable hashtags, utilizing the current trends to ride on it. This also supports the brands and allows them to republish their old content appropriately to gain more publicity and attraction. Artificial intelligence involves expert systems, natural language processing, machine vision, and speech recognition. The industry has also undergone a high degree of framing and transformation, with digital media paving its path in getting its primary focus of interest within all sub-sectors, including radio, print, and TV.



(Source: www.indiaai.gov.in, 2023)

This research will be based on artificial intelligence, digital media, and the role of artificial intelligence in digital media, which will also be entertained using this research. The use of artificial intelligence in creating content, generating subtitles, social media, creating multimedia, etc., will also be highlighted by conducting this research.

RESEARCH AIMS AND OBJECTIVES

- To learn about the functioning and advancement of artificial intelligence.
- To know about Digital media and how it works effectively in modernization.
- To learn about the role of artificial intelligence in digital media.

LITERATURE REVIEW

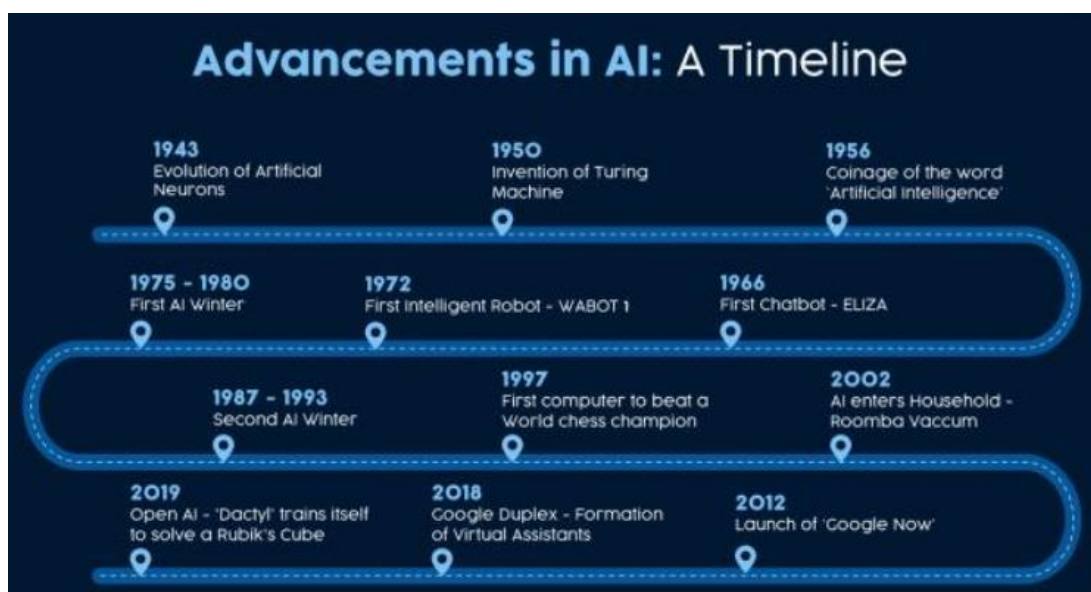
Functioning of artificial intelligence

According to Akram & Kumar (2017), As the hype about artificial intelligence has accelerated, the vendors have also scrambled to promote how their services and products use it. More often, they refer to or illustrate that artificial intelligence can be stated as a component of technology like machine learning. Artificial intelligence also requires a foundation of specialized software and hardware for writing and training in machine learning algorithms.

According to Arnold *et al.* (2017), *no single type of programming language is synonymous with artificial intelligence, such as C++, Java, and Python, and Julia has popular features with artificial intelligence developers.* Generally, we can say that the artificial intelligence system usually works by ingesting a large amount of labeled training data, analyzing the complete data for the patterns and correlation, and utilizing such patterns to create predictions regarding future States. In this manner, a chatbot gets fed examples of the text that can be learned in generating life, which has to be exchanged with the people, or an image recognition tool that can learn to identify and describe the objects within the images through reviewing several examples. The new rapidly enhancing generative artificial intelligence techniques can also evolve realistic photos, music, text, and other media types.

Advancements in artificial intelligence

As per Albarran (2016), As artificial intelligence was introduced to the world, it evolved from the day it came into existence. The advancement chart of artificial intelligence is presented below: -



(Source: www.mygreatlearning.com, 2023)

The programming of AI usually focuses on the cognitive skills that comprise the following steps, which are presented below: -

- **Creativity**—This aspect of artificial intelligence utilizes neural-based networking, statistical methods, and various other techniques to generate new text, images, ideas, and music.
- **Learning**—This aspect of artificial intelligence programming usually concentrates on acquiring new rules and data and turning them into actionable information. The rules can be stated as algorithms that provide computing devices with complete step-by-step instructions about completing a specific type of task.
- **Reasoning**- This aspect of artificial intelligence programming usually focuses on selecting the correct algorithm to reach the desired output.
- **Self-correction**—Artificial intelligence programming is usually designed to continually fine-tune algorithms and ensure complete, suitable, accurate results.

DIGITAL MEDIA

According to Anderson & Jiang (2018), digital media can be defined as digitized content transmitted over computer networks or the Internet. It can involve graphics, video, audio, and text. This means that news from newspapers, TV networks, magazines, etc., represented on websites or blogs, can also fall within this category. Most digital media is based on translating the analog data into digital data. The Internet usually starts to grow when the content or the text is published or processed on the Internet instead of stored in papers or magazines like the traditional old method. Soon after the text was put over, the computer's images followed; it got the video and audio over the Internet. This type of digital media has also covered a long path within the few years of becoming what we already know today, and it is continuing to grow.

ARTIFICIAL INTELLIGENCE ROLE IN DIGITAL MEDIA

Automated journalism

According to Benabdelouahed & Dakouan (2020), automated journalism, which is also carried out under the name of “robot journalism,” makes the utilization of natural language algorithm creations that are powered by artificial intelligence in the case of converting the data automatically within the various types of images, videos, stories as well as the visualization of the data and then distributing this data through the platform of automated journalism. The power of artificial intelligence has also brought it under the scrutiny of several types of moral debate, as many experts usually believe that using artificial intelligence also leads to the loss of jobs for many people and the circulation of fake content.

Role of AI in distributing as well as creating the interactive data virtualization

According to Frosh (2018), AI has also played a dynamic role in publishers' ability to visualize interactive data quickly. This can be illustrated by an example that “Opinary,” the Berlin-based startup, is an artificial intelligence-powered product that goes within the articles in comprehending their subjects as well as creating the visualization of interactive data by placing it directly into the articles, which also permits the users in sharing their thoughts on the topic of an article which also involves the complete responses of the readers in the real-time (Zhuravskaya *et al.*, 2020).

Role of artificial intelligence in generating the subtitles

According to Gündüz (2017), this can be integral for media companies in ensuring that their content remains suitable for the consumption of the audience of varying regions. Companies must usually offer precise subtitles related to their video content to do this. Conventionally, drafting the subtitles can also prove highly draining and time-consuming for human translators, not to mention the complete struggle of identifying the proper type of human resources for translating content into a specific language. With human translation also becoming very susceptible to errors, the media platform started using artificial intelligence techniques like natural language generation and an NLP. For example, the artificial intelligence of YouTube also permits its publishers to generate automatically closed video captions while adding to the applications, ensuring that their

content is easily reachable to every audience on YouTube (Twenge et al., 2020).

Role of Artificial Intelligence in Creating and Recommending Multimedia

According to Karnouskos (2020), images in publications are recommended by machine algorithms based on the relevancy of the content and the criteria of past engagement. For example, “Getty Images,” a visual communication giant, introduced “Panels,” which can be stated as a new tool of artificial intelligence for media publishing. It also recommends the best type of visual content for accompanying news articles. “Panels” also ensure the presence of the “Getty Images” database and provide the media editors with customizable assistance and research for summarising the articles while offering the selections of the images within the story's various elements.

Role of artificial intelligence in reporting and writing articles

According to Kose & Sert (2016), artificial intelligence is being leveraged through publications to deal with Tedious and laborious tasks while removing them from the journalist workload. For example, the patch of the publishing network also has integrated artificial intelligence within the content management system for distributing and creating repetitive articles like financial reports and weather forecast reports based on the existing framework.

Personalization of the content

According to Li (2019), popular video streaming platforms like Netflix and Spotify also accomplished this by supplying content to people with all the complete demographics, varying preferences, and tastes of the audience. Such type of platforms usually use the algorithms of machine learning as well as artificial intelligence for studying the behaviors of individual users as well as the demographics for testing what the user requires or what kind of interest a user has in viewing content as well as listening to the watched video while ensuring that the user gets constantly kept engaged. Moreover, this artificial intelligence platform usually offers users content catering to their preferences while facilitating a profoundly customized experience (Stephen, 2016).

METHODOLOGY

The methodology that is used in the entire research is qualitative. This methodology is précised within the analysis of the previous year's data and generating the data of the recent years for this research while getting updated about the complete role of Artificial Intelligence and digital media. This analysis of the data of past years is also conducted on behalf of the comparing efficiently with the current results as well as current scenarios so that the conversions required to be accomplished are based on the complete analysis and evaluation that also requires to be considered necessary for the changes to be done according to the present situations. This methodology is also immensely supportive and easy because it consumes less time than other types of methodology, like the quantitative method, which consumes more time than the qualitative methodology.

DISCUSSION

Artificial Intelligence in Controlling Bias

Defeating the increasing bias is one excruciating stigma that the media is facing in today's current situation. The information being created for the audience may also often get layered with degrees of bias, leading to misleading content instead of factual data and balanced news. Artificial intelligence generally holds the threat of becoming the apprentice within the indulgence of the bias in the same situation, which can be part of the resolution. In various types of cases, artificial intelligence also assists in decreasing the subjective interpretation of data of the humans as well as the algorithms of machine learning, which get trained while considering only the variables that also enhance the predictive accuracy, which is based on the complete utilization for the training (Sančanin & Penjišević, 2022).

Unlike the decisions humans make, artificial intelligence can also be overseen, interrogated, and explored.

This can be illustrated by an example of the startup of a new company widely known for its complete impartiality. The company uses machine learning technologies and hires human journalists to generate new stories (Siddiqui & Singh, 2016). The site also utilizes artificial intelligence to select the story. Once the topic is selected, it also explores millions of new sources for gathering the content irrespective of the complete opinions of the sources that get propagated while also looking for the reliability of the complete sources. Then, on a complete research basis, the artificial intelligence starts writing its complete, non-biased version of a story. But at the same time, the company also has pairs of human editors reviewing every story as well as feeding the edits back to the artificial intelligence, which can be a significant defect for every Technology visualizing how artificial intelligence tends to adopt the biases of their creators Reid (Chassiakos *et al.*, 2016).

Artificial intelligence in social media

Facebook- The complete backbone of Facebook is based on the entire understanding and gaining knowledge of the behavior of users, yet with a completely massive user base. It also utilizes several types of techniques at the same point. Deep learning techniques do not require any Detailed data from the image, nor do they require the ability to comprehend the context of the image and analyze the contents while utilizing the text and meta. For example, if abundant tiger images and videos are shared across Facebook (Miller, 2016). This type of technique can also produce insights into understanding the frequency of the appearances of the products with these videos and images for presenting Ads for the people who used to like watching the videos of a tiger. These techniques of profound text also utilize neural networking to analyze the words of the user's post to understand their context and comprehend their meaning with the algorithm. Technology or face recognition is also utilized to recognize the faces of humans within two or more types of images. The technology's complete accuracy has also made it the target of many controversies (Kose & Sert, 2017).



(Source: www.digitalmarketingtrends.in, 2023)

Instagram—With millions of photos being shared on the platform daily, Instagram also leverages artificial intelligence to create search specifications with its massive database, which also helps users find images related to their favorite types of experiences and activities (Ng, 2020).

LinkedIn also uses artificial intelligence techniques to offer job recommendations, suggest people with whom users want to connect, and deliver specific posts on the user's feed (Manago & McKenzie, 2022).

Twitter- Twitter uses artificial intelligence techniques to recommend tweets on the user's timeline and ensure that suitable tweets are entertaining to the users. First, it also utilizes the processing of natural language and

NLP to analyze the thousands of tweets every second and provide insights into the users' inclinations. Twitter also uses artificial intelligence algorithms to flag and remove accounts that promote extremist or hate groups or tweets. Twitter also increases the users' experience by utilizing neural networking and displaying most of the intriguing parts of the image for thumbnails (Martin & Betrus, 2019).

ADVANTAGES AND DISADVANTAGES OF ARTIFICIAL INTELLIGENCE IN DIGITAL MEDIA

The advantages and disadvantages which are faced due to artificial intelligence in digital media are presented below: -



Advantages and Disadvantages of AI	
Advantages:	Disadvantages:
- Reduces in human error - Helps in lessening repetitive work - Provides Digital assistance - Faster and more accurate decisions	- Cost overruns - Dearth of talent - Lack of practical products - Potential for misuse

(Source: www.mygreatlearning.com, 2023)

CONCLUSION

It is concluded that artificial intelligence can be defined as the simulation of human intelligence processes by machines, specifically through the computer system. The utilization of artificial intelligence is also constant and ever-evolving in every sector of life. Digital media gets digitized content that can be circulated or transmitted over computer networks or the internet. It also involves graphics, video, audio, and text. This illustrates that news from TV networks, magazines, newspapers, etc., can be represented on the website or in the blogs that fall under this category. This complete industry is also under Gone with a high degree of transformation, with digital media paving its way towards becoming the main concentration in the interest of sub-sectors that involve radio, print, television, etc. Artificial intelligence also played a dynamic and significant role in enabling the Publishers to create interactive data visualization within a short duration, and automated Journalism, denoted by the name of “robot journalism”, makes use of a natural language generation algorithm that is also powered by the artificial intelligence for the automatic conversion of the data within the various new images, stories being distributed through the use of the platform of automated journalism.

Conflict of Interest Statement

The authors declare no conflicts of interest related to this research project. We affirm that the research was conducted with the utmost integrity and impartiality.

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