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IMPACT OF ARTIFICIAL INTELLIGENCE IN INDIAN NEWS MEDIA: LITERATURE REVIEW

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ABSTRACT

Aim/Purpose In the past few years, news media organizations have been restructured by the progress in technology in many nations across the globe. This progress includes

the utilization of artificial intelligence (AI) in news media. In India, the news media are undergoing changes with the inclusion of AI methods in various areas, such as news production and dissemination. Therefore, it becomes signifi-

cant to study the impact of AI on news media in India.

Background In this paper, the aim is to present a comprehensive survey of research done re-

lated to the usage as well as the impact of AI on Indian news media. The study aims to gather knowledge about the impact of AI on the transformation of news media practices in TV, print, and digital news media in our country.

Methodology The narrative review methodology has been adopted in the research to conduct

the literature review.

Contribution The proposed work contributes to giving a comprehensive understanding of the

impact of AI in Indian News media.

Findings There has not been any comprehensive research related to the impact of AI on

news media personnel in India. There is no study comprising the professional and economic impact of AI on news media personnel, such as reporters, producers, anchors, and owners of news media organizations. There has been no study about the perception of AI usage in Indian news media. Also, no study has been done on how AI can be used to enhance customer experience in news

media in India.

Recommendations for Researchers

The proposed work aims to assist media students and researchers in conducting further research associated with the impact of AI in Indian news media based

on data and analysis performed in the proposed work.

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Impact on Society The study can encourage the news media organizations to use AI more effi-

ciently and help them to balance between AI and humans.

Future Research As future work, comprehensive research on the impact of the usage of AI in

TV, print, and digital Indian news media is proposed. This includes personal and professional experiences of news reporters, news producers, news consum-

ers, and owners of news media organizations.

Keywords artificial intelligence, news media, journalism, technology

INTRODUCTION

One of the reasons for the growth of artificial intelligence (AI) is the human desire to let computers perform the tasks that humans do. One of the areas where humans play a major role is the news media. AI has rapidly evolved from a trial to a vital component of contemporary journalism (Korteling et al., 2021; Rachmad, 2022; Theodosiou et al., 2024).

While some contend that AI could theoretically generate anything that humans can, others counter that humans possess unique qualities that render AI incapable of being truly creative. AI's capacity for creativity is frequently cited as a limitation (Ali & Hassoun, 2019; Schmelzer, 2018). For many years, researchers both inside and outside the journalism field have examined the idea of creativity itself (Kaufman, 2016; Pashevich, 2018; Witschge et al., 2019). Numerous studies have been conducted outside of journalism to define and quantify creativity. Apart from the perspective of creativity, artificial intelligence is altering the journalism landscape, impacting not only how news is created and disseminated but also the nature of journalism itself and the interactions between media organizations and their viewers (Abdulmajeed & Fahmy, 2023; Smith & Anderson, 2014; Sonni et al., 2024).

Although AI can enhance output and expand news coverage, there is a genuine concern that this could lead to less contextualized and superficial journalism. This demonstrates that integrating AI into journalism necessitates a strategy that upholds fundamental journalistic principles, such as context, accuracy, and in-depth knowledge of the underlying subjects. According to Latar (2018), AI may significantly alter various aspects of society, including journalism. While some people believe that AI will enhance journalism, others worry that it will lead to unethical behavior, fewer reporting opportunities, and a decline in the quality of journalism (Al-Zoubi et al., 2024; de Haan et al., 2022; Seychell et al., 2024). The research by Sonni et al. (2024) also raises concerns about data privacy, highlighting a conflict between individuals' right to privacy and AI's ability to enhance personalized news experiences. This raises important questions about what, in the digital age, constitutes "news" and how journalism may continue to serve a unique role in a media environment that is becoming increasingly varied and dynamic.

The algorithms that support machine learning are "soft-coded" and flexible, in contrast to conventional computer programs that are "hard-coded" to accomplish particular works. By establishing clear objectives for the algorithms to meet, malleability is accomplished. An ideal algorithm in machine learning is developed when numerous iterations accomplish objectives. This algorithm falls under the category of neural networks. These neural networks are also being used in areas that use conventional machine learning algorithms. The use of AI driven by machine learning and neural networks has accelerated in recent years (Al Naqbi et al., 2024; Dastres & Soori, 2021; Hansen et al., 2017; Osoba & Welser, 2017).

Artificial intelligence has significantly expanded its scope to encompass data analysis, matter modification, fact-finding, and administrative tasks. Initially, the primary focus of journalists was computer-assisted reporting. Essential databases and digital tools were used by journalists to collect and arrange data more effectively. Although there were not many complex AI applications, it was essential for

laying the technological groundwork. Recent decades have seen the development of the internet and improvements in data processing and storage, which have prepared the way for increasingly sophisticated AI applications in reporting (Al Naghi et al., 2024; Hamna et al., 2024; Tripathi, 2024).

AI is the latest development in a long history of new technologies being used in the journalism sector (Broussard et al., 2019). Instances of earlier technologies that have profoundly altered the character of journalism include the printing press, the phone, and the internet. The majority of traditional journalism is currently being transformed by AI, which is replacing people in several areas, including research, content creation, and delivery. These days, robots, algorithms, artificial intelligence (AI), and other technologies are integral components of the modern media ecosystem. As a result, a number of businesses are currently investing in artificial intelligence, including Microsoft, Facebook, Google, and Minecraft. In this regard, AI introduced a new media idea referred to as "automated journalism" (Malmelin & Nivari-Lindström, 2015; Vadapalli et al., 2018; Zalova, 2024; Zhang & Pérez Tornero, 2023).

From the aforementioned, it is clear that AI has had a significant impact on the news media sector; therefore, it becomes crucial to comprehensively understand the impact of AI on journalism and journalists in India. In this paper, the purpose is to critically examine the research on AI jobs in Indian news media and to identify the research gaps in contemporary studies on AI and news media. Research papers, including journal articles, conference papers, news articles, and books, published in India and abroad, are covered in this research. The basic objectives of this paper are:

- (1) What is the scope of AI in news media?
- (2) What are the positive as well as negative impacts of AI on news media?
- (3) Will AI substitute human creativity?
- (4) What are the emerging challenges from the growing role of AI in news media?

METHODOLOGY

The narrative review methodology has been adopted in the research to conduct the literature review. The narrative review methodology is used to identify and evaluate published material on a subject, and it facilitates the reporting of review findings in a narrative style. Numerous studies can be included in a narrative review, which also provides an overall summary, along with interpretation and critique. Among many others, integrative, critical, and state-of-the-art reviews are examples of narrative reviews. The goals of narrative reviews are to identify and summarize previously published material and explore unexplored research topics (Ferrari, 2015; Mitchell & Egudo, 2004; Sukhera, 2022).

While narrative review methodology summarizes the body of existing literature, thematic analysis can be used to identify recurrent patterns in datasets derived from the qualitative data gathered through the narrative review. Thematic analysis has been employed to extract and synthesize information into meaningful categories, such as "positive impacts" and "negative impacts of AI on news media (Joffe, 2011; Neuendorf, 2018). Thematic analysis is used to identify recurring patterns, themes, and gaps across a selected body of literature. Articles were first screened to identify their relevance to AI's role in journalism. The data were then manually coded to group findings into predefined categories, such as the ethical implications of AI, its impact on job roles, and its potential for mitigating misinformation. Sub-themes emerged within each category, allowing for a detailed examination of AI's role in Indian news media. To make the review comprehensive, the following databases have been used to access the relevant literature:

- (1) Scopus
- (2) Web of Science
- (3) Clarivate Analytics: Social Sciences Citation Index (SSCI)
- (4) IEEE Xplore
- (5) SpringerLink
- (6) Current Contents Social & Behavioral Sciences

(7) DOAJ

The search was conducted using the keywords "artificial intelligence," "news media," "journalism," and "technology." The time period of the literature review was from 2010 to 2025. More details of the data used in the literature review are presented in Figure 1, which shows the year-wise number of papers reviewed during the literature review. It can be seen that the majority of works related to the role and usage of AI in news media have been conducted over the last five years.

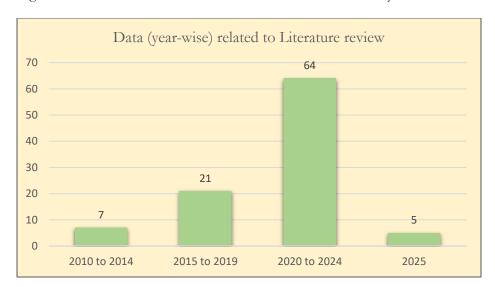


Figure 1. Data (year-wise) related to the literature review

The rest of the paper is organized as follows. The next section discusses the role and importance of AI in news media. Then, the contemporary uses and role of AI in Indian news media are discussed in the following section. The literature reviewed in the paper is then summarised, along with the research gaps found during the study. Finally, the paper concludes with a summary of the work and recommendations for future research.

AI IN NEWS MEDIA

The news industry is experiencing one of its most significant transformations due to the development of a new technological revolution, i.e., AI (Tejedor & Vila, 2021; Vadapalli et al., 2018). Generally, when we think of AI, we think of robots. But AI is more than just a robot. Digital technologies, such as AI, can revolutionize the world. However, there are disadvantages to these digital technologies (Aljazairi, 2016).). Lam Thuy Vo is a journalist and educator in the United States who investigates the effects of digital platforms on people by combining data analysis with field reporting. She has noted how digital platforms tend to favor certain messages over others (Mims, 2023; van Dalen, 2012).

NEGATIVE IMPACT OF USE OF AI ON NEWS MEDIA

Owies et al. (2025) have discussed the professional and ethical challenges associated with the utilization of AI in news media in Egypt. Authors have pointed out creativity and bias as professional challenges. The ethical challenges associated with the use of AI include the lack of data quality used in research and journalism. They conclude that professional journalism is in danger from artificial intelligence. AI technologies may be used in creating fake stories for reporting in today's digital world, suggesting that they can have the ethical implications on the jobs of reporters ("Wyoming reporter," 2024).

AI may also affect the job opportunities of journalists. Recently, a Polish radio station has fired its journalists and replaced them with AI-generated "presenters". This, however, has raised controversy ("Polish radio station," 2024). A study has been conducted on journalists employed in the newsroom of Al-Mamlaka TV in Amman. The study reveals that journalists in the newsroom must perform certain tasks when AI is present. First, content produced by AI needs to be watched over and managed. Second, data and algorithms must be examined. Last but not least, journalists must utilize their creative human touch while using AI to create journalistic content (Al-Zoubi et al., 2024; Richardson, 2018).

According to a recent survey by the Thomson Reuters Foundation, journalists in developing nations and the Global South are raising concerns about how AI may impact the media. Journalists have expressed concern about the potential of technology in journalism, as well as serious ethical concerns (Thomson Reuters Foundation, 2025). Marianna Spring, an investigative correspondent for the BBC, believes that when it comes to elections, artificial intelligence-generated photos and films pose a risk. However, some people are more worried about audio and its role in deception (Adami, 2024). According to a scientist named Jorge Buendía, the ability of AI-generated software to mimic politicians and use their voice or image to spread misinformation poses a potential new threat. They believe that while AI may increase the amount of misinformation, individuals won't necessarily consume it. This is because there are already enough people who are currently overwhelmed with misinformation. It is crucial that reporters actively consider how they can utilize new technologies to enhance both their reporting and the media landscape as a whole (Pariser, 2011; Stanly, 2024).

According to a report at NDTV World ("Artificial intelligence," 2023, September 20), more than half of the surveyed journalists expressed concerns about the ethical implications of AI on their profession, highlighting both the threat and promise of AI for journalists. The report states that 85% of London respondents used generative AI tools for tasks like creating headlines & summaries. However, 60% also expressed reluctance in using AI. A new article published on June 26, 2024, about comic Larry the Cable Guy revealed that a writer from a rival news organization has used generative artificial intelligence to assist in writing false tales about him ("Wyoming reporter," 2024).

The work by Aissani et al. (2023) found that news media organizations are utilizing numerous AI tools to produce misinformation. Iaroshenko (2024) discusses the potential benefits and challenges that arise when journalism and AI technologies are combined. AI enhances the skills of journalists by reducing time, alleviating them of repetitive tasks, and increasing the productivity of media content production.

POSITIVE IMPACT OF USE OF AI ON NEWS MEDIA

In journalism, automated content generation first emerged as a benefit of AI in news media. Simple reports, including financial news, sports summaries, and weather updates, were generated by algorithms (Stanly, 2023). A significant advancement came with technology, which made it possible to transform data into intelligible stories. AI's contribution to lessening the workload of journalists in creating standard news reports began during this time. To enhance consumer involvement, news companies have started utilizing AI algorithms to tailor data distribution to specific consumers (Al Naqbi et al., 2024).

Since ChatGPT, a tool created by the US start-up OpenAI, emerged in late 2022, the cost of generative AI has decreased drastically, making it more affordable for smaller newsrooms. AI in news media is currently at a juncture where moral considerations and scientific proficiency intersect. AI is a tool for improved journalistic practice. AI's position in journalism will continue to grow as technology develops further, posing new questions and opportunities for the future ("With the relentless rise," 2024).

Research by Pavlik (2023) offers insights into the potential and limitations of ChatGPT, discussing the implications of generative AI for media education and journalism. When time constraints and

other resource limitations become more significant, an AI tool like ChatGPT can be a valuable aid to journalists or media professionals, ultimately enhancing the caliber and effectiveness of journalistic and media work.

La-Rosa Barrolleta and Sandoval-Martín (2024) compare the quality of news articles generated by natural language generation (NLG) software and professional journalists using the Turing test. According to the study, news stories produced by AI and those authored by qualified journalists do not differ significantly. Both forms of news stories are regarded as equally credible. AI is thought to be more credible than humans, whereas journalists are considered to be crafting a more engaging story. According to the study's findings, automated news production in Spanish is doable without sacrificing quality.

AI clearly has the ability to support fact-checking tasks. Efficient and effective fact-checking is not only advantageous but also necessary in a nation as diverse and populated as India. AI is highly advantageous in revolutionizing the field of uncovering the truth behind each news story by systematizing the detection of disinformation, examining complex databases, and so forth. Now, fact-checkers can devote additional time to in-depth research and examination due to this automation (Dubbudu & Deshetti, 2024).

A well-known Israeli TV journalist, Nussbaum, aged 71, believed his career would end when amyotrophic lateral sclerosis (ALS) caused him to lose his ability to talk effectively. He faced difficulty speaking and moving, and thus, it was becoming increasingly difficult for him to communicate and be understood. His organization helped him to continue his work as a journalist with the assistance of AI (Kumar, 2025).

AWARENESS OF AI IN NEWS MEDIA

Nwanyanwu and Nwanyanwu (2021) mentioned that AI is not being used by Nigerian journalists in their newsrooms. The use of AI in newsrooms is hindered by several issues, including the lack of expertise to operate AI applications efficiently, inadequate setup, and the high cost of purchasing and maintaining these tools. Other issues include the cost of an Internet connection, training AI handlers, and cultural and socioeconomic barriers to the adoption of AI. The aim of the study conducted by Guanah (2021) was to provide an understanding of how mainstream media, such as newspapers, radio, and television, help raise awareness of artificial intelligence (AI) operations. The report suggested that awareness of AI should be raised through all accessible channels, such as the media and opinion leaders.

Some authors investigated the level of knowledge among Ebonyi State journalists about artificial intelligence in news production (Udoh et al., 2022). Since every journalist in Ebonyi State is aware of AI, its use in news production has altered the nature of journalism. In Ebonyi State, reporters are eager to learn artificial intelligence capabilities because they know it can make their jobs simpler. However, they are also concerned that it can lead to massive job losses by forcing many employees out of their organizations. The purpose of the study by Sharadga et al. (2022) was to determine how journalists in Jordan TV's newsrooms felt about using AI techniques.

The report also shows the degree to which Jordan TV's newsrooms are prepared to use artificial intelligence approaches. It is mentioned that the application of this type of AI-based reporting has aided journalists to be more productive and satisfied with their jobs. Additionally, the use of AI-assisted journalists is more efficient. The research conducted by Al-Zoubi et al. (2024) aimed to investigate the moral dilemmas that journalists face when using AI. According to the findings, laws governing the use of AI in reporting are the primary moral issues that reporters should avoid. The study finds that by critically embracing AI in the newsroom, Al Mamlaka TV journalists uphold the fundamentals of the social responsibility theory.

In this section, it can be seen that AI is being used in news media across the globe in different contexts, and it has been found that the research has been done to study the impact of AI on journalism

in positive and negative terms but not with the perspective of the economic and social impact of AI on reporters, producers, media owners and viewers. The research in this paper is concerned with insight into the comprehensive impact of AI on Indian news media. Therefore, the research done related to the role of AI in Indian news media is presented in the next section.

AI IN INDIAN NEWS MEDIA

In India, information and communication technologies have advanced significantly recently and are playing a vital role in modernizing and revitalizing journalism. As a result, the Indian media industry has undergone rapid and unparalleled transformations. Deutsche Welle (2023) discusses how an Indian media company, 'Aaj Tak' news channel of the India Today Group, debuted 'Sana' as its first full-time artificial intelligence (AI) news anchor. Sana appears human and utilizes text-to-speech technology to read data provided to it, as well as deliver news updates multiple times a day. As another example of AI, an AI-based news anchor is the first of its kind in South India, introduced by Power TV, a well-known Kannada channel. The new AI news host was given the name "Soundarya" by the management (Thadhagath, 2023, July 13).

The study conducted by Das and Upadhyay (2024) aims to provide an understanding of the impact of the COVID-19 epidemic, which has transformed print news media in India. It offers a real-world method to conduct the reporting tasks, as the epidemic was a push to adopt novel methods and promote innovative techniques in the newsroom. According to the research, many news media organizations adopted new technologies during the COVID-19 pandemic to compete in the technology sector. An independent Indian news organization called Scroll has developed a URL-to-MP4 tool that, in under three minutes, generates an MP4 (video) file to be shared on social media by extracting media from a text article and allowing users to add more content (Gupta, 2024).

Last year, OpenAI, the startup behind ChatGPT, introduced a feature that allows publishers to opt out of having their content scanned by its AI engine. Users are starting to realize that many generative AI products are based on stolen data, two years after the technology's debut. Users' lives are made easier by the AI-powered search bar, which eliminates the need for them to access and read several links. After searching the web for relevant information, users only need to input their query, and the chatbot will provide a thorough response (Tripathi, 2024).

Jaiswal and Bhattacharya (2024) have discussed how AI technologies have developed and how the media have embraced them, emphasizing the move toward data-driven narrative, personalized news distribution, and automated content creation. The research then discusses how AI-powered technologies can enhance news production efficiency and provide more in-depth audience insights.

NEGATIVE IMPACT OF AI IN INDIAN NEWS MEDIA

AI has already caused a stir in the mainstream media. AI guarantees that it will revolutionize journalism. According to studies conducted by Banerjee (2024), it might overtake the media environment by enabling new types of journalistic innovation. It is crucial that reporters actively consider how they may use new technologies to enhance both their reporting and the media landscape overall. The majority of media experts recognize that the increasing reliance on automation and algorithms poses a danger to journalism's legitimacy and dependability. In addition to these worries, AI also creates issues with job security and the potential for biases in the data it utilizes to create content (Stanly, 2024, January 18).

Verma (2024) has conducted a review to methodically examine diverse applications of AI in journalism. The goal is to understand how AI is revolutionizing the media world by examining both the benefits and drawbacks of AI. AI plays a radical role in systematizing monotonous processes, such as information gathering and sorting. These days, AI-generated computerized summaries and reports guarantee rapid, accurate, and consistent news. Partiality and clarity are significant issues when news stories are selected and prioritized using AI algorithms.

A study by Choudhary (2024) attempts to explore the link between web journalists and the incorporation of AI on Indian digital news desks. Seven web journalists working in the newsrooms of well-known digital organizations in Mumbai and the Delhi NCR were interviewed for the study. They were asked questions about the distinction between content produced by AI and content created by web journalists. This study emphasizes the roles, possibilities, and difficulties faced by online journalists in India as well as their adherence to newsroom ethics. According to the findings, the biggest obstacles for newsroom journalists who are implementing AI are a lack of human touch or emotion, factual inaccuracies, and the stress of losing money if Google de-ranks their website.

Badgamia (2023) has discussed how the media landscape is undergoing a significant transformation following the adoption of AI in journalism. Accuracy is a crucial aspect of journalism, but AI may repeatedly produce inaccurate basic factual data, which could ultimately jeopardize journalism's credibility. The negative impacts of AI have been extensively covered in the media lately, with topics ranging from widespread disinformation to the possibility of mass unemployment. AI news anchors in India are currently in the testing stage. News networks are using them to deliver brief news updates, occasionally with AI anchors lip-syncing and human journalists recording voice-overs. Media people have concerns about unemployment following the adoption of AI in news media (Jogi, 2023). A study conducted by Upadhyay et al. (2024) analyzed the levels of unhappiness, nervousness, and tension among reporters working in various news media institutions and found that reporters are particularly concerned about their job security.

Fake news has been a problem for modern news outlets, which has subsequent effects on society at large and newsroom management in particular. The spread of misleading information is contributing to an increase in mistrust and a decline in the trustworthiness of the mainstream media. Technological interventions have emerged as one of the most important ways to counteract false news. This has been achieved with the assistance of extremely reliable media platforms, which verify the accuracy of online news material. Blockchain technology and artificial intelligence may help stop the dissemination of fake news and misinformation (Patnaik & Biswal, 2023)

The effect of rising AI on journalism's actual news distribution is the main topic of study done by Mahajan et al. (2024). The authors have examined how AI might transform news production by automating mundane tasks, increasing productivity, and facilitating in-depth research. This study also addresses the practical and ethical concerns associated with the deployment of AI in newsrooms.

A study conducted by Jagadish and Graceline Jasmine (2024) examines the application of deep learning algorithms in identifying AI-generated photographs. This project aims to develop a robust solution to the growing threat posed by the widespread use of advanced AI-generated content, particularly in the dissemination of misinformation and fake news. With an emphasis on material produced by cutting-edge AI tools like diffusion models, the suggested method entails the deployment of a high-accuracy deep learning model trained on a varied dataset, which includes both real & artificial images. The ultimate objective is to provide journalists with a tool that enables them to recognize and steer clear of AI-generated images, thereby strengthening media integrity and enhancing public confidence.

Research conducted by Kanozia (2019) analyzes and reviews current studies, trends, and efforts to combat false news on a national and international level. The authors attempt to determine the problems associated with fake news and their potential solutions by employing two types of strategies: artificial intelligence and machine learning, as well as human intelligence.

The goal of the research conducted by Bagaitkar-Palkar (2024) was to identify and examine the bias tendencies that arise in news reports due to the use of AI algorithms. Human intelligence should not be underestimated by AI technology. Any information produced by human intelligence includes feelings, observations, spontaneous analysis, and more. This is not possible with data that is simply entered and generated. Aside from textual content, the human brain is a sophisticated organ that can store a great deal of high-quality information and respond more effectively.

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POSITIVE IMPACT OF AI IN INDIAN NEWS MEDIA

Research conducted by Sinha et al. (2023) in the Indian context aimed to determine the duties of reporters and media outlets in battling misinformation. First, according to the findings, journalists wanted greater audience access and also aimed for ethical journalism. Second, the impact of social media on journalism was seen as a positive development in this digital age. Third, AI has helped journalists improve their ability to use technology to combat misinformation.

AI-powered fact-checking solutions rely on pre-existing databases and algorithms to verify facts. However, these systems frequently fail to detect context-specific or subtle disinformation, which calls for human judgment. Journalists must use both conventional verification techniques and AI-driven insights to maintain credibility, guaranteeing a fair response to disinformation in the digital era (Jha, 2024).

A study by Sharma et al. (2024) highlights the value of AI in improving journalistic skills. The research focuses on the use of AI in reporting, the moral problems surrounding AI in news production, and its worldwide effects. In an effort to revolutionize news reporting, Microsoft is taking significant steps in the area of AI. The internet giant is collaborating with several media outlets to provide reporters with AI-powered resources designed to enhance news reporting (Tech Desk, 2024).

The study conducted by Owies et al. (2025) examines developments in AI literacy among journalists, emphasizing the combined pressures of declining revenue and changing news consumption patterns. It highlights the potential for respectable news outlets to use AI to produce high-caliber journalism. It also highlights the significance of reliable and superior content produced by AI. The study explores the moral issues and legal frameworks related to the usage of AI in media, which emphasize the need for increased AI literacy to guarantee responsible use. The report highlights a substantial knowledge gap among journalists regarding AI technology, using case studies and expert perspectives to argue for thorough training and adherence to ethical standards. The results suggest that AI can enhance journalistic effectiveness while maintaining independence and integrity, ultimately fostering an audience that is more informed and engaged.

HUMAN CREATIVITY AND AI IN INDIAN NEWS MEDIA

The practical application of limited AI in the journalism field is examined in the study by Sahay et al. (2023). A form of human creativity is journalism. However, the news industry has already made extensive use of algorithms written by AI to produce articles, thereby altering the role of human journalists. Research indicates that readers often struggle to distinguish between news produced by journalists and news generated by machines. The study examines the "robots' inability" to outperform humans in entertainment media and projects how robo-journalism may evolve in the future within news media. By employing scientific techniques and procedures to identify and document crimes, abuses, and other human rights breaches, forensic journalists can help uncover the truth behind complex stories. However, forensic journalism also has disadvantages, including potential impacts on media credibility, risks to journalists' safety, and ethical and legal issues. Finding a balance between these consequences and promoting forensic journalism requires investments in digital technologies and data journalism, as well as financial support for independent media and legislative protections for journalists and sources (Mia & Jain, 2023).

Although the reality of the cultural economy is more complex, the rhetoric surrounding the creative industries assumes that unchecked economic progress is driven by the availability of productive human ingenuity. Singing, acting, sketching, writing, and other forms of artistic and cultural output are typically labor-intensive. This trend is effectively captured by Baumol and Bowen's (1971) cost disease hypothesis in the situation of the live performing arts industry. Because performers' labor cannot be substituted by motorized processes, the industry experiences a throughput delay and rising overhead charges. AI is also helpful in the creative processes in the news media industry. AI can also

be used to enhance the interaction with the news viewers. The capacity of generative AI to produce lifelike visual works from text descriptions is one of its key advantages.

The effects of these technologies on media communication and visual literacy were examined by Grupač et al. (2024). According to the study, AI facilitates the production of multimedia content that can expand the audience and give innovators additional avenues for their creativity. It does, however, also draw attention to the growing difficulty in identifying AI-generated content, which raises questions about the legitimacy and authenticity of media. According to Bosi et al. (2024), sophisticated algorithms enable the restoration and enhancement of the quality of older audio footage. AI turns out to be a very useful technique for increasing accuracy and efficiency. Moravčíková et al. (2024) claim that the fusion of the digital and physical worlds is a defining feature of contemporary media culture, with AI emerging as a vital module of this shift. The media now actively contribute to shaping reality, whereas in the past, they merely reflected it. AI could be utilized to forecast media trends, automate text editing, and modify material according to the audience. These applications affect the quality of news and put more strain on the credibility of the media. AI supports the artistic aspect of news creation, which includes trend research, production of pictorial data, and creation of customized media data.

EMERGING CHALLENGES OF AI IN NEWS MEDIA

There are many potential challenges related to the use of AI in Indian news media. These include structural, ethical, regulatory, and audience challenges. The structural challenge that comes with the application of AI in news media deals with expressing news stories with graphical storytelling, concept-level "explainer" journalism, and summarized news. Despite demonstrating great promise in audience testing, many of these structural experiments were not successfully implemented into regular production. The fundamental reason for this was that it was frequently not feasible for journalists to continuously produce and maintain information in these drastically different forms as part of a continuous production process (Caswell, 2024).

Additionally, due to AI, journalists are losing their jobs as the technology is capable of performing some of their tasks efficiently. This, in turn, has introduced structural changes within news media organizations. Journalists are now worried about the ethical issues raised by AI systems. Study participants voiced apprehensions regarding AI uses that may not respect confidentiality. It could exploit their own material as AI-generated data, exposing news outlets to privacy and responsibility issues (Al-Zoubi & Ahmad, 2024).

Tech news coverage can inform the public about technological advancements that raise moral questions, which require legislation, and the ways in which legislators plan to address them. In general, news media organizations would gain from more stringent regulation of IT firms. Second, the problem and its extent were not always appropriately portrayed by the news media, and sensationalism is prevalent when covering IT scandals. Then, regulators might want to consider how data-driven companies might be held responsible for providing this. By fostering awareness of the applications of datafication and automation, transparency regarding potential data dangers and their mitigation can boost confidence in data practices and promote essential data literacy (Nguyen, 2023).

The last category under AI challenges in news media is audience challenges. Developing those instances is hampered by the intricacy of journalism. Additionally, journalism is a values-based profession that is subject to stringent rules, regulations, and procedures, as well as time constraints and economic hardship (Kulik, 2023; Waddell, 2019). It also strives to fulfill the constantly shifting expectations of its audience and faces serious repercussions for errors made in public. Due to its complexity, implementing new news production workflows requires numerous interrelated factors and carries a significant risk of unforeseen dependencies, interactions, and unintended consequences. Finding and fixing these problems takes time (Caswell, 2024).

In this section, it is evident that there is a lack of research on the comprehensive understanding of the concrete impact of AI on news reporters, producers, owners, and viewers. Table 1 presents the role of AI in news media in a summarized form.

Table 1. Role of AI in news media in a summarized form

| Positive impact | Negative impact |
|--------------------------------------|--|
| AI in News Media | |
| Automated content generation | Affect the job opportunities |
| Examine complicate databases | Used in creating fake information |
| Improve effectiveness of journalists | Lack of data quality |
| | Biasness |
| | Lack of awareness of AI technologies among journalists |
| AI in Indian News Media | |
| Used in fact-checking | Job insecurity |
| Helps in creating superior content | Increased dependability on AI for journalists |
| Detect context-specific information | Lack of human touch in news stories |
| Helps in increasing productivity of | Stress for digital journalists of losing money if Google |
| journalists | de-ranks their website |
| | Lack of transparency |

SUMMARY AND GAPS

In this paper, the research work done in the field of artificial intelligence and news media is reviewed. In this section, a summary of the research is presented. First, the research work in the field of AI and news media in terms of the number of research papers in journals and conferences, news articles, and books, is presented in Figure 2. The figure presents the amount of research reviewed in this paper regarding the use of artificial intelligence in news media in India, as well as outside India.

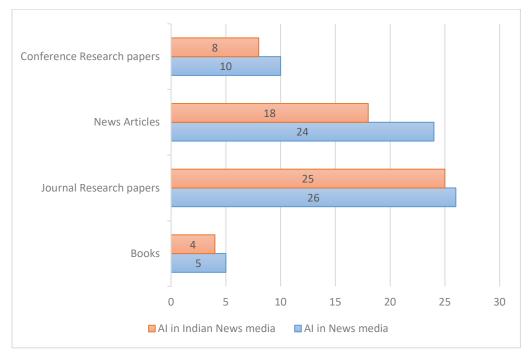


Figure 2. Data regarding research done in AI in the news media in India and abroad

After reviewing the research on the role of AI in Indian news media, the percentage of work done by Indian authors and work done by authors outside India is presented in Figure 3. Both Figure 2 and Figure 3 helped us to authenticate the research. Figure 2 illustrates the number of research works reviewed, which reflects the coverage of the role of AI in news media in the research paper. Figure 3 gives confidence that the viewpoints of both Indian and international authors are considered.

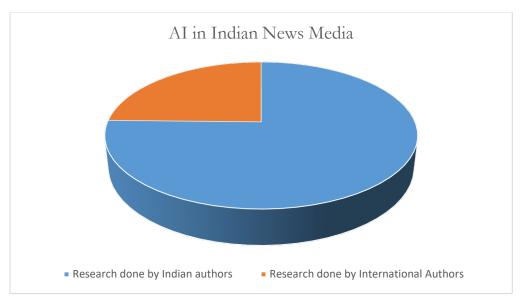


Figure 3. Data regarding research done by the authors in India and abroad in AI in the Indian news media

The review study examined the development of AI in the sector, pointing out how it went from providing simple reporting support to using sophisticated machine learning techniques and creating customized content. The effects of AI on journalism are complex. On the one hand, it has greatly increased productivity and accuracy in data analysis. On the other hand, the emergence of AI in the newsroom also raises urgent ethical issues, such as the possibility of journalists losing their jobs. The emergence of deepfakes presents a serious threat to journalistic integrity in terms of content verification. It is anticipated that future AI technologies will include sophisticated detection features to recognize and mark fake media, thereby protecting the integrity of journalistic information.

Next, the following research gaps found during the research are presented.

- (1) There has not been any comprehensive research regarding the impact of AI on news media personnel in India. There is no study that comprehensively examines the professional and economic impact of AI on news media personnel, including reporters, producers, anchors, and owners of news media organizations.
- (2) There has been no study about the perception of AI usage in Indian news media. Also, no study has been conducted on how AI can be used to enhance customer experience in news media in India.
- (3) There is very little research on potential challenges and opportunities of AI in the news media sector in India. Also, there is a lack of research on the ethical consequences of the use of AI in news media in India.

Figure 4 presents the unaddressed research questions related to the role of AI in Indian news media. These research questions could be used to have a deep understanding of the impact of AI on journalism in our country.

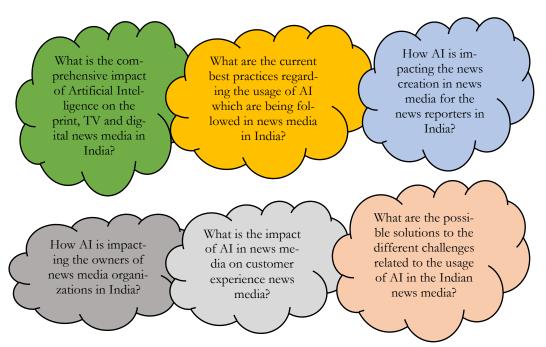


Figure 4. Research questions to be addressed related to the role of AI in Indian news media

CONCLUSION

The significance of AI in news media is evident in several ways, such as creating news stories, following up on breaking news, exploring big data sets, and verifying fake news. In recent years, India's leading news media organizations have begun to utilize AI in various job profiles. Hence, the research is conducted to review the work done associated with the role and usage of AI in Indian news media. The aim of the research was to give an understanding of the impact, challenges, and opportunities of AI in Indian news media.

AI tools like ChatGPT have drastically changed the scope of news media, enabling automated summaries, script generation for AI anchors, and natural language translations across Indian languages. In addition to news production, AI is also being used for audience sentiment analysis and the creation of hyper-personalized content that caters to regional and cultural diversity. Future work should also explore emerging tools, such as predictive algorithms, for data-driven journalism.

AI is radically impacting journalism, impacting not only how news is created and disseminated but also the essence of journalism itself and the interaction between media organizations and their viewers. However, there are several unresolved issues and societal concerns associated with AI, including biased algorithms and the extensive and/or intentional dissemination of incorrect information.

Human creativity and AI can go hand in hand, but practically, AI cannot fully replace human creativity in news media. If individuals continue to work in the media, it will be due to societal necessity rather than economic considerations. Many industries experience this: maintaining jobs takes precedence over boosting productivity.

Particular concerns have been expressed about reliable and sensible utilization of AI-driven tools by news organizations, including new ethical and legal issues, as algorithms increasingly influence editorial decisions, specifically because journalism and the media have a societal duty to avoid problems like digital divisions, marginalization, polarization, or disinformation at all costs in the production and distribution of news.

For future work, comprehensive research is proposed on the impact of artificial intelligence in TV, print, and digital Indian news media. This includes personal and professional experiences of news reporters, news producers, news consumers, and owners of news media organizations. The experiences of all these people will help inform in-depth research on the impact of artificial intelligence use in India.

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