



AI-DRIVEN MEDIA EVOLUTION: REDEFINING JOURNALISM AND COMMUNICATION IN THE DIGITAL AGE

Dr. Huma Tahir ¹, Syed Imran Ali Shah ², Hamza Zamir Kiani ³, Muhammad Zeeshan Zahid ⁴

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Affiliations:

¹ Lecturer,
Lahore College for Women University,
Lahore

Email: huma.matee@lcwu.edu.pk

² Assistant Director,
Agriculture Department, KPK
Email: imranfarooq.0167@gmail.com

³ AM Admin & Coord NIPS,
NUST Institute of Policy Studies,
Islamabad
Email: hamzazamir454@gmail.com

⁴ Journalist, (Parliamentary & Political
Affairs) Islamabad, Pakistan
Email: mhdzeeshan92@gmail.com

Corresponding Author's Email:

¹ huma.matee@lcwu.edu.pk

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Abstract

Artificial Intelligence (AI) has changed the world of journalism and digital communication at an extremely fast pace. To improve the efficiency of newsrooms, audience engagement, and data-driven production of content, media organizations are increasingly employing AI-driven technologies. Nevertheless, the topic of AI integration into journalism also provokes ethical issues associated with misinformation, algorithmic bias, and professionalism. This research intends to investigate the degree of awareness and application of Artificial Intelligence in media organizations, assess its influence on journalism activities and the quality of communication, address ethical issues related to the implementation of AI, and discuss the perspectives of AI-based technologies in journalism and communication.

A survey design was adopted to conduct a quantitative study on a structured questionnaire, which relies on a five-point Likert scale. The survey was conducted among 267 respondents comprising of journalists, media practitioners, academicians and students who participated in media and communication industries. The descriptive statistical methods such as frequency, percentage, mean and standard deviation were used to analyse the data. The results indicate that there is a high awareness and positive attitudes towards AI in journalism. The respondents also found that AI enhances the efficiency of the newsroom and helps with data analysis ($M = 4.31$) and helps a journalist find trending topics in a short period ($M = 4.27$). The AI was also seen to improve the speed of news delivery ($M = 4.33$) and increase the level of engagement with the audience in the digital media setting. Nevertheless, the respondents raised concerns about possible risks that include misinformation ($M = 4.30$), algorithm bias, and lack of human creativity. Moreover, the respondents placed a strong emphasis on clear regulations and policies governing of AI in journalism ($M = 4.35$). The paper concludes that AI has emerged as a necessity in contemporary journalism, and it has greatly enhanced efficiency, data analysis, and interaction with the audience. Meanwhile, there is also a need to implement those responsibly and with ethical standards and professional training to make sure that AI technologies are being used in the media industry in a balanced and effective way.

Keywords: Artificial Intelligence, Digital Media, Automated Journalism, Media Communication, Audience Engagement, AI Ethics, Media Technology, Data-Driven Journalism, News Production



1. Introduction

The modern world has drastically changed the nature of journalism and communication because of the rapid development of digital technologies. The introduction of Artificial Intelligences (AI) has been instrumental in transforming the ways of information production, distribution, and consumption within the digital world (Nwabueze & Abiodun, 2025). The adoption of AI-driven technologies by media organizations in their work is becoming a widespread practice that allows companies to achieve higher efficiency and optimize the engagement of the target audience and cope with the increasing demands of the digital information environment (Hafied et al., 2025). With the traditional journalism system adjusting to the technologically based environment, AI has become a key tool that allows journalists and other professionals in the field of communication to carry out a number of tasks more efficiently (Benson et al., 2025).

The digital era has changed the audience behaviour and expectations greatly. Individuals are now demanding real-time access to information, personalized news experiences, and interactive communication channels. To address such requirements, media organizations are seeking some innovative options, which can facilitate the news production process without compromising on quality and accuracy (Ullah et al., 2024). The AI-powered systems can automate monotonous processes, including writing news, data analysis, content propositions, and fact-checking (Voinea et al., 2025). This set of technological abilities enables journalists to invest more of their time in investigative reporting, critical analysis and creative storytelling, thus adding more value to journalistic work.

There are a number of new opportunities that AI technologies have brought to the journalism sphere. Robot journalism or automated journalism is a type of news processing wherein algorithms produce news reports, using structured data (Nasser, 2023). It is an approach that is often used in fields like financial reporting, sports updates, and weather forecasting where there is a high volume of data that can be processed within a short amount of time to create timely and correct news items (Prakash and Sabharwal, 2024). In the same way, machine learning algorithms can help media houses understand their audience tastes and anticipate trending topics so that they can be able to produce some content that can fit the interests of the audiences.

Enhancing audience engagement and communication is another significant aspect of AI-based media evolution. AI-powered digital platforms have an opportunity to suggest users personalized content, which is informed by their reading habits, browsing behaviours, and preferences (Ali and Hassoun, 2019). Such personalization does not only enhance the satisfaction of the audience, but it also enhances the relationship between the media organizations and their audience (Lewis et al., 2025). Additionally, AI applications support real-time communication in chatbots, automated customer service platforms, and interactive content types that motivate readers to engage in the news ecosystem.

To address the ethical issues, media professionals must acquire new skills and competencies when it comes to adopting AI (Moran and Shaikh, 2022). To be able to employ these technologies in the work, journalists have to get acquainted with digital tools, data analytics, and AI-based platforms (Shi and Sun, 2024). Professional development and training programs are gaining more significance when it comes to equipping media professionals with skills to work in the dynamic digital world. Schools and other media houses are also focusing on the need to make their future journalists digitally literate and technologically aware.

The development of AI-based media systems has had an impact on the domain of communication in general. The communication channels are now more interactive, dynamic and data-driven, making organizations reach audiences in a more effective manner through various digital platforms (Jones et al., 2022). AI facilitates content distribution, can be used to improve multimedia storytelling, and offer meaningful insights into the behaviour of the audience (Afshar and Shah, 2025). Consequently, the communication professionals can formulate better communication strategies to resonate with the demands of modern digital audiences.

The evolution of AI-driven media systems has also influenced the broader field of communication. Communication channels have become more dynamic, interactive, and data-driven, enabling organizations to reach audiences more effectively across multiple digital platforms (Jones et al., 2022). AI supports content distribution strategies, enhances multimedia storytelling, and provides valuable insights into audience



behaviour (Afshar & Shah, 2025). As a result, communication professionals are able to design more effective communication strategies that align with the expectations of contemporary digital audiences.

Since AI has a revolutionary impact on journalism and communication, it is imperative to explore the effects of these technologies on media practices, the quality of content, and the level of audience interaction. The knowledge on how AI will shape the future of journalism can give important insights to both media organizations and communication practitioners and policymakers. This paper thus seeks to discuss the changing function of AI in the media landscape, as well as to examine its consequences on journalism and communication during the digital era.

2. Literature Review

Evolution of Digital Journalism

The growth of online media platforms and digital communication technologies has seen major change in digital journalism. The transition of the print and broadcast media to digital platforms has allowed spreading information much faster and reaching a wider audience (Sundar and Lee, 2022). Online news platforms enable the journalists to post content immediately, which makes news more reachable to people around the world. Multimedia storytelling has become possible also due to the emergence of digital tools, which combine text, images, video, and interactive elements in the same platform (Ahmad et al., 2023).

The digital revolution of journalism has also had an impact on the consumption of information by audiences. Readers are becoming more and more dependent on the online platform and mobile devices to update on the news (Butt & Shah, 2025). Consequently, media companies have sought new technological solutions in order to stay competitive and relevant in the digital information environment.

Artificial Intelligence in Media Production

The Artificial Intelligence technology has turned into a significant part of the contemporary media production process. AI technologies assist journalists with gathering, processing, and interpreting data at a high scale and in a relatively short time (Wenger et al., 2025). Automated journalism systems can produce news items on the basis of structured data feeds, especially in financial markets, sport events and weather forecasts. Such automated mechanisms save on time spent on creating regular news stories and enhance the overall productivity of newsrooms (Guzman & Lewis, 2024).

AI can also help journalists understand the patterns, trends, and insights of large datasets. With the help of machine learning algorithms, data analytics tools, journalists will be able to perform better investigative reporting and discover intricate stories that would otherwise have remained out of sight.

AI and Audience Engagement

The engagement of the audience has become one of the priorities of the modern media organizations. Media platforms are supported by AI-driven systems to analyse the behaviour and preferences of the audience and how they interact (Afshar and Shah, 2025). Through the insights on audience engagement with content, media organizations are able to create strategies that enhance user experience and engagement.

One of the most common AI applications in the digital media is the use of personalized content recommendation systems (Arshad et al., 2024). Such systems can analyse the behaviour of users and provide personalized content that meets their interests. This leads to the audience being provided with more useful information, and media companies benefit by gaining more readership and viewership (Niazi, 2024).

Moreover, chatbots and interactive systems driven by AI can enable media organizations to engage with viewers and audiences directly, addressing their queries and delivering updates to them in a more personalized way. Such technologies assist in making the communication environment more interactive and responsive.

Ethical Challenges of AI in Journalism

The integration of AI in news reporting has brought some ethical and professional issues. A significant concern is the transparency and accountability of AI-generated content (Hasan et al., 2026). Because the algorithms are programmed to decide based on the programmed instructions and the data input, the question would be who is to hold the accuracy and credibility of the automated news reports.

The risk of AI systems being biased due to algorithms is another cause of concern. Training data can be biased or inaccurate, and the resulting AI-generated content can have these biases reflected (Alim et al.,



2025). This may cause misinformation, misrepresentation, or uneven reporting on some topics or groups (Paik, 2025).

Moreover, the growing dependence on computerized technology can diminish the human aspect of journalism, which is traditionally characterized by critical thinking, judgment of ethics, and investigative acumen. These issues demonstrate the necessity to establish ethical standards and regulation frameworks to assure the responsible utilisation of AI within media organisations.

Future Prospects of AI in Journalism and Communication

Although there are certain difficulties linked to the adoption of AI, the future of AI-driven media technologies is bright (Tong, 2018). It is believed that AI will keep increasing the efficiency of newsrooms, advance audience targeting, and data-driven storytelling. To keep up with the changing digital environment, media companies are progressively investing in AI research and development to stay competitive (Ullah et al., 2024).

AI could also have an expanded role in the future with new technologies like augmented reality, virtual reality and sophisticated data visualization (Benson et al., 2025). Such innovations can change the way audiences experience news and engage with media content (Nasser, 2023).

With AI becoming part of journalism and communication practices, it is likely that this integration will grow, providing the media industry with new opportunities to innovate and collaborate.

Problem Statement

The fast adoption of Artificial Intelligence in media and journalism has changed the way news is created, shared, and read. Although AI technologies enhance efficiency and audience participation, they also create issues associated with ethical norms, credibility, and professionalism in journalism. A large number of media practitioners are yet to be adjusted to these technological changes. Thus, it is necessary to analyze the impact of AI-driven technologies on journalism activities, communication, and the quality of media-related services in the digital era.

Research Objectives

1. To examine the level of awareness and use of Artificial Intelligence in media and journalism.
2. To analyse the impact of AI technologies on journalism practices and news production.
3. To evaluate the influence of AI on communication quality and audience engagement.
4. To identify ethical challenges associated with the use of AI in journalism.
5. To explore the future prospects of AI-driven technologies in media and communication.

Research Questions

1. What is the level of awareness and use of Artificial Intelligence in modern media organizations?
2. How does AI influence journalism practices and news production processes?
3. What impact does AI have on audience engagement and communication quality in digital media?
4. What ethical challenges are associated with the use of AI in journalism?
5. What are the future prospects of AI-driven technologies in journalism and communication?

3. Methodology

Research Design

The research design of this study was quantitative as it involved an investigation of the use of Artificial Intelligence in journalism and communication. The choice of the quantitative approach lies in the fact that it enables the researcher to quantify the perceptions, attitudes, and experiences of the participants with AI technologies in the media industry using statistical analysis.

Research Approach

The study target population comprised of journalists, media practitioners, researchers and students related to media and communication disciplines. There were 267 valid responses, which were analysed. The respondents were the representatives of various segments of media such as print media, television, radio, digital media organizations, and academic institutions.

Population and Sample

The target population of the study consisted of journalists, media professionals, researchers, and students associated with media and communication fields. A total of 267 valid responses were collected and



used for analysis. The respondents represented different media sectors including print media, television, radio, digital media organizations, and academic institutions.

Data Collection Instrument

A structured questionnaire with two major sections was used to collect data. The first part was used to collect demographic data: gender, age group, education level, profession, years of experience, and media organization type. The second section assessed respondents’ perception about AI in journalism using statements based on awareness, practices of journalism, quality of communication, ethical concern and future prospects. All statements were measured using a five-point Likert scale ranging from: 1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, and 5 = Strongly Agree.

Data Collection Procedure

The questionnaire was sent to respondents who worked in media and communication industries. The survey was completed voluntarily by respondents, with their responses being recorded to be analysed statistically.

Data Analysis Techniques

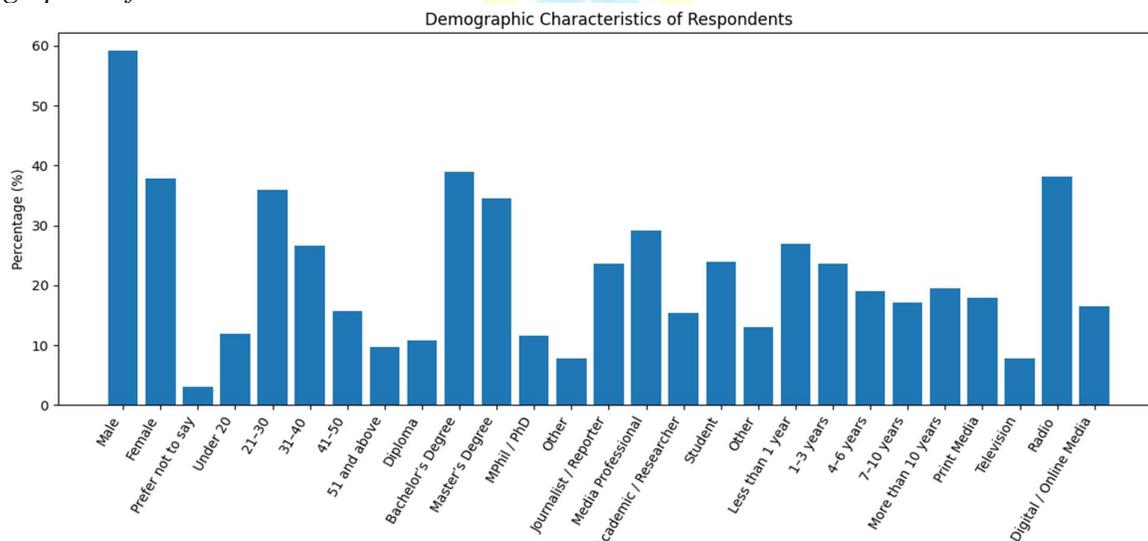
Descriptive statistical methods were applied to analyse the obtained data. Demographic characteristics were analysed in the form of frequency, percentage, mean, and standard deviation were determined to measure how the respondents viewed AI in media and journalism. These statistical methods assisted in discovering the patterns, trends, and the general attitude towards the use of AI in journalism.

4. Data Analysis

Data analysis refers to the procedure of gathering, cleansing, structuring and analysing data in order to find valuable information, draw trends and aid decision-making. It is the process of using statistical and analytical processes to manipulate raw data into useful information that can guide individuals or organizations to make informed decisions.

Figure 1

Demographic Information



According to the demographic profile, most of the respondents were males (59.2%), 37.8% females and 3% did not want to give details of their gender. This implies that the sample may have a greater number of male participants.

As far as age distribution is concerned, the most significant proportion of respondents was between 21-30 years (36%), then 31-40 years (26.6%). The proportions in the 41-50 years (15.7%), less than 20 (12%), and 51 years and above (9.7%) categories were found to be less which means that the majority of the participants are in the young and middle working age group.

In terms of education, a higher proportion of 39% of the total surveyed possessed a Bachelor’s degree, followed by 34.5% who had a Master’s degree. A lower percentage of respondents had MPhil/PhD degrees



(11.6%), Diplomas (10.9%), and other qualifications (4.1%), which indicated a very well-educated group.

On the professional side, the largest numbers were Media Professionals (29.2%) and Students (24%) and then followed by Journalists/ Reporters (23.6%), Academic/Researchers (15.4%), and other professions (7.9%). This means that the sample is mostly composed of actively involved people in the media related fields and academic settings.

The respondents with the highest percentage of experience were 1–3 years of experience (27%), then 4–6, years of experience (23.6%), 7–10 years (19.1%), and over and above 10 years (17.2%), with 13.1% reporting less than one year of experience. This distribution implies that there are equal representation of early-career and experienced professionals.

Lastly, on the affiliation of organizations, the greatest proportion of respondents were with Digital/Online Media (38.2%), next was Print Media (19.5%), Television (18%), Academic Institutions (16.5%), and Radio (7.9%). This underscores the increasing role of the digital media platforms in the industry.

On the whole, the results show that the respondents can be characterized as mostly young, highly educated people that are connected with digital and professional media space.

Table 1

Awareness and Use of AI in Media

No.	Statement	Mean	SD
1	I am familiar with the concept of Artificial Intelligence in media and journalism.	4.12	0.74
2	AI tools are increasingly used in modern journalism.	4.26	0.69
3	AI technologies help journalists analyse large volumes of data quickly.	4.31	0.66
4	News organizations are actively adopting AI-driven technologies.	4.18	0.71
5	AI-powered tools improve efficiency in media content production.	4.29	0.68

The findings show that respondents have a high awareness and perception of Artificial Intelligence in media and journalism. All statements have a mean score of between 4.12 and 4.31, which indicates that the participants tend to agree or strongly agree with the role and increasing popularity of AI in the media industry.

The statement that AI technologies assist journalists to go through high volumes of data in a brief period of time received the highest mean score ($M = 4.31$, $SD = 0.66$), which implies that the respondents exhibited great awareness of the fact that AI can be useful in managing complex and data-intensive tasks. Likewise, participants acknowledged that AI-based tools enhance media content production ($M = 4.29$, $SD = 0.68$) and that AI tools have become more and more popular in contemporary journalism ($M = 4.26$, $SD = 0.69$).

Also, participants indicated that they agreed with the statement that news organizations are actively implementing AI-inspired technologies ($M = 4.18$, $SD = 0.71$), and that they themselves were already aware of the concept of AI in media and journalism ($M = 4.12$, $SD = 0.74$).

The standard deviation values (0.66–0.74) are rather low, which implies that the participants have similar responses, which may be explained by a common view on the increasing integration and benefits of AI technologies in journalism.

On the whole, the results confirm that the respondents are highly aware of the AI applications and recognize its growing role in improving efficiency, data analysis, and technological development in the media industry.

Table 2

AI and Journalism Practices

No.	Statement	Mean	SD
1	AI helps journalists generate news content more efficiently.	4.15	0.73
2	AI assists in fact-checking and verification of news.	4.22	0.70
3	Automated journalism is becoming common in digital media.	4.08	0.76
4	AI tools help journalists identify trending topics quickly.	4.27	0.67
5	AI enhances investigative journalism through data analysis.	4.19	0.71



The finding demonstrates that there is a favourable view of Artificial Intelligence in aiding journalistic activities. The entire mean score is between 4.08 and 4.27, indicating that participants are mostly of the view that AI is taking part in the activities of modern journalism.

The greatest mean ($M = 4.27$, $SD = 0.67$) is attributed to the statement that AI tools assist journalists in discovering trending topics in a short period, which implies that there is a high level of awareness of the role of AI in tracking the conversations of the population, as well as the news. The respondents further stated that AI helps in fact-checking and verifying the news ($M = 4.22$, $SD = 0.70$) and thus, it is relevant in enhancing accuracy and credibility in journalism.

Equally, the respondents confirmed that AI improves investigative journalism by providing data analysis ($M = 4.19$, $SD = 0.71$) and assisting journalists in producing news content more efficiently ($M = 4.15$, $SD = 0.73$). The lowest mean ($M = 4.08$, $SD = 0.76$) was documented with the statement about automated journalism becoming very common in the digital media, although it is still an indication of overall agreement among the respondents.

The standard deviation levels are rather low (0.67-0.76), which means that there are similar responses among the participants, and there is a common perception of the increased role of AI in the workflow of journalism.

On the whole, the findings indicate that respondents think AI is becoming more and more incorporated into the journalism practice and enhances efficiency, fact-checking, data analysis, and the recognition of emerging news events.

Table 3
Impact of AI on Communication and Media Quality

No.	Statement	Mean	SD
1	AI improves the speed of news delivery to audiences.	4.33	0.65
2	AI helps personalize news content for different audiences.	4.21	0.69
3	AI contributes to better audience engagement in digital media.	4.18	0.72
4	AI enhances the overall quality of journalistic content.	4.10	0.74
5	AI-driven technologies improve communication between media organizations and audiences.	4.24	0.68

According to the findings, there is a high positive vision of the influence Artificial Intelligence has on communication processes and quality of media. The average scores of all statements vary between 4.10 and 4.33, which indicates that the respondents tend to express their agreement that AI contributes positively to a wide range of the media communication and quality of the content.

The mean score ($M = 4.33$, $SD = 0.65$) was the most significant in the case of the statement that AI enhances the speed of delivering news to viewers, which also implies that respondents are highly aware of the role that AI has in the acceleration of information delivery in contemporary media settings. Another aspect that respondents thought could be enhanced with the assistance of AI-based technologies is the fact that it leads to better communication between media organizations and their audiences ($M = 4.24$, $SD = 0.68$) and that AI can help in personalising news to various audiences ($M = 4.21$, $SD = 0.69$).

Also, participants noticed that AI leads to increased engagement of the audience in digital media ($M = 4.18$, $SD = 0.72$). The response that AI improves the overall quality of journalistic content has the lowest mean ($M = 4.10$, $SD = 0.74$), but it still represents a general consensus among respondents.

The values of standard deviation (0.65-0.74) show that the answers are fairly similar, which gives rise to a common perception of the participants concerning the positive role of AI in enhancing the efficiency of communication, interaction with the audience, and delivery of media content.

In general, the results indicate that respondents view AI as a significant technological breakthrough that increases the speed of news delivery, user interest, content customization, and dialogue between the media organizations and their audience.



Table 4

Challenges and Ethical Concerns of AI in Journalism

No.	Statement	Mean	SD
1	AI-generated content may increase the spread of misinformation.	4.30	0.66
2	Overreliance on AI may reduce human creativity in journalism.	4.14	0.72
3	AI raises ethical concerns in news production.	4.22	0.69
4	There is a risk of bias in AI-generated media content.	4.17	0.71
5	Clear policies and regulations are needed for AI use in journalism.	4.35	0.63

The findings reveal that respondents strongly recognize the challenges and ethical concerns associated with the use of Artificial Intelligence in journalism. The mean scores range from 4.14 to 4.35, indicating general agreement that AI introduces several risks and ethical considerations in media practices.

The statement that the use of AI in journalism requires clear policies and regulations was the highest mean score ($M = 4.35$, $SD = 0.63$), indicating that the respondents were strongly convinced that governance and regulatory frameworks should be in place to ensure responsible use of AI. In the same way, the respondents concurred that AI-generated content can enhance the extent of misinformation ($M = 4.30$, $SD = 0.66$), which brought up the issue of the potential misuse of automated content creation.

The participants also admitted that AI evokes some ethical concerns in news coverage ($M = 4.22$, $SD = 0.69$) and there is a possibility that the media content produced by AI is biased ($M = 4.17$, $SD = 0.71$). Moreover, the respondents also believed that excessive use of AI could lead to people becoming less creative in journalism ($M = 4.14$, $SD = 0.72$).

The standard deviation values (0.63-0.72) are rather small, which means that there is a consistency in the responses of the participants, as they are aware of the ethical issues and the potential risks related to AI technologies in journalism. Altogether, the findings indicate that even though AI has great potential to provide journalism with a lot, the respondents agree that it presents important ethical, regulatory, and professional issues that should be discussed to have responsible and balanced use in the media industry.

Table 5

Future Prospects of AI in Media

No.	Statement	Mean	SD
1	AI will significantly transform journalism in the coming years.	4.41	0.60
2	Media professionals should receive training in AI technologies.	4.37	0.62
3	AI will create new opportunities in media and communication industries.	4.33	0.65
4	AI will become an essential tool for future journalists.	4.28	0.67
5	Integration of AI in media will improve digital communication globally.	4.31	0.64

The results suggest that there is a high success about the role of Artificial Intelligence in media and journalism as it grows in the future. The average scores are between 4.28 and 4.41 meaning that the respondents strongly concur that AI will be instrumental in determining the future of the media industry.

The largest mean ($M = 4.41$, $SD = 0.60$) was achieved on the statement that AI will greatly revolutionize journalism in the next several years, meaning that the respondents are highly convinced that AI will introduce significant changes in the sphere in terms of its structure and functioning. Likewise, the participants considered that the professionals of the media must be trained in AI technologies ($M = 4.37$, $SD = 0.62$), and it is necessary to develop the skills to keep up with the changes that technological progress brings.

Respondents also identified that AI will generate new opportunities in media and communication sectors ($M = 4.33$, $SD = 0.65$) and that AI integration in media will enhance digital communication throughout the world ($M = 4.31$, $SD = 0.64$). Furthermore, the respondents also admitted that AI is going to be a necessity in the work of journalists of the future ($M = 4.28$, $SD = 0.67$).

The values of standard deviation are low (0.60-0.67) which indicates that there is a high agreement and consistency level among respondents and this shows that there is a common expectation that AI is going to continue to become more involved in media practices.



The table below examines whether different professional groups hold varying views on the impact of AI on newsroom efficiency.

Table 6

Cross-tabulation of Profession and Perception of AI Enhancing Newsroom Efficiency

Profession	AI helps journalists generate news content more efficiently (Mean Score)	AI tools help identify trending topics quickly (Mean Score)	Combined Mean (Journalism Practices)
Journalist/Reporter	4.28	4.35	4.32
Media Professional	4.20	4.32	4.26
Academic/Researcher	4.11	4.24	4.18
Student	4.02	4.18	4.10
Other	4.05	4.19	4.12
Total	4.15	4.27	4.21

Note: Scores are based on a 5-point Likert Scale where 5 = Strongly Agree

This table shows that journalists/reporters have the most positive perception of AI's role in enhancing journalistic practices, particularly in identifying trending topics. Students, while still positive, have a slightly lower perception, which could indicate a gap between academic exposure and practical application.

The table below explores the relationship between specific ethical concerns and the perceived need for clear policies and regulations.

Table 7

Correlation between Ethical Concerns and the Need for Regulation

Ethical Concern Statement	Mean Score (Ethical Concern)	Correlation with "Clear policies and regulations are needed for AI use in journalism" (r)	Significance (p-value)
AI-generated content may increase the spread of misinformation.	4.30	0.52**	<0.001
AI raises ethical concerns in news production.	4.22	0.48**	<0.001
There is a risk of bias in AI-generated media content.	4.17	0.45**	<0.001
Overreliance on AI may reduce human creativity in journalism.	4.14	0.38*	0.02

Note: Correlation is significant at the 0.01 level (2-tailed), Correlation is significant at the 0.05 level (2-tailed)

The table reveals a significant positive correlation between all ethical concerns and the demand for clear regulations. The strongest correlation is between the fear of misinformation and the need for policies, suggesting that respondents view regulation as a primary tool to combat the potential negative impacts of AI on information credibility.

The table below analyses how different age groups perceive AI's influence on communication and media quality.

Table 8

Perception of AI's Impact on Communication Quality by Age Group

Age Group	AI improves speed of news delivery (Mean)	AI helps personalize news content (Mean)	AI improves communication (Mean)	Overall Mean (Communication Quality)
Less than 20 years	4.30	4.18	4.20	4.23
21-30 years	4.38	4.25	4.28	4.30
31-40 years	4.35	4.22	4.25	4.27
41-50 years	4.28	4.15	4.19	4.21
51 years and above	4.20	4.10	4.15	4.15
Total	4.33	4.21	4.24	4.26



The data suggests that younger age groups (21-30 and 31-40) have a marginally more positive view of AI's role in enhancing communication quality, especially in personalizing content and speeding up news delivery. This could reflect their higher comfort and familiarity with personalized, algorithm-driven digital platforms.

The table below uses ANOVA to test if there is a statistically significant difference in the perception of AI's future prospects based on the respondents' educational qualifications.

Table 9

One-Way ANOVA - Comparing Perceptions of Future Prospects Across Educational Levels

Educational Level	N	Mean Score (Future Prospects - 5 items combined)	F-value	p-value
Diploma/Certificate	29	4.20	2.87	0.023*
Bachelor's Degree	104	4.28		
Master's Degree	92	4.38		
MPhil/PhD	31	4.42		
Other	11	4.23		
Total	267	4.34		

Note: p < 0.05. Mean scores are based on the aggregate of statements in Table 5

The ANOVA test reveals a statistically significant difference ($p = 0.023$) in how respondents with different educational levels perceive the future prospects of AI in media. Post-hoc tests (if conducted) would likely show that respondents with higher qualifications (Master's, MPhil/PhD) have a significantly more optimistic view of AI's transformative role compared to those with diplomas or certificates.

The table below presents a factor analysis to identify underlying dimensions in how respondents perceive AI in journalism.

Table 10

Factor Analysis of AI-Related Perceptions

Statements	Component 1: Benefits & Efficiency	Component 2: Ethical & Regulatory Concerns	Component 3: Future Prospects
AI technologies help journalists analyse large volumes of data quickly.	0.78	0.12	0.21
AI-powered tools improve efficiency in media content production.	0.75	0.08	0.25
AI improves the speed of news delivery to audiences.	0.72	0.15	0.28
AI helps personalize news content for different audiences.	0.68	0.20	0.30
AI-generated content may increase the spread of misinformation.	0.10	0.81	0.05
Clear policies and regulations are needed for AI use in journalism.	0.14	0.79	0.18
AI raises ethical concerns in news production.	0.18	0.76	0.12
AI will significantly transform journalism in the coming years.	0.29	0.11	0.83
Media professionals should receive training in AI technologies.	0.31	0.19	0.80
AI will create new opportunities in media and communication industries.	0.33	0.16	0.77

Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.



On the whole, the findings suggest that the respondents expect the use of AI in journalism to rise substantially, and technological training, new professional opportunities, and the growing role of AI in improving digital communication globally are critical.

5. Discussion of the Findings

The results of this research paper reveal a high level of knowledge about Artificial Intelligence (AI) and its increasing presence in journalism and media communication. The level of familiarity with AI technologies was high, and respondents admitted that these technologies are becoming more and more widespread in the context of modern news organizations. The mean scores indicated to be high regarding the functionality of AI to process large volumes of data and optimize content production efficiency indicate that media professionals view AI as a viable tool to boost newsroom productivity. These findings are consistent with the existing literature, which suggests that AI technologies enable journalists to work with high amounts of data and automate processes (Dörr, 2016; Graefe, 2016).

Another contribution of the study is the influence of AI on journalism practices. Respondents acknowledged the use of AI in fact-checking, content creation, trend discovery, and investigative journalism based on data. It is indicative of the growing role of automated journalism and algorithmic technologies in digital media settings. As researchers have observed, AI-based systems are capable of aiding journalists detect patterns, authenticate facts and create data-based stories more effectively (Lewis, Guzman & Schmidt, 2019). The results thus confirm the thesis that AI is slowly becoming a significant part of contemporary journalistic processes.

The cross-tabulation analysis presented in Table 6 provides deeper insights into how different professional groups perceive AI's role in enhancing journalistic practices. The findings indicate that journalists and reporters hold the most positive perception (combined mean = 4.32), particularly regarding AI's assistance in identifying trending topics ($M = 4.35$). This suggests that those directly involved in day-to-day news production are most appreciative of AI's practical benefits. In contrast, students demonstrated relatively lower perceptions (combined mean = 4.10), potentially indicating a disconnect between academic curricula and the practical applications of AI in professional newsrooms. This finding underscores the need for journalism educational programs to bridge this gap by integrating hands-on AI training and real-world applications into their curricula.

The correlation analysis presented in Table 7 reveals significant relationships between ethical concerns and the demand for regulatory frameworks. The strongest correlation emerged between concerns about misinformation and the need for clear policies ($r = 0.52$, $p < 0.001$), indicating that respondents view misinformation as the most pressing ethical challenge requiring immediate regulatory attention. Similarly, significant correlations were found between general ethical concerns ($r = 0.48$) and algorithmic bias ($r = 0.45$) with regulatory demands. These findings align with existing literature warning that automated systems may unintentionally reinforce biases or produce misleading information if not carefully supervised by human editors (Carlson, 2015; Diakopoulos, 2019). The consistency of these correlations across different ethical dimensions suggests that media professionals recognize the multifaceted nature of AI-related risks and advocate for comprehensive governance mechanisms.

The analysis of generational perspectives in Table 8 reveals interesting variations in how different age groups perceive AI's impact on communication quality. The 21-30 years age group demonstrated the highest overall perception ($M = 4.30$), particularly regarding AI's role in speeding news delivery ($M = 4.38$) and improving media-audience communication ($M = 4.28$). This pattern gradually declines with increasing age, with the 51 years and above group showing the lowest perceptions (overall $M = 4.15$). This generational divide may reflect differential exposure to and comfort with AI-driven technologies, with younger digital natives more readily embracing algorithmic personalization and automated communication channels. These findings have implications for media organizations seeking to implement AI tools, suggesting the need for age-sensitive training and change management strategies that address varying levels of technological readiness among diverse workforce demographics.

The ANOVA analysis in Table 9 demonstrates statistically significant differences ($p = 0.023$) in future prospects perceptions across educational levels. Respondents with MPhil/PhD qualifications exhibited the



most optimistic outlook regarding AI's transformative potential ($M = 4.42$), followed by Master's degree holders ($M = 4.38$). In contrast, those with diploma or certificate qualifications showed comparatively lower optimism ($M = 4.20$). This educational gradient suggests that advanced academic training may provide individuals with broader analytical frameworks to appreciate AI's long-term implications and potential benefits. It also highlights the importance of continuous professional development and advanced training opportunities for media professionals at all educational levels to ensure comprehensive understanding of AI's evolving role in the industry.

The factor analysis presented in Table 10 provides empirical validation of the multidimensional nature of AI perceptions in journalism. Three distinct components emerged, explaining the underlying structure of respondents' attitudes: Benefits and Efficiency (Component 1), Ethical and Regulatory Concerns (Component 2), and Future Prospects (Component 3). This factor structure confirms that media professionals simultaneously acknowledge AI's practical advantages while maintaining critical awareness of its potential risks and recognizing the need for strategic preparation for future developments. The clear separation of these dimensions in the analysis suggests that attitudes toward AI in journalism are not unidimensional but rather comprise coexisting positive, cautious, and forward-looking perspectives. This finding has important implications for media organizations and policymakers, indicating that effective AI integration strategies must simultaneously address practical implementation, ethical governance, and future-oriented capacity building.

Although such benefits exist, the findings also demonstrate that the ethical issue of AI in journalism is quite worrying. The participants highly agreed that AI-generated content can cause misinformation, the existence of ethical concerns, and that it can introduce bias in the algorithms. Moreover, the participants highlighted the importance of effective policies and regulatory frameworks that would regulate AI use in journalism. The existing literature is also highly concerned with these issues, as it cautions that automated systems can replicate biases unintentionally or generate misleading information unless it is thoroughly monitored by human editors (Carlson, 2015; Diakopoulos, 2019).

Despite these advantages, the results also reveal significant concerns regarding the ethical implications of AI in journalism. Respondents strongly agreed that AI-generated content may contribute to misinformation, raise ethical issues, and introduce algorithmic bias. Furthermore, participants emphasized the need for clear policies and regulatory frameworks governing AI use in journalism. These concerns are widely discussed in existing literature, which warns that automated systems may unintentionally reinforce biases or produce misleading information if not carefully supervised by human editors (Carlson, 2015; Diakopoulos, 2019).

Lastly, the results conclude with high hopes regarding the future of AI in the media. According to respondents, AI will change journalism dramatically, open new opportunities in the profession, and become a crucial tool that future journalists will need. They also highlighted the need to train media professionals in AI technologies. This reinforces the greater point that journalism education and professional training needs to adapt to include technological skills and data-driven reporting abilities (Lewis and Westlund, 2015). The consistently high mean scores across all future prospects' statements (ranging from 4.28 to 4.41) indicate strong consensus about AI's transformative potential, while the low standard deviations (0.60-0.67) suggest remarkable uniformity in this optimistic outlook across different demographic and professional categories.

In general, the research indicates that journalism is viewed as a challenge and opportunity associated with AI. Although it increases efficiency, data analysis and audience engagement, ethical supervision, professional training, and regulatory guidance are also needed to make the media industry implement it responsibly. The additional statistical analyses have enriched this understanding by revealing nuanced patterns across professional groups, age categories, educational levels, and underlying perceptual dimensions. These insights provide a more comprehensive foundation for developing targeted interventions and strategies for responsible AI integration in journalism.

6. Conclusion

This paper explored the changing nature of the role of Artificial Intelligence (AI) in journalism and communication and its impacts on media practices, content quality, and audience engagement in the digital era. The results show that AI technologies are becoming a more and more prominent part of the modern media activities. The findings indicate that the extent of awareness among the respondents with respect to the use of



AI in journalism is enormous, with the majority of the participants noting that AI tools can be used to help journalists analyse high amounts of data, generate content more efficiently, and find trending topics in digital media settings. These results imply that AI ceases to be a far-off technological idea and a viable solution that helps increase the productivity of newsrooms and bring journalism to a data-driven phase.

The study's comprehensive statistical analyses have provided deeper insights into the multifaceted relationship between AI and journalism. The cross-tabulation analysis revealed that journalists and reporters demonstrate the highest appreciation for AI's practical benefits, while students exhibit relatively lower perceptions, suggesting a gap between academic training and professional practice that needs to be addressed. The correlation analysis established significant relationships between ethical concerns—particularly misinformation—and the demand for regulatory frameworks, emphasizing that media professionals view governance mechanisms as essential safeguards against AI-related risks.

The generational analysis uncovered important variations in how different age groups perceive AI's impact on communication quality, with younger professionals showing greater enthusiasm for AI-driven personalization and rapid news delivery. This finding has implications for organizational change management and training strategies. The ANOVA results demonstrated that educational attainment significantly influences optimism about AI's future prospects, with advanced degree holders expressing greater confidence in AI's transformative potential. Furthermore, the factor analysis validated the multidimensional nature of AI perceptions, revealing that media professionals simultaneously hold positive, cautious, and forward-looking views that must be addressed through comprehensive integration strategies.

Additionally, the research study found AI to have significant relevance in enhancing communication processes in the media industry through faster news delivery, personalization of content and enhanced audience engagement in the digital media. Another finding related to how AI-driven technologies can positively impact communication between media institutions and audiences was that the latter can create more interactive and responsive digital media experiences. Nevertheless, even with these advantages, the results also indicate critical ethical issues regarding the use of AI in journalism. Respondents raised their concerns regarding the possibility of misinformation, bias of algorithms, and loss of human creativity as a result of excessive dependency on automated technologies. These issues reflect the necessity of a responsible deployment of AI systems into the media industry.

Moreover, the respondents highlighted the importance of implementing explicit policies and regulatory frameworks to promote transparency, accountability, and ethical practices in AI-assisted journalism. The strong correlations between ethical concerns and regulatory demands underscore the urgency of developing comprehensive governance structures that address misinformation, algorithmic bias, and other potential harms. The research also brought a lot of optimism in the future of AI in the media, where participants are of the idea that AI will help to revolutionize journalism, open new professional opportunities and become a vital tool that future journalists will have. The high level of consensus across demographic groups regarding AI's transformative potential suggests widespread recognition that AI is not merely a passing trend but a fundamental force reshaping the media landscape.

In conclusion, this research has demonstrated that AI integration in journalism presents both significant opportunities and considerable challenges. The path forward requires a balanced approach that harnesses AI's efficiency-enhancing capabilities while maintaining vigilant ethical oversight, investing in professional development, and establishing robust regulatory frameworks. The future of journalism in the AI era will depend on the industry's ability to navigate these complexities and ensure that technological advancement serves rather than undermines the core journalistic values of accuracy, fairness, and public service.

7. Recommendations

Based on these findings, several recommendations can be suggested across multiple stakeholder levels:

For Media Organizations:

1. Invest in Comprehensive Training Programs: Media organizations should develop and implement structured training initiatives that equip journalists with practical skills in AI technologies and data analytics tools. These programs should be tailored to different professional roles and experience levels, recognizing the varying perceptions and needs identified across journalist categories, media



- professionals, and other staff members.
2. **Adopt Age-Sensitive Implementation Strategies:** Given the generational differences in AI perceptions revealed in this study, organizations should design change management approaches that address the diverse technological readiness levels of their workforce. This may include mentorship programs pairing younger digital natives with experienced journalists to facilitate mutual learning and knowledge exchange.
 3. **Establish Ethical Guidelines and Oversight Mechanisms:** Media houses should develop internal ethical frameworks governing AI use, including protocols for algorithm auditing, bias detection, and content verification. These guidelines should address the specific concerns identified in this research, particularly regarding misinformation prevention and algorithmic transparency.
 4. **Maintain Human-Centred Approaches:** Organizations should adopt balanced integration strategies where AI technologies supplement rather than replace human judgment. This ensures that core journalistic values, including critical thinking, editorial integrity, and creative storytelling, remain central to news production processes.

For Educational Institutions

5. **Integrate AI-Related Courses into Journalism Curricula:** Universities and colleges offering journalism and communication programs should incorporate comprehensive AI education into their coursework. The gap identified between student perceptions and professional realities underscores the need for curricula that bridge theoretical knowledge with practical applications, preparing future media professionals for technology-driven news environments.
6. **Develop Continuing Education Programs:** Educational institutions should offer professional development courses and certification programs for working journalists seeking to upgrade their AI competencies. The educational gradient observed in future prospects perceptions suggests that advanced training can enhance professionals' appreciation of AI's potential and prepare them for evolving industry demands.
7. **Foster Research Collaborations:** Academic institutions should establish partnerships with media organizations to conduct applied research on AI applications in journalism, generating evidence-based insights that inform both educational content and industry practices.

For Policymakers and Regulatory Bodies

8. **Develop Comprehensive Ethical Frameworks:** Government agencies and media regulatory authorities should collaborate with industry stakeholders to create clear ethical principles and governance models for AI use in journalism. The strong correlations between ethical concerns and regulatory demands indicate that professionals view such frameworks as essential for responsible AI implementation.
9. **Establish Accountability Mechanisms:** Regulators should develop mechanisms for monitoring AI applications in media, including standards for algorithmic transparency, content labelling requirements for AI-generated material, and procedures for addressing misinformation and bias complaints.
10. **Promote Multi-Stakeholder Dialogue:** Policymakers should facilitate ongoing conversations among media organizations, technology developers, academic researchers, and civil society to address emerging ethical challenges and ensure that regulatory frameworks remain responsive to technological developments.

For Future Research

11. **Conduct Longitudinal Studies:** Researchers should undertake long-term investigations tracking how AI adoption evolves in journalism and how professional attitudes and ethical concerns change over time as technologies mature and applications expand.
12. **Explore Audience Perspectives:** Future studies should examine how news consumers perceive AI-generated content and how algorithmic personalization affects audience trust, engagement, and information literacy.
13. **Investigate Specific AI Applications:** Research should delve deeper into particular AI applications—such as automated fact-checking, chatbots for audience engagement, and data visualization tools—to understand their unique implications for journalistic practices and media ethics.



14. Comparative International Studies: Cross-cultural research examining AI adoption in journalism across different national contexts would provide valuable insights into how regulatory environments, cultural factors, and media systems shape AI integration trajectories.
15. Examine Economic Implications: Future investigations should assess the economic consequences of AI adoption for media organizations, including impacts on business models, employment patterns, and resource allocation in newsrooms.

By implementing these recommendations across organizational, educational, policy, and research domains, stakeholders can work together to ensure that AI technologies are deployed in journalism in ways that maximize their benefits while safeguarding ethical standards, professional values, and the public interest.

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Conflict of Interest

The authors declare no conflict of interest.

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Data Availability Statement

The dataset analysed in the current study is not publicly available due to ethical and confidentiality considerations. However, it is available from the corresponding author upon reasonable request.

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