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Research Article

AI and the evolution of journalistic practices

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ABSTRACT

This study investigates how artificial intelligence (AI) is a transformative power in traditional journalistic practice, focusing on new skills and competencies of journalists in an AI-driven newsroom. The methodological approach was mixed-methods and included semi-structured interviews with journalists and a content analysis comparing AI-generated with human-written news articles. Key findings reveal that AI encompasses efficiency, precision, and personalization in news delivery, as well as some big ethical challenges that involve biases in algorithms, privacy, and transparency of AI-generated content. The study outlines the imperative of journalists' adaptation to the new evolving roles involving data analysis and technology use, with a close eye on journalistic integrity. This includes implications for the industry in terms of robust ethical standards, interdisciplinary collaboration between journalists and technologists, and educational reforms to prepare future journalists with the necessary skill set. If these challenges are addressed, AI can unleash its potential and help the journalism industry maintain its core values of accuracy, accountability, and service to the public. This paper contributes to the ongoing discourse on the future of journalism in the digital age, underlining some key ethical considerations as far as the integration of AI technologies is concerned.

Keywords: artificial intelligence, journalism, content generation, media transformation

1. INTRODUCTION

Artificial intelligence (AI) is rapidly changing many industries, including journalism. AI technologies are now integral to news gathering, production, and dissemination, altering the way news is reported and consumed (Ioscote et al., 2024). This article explores the significant impact of AI on journalistic practices and the essential skills and competencies required for journalists in an AI-driven newsroom.

Each technological innovation has allowed journalism to reorganize and evolve. From the invention of the printing press to the rise of digital media, and now, the era of AI, journalism has continually evolved to incorporate new tools and methodologies (Sonni et al., 2024). However, these shifts bring challenges and ethical dilemmas that the industry must address.

This study seeks to answer two main questions: How is AI transforming traditional journalistic practices? What new skills and competencies do journalists need in an AI-driven newsroom? The article explores AI's impact on journalism and the necessary adaptations for journalists in this new environment.

AI significantly enhances modern journalism by offering efficiency, precision, and personalization. Automated journalism, for instance, allows for the production of news stories from structured data at much higher speeds, making them timelier (Ioscote et al., 2024). AI-driven data analytics tools

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support investigative journalism by uncovering patterns and trends in large datasets. Personalized news feeds, powered by AI algorithms, cater to individual user preferences, thus increasing reader engagement. However, these advancements also present challenges such as potential biases in AI algorithms, privacy concerns, and the need for transparency in AI-generated content (Amponsah & Atianashie, 2024).

To illustrate these impacts further, several case studies from leading news organizations like *The Washington Post*, BBC, and Associated Press showcase the practical uses and benefits of AI in journalism. These companies have successfully integrated AI into their workflows, enhancing efficiency and audience engagement. Comparative analyses of AI-generated and human-written articles reveal strengths and weaknesses: AI excels in processing large amounts of data quickly and delivering fact-based content, while human journalists provide in-depth contextual insights and narrative quality (Amponsah & Atianashie, 2024)

This study employs a mixed-methods research design, combining qualitative and quantitative approaches to examine AI's impact on journalism. It includes interviews with journalists, editors, and technical experts, as well as a content analysis comparing AI-generated news articles to those written by humans.

2. LITERATURE REVIEW

The involvement of AI represents a significant shift in journalism, influencing how news is produced, disseminated, and consumed. This literature review examines how AI transforms traditional journalistic practices and identifies the new skills journalists need within AI-driven journalism. It summarizes findings from various sources to provide a comprehensive overview of this evolving landscape.

2.1 Transformation of traditional journalistic practices

AI is fundamentally transforming the creation of news. Automated journalism is one of the finest examples of this, in which AI systems translate structured data into news stories with minimal or no human involvement, thereby facilitating real-time reporting and the acceleration of the news process (Ioscote et al., 2024). Through this process of automation, journalists can redirect their focus from general reporting to analytical and investigative reporting. Moreover, data journalism powered by AI uses sophisticated algorithms to search databases of great size and reveal patterns, as well as anomalies, enabling reporters to dig up concealed stories and provide denser, data-driven accounts (Sonni et al., 2024).

An additional transformative element is the customization of content. News organizations currently employ machine-learning algorithms to examine user behaviour—such as reading patterns and interests—and provide personalized news feeds. This update not only enhances the level of engagement by readers but also enables news media to compete more competitively in saturated digital media (Ioscote et al., 2024; Sonni et al., 2024). Geographical variations also illustrate the global reach of AI: for instance, in China, the Xinhua News Agency uses an AI news presenter (Xin Xiaomeng) that leverages natural language processing (NLP) and facial recognition technologies to deliver round-the-clock news reporting. At the same time, Scandinavian news organizations, such as Sweden's MittMedia and Norway's Schibsted, have incorporated AI applications for the automated production of local news stories (Caswell, 2023). In Latin America, leading newspapers like Brazil's *Folha de S. Paulo* use AI-powered fact-checking tools to evaluate information in real time, thus helping to combat misinformation in regions where the spread of fake news can have dire social consequences (Ioscote et al., 2024). In addition, regular tasks like transcription, translation, and editing are increasingly being automated by AI, which improves the productivity of newsroom activities and allows for more focused use of human skills (Amponsah & Atianashie, 2024). Together, these phenomena demonstrate that AI is not a supporting element but rather a driving force behind the reassessment of conventional journalistic practices worldwide.

2.2 New skills and competencies in an AI-driven newsroom

As AI transforms journalism, reporters need new competencies. The first is data literacy. Reporters must be capable of reading and assessing enormous amounts of information feeding the algorithms in AI applications, so that their ability to generate good inferences and build accurate, context-rich stories is reinforced (Dierickx et al., 2024). Alongside data literacy, technical proficiency—specifically, a competency in programming languages such as Python—is ever more crucial. Such proficiency allows journalists to collaborate effectively with data scientists and engineers, develop bespoke

analytical tools, and examine the automation of numerous facets of the reporting procedure (Caswell, 2023).

Furthermore, a firm understanding of AI's ethical aspects is necessary. Contemporary journalists must possess knowledge of concepts like fairness, transparency, and algorithmic bias in AI-created content. Since most AI systems are only as good as the data they were trained on, it is paramount that journalists critically evaluate the outputs of the systems and not propagate embedded biases (Amponsah & Atianashie, 2024). Besides individual competencies, the contemporary newsroom demands effective multidisciplinary teamwork. There should be collaboration among journalists, data scientists, and AI researchers to develop media tools that assist narrative approaches with enhanced techniques without compromising ethical standards (Sonni et al., 2024).

Additionally, as AI tools evolve at a faster rate—across applications in deep learning, NLP, and automated fact-checking—continuing professional development is imperative. The ongoing education requirement is met by conducting regular training sessions, workshops, and participation in industry seminars (Biswal & Kulkarni, 2024). These efforts enable journalists to retain current levels of awareness regarding the newest developments and best practices concerning the application of AI. In general, the application of AI in journalism work needs to be a combination of old reporting abilities with new technical abilities, ethical awareness, and a teamwork mindset in order to be capable of utilizing the opportunities provided by technological advancement.

2.3 Case studies of AI integration in news organizations

Several real-world instances illustrate AI's practical impact on journalism. A notable example is *The Washington Post*'s utilization of Heliograf, an AI-driven bot that produces news articles directly from structured data. Not only does this enhance the speed of news creation, but it also enables journalists to focus on intricate, investigative reporting that demands human judgment (Ioscote et al., 2024).

Likewise, the BBC also integrated machine-learning algorithms into its newsroom operations. The platform "Juicer" aggregates and analyses content from a variety of sources, including assisting editors in rapidly identifying and taking advantage of trending topics. In so doing, the BBC enhances its content personalization to various segments of its audience and, concurrently, its capacity to react to the latest events with customized news stories (Sonni et al., 2024).

A further notable example is presented by the Associated Press, which employs AI to produce financial reports for various companies automatically. As implied by Amponsah and Atianashie (2024), such automation has enabled the Associated Press to generate numerous standardized reports with great precision, hence illustrating AI's potential in effectively managing repetitive tasks. Overall, these case studies illustrate that embedding AI in newsroom processes is double-edged: efficiency in standard processes and opportunity for more interactive, high-level reporting by freeing up human reporters to focus on work requiring sophisticated analysis and narrative.

2.4 Content analysis: AI-generated versus human-written articles

A key area of research is the comparison between narratives authored by AI and those authored by human authors. Research shows that while content authored by AI demonstrates proficiency in handling vast amounts of data and delivering prompt, factually correct accounts, it generally falls short of the richness and complexity found in articles authored by humans (Amponsah & Atianashie, 2024). That is, AI is competent in handling assignments with minimalist fact representation, such as in financial reporting or sports scores; yet it tends not to do contextual analysis or create involved storylines (Ioscote et al., 2024).

Articles written by humans possess the capability of incorporating subtle contextual hints, emotional connections, and moral repercussions in their text. Journalists employ personal intuition and artistic vocabulary to captivate readers and foster a more nuanced understanding of applicable topics. Even though generative AI has made advancements in mimicking innovative strategies—like the application of metaphors and the employment of multifaceted stylistic methods (Biswal & Kulkarni, 2024; Caswell, 2023; Schmelzer, 2024)—the "human touch" in the sense of its ability for practicing ethical discernment and adaptive narration is difficult to duplicate entirely. Moreover, though AI programs can generate content rapidly and in large volumes, they still need human supervision to be provided to make sure there is narrative consistency and to amend the biases the automatic processes unwittingly perpetuate (Dierickx et al., 2024; Sonni et al., 2024). Consequently, the content analysis underscores that although AI improves the efficiency of information processing, the integrity of high-quality journalism remains reliant on the unique advantages of human creativity and ethical judgment.

2.5 Broader implications and ethical considerations

The growing incorporation of AI in the journalistic field provokes numerous ethical and social issues. Among the primary concerns, the major concern is transparency; the media organizations have to disclose the terms under which AI technologies are implemented in content creation since the comprehension of information sources is important for sustaining public trust (Harb & Qabajeh, 2024). It is also vital to resolve the issue of algorithmic bias. Since AI systems learn from historical data, they can perpetuate and reinforce existing biases. To mitigate these risks, it is important that media companies regularly audit AI systems and use diverse, representative datasets (Amponsah & Atianashie, 2024; Dierickx et al., 2024).

Another key ethical concern is data privacy. Personalization using AI demands large quantities of user data, giving rise to substantial data collection, storage, and use practices, and raising serious issues of data practice (Whittaker, 2024; Zuboff, 2019). Strong data protection practices—like encryption, anonymization, and strict data-protection measures—are called for to preserve individual privacy. Internal accountability practices like ethics committees and periodic auditing of AI deployment also ensure AI tools are properly used.

Also, regular ethical training for journalists is important. Regular workshops and cross-disciplinary discussions help to build a culture of ethical awareness, enabling journalists to critically consider where AI-generated content is likely to require additional human input. In balancing efficiency and fairness, media organizations must consider not just the benefits of rapid, personalized content delivery but also the longer-term consequences, such as the potential to create filter bubbles or spread misinformation. By developing and adhering to strict codes of ethics, news outlets can preserve their integrity while adopting emerging AI technologies.

2.6 Theoretical frameworks and sociocultural contexts

There are theoretical traditions that account for the broad impact of AI on the journalistic profession. Habermas' public sphere theory, for example, argues that AI-driven personalization will enhance public debate since news will be rendered more pertinent to personal interests; meanwhile, it has the potential to divide the public sphere in case the audiences are presented with only highly filtered information (Habermas, 1989). Similarly, Jenkins' convergence culture theory accentuates how digital technologies are breaking down the distinctions between media consumers and producers, thereby increasing user participation and content diversity (Jenkins, 2006).

Castells' examination of the network society places such shifts within the context of wider sociotechnological change. The use of AI in communication networks accelerates the speed of information exchange and opens up new mechanisms for automatic reporting, but it also creates insecurities surrounding the concentration of media power and the availability of digital content (Castells, 2010). Zuboff's theory of surveillance capitalism is a precautionary model for the commodification of personal data, arguing that the profit-seeking use of AI in journalism can lead to intrusive practices of data and a loss of privacy (Zuboff, 2019).

Finally, the study by Amponsah on the digital divide and media literacy highlights that unequal access to technological resources could marginalize particular groups and intensify existing disparities in access to information (Amponsah & Atianashie, 2024). Collectively, these frameworks affirm the necessity of a balanced application of AI to journalism—one that exploits the potential of technology without compromising the well-being of the public. These frameworks promote the creation of policy and practice aimed at optimizing transparency, safeguarding privacy, minimizing bias, and ensuring technological advancement augments and does not empower a knowledgeable and fair public debate.

3. METHODOLOGY

3.1 Hypothesis

This study hypothesizes that AI fundamentally transforms journalistic practices by introducing tools and methodologies that enhance efficiency, accuracy, and personalization in news delivery. Additionally, it hypothesizes that journalists need to acquire new skills and competencies to effectively work in an AI-driven newsroom.

To test these hypotheses, the study employed semi-structured interviews and content analysis as its primary methods of data collection and examination.

3.2 Means of collecting data

Semi-structured interviews

- Interviews were conducted with three journalists, editors, and technical experts who have experience working with AI tools in journalism.
  - Zaid Mushtaq, Editor, reporter, producer, and montage editor at *Al Rai* Jordanian newspaper.
  - Osama Alkhatatbeh, a journalist at Roya TV, a field reporter, a television reporter for news on various events, and an editor within the news broadcast team. He is a well-experienced reporter at Roya TV and also works in the sports department.
  - Shifaa Alqudah is a freelance journalist from Jordan, known for her work with various organizations and her podcast on female migrant worker rights. She has also covered local and international conferences, including the Conference of the Parties in Dubai. Alqudah has won awards, holds a scholarship with the February Network's Alternative Academy for Arab Journalism, and is Jordan's ambassador for the Human Rights Measurement Initiative.
- The interviews followed a semi-structured format, allowing for open-ended responses while ensuring that key topics were covered.
- Questions addressed the participants' experiences with AI, the impact on their work, the skills they deem necessary for working with AI, and any ethical concerns they encounter.

Content analysis

- A sample of news articles produced by AI and a sample of human-written news articles were collected.
- The AI-generated articles were sourced from different news organizations' articles marked to use AI tools.
- The human-written articles were selected from the same news organizations and covered similar topics to ensure comparability.

3.3 Means of examining data

Semi-structured interviews

- The interviews were transcribed and analysed using thematic analysis to identify common themes and insights.
- The responses were grouped based on recurring themes, such as the impact of AI on journalistic practices, the skills required to work with AI and ethical considerations.

Content analysis

- The content analysis compared AI-generated articles and human-written articles based on several criteria, including accuracy, depth, narrative quality, and style.
- Statistical analysis was conducted to quantify differences between the two sets of articles, focusing on aspects such as factual accuracy, comprehensiveness, and reader engagement metrics.

4. DISCUSSION

4.1 Semi-structured interviews

4.1.1 Summary of key-findings

Regarding the transformative impact on journalism: Respondents recognized AI's impact, transforming data collection and analysis. Automation could improve production speed and efficiency, freeing journalists for storytelling (Mushtaq, 2025).

Regarding skill development and competency needs: Journalists must develop new skills and competencies to use AI applications effectively. They need knowledge and technical skills for data analysis and reporting (Mushtaq, 2025). Learning and adapting to new technologies is crucial for journalists to remain relevant in the changing media landscape (Alqudah, 2025).

Regarding ethical considerations and challenges: Ethical considerations in the integration of AI in journalism include concerns about information reliability, human verification, and trust loss (Mushtaq, 2025). Transparency in AI technology use is crucial to avoid misinformation and maintain audience trust. Guidelines and standards are needed to address these ethical challenges in journalism (Alkhatatbeh, 2025).

Regarding collaboration between humans and AI: AI complements human journalists in data analysis and reporting, but storytelling, context, and ethical judgments are unique to human

endeavours. Balancing technological assistance with human oversight is crucial for maintaining journalistic integrity (Alqudah, 2025; Mushtaq, 2025).

Regarding future outlook and emerging technologies: Future AI will continue to change how journalism is carried out, for instance, editing and fact-checking are parts of tools proposed to increase quality in journalism; however, continuous debates about ethical implications and privacy concerns do remain (Mushtaq, 2025).

4.1.2 Impact of AI on journalistic practices

Enhanced efficiency and speed: AI technologies enhance efficiency in journalistic workflows by automating routine tasks like data gathering and report drafting, allowing journalists to focus on high-quality storytelling (Mushtaq, 2025).

Improved data analysis and insights: AI-powered data analysis is the future of journalism because it provides journalist with an understanding of audience preference, emerging issues, and public sentiment to effectively shape their content for relevance in reporting (Alqudah, 2025).

AI-powered fact-checking: Trusted databases are essential for fact-checking, as they help journalists identify inconsistencies and flag them for follow-ups, ensuring journalistic integrity and preventing the airing of potentially fake news in fast news environments (Alqudah, 2025; Mushtaq, 2025).

Personalization of content: AI technologies can personalize news content based on audience interests or behaviours, improving engagement and satisfaction. This can help media organizations retain their audience and foster a more informed public, but also raises concerns about echo chambers and one-sided information delivery (Mushtaq, 2025).

Ethical challenges and bias mitigation: The ethical implications of AI integration in journalism include potential bias issues, leading to biased reporting or stereotype reinforcement. To mitigate these issues, strategies such as diverse training data, periodic audits of AI output, and human oversight are necessary to maintain journalistic integrity (Alqudah, 2025; Mushtaq, 2025).

Training and skill development: Training in data analysis, AI tool usage, and ethics will be paramount in adapting to the complexities of the digital age. This requires continuous learning and professional development that equips journalists with both traditional reporting skills and technological proficiency (Alqudah, 2025; Mushtaq, 2025).

4.1.3 Skills and competencies required

Data literacy: A data-literate journalist needs to be abreast of how datasets are interpreted, and use analytics tools like Excel, R, or Python, enabling them to undertake quality reporting and identify data trends or even transform it into a consumable format as the basis required for data-driven journalism (Mushtaq, 2025).

Technical proficiency: In integrated use, such AI technologies for journalism go from simple tasks like content generation, transcription, and sentiment analysis to becoming even more important with regard to technical skills. Continuous learning of NLP and machine-learning algorithms will be inevitable if journalists wish to enhance productivity and creativity (Alqudah, 2025).

Ethical understanding: The use of AI in journalism raises ethical concerns, including potential misinformation, privacy concerns, and data usage ethics. Journalists need training to critically analyse AI output to avoid stereotyping and misinformation, ensuring the profession maintains public trust and ethical standards (Alkhatatbeh, 2025).

Adaptability and flexibility: A journalist needs to always learn new skills and put themselves in a place where they can adapt to rapid technological change in the field. They should be open to new storytelling formats, and AI tools, and respond to emerging audience needs (Alkhatatbeh, 2025).

Critical thinking and analytical skills: Critical thinking is a core competency for journalists, requiring a critical view of data and AI outputs. This involves analysing credibility, questioning sources, and examining ethical implications, fostering well-rounded and responsible journalism (Mushtaq, 2025).

Collaboration and communication skills: Collaboration is very much essential in integrating AI technologies in journalism, wherein a journalist, a data scientist, and an AI specialist come together to develop the tool. It requires effective communication skills: to clearly outline the journalistic objectives and requirements while presenting insights in an understandable and engaging manner (Alqudah, 2025).

Storytelling and creative skills: The rise of AI has affected storytelling, but the work of a journalist needs to be more developed in their storytelling to make stories appealing to audiences. Nurturing creativity and exploring new storytelling methods is crucial, not replacing them (Mushtaq, 2025).

4.1.4 Ethical considerations

Verification of information: The ethical issue in AI-driven journalism is information verification, requiring journalists to independently verify information with accredited sources and understand AI's limitations to prevent misinformation and ensure integrity in their reporting (Mushtaq, 2025).

Transparency and disclosure: Transparency is crucial for gaining public trust in AI-generated news content. Media organizations should disclose the sources of information and data analysis methods, fostering trust and dispelling doubts about the truthfulness of information. It also clarifies AI's limitations and potential errors in produced information (Alkhatatbeh, 2025).

Addressing bias: AI algorithms can introduce biases in data, potentially causing biased or unfair representation in journalism. Journalists should be aware of these biases and reduce them through routine audits and diversified training data. Addressing biases can lead to more equitable and representative media coverage (Mushtaq, 2025).

Privacy concerns: AI in journalism collects and analyses personal data, raising privacy concerns. Journalists must exercise discretion and seek informed consent for sensitive information. Privacy protection and legal and ethical considerations are crucial. Journalists should be aware of potential harm and the consequences of their reporting (Alqudah, 2025).

Accountability and responsibility: The increasing reliance on AI raises questions about accountability and responsibility in case of errors or misuse. Journalists are responsible for the information they publish, whether AI or human effort and must be prepared to address inaccuracies and ethical breaches (Mushtaq, 2025).

Ethical use of AI tools: The increasing reliance on AI raises questions about accountability and responsibility in case of errors or misuse. Journalists are responsible for the information they publish, whether AI or human effort and must be prepared to address inaccuracies and ethical breaches (Alqudah, 2025; Mushtaq, 2025).

Maintaining human oversight: AI's potential is significant, but human oversight is crucial in content creation. Journalists and editors must review AI-generated content for ethical standards, preventing stereotypes and misinformation. This oversight ensures critical thinking and integrity in an increasingly automated journalism landscape (Alkhatatbeh, 2025; Mushtaq, 2025).

4.1.5 Future of AI in journalism

Enhanced efficiency and speed: AI technologies are bound to go a long way in massively improving news production in terms of speed and efficiency. According to the interviewees, AI was able to do routine jobs like data gathering and preliminary reporting so that journalists could be freed to do the heavy-lifting, more difficult, and creative aspects of the profession. Consequently, there is quicker news delivery as media organizations answer faster to breaking news and emerging stories. As the evolution continues, these AI tools will go on to automate more workflows and save newsrooms time spent on mundane tasks to improve overall productivity.

Improved data analysis and insights: Investigative journalism will be revolutionized by the ability of AI to analyse huge volumes of data in less time with complete accuracy. Osama and Zaid further stated that AI-powered systems can uncover important trends and stories buried in large amounts of data. In data-driven reporting, journalists will be able to make use of AI where advanced analytics is utilized to delve deep into complex issues (Alkhatatbeh, 2025; Mushtaq, 2025). This would raise the quality of journalism since reporters can now present well-researched and data-supported stories that really appeal to audiences.

Personalization of content: AI technologies will make news content personalized, catering to the needs and interests of particular readers. According to Zaid, Shifaa, and Osama, AI can analyse audience behaviours and preferences to craft personalized news experiences (Alkhatatbeh, 2025; Alqudah, 2025; Mushtaq, 2025). This may make audiences more engaged because readers will be receiving content that is most relevant to their interests. But it also brings in ethical issues on filter bubbles and the possibility of misinformation, which requires a very keen eye on how personalized content is curated and presented.

AI as a collaborative tool: Instead of replacing journalists, AI will be used as a collaborative tool to augment the capabilities of journalists. Shifaaa made a point of stressing that AI technologies should be considered as supportive tools to complement the human element of journalism (Alqudah, 2025). AI in news can augment the power of analysis with a journalist's critical thinking and ethical judgment intact. Such a collaboration might offer new ways to tell stories that incorporate the strengths of AI with human journalists' intuition and creativity.

Addressing ethical challenges: More use of AI technologies in journalism will automatically bring the need to address ethical challenges. According to Zaid and Osama, continuous discussions related to bias, privacy, and accountability are paramount to ensure that the use of AI is responsible (Alkhatatbeh, 2025; Mushtaq, 2025). Journalism has a clear-cut duty to outline guidelines and standards on how it should make use of AI and also train its journalists to navigate the challenges of its development. By being proactive in trying to resolve ethical considerations, the industry can develop a sense of responsibility and integrity regarding the emerging trends in technology.

Evolving skill sets for journalists: With the introduction of AI in journalism, the skill sets and competencies that are required by journalists will also need to evolve. According to Zaid, some of the competencies include data understanding, technical skills, ethical awareness, adaptability, critical thinking, and collaboration (Mushtaq, 2025). The more pervasive the application of AI tools becomes, the more necessary it will be for journalists to know and be able to apply such technologies without loss of quality in their reporting. Training and education programs will be essential to equip journalists to handle the changing face of AI in journalism.

Role of AI in fact-checking: AI technologies are bound to be some of the major interventions that might improve fact-checking processes. Zaid, Osama, and Shifaa see that AI tools will be able to help journalists to verify information and flag inaccuracies in real time (Alkhatatbeh, 2025; Alqudah, 2025; Mushtaq, 2025). By automating fact-checking, journalists can ensure that the information they publish is accurate and reliable, reducing the risk of spreading misinformation. This capability will be particularly valuable in an era where the rapid dissemination of information can lead to the spread of false narratives.

The human element in journalism: According to Osama, "However great, no AI can take the place of the human touch in journalism" (Alkhatatbeh, 2025). Shifaaa also raised her concern about the tendency toward overreliance on AI and tempered her words with assurance that the technology will not oust the human touch (Alqudah, 2025). They continue to narrate their stories with emotions important to their audiences, telling perspectives and experiences with diverse storytelling. The journalism of the future is how AI technologies are integrated in harmony with the core values of empathy, ethics, and human connection.

Exploring newer AI technologies: The future of AI in journalism is promising, with advancements in deep learning, NLP, and automated fact-checking poised to revolutionize the field. These technologies are set to enhance the efficiency, accuracy, and overall quality of news production and delivery.

Deep-learning algorithms can analyse vast datasets to uncover hidden patterns and trends that may not be immediately apparent to human analysts (Schmelzer, 2024). By leveraging deep learning, journalists can gain deeper insights into complex issues, enabling them to produce more data-driven and investigative reports.

NLP enables AI systems to understand, interpret, and generate human language with greater accuracy. This technology can assist journalists in various ways, from transcribing interviews and summarizing lengthy documents to generating initial drafts of articles (Biswal & Kulkarni, 2024). For instance, NLP tools can transcribe interviews in real time, allowing journalists to focus on the conversation rather than taking notes. This can enhance the accuracy and efficiency of the reporting process.

Automated fact-checking is a critical advancement in the fight against misinformation. AI-driven fact-checking systems can rapidly verify the accuracy of information, flagging potential falsehoods and ensuring that news content remains credible and trustworthy (Whittaker, 2019). Journalists can use automated fact-checking tools to enhance the integrity of their reporting. By integrating these tools into their workflows, they can quickly verify information before publication, reducing the risk of disseminating false or misleading content. This not only enhances the credibility of news organizations but also helps build public trust in journalism (Schmelzer, 2024).

The integration of deep learning, NLP, and automated fact-checking into journalism holds immense potential to revolutionize the industry. These technologies can enhance the efficiency and accuracy of news production, enabling journalists to produce high-quality content more quickly and effectively. They also offer new opportunities for personalized storytelling and audience engagement, helping news organizations meet the evolving needs of their readers.

Interdisciplinary collaboration: The future of journalism with AI is a collaborative one, where human creativity and critical thinking are complemented by the analytical capabilities of AI technologies. Interdisciplinary collaboration between journalists and technologists is essential. By working together, they can design and implement AI tools that meet the specific needs of newsrooms while ensuring ethical practices are maintained.

Journalists bring their expertise in storytelling, ethics, and audience engagement, while technologists contribute their knowledge in data analysis, machine learning, and software development. This collaborative approach ensures that AI tools are tailored to journalistic workflows and align with the standards of responsible journalism (Biswal & Kulkarni, 2024). Regular reviews and refinements of AI tools by interdisciplinary teams help address ethical concerns and enhance performance, fostering a culture of continuous improvement and innovation (Caswell, 2023).

In summary, the future of journalism with AI will rely heavily on interdisciplinary collaboration. By embracing this partnership, news organizations can navigate the challenges and opportunities of the digital age, delivering high-quality, personalized content that meets the needs of their audiences and upholds the core values of journalism.

4.1.6 Personal insights and recommendations

Embrace continuous learning: One of the most critical recommendations is that journalists commit to continuous learning. As Zaid emphasized, the rapid pace of technological advancement necessitates that journalists stay informed about the latest AI tools and their applications in journalism (Mushtaq, 2025). This can be achieved through attending workshops, online courses, and industry conferences focused on AI and data journalism. The more investment journalists make in education, the better the technical capability will be to use AI to enhance reporting.

Foster a culture of collaboration: Shifaaa emphasized that while news organizations do need to work on collaboration between editorial and technology, this is where effective integration of AI can actually happen in journalistic workflows, with journalists and technologists getting together and working (Alqudah, 2025). The collaboration could yield specific AI tools designed for the needs of journalists. It will ensure that technology does not become an obstacle but rather an enabler. Encouraging openness and collaboration could give way to more innovation and better-quality journalism.

Prioritize ethical considerations: As AI technologies continue to become more pervasive, journalists need to ensure that ethical considerations are at the top of everything they do. According to Osama and Zaid, understanding the ethical implications of using AI is going to be important to maintaining credibility and trust with audiences (Alkhatatbeh, 2025; Mushtaq, 2025). Training in recognizing potential biases in AI-created content and ways of mitigating those biases is necessary among journalists. In this regard, the requirement of clear ethical guidelines on the use of AI in journalism will ensure the reasonable and transparent use of this technology.

Maintain the human touch: Osama added that though AI tends to have a lot of benefits, journalism must maintain a human touch (Alkhatatbeh, 2025). In regard to journalists, it means that their reporting should reflect a distinctive voice and perspective and that their stories should move audiences on an emotional level. It is the personal touch that will distinguish journalism from automatically created content. The narration of diverse stories with different experiences and perspectives should therefore remain a focus, where AI enhances storytelling without eliminating the creativity of a journalist.

Engage with audiences: The foundation of trust and credibility in journalism lies in engaging with the audience. Shifaaa emphasized the importance of getting responses from readers to do better and be more transparent. Journalists must also engage their audiences in the use of AI during the production of content (Alqudah, 2025). In such a way, journalists would understand what was expected and what was of concern to their audiences, so they could shape their reporting accordingly.

Balance innovation with tradition: While embracing this AI technology, the journalist should not lose their grasp on the rich tradition of conventional journalistic practices. Osama added that dependence solely on technology alone may cause one to lose that human touch which is important in storytelling (Alkhatatbeh, 2025). They need to seek a balance between innovation and tradition by letting AI improve their work while remaining firmly rooted in core journalistic principles of accuracy, fairness, and empathy.

4.2 Content analysis

4.2.1 Accuracy and factuality

Verification of information: Human-generated articles provide valid information through facts, statistics authenticated, and expert quotations. Statistics from Duke Reporters' Lab and expert opinions, such as that of John P. Wihbey, establish the basis for Meta's action in ending the fact-checking program.

AI-generated articles are less deep in the verification of facts and will not discuss in detail the possible consequences or criticisms of the user-generated "community notes" system.

Contextual accuracy: The human-generated article by Meta places facts in broader social and political contexts, discussing fact-checking initiatives, historical context, misinformation, and implications for democratic discourse.

However, the AI rendition lacks depth in contextualizing facts, leading to superficial understanding and a lack of nuances critical for informed discourses. This is a call for more comprehensive and contextualized information.

Use of data and statistics: Meta's human-written article effectively presents facts and statistics, highlighting the rise in active fact-checking projects and their peak in 2022.

However, the AI-sourced article lacks specific statistics or studies, potentially weakening the presentation of facts and limiting readers' understanding of the situation. Overall, the human-written article enhances the veracity of Meta's argument.

Expert opinions and credibility: The article produced with AI incorporates additional expert voices, bringing a sense of balance in views on Meta's decision and possible bias in fact-checking initiatives. It lacks expert references, though, which makes the information a bit less authoritative. The voices of experts within the article give credence to its accuracy and varied knowledge.

Potential for misinformation: Throwing Back at Misinformation: The human-written article actively engages in the issue of misinformation, talking about the setbacks that fact-checking initiatives face and the possible outcomes of Meta pulling out from the program. Strong journalism is underscored as key in countering misinformation, while the role of fact-checkers is upheld to add context and clarity to misinformation. In this way, the proactive means of addressing misinformation add to the accuracy and relevance of the article.

4.2.2 Depth and context

Historical contexts: Human-written articles bring light to the changing face of fact-checking initiatives on the digital front; landmark events like the 2016 US presidential election and Brexit are discussed in detail.

AI-generated articles might just touch on how the fact-checking program of Meta has changed; hence, providing a very surface-level understanding of the subject and lacking an appreciation for when a pivot occurred in the world of online information and misinformation.

A nuanced discussion of issues: AI-generated articles delve deeper into an understanding of the issues at stake in fact-checking and content moderation, integrating multiple perspectives and concerns about perceived biases. They often do not delve deeply enough to help readers understand the wider implications of content moderation practices, such as the post-Meta decision and the possible increase in misinformation. Both types of articles contribute to a more comprehensive understanding of the challenges with which social media platforms must contend.

Engagement with expert opinions: While the human-generated articles make much better use of expert views in adding depth to fact-checking and content moderation discussions, they support the different perspectives by quoting experts like Lucas Graves and John P. Wihbey. The articles generated by AI lack specific names or in-depth information to back up what they are saying, hence the reduced authority and a doubtful reader.

4.2.3 Writing style and tone

Clarity and precision: The human-generated articles have a very straightforward writing style, addressing the fact-checking program that has been set up by Meta. This style of writing is concise; therefore, anyone reading will easily grasp what it is about within a very short period. The AI ones may be general: the levelling out of fact-checking initiatives, therefore leaving more room for disinformation.

Tone: Human-generated articles are more critical and analytical, often encouraging readers to reflect on the value of factuality in news. This is demonstrated through Wihbey's involvement in the material on the evolution of fact-checking, showing responsible consideration of journalism. AI articles have a more neutral and descriptive tone, presenting information without engaging a critical tone, as was seen in human-generated articles. This may incite more thinking and conversation due to a lack of deep analysis.

Use of quotations and expert opinions: Human-written articles use quotes from experts, such as Lucas Graves in the article analysed, to create a balanced view. Quotes lend a certain weight to the narration and a well-rounded perspective. In this case, AI-generated articles may lack direct quotes or deep reflections; thus, the article may be less interesting for readers. On the other hand, human-

written articles often provide readers with a well-rounded perspective, enabling them to make informed decisions based on evidence and public opinion.

Engagement with the audience: Human-written articles have rhetorical questions to engage the audience and allow them to form an opinion and build interaction. In this way, readers can form opinions on topics through human-generated articles, while generated articles may not be as appealing and interactive. While AI articles provide great information, they do not really make the readers reflect on their opinions or experiences, which makes the reading passive.

Emotional resonance: Human-written articles often depict urgent issues, such as misinformation in the realm of journalism in Gaza. These are usually emotionally captivating to the audience, where the author mentions the "grave risk" of the patients due to misinformation and the unavailability of resources.

While AI-generated articles are deeper in information, they miss the emotional resonance of human-generated articles. This may lead to a lesser reading experience wherein the readers cannot get themselves compelled enough to take the material to heart quite as much. Overall, human-generated articles become all-rounded and emotional as far as reporting on pressing issues is concerned.

4.2.4 Narrative quality and creativity

Storytelling techniques: Human-written articles are replete with anecdotes that capture the attention of readers and put information into context. A story about Meta's decision to end its fact-checking program, for instance, opens with a thick description of the cultural and political climate—a framing of a struggle between free speech and misinformation. The story is situated within a larger narrative of shifting society and its impact on democracy.

Human-written articles tend to be more in-depth, while AI ones fall into a more expository, straight style. Facts and opinions are presented linearly, which makes the reading experience more report-like than a story. This can make the reading less interesting since the same feeling of urgency or importance might not be raised by the article.

Character development and perspectives: Human-created and AI-generated articles give different insights into the characters. Human-created articles showcase a multi-dimensional debate where the motivations and concerns of several parties are concerned. Quotes, such as from John P. Wihbey and Lucas Graves, show fact-checking to have evolved over time and, therefore, offer a historical context.

There is no character development or depth in the AI-generated articles; for instance, there are critics mentioned but not explained. The story will be less emotionally appealing since it does not give a clear view of the background or motives of the critics. As a whole, whether human-created or AI articles are better depends on the needs and perspectives of the audience.

Imagery and descriptive language: Human-generated articles are usually descriptive in style, using language that may appeal to the interest of a person. For example, it describes what happens in Gaza due to misinformation and a lack of resources. It would evoke empathy or concern from the reader; therefore, more effective.

On the other hand, AI-generated articles are straightforward, lacking flair for description that may make the reading more colourful. This may make the issues sound more clinical and hence incapable of impressing the same feelings in listeners.

Thematic depth and exploration: Human-generated articles go deeper thematically, allowing the digging of issues such as what tech companies like Meta mean to society and democracy. They debate the consequences of giving up fact-checking, accountability, and the role of journalism in a democratic society.

AI articles focus superficially on significant themes, such as misinformation and user contributions, possibly not to engage or inspire reflective thinking about the implications of such themes. This can result in a less rich and engaging narrative since the text does not fully explore the ramifications of these themes or the changes that have brought humanity to this moment.

5. CONCLUSIONS

This study explored AI's integration into journalism, focusing on its transformative impact, ethical considerations, and the skills journalists need to adapt to this evolving landscape. Semi-structured interviews with industry professionals and a comparative content analysis of AI-generated and human-written articles revealed several key findings that underlined the dual nature of AI as both an opportunity and a challenge for the field of journalism.

5.1 Summary of findings

This study explored AI's integration into journalism, focusing on its transformative impact, ethical considerations, and the skills journalists need to adapt to this evolving landscape. Semi-structured interviews with journalists, editors, and technical experts revealed key themes capturing the current and future trajectory of journalism in the AI age.

- Increased efficiency and speed: AI tools greatly enhance the efficiency and speed of news production by facilitating data collection and analysis processes. This shift not only accelerates the news production cycle but also allows for a more agile response to breaking news events (Mushtaq, 2025).
- Quality of reporting: AI-generated articles excel in factual accuracy and the ability to process large volumes of data, but they usually lack the depth and narrative quality that human journalists provide. Human-written articles are found to be more contextual and appealing with emotional engagement and storytelling.
- Ethical considerations: Many respondents were concerned that biased AI algorithms might crystallize the bias already in the news (Alkhatatbeh, 2025). Transparency in AI-created content is crucial, as audiences need to have confidence in the news at a time when misinformation thrives.
- Skill development and competency needs: Integrating AI requires journalists to shift their skillsets, continually learning and adapting to new technologies, including data interpretation, AI-driven storytelling, and critical assessment of AI output (Alqudah, 2025).
- Human-AI collaboration: Interviewees believe that AI should support and not replace human journalists, as the core of journalism—storytelling, ethical judgment, and contextualization—is something inherently human. A collaborative culture between editorial teams and technology experts could result in the development of AI tools to meet the needs of journalists and eventually upgrade the quality of reporting.
- Future outlook and emerging technologies: Interviewees were optimistic about the future of journalism due to continued AI technology development. They indicated positive trends such as automated editing and AI-powered fact-checking tools, which would save time for journalists in finding important trends or stories, thus increasing the overall quality of journalism (Mushtaq, 2025). However, the fast-changing face of AI requires continuous deliberation regarding its ethical use, bias, and privacy concerns.

5.2 Implications

AI integration in news journalism profoundly impacts the journalistic profession, media organizations, policymakers, and educators. While AI offers significant opportunities to enhance efficiency and personalization in news delivery, it also raises critical ethical challenges that must be addressed to ensure responsible use.

Potential benefits to audience engagement and trust

AI-driven journalism can significantly enhance audience engagement by offering personalized news content tailored to individual preferences. Personalized news feeds, powered by AI algorithms, allow media organizations to deliver content that resonates with readers, increasing user satisfaction and loyalty. According to Biswal and Kulkarni (2024), the ability to create personalized storytelling experiences can foster a deeper connection between readers and news organizations. This heightened engagement can lead to increased reader loyalty and higher retention rates.

AI technologies also enable media organizations to process and analyse vast amounts of data quickly, allowing for more accurate and timely reporting. AI-powered fact-checking tools can help journalists verify information in real time, reducing the risk of spreading misinformation and enhancing the credibility of news content (Schmelzer, 2024). By ensuring the accuracy and reliability of information, AI can help build public trust in journalism.

Risks to audience trust and ethical considerations

However, the long-term impact of AI on audience trust is more complex. While personalized news content can enhance engagement, it also raises concerns about filter bubbles and echo chambers, where readers are only exposed to information that reinforces their existing beliefs (Whittaker, 2019). This can limit exposure to diverse perspectives and hinder critical thinking, ultimately affecting the quality of public discourse. To mitigate this risk, news organizations must ensure a balanced and diverse range of content is delivered to their audiences, promoting a well-rounded understanding of current events.

Algorithmic bias is another significant ethical challenge in AI-driven journalism. AI systems

are trained on large datasets that may contain inherent biases, which can be perpetuated in the generated content. This can lead to skewed reporting that reflects existing prejudices and affects public perception and trust in the media (Amponsah & Atianashie, 2024). To address this issue, media organizations must implement regular audits of AI systems to identify and rectify biases. Ensuring diverse and representative data is used to train AI models is crucial to reducing bias in AI-generated content. Additionally, involving ethicists and social scientists in the development and deployment of AI tools can help create more balanced and fair algorithms (Dierickx et al., 2024).

Data privacy and transparency

The collection and use of personal data by AI systems pose significant privacy concerns. AI-driven journalism often relies on user data to personalize content and improve engagement, raising questions about how this data is collected, stored, and used (Zuboff, 2019). Media organizations must implement robust data protection measures, such as encryption and anonymization, to safeguard user information. Transparency in data collection processes and obtaining informed consent from users are also crucial to maintaining trust. Developing clear data privacy policies and adhering to legal and ethical standards can ensure the responsible use of personal data in AI-driven journalism (Whittaker, 2019).

Transparency and accountability are essential to address the ethical challenges associated with AI in journalism. Policymakers and media regulators must work together to establish guidelines that ensure AI systems are used responsibly and transparently (Schmelzer, 2024). These guidelines should include requirements for algorithm audits, data privacy protection, and transparency in AI-generated content. Media organizations should also implement internal accountability mechanisms, such as ethics committees and regular reviews of AI tools, to monitor and address potential ethical issues (Biswal & Kulkarni, 2024).

Maintaining human oversight

While AI can enhance efficiency and accuracy in journalism, it is essential to maintain human oversight in the content creation process. Human journalists should be involved in reviewing and editing AI-generated content to ensure it meets ethical standards and maintains the core values of journalism. This oversight helps prevent the dissemination of biased or misleading information and ensures that journalistic integrity is upheld (Whittaker, 2019).

In summary, the integration of AI in journalism presents both significant opportunities and ethical challenges. By addressing these challenges through transparency, accountability, and human oversight, media organizations can leverage AI to enhance audience engagement and trust while upholding the core values of journalism.

5.3 Future research

This study explores AI's integration into journalism, highlighting areas for further exploration. Future research should focus on the long-term impact on audience engagement and trust, the ethical implications of AI, and the development of comprehensive ethical frameworks. Additionally, further investigation into AI tools and their consequences for journalistic practices, such as fact-checking and automated editing software, could improve quality and efficiency.

To further understand the potential and impact of AI-driven journalism, future research should explore several speculative and forward-looking scenarios:

Personalized storytelling and audience engagement: Investigate how generative AI can create personalized storytelling experiences tailored to individual reader preferences by analysing user behaviour and engagement patterns (Biswal & Kulkarni, 2024). Studies could explore the effectiveness of personalized content in enhancing audience engagement and fostering a deeper connection between readers and news organizations.

Human-AI collaboration in creative content generation: Examine the collaborative potential between human journalists and AI systems in creative content generation. Research could focus on how AI can augment human creativity by providing initial drafts, generating ideas, and offering new perspectives (Caswell, 2023).

Ethical implications of AI-driven journalism: Address issues such as algorithmic bias, transparency, and accountability in AI-generated content (Whittaker, 2019). Developing ethical guidelines and standards for AI integration in journalism is crucial to ensure responsible use.

Long-term impact on audience trust and news consumption: Investigate how AI-generated content influences reader perceptions of credibility and trustworthiness (Sonni et al., 2024). Studies could explore the potential risks and benefits of personalized news feeds on audience engagement and loyalty.

Global perspectives on AI integration in journalism: Conduct comparative studies examining the implementation of AI technologies in diverse media landscapes (Ioscote et al., 2024). These studies can provide a comprehensive understanding of the global impact of AI on journalism.
Advances in AI technologies and their applications: Focus on the latest advancements in AI, such as deep learning, NLP, and automated fact-checking (Schmelzer, 2024). Investigating these emerging technologies can provide insights into how they can revolutionize journalistic practices.
Interdisciplinary collaboration and innovation: Explore the benefits of interdisciplinary collaboration between journalists, technologists, and ethicists (Biswal & Kulkarni, 2024). Such collaborations can lead to the development of innovative AI tools tailored to the needs of news organizations.

By addressing these areas, future research can provide valuable insights into the evolution of AI-driven journalism.

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