

AI-Driven Journalism and Media Practice: Challenges and Prospects in Newsroom Decision-Making in Nigeria

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Abstract

Artificial Intelligence (AI) has rapidly evolved into a transformative force in global journalism, reshaping newsroom practices, editorial workflows, and decision-making processes. This study examines the dynamics of AI-driven journalism in Nigeria, focusing on the challenges and prospects associated with its integration into newsroom decision-making. Drawing on secondary data from scholarly literature, industry reports, and media analyses, the paper situates AI as a socio-technical innovation that is redefining traditional gatekeeping roles and fostering a hybrid model of human–algorithm collaboration in news production. The paper identifies critical challenges hindering effective AI adoption, including infrastructural deficits, limited digital literacy among journalists, funding constraints, ethical concerns, and institutional resistance to technological change. It further highlights emerging risks related to algorithmic bias, misinformation amplification, editorial autonomy, and surveillance threats to press freedom. Anchored in Diffusion of Innovation and Technological Determinism theories, the paper argues that AI is not merely a supportive tool but a transformative agent influencing the structure and culture of Nigerian newsrooms. It concludes that sustainable integration of AI in journalism requires strategic investments in infrastructure, capacity building, and the development of ethical and regulatory frameworks. By critically examining both the constraints and potentials of AI-driven journalism, the paper contributes to ongoing discourse on the future of media practice in Nigeria and underscores the need for a balanced, human-centred approach to technological adoption in newsroom decision-making.

Keywords

AI-Driven, Challenges, Journalism, Media Practice, Newsroom, and Prospects



I. Introduction

Artificial Intelligence (AI) has moved from being a futuristic concept to a central force reshaping the global media landscape. Across the world, AI systems now assist journalists with tasks such as story detection, data analysis, content verification, trend prediction, audience analytics, and even automated news writing. These developments are not merely technological upgrades; they represent a structural transformation of newsroom culture and decision-making processes. As Ali and Hassoun (2019) note, AI-driven journalism introduces a new production ecosystem where algorithms perform roles previously dependent on human judgement, speed, and intuition.

Nigeria's media industry, like many across Africa, is gradually integrating these technologies. Major newsrooms are experimenting with chatbots, automated graphics, AI-assisted fact-checking, and social media listening tools, driven in part by the need to meet the increasing demands of digital audiences. Oginni (2024) explains that this shift is not optional; it reflects the realities of a media environment where immediacy, accuracy, and content personalization have become central to competitiveness (Emmanuel et al., 2025).

Despite these global trends, the Nigerian experience remains distinct. Many newsrooms struggle with infrastructural limitations, inconsistent digital literacy, inadequate funding, and cultural resistance to algorithmic decision-making. Radoli (2024) observes that African legacy media often operate in hybrid spaces where traditional editorial routines coexist with emerging digital technologies, creating tension and uncertainty among practitioners. Similarly, empirical research shows that journalists understand the relevance of AI but often lack the expertise or institutional support required for meaningful adoption (Udoh, Nsude & Oyeleke, 2021; Uchendu et al., 2026).

The integration of AI into newsroom decision-making is also layered with ethical dilemmas. AI systems can influence what becomes news, how stories are framed, and which audiences receive particular kinds of information. These shifts raise critical concerns about editorial autonomy, algorithmic bias, and the potential erosion of human values in journalistic judgement. Ojoajogwu and Samuel (2025) warn that AI-driven surveillance technologies, increasingly used by governments for “security purposes,” could threaten source confidentiality, press freedom, and investigative journalism (Aondover et al., 2025).

Yet, AI also presents immense opportunities. Studies affirm that AI can support investigative journalism by detecting hidden patterns in large datasets, accelerating verification processes, and reducing human error (Umeora, 2025). Other scholars highlight prospects such as improved newsroom productivity, enhanced fact-checking precision, faster content turnaround, and audience-centric programming (Gbaden, Gambo & Shem, 2024; Oyedeji & Uthman, 2024). These benefits underscore the need to understand how AI can strengthen journalism in Nigeria rather than displace professional standards.

At the organizational level, newsroom decision-making is becoming increasingly data-driven. Editors today rely on algorithmic dashboards, predictive analytics, and automated content assessment tools when deciding story priorities, audience targeting strategies, and platform-specific publication schedules. However, the extent to which these tools complement or conflict with human editorial judgement in Nigeria remains insufficiently studied. Therefore, to meaningfully navigate these tensions, there is a need for a systematic examination of how AI technologies influence newsroom decisions, the challenges journalists face, the ethical implications that emerge, and the prospects for a sustainable AI-integrated media ecosystem in Nigeria.

1.1 Problem Statement

Although AI offers transformative possibilities for journalism, its adoption in Nigerian newsrooms is hindered by multiple structural, ethical, and cultural obstacles. First, many journalists lack adequate knowledge of AI tools beyond basic automation features, leading to superficial or inconsistent integration. Udoh, Nsude and Oyeleke (2021) reveal that while awareness of AI is growing, actual operational proficiency remains limited, reinforcing reliance on manual processes.

Second, AI implementation is constrained by funding challenges and infrastructural inequalities. Oyedeji and Uthman (2024) note that many media houses, especially regional and privately-owned outlets, cannot afford advanced AI software or the continuous maintenance required to sustain digital innovation. This inequality widens the technological gap between Nigerian newsrooms and global media organizations.

Third, ethical and professional risks are escalating. AI generates content rapidly, but without adequate oversight, it may reinforce biases, amplify misinformation, or distort editorial priorities. Algorithms trained on unrepresentative datasets may produce skewed

news decisions, thereby undermining journalistic neutrality and credibility (Aondover et al., 2022; Gbaden et al., 2024).

Fourth, concerns about surveillance and press freedom have become more pronounced. AI-powered monitoring systems deployed by state institutions potentially undermine investigative reporting and journalistic confidentiality (Ojoajogwu & Samuel, 2025). This creates a climate of caution, especially for journalists covering political corruption, insecurity, or human rights abuses.

Finally, scholarly attention has only marginally addressed how AI affects newsroom decision-making, an area that is central to journalistic practice. Existing studies highlight challenges and opportunities but rarely interrogate how AI shapes editorial judgement, agenda-setting priorities, and the balance of power between human editors and technological systems (Aondover et al., 2022).

These problems highlight the necessity of critically examining AI-driven journalism in Nigeria, not only to document its effects but also to propose ethical and sustainable strategies that enhance newsroom decision-making processes.

II. Review of Literature

2.1 Theoretical Framework

The paper employed Diffusion of Innovation Theory and Technological Determinism Theory. Rogers' Diffusion of Innovation Theory explains how innovations are communicated, adopted, and institutionalized within social systems. Applied to AI in Nigerian journalism, the theory accounts for variations in adoption across organizations. Innovators, such as some national digital platforms, experiment with AI-driven tools, while the early and late majority adopt more cautiously due to resource constraints and limited training. Understanding these diffusion patterns helps explain adoption gaps and informs strategies to promote AI integration in diverse newsroom contexts (Gbaden et al., 2024; Udoh et al., 2021; Idris & Msughter, 2022).

Technological determinism posits that technology drives societal and organizational change. In newsrooms, AI is not a passive tool but a transformative force shaping editorial decisions, workflows, and professional roles (Radoli, 2024). AI's influence extends to prioritization of stories, automated content ranking, and predictive analysis of audience engagement. This theory highlights the structural impact of AI and its capacity to redefine journalistic norms, independent of human intent (Vitalis et al., 2025).

III. Research Methods

This study used secondary data to examine AI-driven journalism and media practice in Nigeria, with particular focus on its challenges and prospects in newsroom decision-making. Data were sourced from scholarly journal articles, industry reports, policy documents, media publications, and credible online databases addressing artificial intelligence in journalism, digital media transformation, and newsroom practices within Nigeria and comparable contexts. The study employs a thematic and interpretive analytical approach to synthesise existing literature, identify recurring patterns, and critically evaluate how AI technologies are reshaping editorial processes, gatekeeping functions, and decision-making structures in Nigerian newsrooms (Teniola et al., 2025). Through this approach, the study draws insights into the ethical, professional, and institutional implications of AI adoption, while also

highlighting opportunities for innovation, efficiency, and enhanced news production in the evolving media landscape.

3.1 Artificial Intelligence in Journalism

Artificial intelligence encompasses computer systems capable of performing tasks traditionally requiring human intelligence, including learning, reasoning, problem-solving, and decision-making (Oginni, 2024). In the context of journalism, AI manifests in diverse tools and applications, ranging from automated news writing and transcription services to predictive analytics, chatbots, content recommendation engines, and automated video and image processing (Ali & Hassoun, 2019; Oyediji & Uthman, 2024). These technologies facilitate the efficient handling of large datasets, enable the detection of patterns and trends, and provide journalists with insights to enhance decision-making processes (Usman et al., 2022; Mojaye & Aondover, 2022).

The application of AI in journalism is not merely technical; it represents a paradigmatic shift in the epistemology of news production. Gbaden, Gambo, and Shem (2024) describe AI as a socio-technical innovation that redefines the roles of journalists, editors, and newsroom managers. AI systems increasingly contribute to content prioritization, editorial planning, and fact verification, effectively participating in decision-making processes that were traditionally human-centered. Ali and Hassoun (2019) refer to this phenomenon as "algorithmic co-production," emphasizing the collaborative creation of news between humans and machines (Onyejelem et al., 2025).

However, AI adoption in Nigeria is constrained by systemic factors. Gbaden et al. (2024) highlight infrastructural deficits, including inconsistent power supply, limited internet connectivity, and the high costs associated with AI tools, which impede widespread implementation (Maikaba & Msughter, 2019). Furthermore, low levels of digital literacy among journalists result in underutilization of AI tools or misapplication, which can compromise the intended efficiency and quality gains (Udoh, Nsude, & Oyeleke, 2021). These factors underscore the complexity of AI adoption and highlight the need for context-specific strategies to facilitate sustainable integration into Nigerian journalism (Aondover & Ademosu, 2025).

3.2 Newsroom Decision-Making in the Digital Era

Newsroom decision-making traditionally involved editorial evaluation of story relevance, timeliness, public interest, and newsworthiness. Gatekeeping the filtering and selection of information before dissemination has historically been central to journalistic practice (Olawuyi & Enuwah, 2024). Editors and journalists exercised professional judgment to prioritize content, ensure ethical compliance, and maintain organizational standards.

The integration of AI introduces a hybrid model of decision-making in which algorithmic systems complement human judgment. AI tools provide real-time insights into audience behavior, trending topics, and engagement metrics, thereby influencing story selection and prioritization (Etumnu & Azubuike, 2024). This has significant implications for editorial autonomy, transparency, and accountability. Lawal, Usman, and Mohammed (2024) observe that while AI reduces workload and accelerates production, Nigerian journalists often express concerns that reliance on algorithms may undermine critical editorial oversight and ethical judgment.

Additionally, AI systems can unintentionally introduce bias into news selection. Algorithms designed to maximize engagement may prioritize sensational or popular content over stories of public importance, potentially distorting the public agenda (Radoli, 2024). As a result, newsroom decision-making in the AI era requires not only technological competence but also ethical vigilance and critical awareness.

3.3 Challenges of AI Integration in Nigerian Journalism

A substantial body of literature identifies multifaceted challenges facing AI adoption in Nigerian media organizations:

1. *Technological and infrastructural barriers*: Gbaden et al. (2024) highlight unreliable electricity, poor internet connectivity, and expensive AI subscriptions as major obstacles to adoption. Without reliable infrastructure, media organizations struggle to integrate AI effectively.
2. *Limited awareness and digital literacy*: Udoh et al. (2021) found that many Nigerian journalists lack sufficient knowledge of AI applications, which limits their ability to utilize these tools for investigative reporting, content curation, and editorial decision-making.
3. *Ethical and professional dilemmas*: Okiyi and Nsude (2019) caution that AI-generated content may compromise journalistic standards, including truthfulness, fairness, and accountability. Automated news production risks introducing bias, inaccuracies, or a lack of context, potentially undermining public trust.
4. *Job insecurity and resistance*: Radoli (2024) notes that journalists perceive AI as both an opportunity and a threat. The automation of routine tasks has provoked anxiety regarding professional displacement, leading to resistance to technological change.
5. *Regulatory and policy gaps*: Umeora (2025) emphasizes the absence of comprehensive regulatory frameworks to guide ethical AI use, including data protection, authorship rights, and algorithmic accountability.
6. *Cultural and organizational resistance*: The adoption of AI requires not only technological investment but also a shift in newsroom culture. Organizations with deeply entrenched editorial routines may resist the introduction of AI, preferring traditional methods despite potential efficiency gains (Oyedeji & Uthman, 2024).

These challenges illustrate the complexity of AI adoption in Nigeria and highlight the need for strategic, ethical, and context-sensitive interventions to facilitate effective implementation.

3.4 Prospects and Opportunities of AI in Nigerian Journalism

Despite the challenges, AI presents numerous opportunities for enhancing newsroom performance, editorial quality, and audience engagement:

1. *Efficiency and productivity*: AI tools automate routine tasks such as transcription, captioning, and preliminary fact-checking, allowing journalists to focus on investigative and analytical reporting (Etumnu & Azubuibe, 2024).
2. *Enhanced investigative journalism*: Umeora (2025) highlights that AI-enabled data analysis facilitates the detection of patterns and anomalies in large datasets, supporting complex investigative projects that were previously time-consuming or impossible.
3. *Improved audience engagement*: Oyedeji and Uthman (2024) emphasize that AI analytics help media organizations understand audience preferences, tailor content, and predict trending topics, thereby increasing relevance and reach.
4. *Fact-checking and misinformation control*: AI algorithms can identify manipulated images, detect disinformation, and verify the authenticity of claims on social media, improving content accuracy and credibility (Oginni, 2024).
5. *Resource optimization*: By automating repetitive tasks, AI allows organizations to allocate human resources strategically, maximizing editorial quality and reducing operational costs (Ali & Hassoun, 2019).
6. *Professional development*: AI adoption provides opportunities for journalists to acquire new technical skills, fostering a workforce capable of integrating data-driven insights into editorial decision-making (Radoli, 2024).

These prospects suggest that, if implemented thoughtfully, AI can enhance journalistic standards, operational efficiency, and public trust in Nigerian media.

IV. Conclusion

This study has demonstrated that AI is fundamentally reshaping journalism and media practice, particularly in the domain of newsroom decision-making. In the Nigerian context, AI represents both a transformative opportunity and a complex challenge. On one hand, it enhances efficiency, enables data-driven editorial processes, strengthens investigative journalism, and improves audience engagement. On the other hand, its adoption is constrained by infrastructural limitations, inadequate digital literacy, funding deficits, and deep-seated cultural resistance within traditional newsroom structures. These constraints highlight the uneven nature of technological integration across Nigerian media organisations and underscore the broader realities of operating within a developing media ecosystem.

The paper further reveals that AI's influence extends beyond technical support to actively shaping editorial priorities, gatekeeping processes, and the overall logic of news production. While this shift toward algorithm-assisted decision-making introduces speed and precision, it also raises critical ethical concerns, including algorithmic bias, erosion of editorial autonomy, risks of misinformation, and threats to press freedom through surveillance technologies. These issues call for a cautious and reflective approach to AI adoption, one that balances innovation with the core values of journalism such as accuracy, fairness, accountability, and public interest.

Thus, the future of AI-driven journalism in Nigeria depends on the ability of stakeholders to navigate these tensions strategically. There is a pressing need for sustained investment in digital infrastructure, continuous training and capacity building for journalists, and the development of clear ethical and regulatory frameworks to guide AI use in newsrooms. Media organisations must also foster a culture of adaptability that embraces technological innovation while preserving professional judgement and human oversight. By aligning technological advancement with ethical responsibility and contextual realities, AI can be effectively harnessed to strengthen newsroom decision-making and contribute to a more resilient, credible, and forward-looking media landscape in Nigeria.

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