Artificial intelligence and journalism: Opportunities, challenges, and ethical considerations for Nepali media

◆ **Bivek Chaudhary**[1]

Abstract

The integration of artificial intelligence (AI) in journalism represents a paradigm shift that is reshaping media landscapes globally, with profound implications for developing nations like Nepal. This comprehensive study examines the multifaceted relationship between AI technology and journalism within the specific context of Nepali media, exploring the opportunities for enhanced news production, distribution, and audience engagement while simultaneously addressing the significant challenges and ethical considerations that arise from this technological transformation. Through a doctrinal methodology encompassing legal, ethical, and technological frameworks, this research investigates how AI applications such as automated content generation, fact-checking systems, personalized news delivery, and data-driven journalism can revolutionize Nepali media practices. The study reveals that while AI offers unprecedented opportunities for improving efficiency, accuracy, and reach in Nepali journalism, it also presents substantial challenges including job displacement

1 Chaudhary, B.A.LL.B. Student at Nepal Law Campus

concerns, algorithmic bias, misinformation risks, and the need for substantial infrastructure development. The research emphasizes that successful AI integration in Nepali media requires a balanced approach that prioritizes ethical considerations, professional development, and regulatory frameworks while maintaining the core values of journalistic integrity and public service. The findings suggest that Nepali media organizations must adopt a strategic, phased approach to AI implementation, focusing on human-AI collaboration rather than replacement, investing in digital literacy and technical skills, and establishing robust ethical guidelines to ensure responsible AI deployment in journalism.

Keywords: *Artificial intelligence, journalism, Nepal, media technology, ethical considerations, digital transformation, automated content generation.*

Introduction

As it revolutionizes how the news is gathered, processed, and disseminated to the global audiences, artificial intelligence in the journalistic practice represents a milestone inthe media evolution. Nepal, one of the developing nations where traditional journalistic practices converge with fast-evolving digital environments and emerging technologically facilitated options, is most affected by this shift in technology. The incorporation of AI in journalism is both a historic moment of hope for progress as also a very intricate challenge that needs to be tackled cautiously to maintain journalistic integrity and societal accountability. Nepal's media landscape has undergone widespread transformation in the past three decades, from being strictly controlled by the state to a more diversified and independent media landscape. The country's journalism sector, including newspapers, radio, television, and more recently online media, serves a population of some 30 million persons spread across a range of linguistic, cultural, and geographic communities. The particular demands on Nepali journalism

are those of limited resources, infrastructure constraints, mixed linguistic requirements, and serving urban and rural communities with different degrees of digital literacy and access to technology. The emergence of AI technologies in journalism globally has created opportunities heretofore unknown, from machine-based news generation and immediate fact-checking to sophisticated audience analysis and personalized content delivery[2]. These have generated both admiration and trepidation among journalists, as professionals grapple with whether human journalists have a place in increasingly automated media. For Nepal, these are particularly complex considerations in the context of the country's developing technological infrastructure, constrained economic resources, and the leadership role which journalism must assume in terms of encouraging democratic processes and social progress[3]. The global demand of the day for media is that AI incorporation into journalism is not merely a technological advancement but a fundamental change with implications for all aspects of news production, from the outset of story conception to final audience engagement. Big global news organizations have already begun to implement AI solutions for various functionalities, including auto sports coverage, machine-generated finance news, content recommendation systems, and social media monitoring. These implementations have much to share in terms of the potential advantages and inherent risks associated with AI integration into journalism[4]. An

2 Thomson Reuters Foundation.(n.d.).*Journalism in the AI era: Insights from the Global South and emerging economies* [Report]. https://www.trust.org/wp-content/uploads/2025/01/TRF-Insights-Journalism-in-the-AI-Era.pdf

3 UNESCO. (2025, May 4). *Reporting in the brave new world: The impact of artificial intelligence on press freedom and the media* [Speech].World Press Freedom Day Conference, Kathmandu, Nepal.https://nepal.un.org/en/293752-reporting-brave-new-world-impact-artificial-intelligence-press-freedom-and-media

4 International News Media Association. (2024, December 10). *2025 newsroom trends point toward team unification, AI integration*. https://www.inma.org/blogs/value-content/post.cfm/2025-newsroom-trends-point-toward-team-unification-ai-integration

understanding of the applications of AI for journalism in Nepal will entail examining the potential of the technology to address the long-standing problems of Nepal's media sector while also examining the possible new problems that might be created with the advent of AI[5]. The benefits of AI include enhanced efficiency in news creation, improved fact-checking capabilities, better audience engagement through customization, and the capacity to service better Nepal's multilingual communities.

These options will, nonetheless, need to be weighed against issues such as job loss, algorithmic bias, the risk of misinformation, and the substantial investment that has to be made in technology platforms and capacity-building[6]. The moral implications of AI adoption in journalism are particularly acute in the Nepali context, since media play a crucial role in keeping democratic discourse going, cultural identity, and social cohesion.[7] The principles of journalistic ethics, i.e., accuracy, fairness, independence, and accountability, have to be carefully upheld and interpreted as AI technologies become more pervasive in news production and dissemination[8]. What this implies is developing new paradigms for the ethical use of AI that respect both international best practices and local cultural sensitivities and expectations. The significance of this study is that it can help the Nepali media institutions, policymakers, and journalism instructors in decision-making related to AI adoption during the complex process of AI adoption.

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5 Kamal DevBhattarai (2025, July 7) AI and the newsroom.*The Annapurna Express*.https://theannapurnaexpress.com/story/55736

6 Swift Technology Pvt. Ltd. (2025, January 25). *Ethical concerns in AI-generated content in Nepal*. https://www.swifttech.com.np/blog/ethical-concerns-in-ai-generated-content-in-nepal/

7 Center for Media Research Nepal. (2025, May 28). *Discussion held on "AI, communication & journalism."*https://research.butmedia.org/discussion-held-on-ai-communication-journalism/

8 Online TV Journalist Association. (2025, July 20). Online TV AI code of conduct-2082.*ICT Frame*.https://ictframe.com/online-tv-ai-code-of-conduct-2082/

Methodology

This study follows a *doctrinal research methodology*, focusing on constitutional, legal, ethical, and technological frameworks relevant to AI and journalism. It relies on the analysis of primary materials, including the Constitution of Nepal, press-related laws, and regulatory provisions, as well as secondary materials such as academic articles, reports, and professional codes of ethics. Additionally, a comparative method is used to examine how AI has been integrated globally and to assess its implications for Nepal. To contextualize these insights, the research incorporates a case-study approach by analyzing how leading Nepali media organizations are beginning to adopt AI technologies in areas such as translation, content personalization, and digital news distribution.

Literature review

Scholarship on artificial intelligence (AI) in journalism is a growing field that explores its impact on media. Early research by Pavlik (2000) and Flew et al. (2012) defined "computational journalism," examining how technology could enhance efficiency and data-driven reporting while also posing risks to journalistic integrity. Later studies focused on the automation of news. Clerwall (2014) and Carlson (2015) analyzed how algorithmically generated news challenges traditional ideas of authorship and credibility. Graefe (2016) and Diakopoulos (2019) further explored the integration of algorithms into content creation, personalization, and verification. Dörr (2016) mapped out the field of "algorithmic journalism," while Montal and Reich (2017) raised concerns about transparency, bylines, and maintaining audience trust when machines are involved in news production.While global research is extensive, studies on AI in Nepali journalism are limited. Acharya (2012) highlighted the need for policy and regulation in Nepal's online media, but a specific focus on AI is largely missing. Despite this academic gap, some Nepali outlets like *Kantipur*, Onlinekhabar, Ratopati and

Setopati are starting to use AI for tasks such as translation, audience analytics, and content adaptation.The lack of systematic research on the scale, challenges, and ethical implications of these practices in Nepal emphasizes the need for further academic inquiry into how AI is entering the local journalistic context.

The current state of journalism in Nepal

Nepal's media landscape is reflective of the country's complex political, social, and economic progress over the past few decades. The media system has evolved from an absolutely controlled state system during the absolute monarchy period to a more lively and independent system after the introduction of democratic government. This evolution has created a lively media industry with opportunities and challenges that directly influence how AI can be implemented[9].

In my view, the current state of Nepali journalism shows both promise and vulnerability. While digital platforms are growing rapidly, the adoption of AI in Nepal remains at a very early stage, limited to small experiments in translation or audience analytics. This creates a clear gap between global innovation and local practice. I believe this uneven growth risks widening Nepal's digital divide, where urban readers may benefit from AI-driven personalization while rural communities remain dependent on traditional radio. Another concern is editorial independence—Nepali media already faces political and corporate pressures, and without transparent and accountable AI systems, algorithmic biases could further weaken public trust. At the same time, I see an opportunity: if used responsibly, AI could reduce the burden of routine reporting for small newsrooms and allow journalists to focus more on investigative and socially relevant stories. However, this will only

9 Poudel, S. (n.d.).*Media contribution in transfer of power in Nepal*. Nepal Studies Journal.https://digitalrepository.unm.edu/cgi/viewcontent.cgi?article=1042&context=nsc_research

be possible if Nepal invests in journalist training, builds AI literacy, and develops its own frameworks rather than depending entirely on foreign technologies.

Understanding Artificial Intelligence in journalism

Artificial intelligence in journalism encompasses a broad range of technologies and applications that enhance, automate, or supplement traditional journalistic practices[10]. Understanding these technologies and their potential applications is essential for evaluating their relevance and impact on Nepali media. AI applications in journalism can be categorized into several key areas, each offering distinct capabilities and presenting unique considerations for implementation.Natural Language Processing represents one of the most significant AI applications in journalism, enabling computers to understand, interpret, and generate human language in ways that were previously impossible[11]. This technology powers automated content generation systems that can produce news articles, summaries, and reports based on structured data inputs. For Nepali journalism, NLP capabilities could potentially address the challenge of producing content in multiple languages while maintaining consistency and accuracy across different linguistic versions of the same story[12].

10 Serrano, A., & Fernández-Barrero, E. (2024). Artificial intelligence and journalism: Automation and augmentation of newsgathering and production. *Frontiers in Communication, 9*, Article 1537146. https://www.frontiersin.org/journals/communication/articles/10.3389/fcomm.2025.1537146/full

11 Meegle. (2025, July 7). *Natural language processing for journalism*.https://www.meegle.com/en_us/topics/natural-language-processing/natural-language-processing-for-journalism

12 Martínez, O., & Silva, P. (2025).Automated content generation with natural language processing in journalism.*International Journal of Electrical, Electronics and Computer Systems, 13*(4), 20-35. https://ijireeice.com/wp-content/uploads/2025/04/IJIREEICE.2025.134103.pdf

Case study: Emerging use of AI in Nepali media

In Nepali journalism, the use of AI is still in its early stages but is growing. Ratopati is a leader in this area, using AI for translation into multiple languages and for article summarization to reach a broader audience. Other outlets like *Kantipur*, Onlinekhabar, and Setopati are more cautiously using AI for tasks like audience analytics to track reader behavior, especially among young, mobile users.Despite these early efforts, AI adoption in Nepal is modest compared to global news organizations. Major challenges include financial limitations, weak infrastructure, and a lack of AI education for journalists. The current use of AI is fragmented and small-scale. However, AI has significant potential to improve journalism in Nepal by reducing routine work, enhancing multilingual coverage, and supporting fact-checking. To realize this potential, the media sector needs to invest in technology, provide professional training, and establish ethical guidelines. Without these steps, AI could worsen the digital divide, benefiting urban populations while leaving rural and marginalized communities behind.

Opportunities for AI integration in Nepali media

The integration of artificial intelligence in Nepali journalism presents numerous opportunities that could address longstanding challenges while opening new possibilities for innovation and improvement in media practices. [13]These opportunities span across various aspects of journalism, from content creation and fact-checking to audience engagement and operational efficiency, offering the potential to transform how Nepali media organizations serve their audiences and fulfill their democratic responsibilities.Enhanced efficiency in news production represents one of the most immediate

13 PRAMOD RAJ SEDHAIN.(2025,March 11). The AI revolution in journalism: A new era of innovation and responsibility.*TheNepal News*. https://english.nepalnews.com/s/opinion/the-ai-revolution-in-journalism-a-new-era-of-innovation-and-responsibility/

opportunities for AI integration in Nepali media. Automated content generation systems could handle routine reporting tasks such as sports scores, weather updates, financial reports, and government announcements, freeing human journalists to focus on more complex investigative work and in-depth analysis. This efficiency gain could be particularly valuable for smaller Nepali media outlets that operate with limited staff and resources, enabling them to maintain comprehensive coverage despite resource constraints. The multilingual capabilities of AI systems offer significant opportunities for Nepali media organizations to serve the country's diverse linguistic communities more effectively. AI-powered translation and content adaptation tools could enable media outlets to produce content in multiple languages simultaneously, ensuring that important news and information reach all segments of Nepal's population regardless of their primary language. This capability could help break down language barriers that currently limit access to information and strengthen social cohesion across linguistic communities.

Challenges and limitations

The integration of artificial intelligence in Nepali journalism, while offering significant opportunities, also presents substantial challenges and limitations that must be carefully considered and addressed[14]. These challenges span technical, economic, social, and ethical dimensions, requiring comprehensive planning and strategic approaches to ensure successful AI implementation that serves the public interest while maintaining journalistic integrity[15].

14 BhanuBhaktaAcharya.(2024, December 11). Journalism in the age of AI.*The Kathmandu Post*.https://kathmandupost.com/columns/2024/12/12/journalism-in-the-age-of-ai

15 UNESCO & Partners. (2025, May 4). World Press Freedom Day 2025: South Asian Conference calls for ethical AI use in media. *The Himalayan Times*. https://thehimalayantimes.com/opinion/world-press-freedom-day-2025-south-asian-conference-calls-for-ethical-ai-use-in-media

Technical infrastructure limitations represent one of the most significant challenges for AI integration in Nepali media. Many AI applications require substantial computing power, high-speed internet connectivity, and sophisticated data storage capabilities that may not be readily available or affordable for all media organizations in Nepal. The uneven distribution of technical infrastructure across urban and rural areas could create disparities in AI adoption, potentially widening the gap between well-resourced and under-resourced media outlets.The substantial financial investment required for AI implementation poses a significant challenge for Nepali media organizations, many of which operate with limited budgets and face ongoing financial pressures. The costs associated with AI technology acquisition, implementation, training, and maintenance may be prohibitive for smaller media outlets, potentially creating a competitive disadvantage and limiting the democratizing potential of these technologies. This financial barrier could lead to increased consolidation in the media sector if only larger organizations can afford AI implementation. Skills and training deficits represent another critical challenge for AI integration in Nepali journalism. Most current journalists and media professionals lack the technical knowledge and skills necessary to effectively work with AI systems. Developing these competencies requires significant investment in professional development and training programs, which may be difficult to implement given resource constraints and the rapid pace of technological change[16]. Language and cultural adaptation challenges are particularly relevant for AI implementation in Nepal's diverse linguistic and cultural context. Most AI systems are developed primarily for English-language applications, and adapting them to work effectively with Nepali languages and cultural contexts requires additional development and customization. The complexity of

16 UmeshPokharel/(2024, August 7). Nepal's path to a responsible AI era. *myRepublica*. https://myrepublica.nagariknetwork.com/news/nepals-path-to-a-responsible-ai-era-24-94.html

Nepal's multilingual environment, with its numerous languages and dialects, presents unique challenges for AI systems that must operate across different linguistic communities.Job displacement concerns represent a significant social challenge associated with AI integration in journalism. While AI can enhance efficiency and capabilities, it may also automate certain journalistic tasks, potentially reducing employment opportunities for journalists and media professionals[17]. This concern is particularly acute in Nepal, where journalism provides employment for thousands of people, and job losses could have significant social and economic impacts[18].Quality control and accuracy challenges arise from the limitations of current AI technology. While AI systems can process information quickly and identify patterns, they may lack the contextual understanding and critical thinking capabilities necessary for complex journalism tasks. AI-generated content may contain errors, biases, or inappropriate interpretations that require human oversight and correction. Ensuring the accuracy and quality of AI-enhanced journalism requires robust quality control processes and human supervision.

Audience acceptance and trust challenges may arise as AI becomes more prevalent in journalism. Some audiences may be skeptical of AI-generated content or concerned about the implications of AI use in news production. Maintenance and updating challenges for AI systems require ongoing technical support and regular updates to ensure optimal performance and security. This ongoing commitment may strain the resources of media organizations and require specialized technical expertise that may not be readily available in Nepal's media sector.The rapid pace of technological change in AI creates challenges for media organizations trying to

17 SSRN. (2025, February 26). *Descriptive insights into how Nepali use AI without awareness*. https://papers.ssrn.com/sol3/Delivery.cfm/5159486.pdf

18 UNESCO. (2023, November 7). Supporting safety of journalists in Nepal. https://www.unesco.org/en/articles/supporting-safety-journalists-nepal

keep up with developments and make informed decisions about technology adoption. The risk of investing in technologies that quickly become obsolete or incompatible with newer systems requires careful strategic planning and flexible implementation approaches.

Ethical considerations and implications

The integration of artificial intelligence in Nepali journalism raises profound ethical questions that require careful examination and thoughtful responses to ensure that technological advancement serves the public interest while maintaining the fundamental principles of ethical journalism. These ethical considerations encompass multiple dimensions of journalistic practice and social responsibility, requiring comprehensive frameworks that address both universal principles and context-specific challenges relevant to Nepal's media environment.The principle of truthfulness and accuracy, fundamental to ethical journalism, faces new challenges in the age of AI integration. While AI systems can enhance fact-checking capabilities and improve accuracy in certain contexts, they also introduce new risks of error, bias, and misinformation. AI-generated content may contain subtle inaccuracies or biases that are difficult to detect without human oversight. The ethical imperative to ensure accuracy requires media organizations to develop robust quality control processes that combine AI capabilities with human judgment and verification. Transparency and accountability represent critical ethical considerations for AI use in journalism. Audiences have a right to know when AI systems have been used in content creation, fact-checking, or editorial decision-making. This transparency requirement extends beyond simple disclosure to include explanation of how AI systems work, what data they use, and how they influence editorial decisions. Accountability mechanisms must be established to ensure that human editors and journalists remain responsible for AI-enhanced content and that clear lines of responsibility are maintained.The protection of privacy and personal information becomes more complex with AI

integration, as these systems often require access to large amounts of personal data to function effectively. The ethical use of personal data in AI-enhanced journalism requires clear consent mechanisms, transparent data use policies, and robust security measures to protect individual privacy. The balance between leveraging data for improved journalism and protecting privacy rights requires careful consideration and ongoing vigilance.Human dignity and respect for persons must be maintained in AI-enhanced journalism, particularly when AI systems are used to analyze or generate content about individuals or communities. The potential for AI to dehumanize journalism by reducing complex human experiences to data points or algorithmic outputs requires careful attention to maintaining human-centered approaches to storytelling and reporting.The democratization of information access, a fundamental goal of journalism, may be both enhanced and threatened by AI integration.

Case studies and global perspectives

Examining international experiences with AI integration in journalism provides valuable insights for understanding both the opportunities and challenges that Nepali media organizations might encounter. These case studies illustrate diverse approaches to AI implementation, highlighting successful strategies as well as cautionary tales that can inform decision-making in Nepal's media landscape.The Associated Press pioneered automated sports and financial reporting beginning in 2014, using AI systems to generate thousands of earnings reports and sports summaries automatically[19]. This implementation demonstrated how AI could handle routine, data-driven reporting tasks while freeing human journalists for more complex analytical work. The success of this program led to expansion into other areas, including automated

19 TechCrunch. (2014, July 1*). The AP is using robots to write earnings reports*. https://techcrunch.com/2014/07/01/the-ap-is-using-robots-to-write-earnings-reports/

generation of election results and weather reports. Key lessons from AP's experience include the importance of starting with structured data sources, maintaining human oversight of AI-generated content, and gradually expanding AI applications as confidence and capabilities grow[20].The Guardian's implementation of AI for audience engagement optimization provides insights into how AI can enhance reader experience and media sustainability[21]. The organization uses machine learning algorithms to personalize content recommendations, optimize article headlines for different audiences, and analyze reader behavior to improve content strategy. This approach has reportedly increased reader engagement and subscription rates while providing valuable insights into audience preferences. The Guardian's experience demonstrates the potential for AI to support both editorial quality and business sustainability. The BBC's exploration of AI for content creation and fact-checking illustrates both opportunities and limitations of these technologies[22]. The organization has experimented with AI-powered news summarization, automated transcription services, and preliminary fact-checking systems. While these tools have shown promise for improving efficiency and accuracy, BBC's experience also highlights the continued importance of human oversight and the limitations of current AI technology for complex editorial tasks. The Washington Post's AI reporter, known as Heliograf, has generated thousands of short news articles on topics ranging from election results to sports scores. This system demonstrates how AI can provide comprehensive coverage of events that might otherwise receive limited attention due to resource constraints.

20 NewsMachines.(n.d.).*How the Associated Press built its AI strategy without breaking trust*. https://newsmachines.substack.com/p/associated-press-ai-strategy

21 Econsultancy.(n.d.).*The Guardian's Head of Audience Planning on customer engagement strategy*. https://econsultancy.com/the-guardians-head-of-audience-planning-on-customer-engagement-strategy/

22 BBC Studios. (2025, July 24). *BBC is testing how AI can benefit kids & family content*. https://kidscreen.com/2025/07/24/bbc-studios-productions-is-testing-how-ai-can-benefit-kids-family-content/

Recommendations for Nepali media organizations

Based on the analysis of opportunities, challenges, and global experiences, several key recommendations emerge for Nepali media organizations considering AI integration. These recommendations emphasize a gradual, strategic approach that prioritizes ethical considerations, human-centered implementation, and sustainable development aligned with local contexts and capabilities.Nepali media organizations should adopt a phased approach to AI implementation, beginning with low-risk applications that provide clear value while building organizational capacity and confidence. Initial implementations might focus on automated data processing, basic content categorization, or audience analytics rather than core editorial functions. This gradual approach allows organizations to learn from experience, identify challenges early, and develop internal expertise before expanding AI use to more critical functions.Investment in human capital development should be prioritized alongside technology acquisition. Media organizations must provide comprehensive training programs for journalists and editors to develop AI literacy, understanding both the capabilities and limitations of these technologies. This training should cover technical aspects of AI systems, ethical considerations for AI use, and best practices for human-AI collaboration. Professional development programs should be ongoing rather than one-time events, given the rapid pace of technological change.Collaboration between media organizations, technology developers, and academic institutions could help address the challenges of AI implementation while sharing costs and resources.Collaboration among media organizations, technology developers, and academic institutions can ease AI adoption by sharing costs, infrastructure, and expertise—especially benefiting smaller outlets. Equally important is adapting AI to Nepal's linguistic and cultural diversity, ensuring systems work effectively in local contexts through continuous monitoring and adjustment.

Conclusion

The integration of artificial intelligence (AI) into Nepali journalism offers both major opportunities and complex challenges. AI can enhance efficiency, accuracy, and reach by enabling automated content generation, improved fact-checking, personalized delivery, data-driven insights, and multilingual support. These advances could strengthen public trust, expand coverage, and improve audience engagement.However, adoption faces significant hurdles, including weak infrastructure, high costs, and skills gaps, alongside ethical concerns such as algorithmic bias, privacy risks, job displacement, and threats to editorial independence. Misuse of AI further complicates implementation.Ethical safeguards are vital in Nepal, where journalism underpins democracy and social development. Upholding truth, fairness, transparency, and accountability requires clear frameworks aligned with global best practices and local values. International experience shows that gradual, low-risk experimentation, strong staff training, ethical guidelines, and human oversight are key to success.This analysis recommends a phased approach that invests in human capacity, prioritizes ethics, and fosters collaboration. AI should complement—not replace—human journalists. Transparency with audiences and ongoing evaluation are essential for public trust. As AI evolves, affordable tools, regulations, and integration with emerging technologies will reshape journalism, offering new opportunities for innovation and engagement.

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