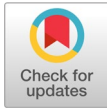


Journal of Public Policy Practitioners (JPPP)

Volume 5 Issue 1, Spring 2026

ISSN_(P): 2959-2194, ISSN_(E): 2959-2208

Homepage: <https://journals.umt.edu.pk/index.php/jppp>



Title: From Bureaucracy to Smart Governance: Challenges and Opportunities of Artificial Intelligence in Nepalese Public Administration

Author (s): Baburam Bhul

Affiliation(s): Office of the Auditor General, Nepal

DOI: <https://doi.org/10.32350/jppp.51.02>

History: Received: February 18, 2025, Revised: March 30, 2025, Accepted: April 30, 2026, Published: June 24, 2026

Citation: Bhul, B. (2026) From bureaucracy to smart governance: Challenges and opportunities of artificial intelligence in Nepalese public administration. *Journal of Public Policy Practitioners*, 5(1), 24–53.
<https://doi.org/10.32350/jppp.51.02>

Copyright: © The Authors

Licensing:



This article is open access and is distributed under the terms of [Creative Commons Attribution 4.0 International License](https://creativecommons.org/licenses/by/4.0/)

Conflict of Interest:

Author(s) declared no conflict of interest



A publication of
School of Governance and Society
University of Management and Technology, Lahore, Pakistan

From Bureaucracy to Smart Governance: Challenges and Opportunities of Artificial Intelligence in Nepalese Public Administration

Baburam Bhul*

Office of the Auditor General, Nepal

Abstract

The study examines how artificial intelligence (AI) operates in Nepalese public administration through its analysis of the pros and cons of AI in digital governance and e-service delivery. The study further analyses various such innovative solutions in Nepal. The research investigates how AI functions in public administration within Nepal through its qualitative research method that combines literature review and research study analysis. The data presents several obstacles for the implementation of AI because it shows a low adoption rate and there is insufficient digital infrastructure and a lack of skilled personnel required for implementation. Nepal lacks a clear legislative framework for the application of AI which raises additional ethical concerns about algorithmic bias and data privacy that must be addressed to win over the public. AI technology provides an essential opportunity to enhance public service delivery in crucial sectors which include health and agriculture, and disaster risk management despite the challenges that arise with AI implementation. The results indicate that public administration of Nepal will definitely benefit from AI application through the establishment of specialized capacity-building programs and development of comprehensive legal and regulatory frameworks and formation of digital ecosystem that encourages public support and participation in AI implementation.

Keywords: artificial intelligence, challenges, Nepal, opportunities, public administration

Introduction

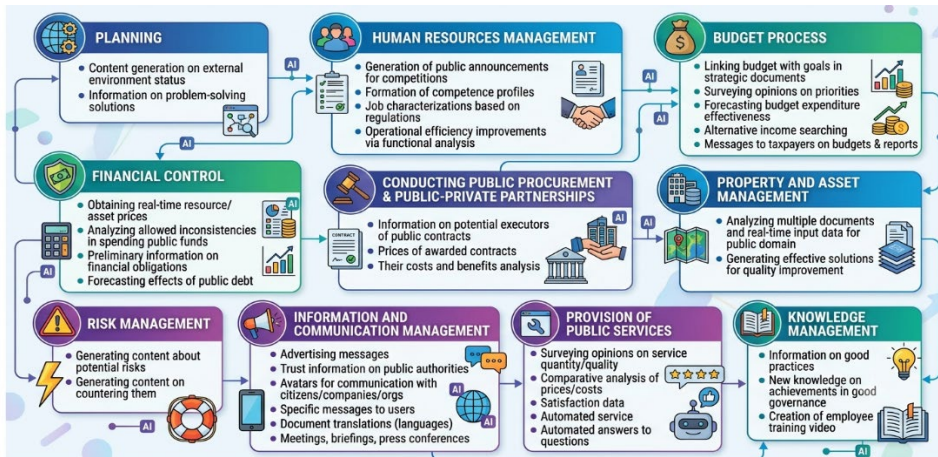
Public administration has evolved through about three centuries of progress; it started with its experimentation with generative artificial intelligence and then gradually turned into today's situation, where the technology is basically a core piece of modern global governance systems. If you zoom

*Corresponding Author: baburamsinghbhul@gmail.com

out, the historical development of AI goes back to the mid-20th century, when early work was mostly about automating repetitive tasks and trying to solve computing issues during the 1950s. Then later, as machine learning took off, along with big data analytics and cloud computing, the whole scope of AI expanded a lot more quickly than anyone expected, at least in practice. According to Mergel et al. (2023), AI is already able to improve complex decisions- making, better service delivery across sectors and a more optimal allocation of resources. In a way, leaders in the use of AI in public administration, the United States, Canada, and the United Kingdom are among the nations that take advantage of this potential to handle urgent governance problems. Predictive analytics, for example, has been used to support public health responses and urban planning, and it also helps increase citizen participation through AI driven platforms (Wirtz & Müller, 2018). And in order to make sure that AI systems actually strengthen public trust, while keeping transparency in government day to day work, many countries have set up regulatory frameworks. These frameworks establish ethical norms and also accountability obligations (Bertot et al., 2014; Dei, 2024).

Figure 1

Areas of Application of AI in Public Administration



Note. Developed and enlarged from Borissov and Hristozov (2024)

The Figure 1 demonstrates multiple AI application fields which researchers evaluated using essential activities that public administration

departments perform during their work in planning, human resources, budgeting and finance control, public procurement, asset management, risk management, communication, public service delivery, and knowledge management. AI provides benefits to these tasks by delivering insights that enable organizations to automate content creation and predict upcoming developments, while organizations examine the data and boost their operational effectiveness. The described activities in the following word cloud, encompass all tasks that require developing position role descriptions, writing official public statements, performing financial evaluations, conducting procurement research, assessing potential risks, and using automated communication systems to engage with the citizens.

Figure 2

Word Cloud



On the contrary, the research gap in AI studies across developing nations is clearly evident in the case of Nepal. Although scholars have published extensive work on the benefits of AI governance for Nepalese public administration, many of these papers overlook the nuanced social, economic, political, and cultural factors that influence how Nepalese public administration functions (Neupane, [2023](#)). Nepal currently faces significant challenges, such as political instability, widespread corruption, and limited technological advancement, which hinder the smooth integration of AI into government workflows (Jha & Yadav, [2022](#)). While some studies briefly

address the problems and risks associated with AI adoption in developing countries, the majority of the literature focuses primarily on the benefits, such as improved operational efficiency and enhanced user satisfaction. Algorithmic bias, data privacy, and accountability are basically just a few of the ethical concerns tied to AI, but they often get brushed aside in a lot of the related research talk, especially when we look at the Nepali context (Paudel & Ghimire, [2021](#)). So, instead of only describing AI in general, this paper tries to zoom in on the challenges, along with the possibilities, that AI brings for Nepal's administration, and in that way it helps to close a real and noticeable gap (UNESCO, [2025](#)). In other words, this article fills that gap by looking at both obstacles and opportunities that AI creates for administration in Nepal (UNESCO, [2025](#)). This study also tries to offer useful information so that policymakers and practitioners can use AI in a more effective manner. The main point is to improve governance and also public service delivery by looking closely at the current situation of AI in Nepal and then assessing how suitable it is within Nepal's particular socio-political and cultural setting.

Literature Review

AI in Public Administration: Macro, Meso, and Micro Perspectives with an Overview of Nepal

Scholarly studies have already begun exploring the influence of AI technologies on public administration jobs and issues faced by these technologies in governmental organizations. There have been several studies focusing on the potential of using AI to enhance government functions through the automation of repetitive processes and the provision of data-based analysis used for operational decisions. Wirtz et al. ([2018](#)) exemplified how AI technologies enable organizations to automate their repetitive processes and thus reduce administrative costs and let public servants perform functions that require human knowledge. Administration processes that take less time to complete will lead to smoother performance due to a reduction in mistakes made in manual data processing. AI predictive analytics can be used by governments to prepare for public health crises that require management in emergency situations, as revealed by Alshahrani et al. ([2024](#)). According to Bertot et al. ([2014](#)), technologies of artificial intelligence (AI), such as chatbots and virtual assistants, have proven extremely useful for the improvement of citizen-government interaction because they allow for responding to citizens' questions faster

and establish an interactive connection with them. There are, however, several ethical issues in the use of AI in public administration. These are algorithmic bias and data privacy and transparency, which are the two major ethical problems that have affected public trust in the government programs (O'Neil, [2016](#); Paudel & Ghimire, [2021](#)). The use of algorithmic bias has resulted in more serious social and historical injustice since it needs an accountability and ethical standard to regulate AI practices. Researchers in the area of study have come up with the need for a comprehensive framework that will include all the stakeholders in the public discussion.

Figure 3

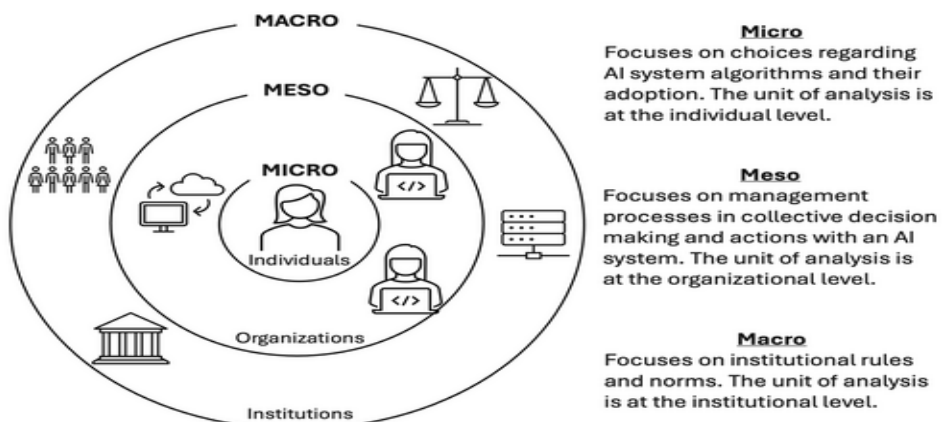
Levels in Public Policy and Administration



Note. Criado et al. ([2024](#))

Figure 4

Level of Decisions and Interactions: Micro, Meso, Macro

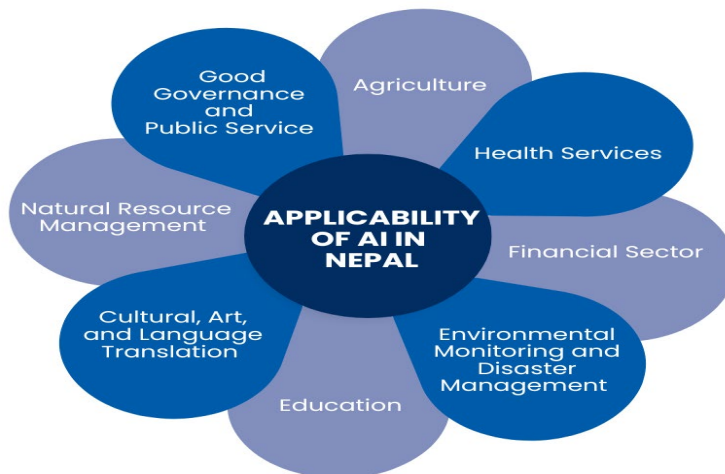


Note. David ([2024](#))

Figures 3 and 4 above have demonstrated the use of AI in public administration, which can be theoretically observed as a complete conceptual framework involving levels of macro, meso, and micro analysis. With the approval of AI technology by public operational systems, the macro level deals with the institutions, government systems, and laws that guide the use of such technology. AI is used in the administration, service, and coordination of activities within various organizations, thus affecting the decision-making process as well as its implementation. The meso-level focuses on public organizations and policy sectors. The micro level focuses on the impact of AI technologies on decision-making power, communication, and administrative processes while considering the specific actors in the public sector, such as managers, workers, and citizens. The public sector utilizes AI technology in the creation of operational systems through organizational practices, institutional rules, and individual behaviors (Criado et al., [2024](#); David, 2024).

Figure 5

Potential Application Areas of Artificial Intelligence in Nepal



In Nepal, research on using AI in public administration is still at the beginning stage, but it is slowly picking up speed because it brings both opportunities and problems. AI can really help with improving public service delivery systems and governance, largely because it can sift through

underlying data and then support more rational policy choices (Jha & Yadav, [2022](#)). Through this, AI is able to surface service delivery gaps, giving evidence that supports decisions, and it can also increase how quickly government programs respond across many areas of public administration, as shown in Figure 4. Still, there are some issues when trying to adopt AI technology in Nepal, for example, not enough technological infrastructure, low digital proficiency among public officials, and also inequalities in who has digital tools across different geographic places (Sharma, [2020](#)). AI deployment is therefore needed for more localized solutions that fit the distinctive requirements of various communities, since the country's socio-political setting is complex, with many ethnic groups and different geographic features (Gajurel, [2023](#)). Public institutions also run into ethical dilemmas during AI development, and these dilemmas bring concerns about accountability, traceability, and openness, especially because there are not yet strong enough legal and policy frameworks (Mahat et al., [2025](#)). As a result, the government urgently needs research that checks how ready different public organizations are for AI adoption and that also suggests practical solutions that consider cultural, economic, and political dimensions that may raise the overall chance of success when AI is implemented in public administration in Nepal (Ministry of Communication and Information Technology [MoCIT], [2024](#); [2025](#)).

Methods

The study explores the challenges and opportunities of AI in Nepal's public administration through a qualitative research design, and it leans on an integrative literature review approach. By bringing together different kinds of sources, like empirical studies, conceptual papers, policy briefs, and government publications, the selected integrative review method lets researchers piece together a wider and more complete picture of what's coming up in governance and digital transformation issues (Paul & Criado, [2020](#); Torraco, [2016](#)). To pull off three objectives—keeping methodological rigor, raising openness, and making sure there is a steady analysis of AI use, governance reform, and the policy consequences for the Nepalese public sector—the study applies a structured review procedure.

Data Collection and Literature Selection

In addition to official government documents, the policy papers, and the

institutional materials concerning AI governance and digital public administration, the dataset was also gathered from relevant academic sources found in research databases, like Google Scholar, Scopus, ResearchGate, and NepJOL. To catch the newest movement in AI-enabled governance and digital transformation, the literature search was done sometime between January and March 2026, and the paper only considered publications produced in the window 2015 to 2025. Also, to dig up useful content tied to “Artificial Intelligence”, “Public Administration”, “AI Governance”, “Nepal”, “Digital Governance” or “E-Governance”, “Public Sector”, and “Policy Challenges”, a bunch of keyword mixes were tried, sometimes rather broadly, during the search process.

To preserve quality standards and keep everything relevant, the screening procedure used predetermined inclusion and exclusion criteria in a sort of quiet way. Stuff like AI, digital governance, public administration, policy implications, administrative transformation, and governance difficulties that were especially noticed in developing nations, including Nepal, were all brought into the study. The review itself systematically went through English language materials such as peer-reviewed journal papers, conference proceedings, official reports, and government publications. After that, the researchers removed duplicate publications, opinion pieces that did not have real analytical depth, sources that did not offer enough methodological information, and studies that only looked at technical AI advancement, with no actual tie to governance. Therefore, the researchers used 62 secondary sources that remained from the screening and selection process for their final evaluation and analysis.

Data Analysis and Synthesis

From the thematic analysis of the selected literature, two organizational issues and three recurring patterns appeared, and they clearly slowed down the use of AI in public administration a bit. The first assessment included a careful document review, and it also relied on literary analysis to set out the core notions. Then, by continuously matching and polishing the related study results and concepts, the research method ended up forming wider theme clusters. From the analysis, four main issues surfaced: institutional competence and the governmental frameworks used in Nepal. Because this direction was supposed to ensure better understanding through a very thorough examination, the study basically considered all conflicting research findings together, including the different views that were already

present in the literature. Since the study draws on published literature and secondary data as its sole source base, the conclusions depend on those materials. Also, because there are not many studies about AI governance in Nepal that bring empirical evidence, researchers struggled to collect a wider range of scholarly as well as policy documents. Overall, an integrative literature review technique enables systematic knowledge synthesis, while it also produces policy recommendations for strengthening AI-supported public administration in Nepal, and it highlights what kinds of research gaps still need serious attention.

Results

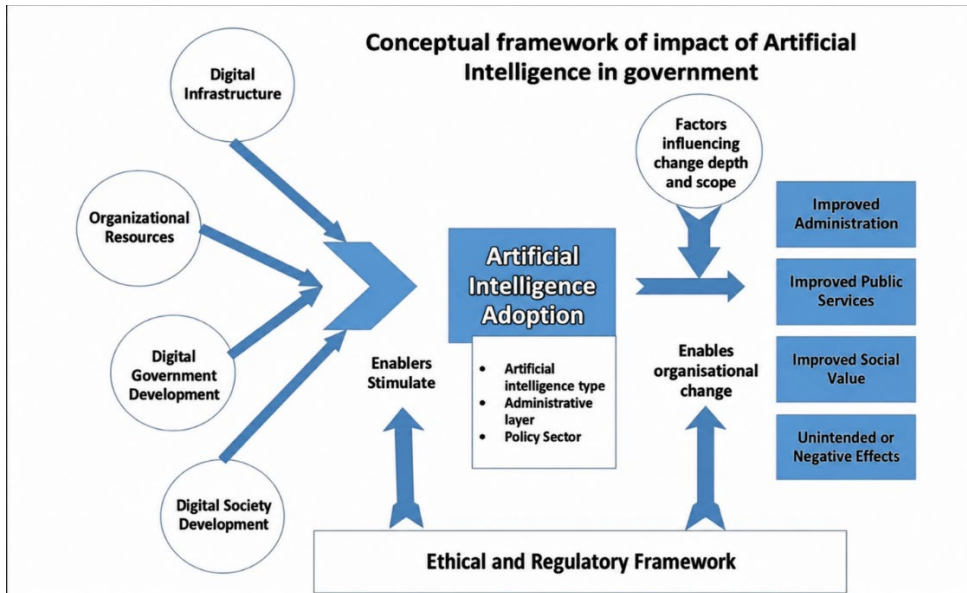
Conceptual Framework: Artificial Intelligence in Public Administration

The proposed approach of thinking makes it possible to get a complete, bit more nuanced understanding of how AI gets adopted in public administration, including what mainly pushes it forward, what legal conditions must be met, and what kind of possible consequences can show up later. It also mentions organizational resources, digital infrastructure, the gradual rise of a digital society, and the building out of digital governance as key components that end up influencing how well the technology really gets integrated or doesn't. As Van Noordt and Misuraca (2020) conclude, and as Figure 5 shows too, the progressive achievement of ethical and regulatory laws would therefore create the right environment for implementing AI in relation to governance principles and social values. Similarly, Worthington (2025) notes that AI brings strong opportunities for enhancing administrative service delivery and also for strengthening social value.

However, some of the issues in its implementation include unanticipated results, ethical problems, lack of compliance with the robust regulatory sandbox requirements, and resistance to organizational change. Several factors that can promote or hinder the extent to which AI can be implemented will determine the extent of influence of AI on the performance, innovation, and organizational change. This means that a risk management plan aimed at achieving both AI-based innovation and risk management is needed. Ethical AI should be applied under strict regulations for maximizing the benefits and minimizing the challenges associated with it, as stated by Van Noordt and Misuraca (2020).

Figure 6

Conceptual Framework of AI Use in Government Services using Organizational Theory



Note. Developed and elaborated from Van Noordt and Misuraca ([2020](#))

Opportunities, Challenges, and Dimensions of AI in Public Administration

There is an immense possibility of using AI technology in public administration for capability enhancement and process facilitation. With its ability to reduce diversity in decision-making processes in administration, improve consistency of service delivery, and facilitate more efficient, transparent, and equitable delivery of services to citizens by public personnel, AI can help in making public service processes standardized on the individual level. With the improvement of decision-making and analytical skills, it will be possible for public sector personnel to focus on complex tasks that require human intervention for better results in the interest of communities (Wirtz et al., [2018](#)). AI can promote more transparency and openness in decision-making processes, decrease corruption, and increase traceability in routine administrative tasks. Through its ability to analyze and understand data, automate routine tasks, and adapt resource management, AI technology can contribute to improved

performance results of public agencies through operational efficiency and effective resource management. According to Porayska-Pomsta and Rajendran (2019), the AI technology will use data analysis in order to identify instances of nonconformity that will help the agencies to improve transparency of their systems and service delivery to their citizens as well as their employees. According to Bryson et al. (2014) and Denhardt and Denhardt (2011), AI technologies are being utilized in public sector activities today since they support goals of the NPM approach, including operational efficiency and responsiveness and public value creation.

Table 1

Opportunities, Challenges, and Dimensions of Artificial Intelligence

Level	Opportunities	Challenges	Dimensions
Individual Level (Employee) -Micro	• Standardization of public service behavior • Reduce decision variations • Improve decision-making and results • Increased information analysis capacity • AI is not very sensitive to the decision's reward • AI not very vulnerable to corruption • Increases anonymity • Increases psychological distance from tasks • Reduces repetitive and boring tasks • Lowers workload for public servants • Increased performance in organizations • Better planning and allocation of	• Erosion of the profession • Loss/shift of discretionary power • Digital rigidity in discretionary power • Continued need for human decision-making • Change in the citizen-public servant relationship • Digital literacy gaps • Transparency concerns (as an element of policies and principles) • Transparency • Interpretability • Explainability • Public trust • Lack of	• Public service decision concepts related to the decisions and interactions of individuals • Discretionary power • Corruption of the public servant • Anonymity • Psychological distance • Workload • Public servant satisfaction • Professional identity • Citizen-public servant relationship • Organizational performance concepts related to decisions and interactions within
Organizational Level (Office) -Meso			

Level	Opportunities	Challenges	Dimensions
National Level (Country) <i>-Macro</i>	resources	qualified personnel	and between organizations
	• Reduce administrative tasks • Identification of deviant practices	• Allocation of resources • Accountability	• Deviant practices • The decision and action's interpretability, explainability, and transparency • Control • Temporality • Trust • Qualified human resources • Accountability • Financial investment concepts related to the decisions and interactions of institutions • Respect for private life (confidentiality, security) • Equity (data quality, bias) • Private/public expertise ratio • Deepening Democracy • Socio-economic Discrimination
	• Potential for greater equality, fairness, and inclusion • Transparency (in AI governance)	• AI life cycle requires a significant financial investment • Confidentiality and security of data and personal information • Fragmentary and loosely coordinated governance • Data quality and bias • Citizen trust	

Note. Elaborated by author with David ([2024](#))

Public administration needs to address two aspects of AI integration, which include the opportunities AI brings and the implementation challenges it creates as shown in Table 1. Public servants experience job dissatisfaction because their professional identities decline when they lose decision-making autonomy, which results in worsened interactions with citizens. The implementation of digital decision-making systems may create problems because these systems will restrict public services from achieving operational agility and quick service delivery. The public faces dual challenges and to counter them, organizations need to make AI systems

accessible and understandable while maintaining their trustworthiness (Christie, [2018](#)). AI technologies create systems that function as black boxes because their decision-making processes remain hidden from viewers who cannot access their internal workings, which leads to accountability problems (Lindgren et al., [2019](#)). Public administration struggles to implement AI technologies because there is a shortage of skilled workers who can operate and maintain these complex systems. The extensive financial requirements for AI life cycle management create disputes about national resource distribution while raising ongoing security and data protection concerns (Attard-Frost et al., [2024](#); Wirtz & Müller, [2018](#)).

The dimensions of AI in public administration need special attention because they contain essential elements that must be observed to achieve complete operational benefits. The assessment includes three components, which consist of data quality, public-private expertise ratios, and equity and discrimination factors in AI applications. All of these require coordinated efforts in AI governance as well, so that all citizens may equip themselves with technological gains; thus, fairness, and minimized biases conditioning data utilization in governance would be brought forward. Privacy and protection of personal information would matter so much in building public trust in AI because, with increasing security and abuse threats towards privacy, people would have many doubts regarding the usage of AI systems (Wirtz & Müller, [2018](#)). In addition to this, public administration must achieve a delicate balance in terms of harnessing AI's opportunities **as well as** challenges, such that very inclusive governance structures can be constructed. Finally, using a systematic approach involving all these dimensions, in a transparent and accountable environment ensures good adoption and use of AI in public administration. This enables public institutions to be more dynamic concerning citizens' demands, and further institutionalizes the tenets of democracy and equity in their internal operations (Gibbons, [2021](#)).

In the literature, generative AI has been generally accepted as the leading form of digital transformation and public service performance enhancement due to its implementation within government processes. The AI technology uses advanced administrative systems to enhance the delivery and accessibility of services and reduce bureaucracy, thus improving operational effectiveness and visibility (Androniceanu, [2023](#); Reis et al., [2019](#)). The AI technology can be used by government agencies

to perform basic functions like real-time data analysis, resource management, and even building holistic citizen services because of the integration of advanced machine learning and generative AI (Androniceanu, [2024](#)). The findings of the literature review show that through access to AI, policymakers can now take evidence-based decisions faster and more efficiently due to AI capabilities in predictive analytics (Reis et al., [2019](#)). With AI's ability to offer structured recommendations and automation processes that lead to greater consistency in decision-making yet make it more difficult to assign responsibility for certain situations, it opens up new scenarios that affect administrative discretion and algorithmic governance (Barth & Arnold, [1999](#); Young et al., [2019](#)). AI can act as a useful technology for government organizations that helps them connect efficiently with citizens and data-driven governing systems at all stages of "governing" thanks to its contribution to smart public administration (Barsekh-Onji et al., [2025](#); Criado et al., [2024](#)).

However, there are substantial sprints and risks that rise and affect, in a critical manner, the appropriate use of generative AI within public administration. They are the following features: a necessity for a high level of governance, accountability, and ethical regulation since an automated decision-making procedure could lead to a scenario when the procedure itself becomes ambiguous, the one making the decision is biased, and it may even be unclear whose responsibility is in case of public services (Bignami, [2022](#); Wirtz et al., [2020](#)). At the same time, structural and organizational barriers that prevent from the wide implementation of artificial intelligence technologies and, consequently, make it impossible to provide transparent and fair services to the citizens are present in the public sphere. Such barriers are characterized by the lack of digital infrastructure, skills, and data fragmentation (Barsekh-Onji et al., [2025](#); Criado et al., [2024](#); Vatamanu & Tofan, [2025](#)). The most significant social and ethical challenges imply the creation of the systems that would ensure the tracking of responsibility of the individuals controlling AI technologies. The use of AI technology involves the introduction of new technological systems, which must be complemented by changes in organizational practices and the working environment since public administration workers have to have technical abilities and emotional intelligence to use AI technology (Corvalán, [2018](#); Vesolovska et al., [2025](#)). As a result, it is clear from the literature review that public administration requires AI technology to transform itself, but it also needs governance frameworks, which involve

balanced approaches and constant ethical evaluation.

Nepal: Current Status of AI Application, Policy and Legal Provisions

The Government of Nepal is engaged in a significant endeavor to integrate AI into the national strategy by introducing the concept of the National AI Policy (MoCIT, [2024](#); [2025](#)). Nepal has developed a complete policy framework that enables the country to utilize AI and other emerging technologies for improved public administration and socio-economic development (MoCIT, [2024](#); [2025](#)). The policy document titled National Science and Technology Innovation Policy 2076 includes a specific statement from the government that such emerging and latest technologies, such as bioinformatics, AI, and robotics, will be taken up to catapult the government to rapid development across the sectors, including industry and business. The government of Nepal shows dedication to using new technologies for public service delivery because it believes that AI will improve operational efficiency and citizen service delivery. The Digital Nepal Framework 2076 shows that AI and robotics, together with Internet of Things (IoT) technology, will create a digital transformation that will lead public sector operations to sustainable development.

The Nepalese government has established multiple legal frameworks for data governance, which enable ethical AI usage and safeguard citizen information. The Personal Privacy Act 2075 establishes comprehensive guidelines that public institutions must follow to protect personal data and document information and communication-related materials. The system works to protect personal information because it creates safe procedures that public offices must follow to protect data according to public standards, which prevent unauthorized access to private information. The existing regulations only apply to specific fields, which include the National Ethical Guideline for Health Research 2019 and the University Grants Commission research misconduct policy 2018. The absence of a comprehensive policy framework makes it difficult to develop standardized AI regulations throughout all fields. The government of Nepal is drafting the Information Technology and Cyber Security Bill 2082 2025, which will create detailed standards for proper AI and digital technology implementation. The Ministry of Communications and Information Technology maintains an open public consultation process to collect citizen feedback on this draft because the government uses this method to show its commitment to developing policies through transparent processes that involve public

participation.

As Nepal develops its digital infrastructure, the Digital Nepal Framework ([2019](#)), a comprehensive strategy framework for implementing digital technology, will open up new possibilities. The Nepalese government produced a framework vision that drives the adoption of information and communication technologies (ICT) as the main engine for driving economic development and social equality. The country has already achieved significant progress in terms of digital adoption, with cell penetration exceeding 100% and internet usage reaching 63%, as well as 9.3 million Facebook users and a developing digital community. The concept of "One Nation," eight sectors, and eighty digital projects that promise digital change in fields including digital infrastructure, agriculture, health, education, energy, tourism, finance, and urban infrastructure are all included in the Digital Nepal Framework. Nepal's significant projects include the National Optical Fiber Network, precision agriculture, electronic health records, smart classrooms, smart metering, tourism augmented reality, digital payment systems, and smart urban services.

The realization of these projects is dependent on some critical enablers: appropriate ICT infrastructure, building the skills of the masses in ICT, promoting entrepreneurship through public-private partnerships (PPP), and a favorable policy environment with updated laws for data protection, I.P., telecommunications, and digital finance. Some legal basis reform might be achieved through constitutional provisions, particularly in the Constitution of Nepal ([2015](#)). These include Article 27 (Right to Information), Article 32 (Right to Education), Article 35 (Right to Health), and Article 51 (State Policy on Science and Technology), along with other sector-specific acts like the Electronic Transactions Act, 2063, and the National Cyber Security Policy. This Digital Nepal initiative is expected to bring about a direct impact on the economy within the range of an exemplary campaign of NPR 800 billion, thus germinating Nepal's vision of a middle-income country in 2030. Hence, with strategic investments, policy reforms, and cooperation amongst the government, private sector, and civil society, Nepal should soon flourish as a regional digital powerhouse for sustainable development and inclusive prosperity for all of its citizens (MoCIT, [2024](#); [2025](#)).

The implementation of AI in Nepal currently is an example of conscious steps towards the digitalization of governmental services and increasing automation and efficiency in governance. One of the most remarkable steps

is the development of the NID, through which it is intended to provide the population with one identity that would consolidate some government services such as banking, tax payment, and voting. In this way, it would become possible to increase the efficiency of government services; in general, this project is somehow similar to the Indian Aadhaar Card. Furthermore, there are quite a lot of institutions developed by the government for supporting this process of digitalization. The needed infrastructure and regulatory framework have been created due to the adoption of the National Broadband Policy in 2015 and the Information and Communication Technology Policy in 2016.

Nepal shows promise for using AI in its government operations, financial services, healthcare system, and educational institutions (Karki & Karki, [2025](#)). This circumstance necessitates the quick development of regulations. Because the nation lacked adequate legal frameworks, the government produced its first draft AI regulation concept paper (Panthi & Rijal, [2024](#)). In accordance with international rules, the paper creates a national AI strategy that preserves end-user privacy, protects cyber security, and protects data (Rana, [2025](#)). The plan calls for the development of a national AI portal that would facilitate information exchange and cooperation amongst entities. AI training programs are the primary focus of human capital development since they would provide a trained labor force that would draw in international investment and aid in research. By describing AI healthcare diagnostics, AI financial fraud detection, AI precision agriculture, and smart governance, the concept paper identifies sectoral AI applications and makes it possible to examine and evaluate the performance of individualized solutions.

Through specialized AI research centers and laboratories, the idea seeks to improve AI research and development (R&D). These facilities would collaborate with academic and business partners and provide funding for shared computing infrastructure to further AI research endeavors. Additionally, the idea promotes forming worldwide alliances with foreign AI research centers in order to advance technology and exchange expertise (Panthi & Rijal, [2024](#)). The AI regulation requirement for Nepal becomes evident because the country ranks 150th out of 188 nations according to the Oxford Insights Government AI Readiness Index 2024, which assigned it a governance score of 33.14 and assessed its technology and infrastructure capabilities (Mahat et al., [2025](#)). The score shows that the country should

build up the AI governance structure. There should be regulation going far beyond the constitutional protection of fundamental rights such as privacy and freedom of speech and protection from any type of discrimination, since the AI system is built upon huge amounts of data that may lead to the misuse of such data and the creation of biases, and possibly even censorship. The implementation of AI systems would demand maintaining transparency and accountability because this measure will ensure proper usage of the system and stimulate economic and technological growth (Panthi & Rijal, [2024](#)). The introduction of the concept paper of the AI regulation is an important step for Nepal since it paves the way towards the construction of complete AI regulation that will allow national development through AI growth (Society for Research in Child Development, [2021](#)).

Discussion

Potential Opportunities for AI for Public Administration in Nepal

In this discussion, it is evident how Nepal has become increasingly aware of the opportunities presented by AI, which has the capability to transform vast national industries through applications in areas like public administration, health care, education, finance, and agriculture development (Karki & Karki, [2025](#)). With the emergence of AI systems, there have been increased threats from the technology that need to be addressed using institutional frameworks. For this purpose, the Nepalese government has developed its own AI regulations concept paper, which is a major achievement in terms of policy for the country working towards building a digital governance eco-system (Panthi & Rijal, [2024](#)). This initiative entails ensuring that cyber security protection, data governance, user protection, institutional coordination, and ethical AI usage as per international standards be incorporated in all inter-related priorities (Rana, [2025](#)). Lack of digital and technological infrastructure and institutional capacity in Nepal means the threat to data breaches, algorithmic biases, cyber-security issues, and constitutional rights like privacy and freedom of speech become even more pronounced, adding value to current regulatory problems in Nepal (Panthi & Rijal, [2024](#)). From findings of the research, one can see that in the case of Nepal, not only should AI governance transcend the problem of adoption but it should include core values of transparency and accountability, as well as respect for human rights.

The findings of the study reveal that it is necessary for organizations to

invest more in developing advanced technology to control AI. It is clear from the proposal to develop a central platform for information exchange, coordination, and collaboration among government bodies, academia, and private sectors in the form of establishing a national AI portal (Panthi & Rijal, [2024](#)). Institutional coordination is one of the important ways that helps in the efficient functioning of digital governance frameworks along with improving their ability to implement policies. As per the Oxford Insights Government AI Readiness Index 2024, the infrastructure and institutions in Nepal remain insufficient for the implementation of AI in public organizations. Due to the fact that the country scored 33.14 in terms of governance, Nepal ranked 150 out of 188 countries in the report, which means that there is no digital infrastructure, technological readiness and governance ability in Nepal (Mahat et al., [2025](#)). The findings reveal that despite the progress made in implementing policies on AI, there remain many problems that should be solved before the creation of responsible governance of AI institutions.

The study demonstrates how human capital development and development of AI research capabilities are essential for Nepal to achieve its goals regarding digital transformation. For Nepal to be able to develop qualified human resources for leading AI innovations and governance, the AI Regulation Concept Paper includes AI education, technical training programs, and workforce development strategies (Panthi & Rijal, [2024](#)). This issue is particularly important because the lack of competent and certified personnel and technical expertise remains one of the biggest barriers to the use of AI technology in Nepal. In order to foster research and development (R&D) activities and cooperation between governmental bodies, educational institutions, and business partners, the concept paper proposes establishing AI research centers and laboratories along with shared computing facilities (Panthi & Rijal, [2024](#)). In order to enhance research and development (R&D) processes and collaboration among government organizations, educational institutions, and business partners, the proposal suggests establishment of artificial intelligence research centers and laboratories alongside computation resources (Panthi & Rijal, [2024](#)). Apart from developing AI solutions locally and attracting foreign investments, such government actions will raise the innovation capacity of Nepal and enable it to compete in the global digital/virtual economy. The findings indicate that AI regulation necessitates constant involvement in governance through provision of regulatory control, research framework

development, skills development, and education.

This study underscores the relevance of applying AI sector-wise and collaborating internationally for formulating the AI technological framework for the future of Nepal. An effort to synchronize the implementation of AI with national development needs, the concept paper and AI policy have pointed out practical applications of AI technologies in diagnosing diseases, detecting financial frauds, precise agriculture, and smart governance. These AI applications can help increase service delivery and efficiency in administration as well as enable public sector organizations to take well-researched decisions for public service. By adopting collaborative research efforts, the concept enables organizations to work with foreign institutions doing AI research to share information and transfer technology while devising new solutions. International connections are needed in the process of technology development because the benefit of the process is available to developing nations such as Nepal due to a lack of local technological skills and competency. The introduction of AI technology into Nepal requires organizations to ensure the observance of principles of transparency, accountability, fairness, and good governance, which would ensure that no unethical behavior and societal inequalities occur and democracy values are protected. The creation of the AI Regulation Concept Paper of Nepal marks the initial stage of developing an extensive AI regulation framework, and now the national AI policy has been adopted in the implementation stage with respect for human rights and progress of the nation.

Potential Challenges for Public Administration in Nepal

As per the results of this study, the implementation of AI technology can lead to a complete revolution in public administration in Nepal. However, it is quite clear from the results of the study that there are a variety of institutional, structural, and technological barriers to the implementation of AI in the country. The most prominent barrier to the implementation of AI is related to the low level of implementation of AI in public and private companies in the country. Although the government introduced a digital governance framework and the concept paper on AI regulation, there is no evidence of the actual implementation of AI technology by government agencies (MoCIT, [2024](#); [2025](#)). Lack of operational AI technology in the administrative processes does not provide any chance for improvement. The people's resistance to the implementation of AI technology grows because

they do not have enough knowledge about AI technology and are limited in their digital competences, and the traditional approach to work in government organizations hinders the technological progress.

The primary challenge to AI utilization is that enterprises lack both the technical expertise and institutional capability required for AI implementation. It is evident from the literature that both public and private organizations in Nepal are not able to satisfy their requirements due to lack of manpower, together with lack of technical skills and training for AI systems (MoCIT, [2024](#); [2025](#)). Due to the need for continuous and integrated AI system management, firms are unable to develop such systems due to lack of administrative skills. The study uncovers numerous weaknesses in Nepal's data ecosystem, including disjointed data collection methods, inadequate data sets, a lack of standardized processes, and ineffective data management systems. The Personal Privacy Act of 2075 was enacted to regulate data protection laws, although the legislation is yet to be fully implemented, posing fears about how the data will be handled in a secure and ethical way. Poor data management methods lead to biased algorithm development, causing poor system functioning and discrimination in the administration process, hence the need for reliable data to ensure effective AI management. In summary, it is imperative to note that to have responsible AI management, it is necessary to invest in workforce development, training programs, and data management techniques and strategies.

Indeed, the findings reveal that the key obstacles facing the adoption of AI technology in Nepal are issues of infrastructure and budget. In Nepal, being a resource-limited country, there are challenges of finance arising from the process of adoption of AI technology, whereby there are costs involved in developing infrastructure, maintenance costs, costs of research facilities, and training costs (MoCIT, [2024](#); [2025](#)). The Digital Nepal Framework through the PPP approach focuses on digital transformation; however, it is lacking financing channels, implementation mechanisms, and investment incentives required to execute AI technology projects (MoCIT, [2024](#); [2025](#)). The rural communities in Nepal, who lack access to internet connectivity and strength, online public services, and digital resources necessary for AI system functioning, suffer immensely due to poor digital infrastructure systems in Nepal (MoCIT, [2024](#); [2025](#)). Due to issues such as lack of internet bandwidth, connectivity problems, and capacity of

technology infrastructure in public institutions, AI implementation within the governance sectors still faces difficulties. It can be deduced from the results that for Nepal to benefit from artificial intelligence in its public administration, it has to invest in broadband, fiber optics, and digital infrastructure, among other initiatives.

Moreover, the discussion highlights some critical issues related to ethics, law, and technology that need to be addressed for effective AI governance in Nepal. While the AI Regulation Concept Paper is a very crucial policy document, there is no regulation at all in the country that can deal with the requirement for the implementation of AI with respect to ethics, security, privacy, and accountability (MoCIT, [2024](#); [2025](#)). There is no clarity about who will take responsibility for overseeing AI if there are any malfunctions or problems created by AI due to a lack of specialized regulatory bodies. Ethics and society are crucial factors because there are chances that AI systems may create unintentional discrimination among Nepalese society and thereby hampering equal access to public services for people from various socioeconomic and ethnic groups. Transparent systems that operate with public accountability and engage in the policymaking process through active participation of civil society are badly required because of the presence of surveillance systems, invasion of privacy, and discriminatory algorithms. The capacity of Nepal in the production of technology is limited by the problem of lack of finance for R&D of AI technologies.

Despite the fact that the concept paper of AI offers a guide to develop AI research centers and collaborate between the academic institutions and private sectors, there is no commitment and funding from the institutions for implementing the idea (MoCIT, [2024](#); [2025](#)). According to the research findings, for obtaining positive impacts of AI in public administration, democratic governance, and national development programs in Nepal, there should be efforts made towards developing governance structure, financing for the research, alliance of institutions, and long-term innovation strategy. Thus, there are some major challenges that need to be overcome for implementing AI technology in Nepalese public administration system. The challenges to be encompass poor adoption rates, insufficient technical skills, poor data management system, weak infrastructure, high cost of deployment, inadequate regulation at present, ethical issues, and poor research and development activities (MoCIT, [2024](#); [2025](#)). In order for the

AI systems to work efficiently, there should be institutional systems in place like the personnel and governance systems besides the technological systems. For the responsible use of AI technology in public administration in Nepal, a holistic and comprehensive approach is needed to develop the human and infrastructural capacities along with enhancing the legislative framework and bringing together all the stakeholders.

Conclusion

Through the application of AI, public administration in Nepal may unlock its transformative power and make government processes and public service provision more efficient in all aspects. With its assistance in workflow optimization and data-driven decision-making processes, AI technology may greatly benefit the government's public service provision. The major policy challenges are set forth in the National AI Policy 2025 and AI Regulation Concept Paper 2024; both documents stipulate that organizations must develop ethical AI solutions while protecting public data and promoting research-based collaborations. Better healthcare services via AI-driven diagnosis, better resource allocation in the tourism and agriculture sectors, and greater disaster response capacity are among the key advantages of using AI in Nepal. Conducting AI research for the major sectors will be the mission of the AI Excellence Centers. Based on the "Digital Nepal Framework," the total contribution of AI along with other technologies is expected to contribute a GDP worth NPR 800 billion by the year 2030, which clearly indicates the economic contributions of AI. By forming centers of excellence for AI research and forming nodal organizations, a thriving AI industry in Nepal can be created that will help compete in the global AI industry.

However, there are numerous difficulties that can hinder the successful integration of AI in public administration. The country scored 32.14 in the Government AI Readiness Index 2024, published by Oxford Insights. The index assesses the preparedness of governments in three aspects. Nepal currently faces various problems, including the slow adoption of the AI technology, the inadequate digital infrastructure system, and the unavailability of skilled workers who can develop AI systems. In addition, the non-existence of an extensive body of law and regulation that regulates the utilization of the AI technology makes it even more difficult. It is important to address ethical concerns before utilizing AI systems in order to win people's trust. Another factor that acts as an impediment to

innovations is lack of funding in research and development as well as data management issues, which limit companies from integrating AI effectively. In solving these problems, Nepal needs to create public-private partnerships, engage in capacity building programs, and have a strategy of integrating AI to meet the requirements of its citizens. Through the framework, Nepal can utilize the AI technology to enhance governance, ensure basic rights, and foster social and economic development.

Author Contribution

Baburam Bhul: sole author

Conflict of Interest

The author of the manuscript has no financial or non-financial conflict of interest in the subject matter or materials discussed in this manuscript.

Funding Details

No funding has been received for this research.

Data Availability Statement

Data supporting the findings of this study will be made available by the corresponding author upon request.

Generative AI Disclosure Statement

The authors used AI or language improvement and formatting only.

References

- Alshahrani, A., Griva, A., Dennehy, D., & Mäntymäki, M. (2024). Artificial intelligence and decision-making in government functions: Opportunities, challenges and future research. *Transforming Government: People, Process and Policy*, 18(4), 678–698. <https://doi.org/10.1108/TG-06-2024-0131>
- Androniceanu, A. (2023). *The new trends of digital transformation and artificial intelligence in public administration*. Questa Soft. <https://www.cceol.com/search/article-detail?id=1231420>
- Androniceanu, A. (2024). Generative artificial intelligence: Present and perspectives in public administration. *Administrație și Management Public*, 43, 105–119. <https://doi.org/10.24818/amp/2024.43-06>
- Attard-Frost, B., Brandusescu, A., & Lyons, K. (2024). The governance of artificial intelligence in Canada: Findings and opportunities from a review of 84 AI governance initiatives. *Government Information Quarterly*, 41(2), Article 101929.

<https://doi.org/10.1016/j.giq.2024.101929>

- Barsekh-Onji, A., Hernandez, Z. T., & Espinosa, E. O. C. (2025). Advancing smart public administration: Challenges and benefits of artificial intelligence. *Urban Governance*, 5(3), 279–292. <https://doi.org/10.1016/j.ugj.2025.06.003>
- Barth, T. J., & Arnold, E. (1999). Artificial intelligence and administrative discretion. *The American Review of Public Administration*, 29(4), 332–351. <https://doi.org/10.1177/02750749922064463>
- Bertot, J. C., Gorham, U., Jaeger, P. T., Sarin, L. C., & Choi, H. (2014). Big data, open government and e-government: Issues, policies and recommendations. *Information Polity*, 19(1–2), 5–16. <https://doi.org/10.3233/IP-140328>
- Bignami, F. (2022). Artificial intelligence accountability of public administration. *The American Journal of Comparative Law*, 70(Supplement_1), i312–i346. <https://doi.org/10.1093/ajcl/avac012>
- Borissov, B., & Hristozov, Y. (2024). Potential for using artificial intelligence in public administration. *Economics – Innovative and Economics Research Journal*, 12(3), 409–423. <https://doi.org/10.2478/eoik-2024-0034>
- Bryson, J. M., Crosby, B. C., & Bloomberg, L. (2014). Public value governance: Moving beyond traditional public administration and the new public management. *Public Administration Review*, 74(4), 445–456. <https://doi.org/10.1111/puar.12238>
- Christie, N. V. (2018). A comprehensive accountability framework for public administrators. *Public Integrity*, 20(1), 80–92. <https://doi.org/10.1080/10999922.2016.1257349>
- Corvalán, J. G. (2018). Digital and intelligent public administration: Transformations in the era of artificial intelligence. *A&C – Revista de Direito Administrativo & Constitucional*, 18(71), 55–87. <https://doi.org/10.21056/aec.v18i71.857>
- Criado, J. I., Sandoval-Almazán, R., & Gil-Garcia, J. R. (2024). Artificial intelligence and public administration: Understanding actors, governance, and policy from micro, meso, and macro perspectives. *Public Policy and Administration*, 40(2), 173–184.

<https://doi.org/10.1177/09520767241272921>

David, G. (2024). Artificial intelligence: Opportunities and challenges for public administration. *Canadian Public Administration*, 67(3), 388–406. <https://doi.org/10.1111/capa.12580>

Dei, H. (2024). The role of big data in ensuring transparency and accountability of public authorities. *Health Leadership and Quality of Life*, 3, Article 421. <https://doi.org/10.56294/hl2024.421>

Denhardt, J. V., & Denhardt, R. B. (2011). *The new public service: Serving, not steering* (3rd ed.). Routledge.

Digital Development. (2019). *Digital Nepal Framework*. Government of Nepal, Ministry of Communication and Information Technology. <https://www.digitaldevelopment.org/library/digital-nepal-framework/>

Gajurel, A. (2023, July 6). *Bridging the digital divide in Nepal*. Nepal Live Today. <https://www.nepallivetoday.com/2023/07/06/bridging-the-digital-divide-in-nepal/>

Gibbons, E. D. (2021). Toward a more equal world: The human rights approach to extending the benefits of artificial intelligence. *IEEE Technology and Society Magazine*, 40(1), 25–30. <https://doi.org/10.1109/MTS.2021.3056295>

Jha, J., & Yadav, A. K. (2022, February 10). *How is artificial intelligence changing the world? What Nepal should do to tap it*. Nepal Live Today. <https://www.nepallivetoday.com/2022/02/10/how-is-artificial-intelligence-changing-the-world-what-nepal-should-do-to-tap-it/>

Karki, S., & Karki, R. B. (2025). *Implicit AI adoption: Descriptive insights into how Nepalese use AI without awareness*. Social Science Research Network. <https://doi.org/10.2139/ssrn.5159486>

Lindgren, I., Janssen, M., Lee, H., Polini, A., Bolívar, M. P. R., Scholl, H. J., & Tambouris, E. (2019). *Electronic government*. Springer. https://dgsociety.org/wp-content/uploads/2020/08/10.1007_978-3-030-57599-1.pdf

Mahat, D., Neupane, D., & Shrestha, S. K. (2025). A critical examination of Nepal's National AI Policy 2081/2025: SWOT analysis and strategic recommendations for sustainable AI integration. *Nepal Journal of Multidisciplinary Research*, 8(1), 71–84.

<https://doi.org/10.3126/njmr.v8i1.76481>

Mergel, I., Dickinson, H., Stenvall, J., & Gasco, M. (2023). Implementing AI in the public sector. *Public Management Review*, 1–14. <https://doi.org/10.1080/14719037.2023.2231950>

Ministry of Communication and Information Technology. (2024). *Concept paper regarding the use and practice of AI in Nepal*. Government of Nepal. <https://mokit.gov.np/content/12663/12663-nepal/>

Ministry of Communication and Information Technology. (2025). *National Artificial Intelligence Policy, 2025 (2082) of Nepal*. Government of Nepal. <https://mokit.gov.np/content/13077/national-artificial-intelligence--aci--policy--2082/>

Neupane, A. (2023). Transformation of public service: Rise of technology, AI and automation. *Prashasan: The Nepalese Journal of Public Administration*, 55(2), 42–52. <https://doi.org/10.3126/prashasan.v55i2.63538>

Office of Attorney Nepal. (2015). *Constitution of Nepal*. https://ag.gov.np/files/Constitution-of-Nepal_2072_Eng_www.moljpa.gov._npDate-72_11_16.pdf

O’Neil, C. (2016). *Weapons of math destruction: How big data increases inequality and threatens democracy*. Crown Publishing Group.

Panthi, R., & Rijal, S. (2024, July 29). *Nepal initiates AI regulation with concept paper*. The Annapurna Express. <https://theannapurnaexpress.com/story/49893/>

Paul, J., & Criado, A. R. (2020). The art of writing literature reviews: What do we know and what do we need to know? *International Business Review*, 29(4), Article e101717. <https://doi.org/10.1016/j.ibusrev.2020.101717>

Paudel, S., & Ghimire, A. (2021, November). *AI ethics survey in Nepal*. NAAMII. <https://www.naamii.org.np/wp-content/uploads/2021/11/AI-Ethics-Survey-Report.pdf>

Porayska-Pomsta, K., & Rajendran, G. (2019). Accountability in human and artificial intelligence decision-making as the basis for diversity and educational inclusion. In J. Knox, Y. Wang, & M. Gallagher (Eds.), *Artificial intelligence and inclusive education: Speculative futures and*

- emerging practices* (pp. 39–59). Springer. https://doi.org/10.1007/978-981-13-8161-4_3
- Rana, V. S. (2025, February 12). *AI in Nepal, at crossroads*. The Kathmandu Post. <https://kathmandupost.com/columns/2025/02/12/ai-in-nepal-at-crossroads>
- Reis, J., Santo, P. E., & Melão, N. (2019, June 19–22). *Impacts of artificial intelligence on public administration: A systematic literature review* [Paper presentation]. Proceedings of 14th Iberian Conference on Information Systems and Technologies, Coimbra, Portugal
- Sharma, G. (2020). Digital governance in Nepal. *Journal of Management Research*, 12(3), 41–53. <https://doi.org/10.5296/jmr.v12i3.17061>
- Society for Research in Child Development. (2021). *Ethical principles and standards for developmental scientists*. <https://www.srcd.org/about-us/ethical-principles-and-standards-developmental-scientists>
- Torraco, R. J. (2016). Writing integrative literature reviews: Using the past and present to explore the future. *Human Resource Development Review*, 15(4), 404–428. <https://doi.org/10.1177/1534484316671606>
- UNESCO. (2025, February 12). *Unveiling the intricacies of AI governance in Nepal: Multistakeholder dialogue on artificial intelligence governance*. <https://www.unesco.org/en/articles/unveiling-intricacies-ai-governance-nepal-multistakeholder-dialogue-artificial-intelligence>
- Vatamanu, A. F., & Tofan, M. (2025). Integrating artificial intelligence into public administration: Challenges and vulnerabilities. *Administrative Sciences*, 15(4), Article 149. <https://doi.org/10.3390/admsci15040149>
- Van Noordt, C., & Misuraca, G. (2020, September 23–25). *Evaluating the impact of artificial intelligence technologies in public services: Towards an assessment framework* [Paper presentation]. Proceedings of the 13th International Conference on Theory and Practice of Electronic Governance, Athens, Greece.
- Van Noordt, C., & Tangi, L. (2023). The dynamics of AI capability and its influence on public value creation of AI within public administration. *Government Information Quarterly*, 40(4), Article e101860. <https://doi.org/10.1016/j.giq.2023.101860>
- Vesolovska, M., Karkovska, V., & Duma, O. (2025). Artificial intelligence

in public administration: How the emotional intelligence of civil servants influences its effective implementation. *Administrație și Management Public*, 45, 27–45. <https://doi.org/10.24818/amp/2025.45-02>

Wirtz, B. W., Weyerer, J. C., & Geyer, C. (2018). Artificial intelligence and the public sector: Applications and challenges. *International Journal of Public Administration*, 42(7), 596–615. <https://doi.org/10.1080/01900692.2018.1498103>

Wirtz, B. W., & Müller, W. M. (2018). An integrated artificial intelligence framework for public management. *Public Management Review*, 21(7), 1076–1100. <https://doi.org/10.1080/14719037.2018.1549268>

Wirtz, B. W., Weyerer, J. C., & Sturm, B. J. (2020). The dark sides of artificial intelligence: An integrated AI governance framework for public administration. *International Journal of Public Administration*, 43(9), 818–829. <https://doi.org/10.1080/01900692.2020.1749851>

Worthington, R. (2025). *The role of AI infrastructure transparency*. Infrastructure Transparency Initiative. <https://infrastructuretransparency.org/2025/02/12/the-role-of-ai-24/>

Young, M. M., Bullock, J. B., & Lecy, J. D. (2019). Artificial discretion as a tool of governance: A framework for understanding the impact of artificial intelligence on public administration. *Perspectives on Public Management and Governance*, 2(4), 301–313. <https://doi.org/10.1093/ppmgov/gvz014>