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Algorithmic Governance: Democratic Opportunity or Threat

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Abstract

The rapid growth of artificial intelligence, big data, and digital technologies has significantly transformed governance systems worldwide. Algorithmic governance refers to the use of automated and data-driven systems in public decision-making, administration, surveillance, and policy implementation. This paper examines whether algorithmic governance poses a threat to democracy, creates opportunities for democratic innovation, or represents a broader transformation of democratic practice. The methodology of this study is based on qualitative and comparative approach, drawing largely on secondary sources such as recent peer-reviewed journal articles, books, government reports and policy briefings and publications from reputed national and international organizations. Drawing on perspectives from political sociology, governance studies, and digital democracy, the study argues that algorithmic systems are not politically neutral. They often reproduce social inequalities, reduce transparency, and concentrate power within states and large technology corporations. The increasing use of surveillance technologies, predictive algorithms, and digital platforms raises concerns regarding privacy, accountability, misinformation, and citizen autonomy. However, the paper also highlights the positive potential of algorithmic governance in improving public service delivery, enhancing citizen participation, strengthening evidence-based policymaking, and promoting digital inclusion. Emerging

forms of e-governance and participatory digital platforms demonstrate that technological systems can support democratic engagement when guided by ethical principles and institutional accountability. The study concludes that algorithmic governance should not be understood solely as a threat or an opportunity, but as an ongoing democratic transformation that demands stronger regulation, transparency, digital rights protection, and inclusive governance frameworks.

Keywords: Algorithmic Governance, Democracy, Artificial Intelligence, Digital Governance, Democratic Transformation

Introduction

Algorithmic governance is increasing use of data-driven systems, artificial intelligence (AI) and automated decision-making tools in the design and implementation of public policies and administrative processes. The rise of algorithmic governance and data-driven decision-making represents a transformative shift in contemporary state administration, profoundly impacting democratic accountability (Masoudi, 2025). As algorithms become more embedded in governance structures, concerns emerge regarding who designs these systems, how decisions are made, and whether citizens retain meaningful influence over public decision-making process (Peeters, 2020).

Establishing national and community priorities on how to reap AI's benefits, while managing its social and economic risk, will be an evolving debate (Nitzberg & Zysman, 2022). Algorithms can improve policy accuracy by analyzing large datasets in real time, enabling governments to respond more effectively to social and economic challenge. The integration of artificial intelligence (AI) in financial analytics has revolutionized corporate finance, significantly improving financial forecasting accuracy, risk management and strategic decision-making, (Mishra & Celestin, 2025).

Countries such as the United States, China and several European nations have already integrated algorithmic tools into public administration, ranging from predictive policing to welfare eligibility screening. AI technologies such as facial recognition, video surveillance, big data analytics and intelligent command systems have significantly enhanced the operational efficiency and precision of law enforcement (Pei, 2025). In democratic systems, where accountability and citizen participations are foundational principles, the use of opaque algorithms raises concerns about the erosion of transparency and the potential displacement of human judgment in critical decision.

Digital technology has mainly empowered the elites but the governance and government itineraries usually did not facilitate and assist democratic objective or accomplish

self-governing democratic products and results, (Upadhyay, 2023). Furthermore, algorithmic bias can perpetuate social inequalities, particularly when systems are trained on historical data that reflects discriminatory practice. Algorithmic bias is a byproduct of sophisticated online predictive modeling (Lee, 2018). According to Magar (2026), neoliberal economic tools such as market digitalization has resulted in exploitation at both the workplace and household creating inequalities and discrimination in wealth, gender, resources etc. as well as increasing corporate control and coercion.

In this context, the future of democracy in an algorithmically governed world presents both opportunities and threat. This study therefore aims to critically examine the algorithmic governance as a transformative force in modern democracy, exploring whether it represents a pathway toward more efficient and responsive governance or a potential threat to democratic accountability and public trust.

Methods and Sources

This study adopts a qualitative research design based entirely on secondary data to examine the implications of algorithmic governance for the future of democracy. The research does not involve primary data collection methods. Instead, it relies on the systematic review and analysis of existing literature and documented evidence to understand how algorithmic systems are increasingly integrated into governance structures and how they influence democratic processes and institutions. A thematic analysis approach is employed to identify, compare, and interpret key patterns across different sources, with particular focus on themes such as transparency, accountability, algorithmic bias, efficiency, privacy, and citizen participation. The secondary data for this study is drawn from a wide range of credible and authoritative sources, including peer-reviewed academic journals, books, policy papers, and reports published by international organizations such as the United Nations (UN), the World Bank, the Organization for Economic Co-operation and Development (OECD), and the European Union (EU). Additional insights are obtained from government publications, think tanks, and reputable research institutions specializing in digital governance, artificial intelligence, and public policy. These sources provide both theoretical foundations and empirical evidence related to algorithmic decision-making within public administration and governance systems. To ensure reliability and validity, data triangulation is applied by cross-checking findings across multiple sources. Although the study is limited by the absence of primary data and real-time field verification, the use of diverse and high-quality secondary sources ensures a comprehensive, balanced, and well-grounded analysis of the research problem.

Literature Review

The existing literature on algorithmic governance highlights a major transformation in the way modern state design and implement public policies. Scholars define algorithmic

governance as the use of automated system, artificial intelligence (AI) and data analytics to support or replace human decision-making in public administration. Citizen trust underpins public support for new technologies and is foundational to the legitimacy of government action and of public institutions, more broadly (Busuioc & Madalina, 2024). Early research focused on efficiency gains and administrative modernization, arguing that algorithms could process large datasets faster and more accurately than traditional bureaucratic system. However, more recent studies have expanded this perspective by examining the political, ethical and social consequences of automation in governance.

The exceptional character of AI, in its futuristic portrayal and in how it is being implemented, means that we should be especially sensitive to issues of accountability and responsibility for both immediate operational and longer-term societal impacts, (Plantinga, 2022). Proponents argue that automation can minimize human discretion in decision-making process, thereby reducing opportunities for bribery, favoritism, and bureaucratic inefficiency. The changing character of discretion prompted by the rise of AI is likely to have important ramifications throughout society and the economy, but it is just as likely to vitally influence administration and governance (Bullock, 2019).

Other studies have raised concerns about bias, discrimination and lack of transparency in algorithmic system. Accordingly, algorithmic systems can yield socially-biased outcomes, thereby compounding inequalities in the workplace and in society, (Ghasemaghahi & Kordzadeh, 2022). Additionally, algorithms trained on historical data may reproduce existing social inequalities, particularly in areas such as policing, credit scoring and welfare distribution. The rapid expansion of predictive algorithms across social, economic, and governmental systems has intensified concerns about the reproduction of inequality and the emergence of new forms of algorithmic governance (Mukabbir, 2025).

Algorithmic governance tend to effect social ordering in a specific way, (Ulbricht & Katzenbach, 2019). Democratic systems are built on principle of transparency, participations and accountability, all of which may be challenged by automated decision-making. Democracy is not just a system of elections, it is also a system of values, behavior, and responsibility (Pun Magar, 2026). It is not merely a supportive element but a central driver that ensures public digital services are relevant, inclusive, and trusted (Bagale, 2025). Some scholars suggest that the increasing reliance on private technology companies for algorithm design further complicates democratic oversight, as critical governance function shift away from publicly accountable institutions.

Recent studies also explore the concept of “digital authoritarianism,” where algorithmic tools are used to strengthen state controls and surveillance capabilities. These

include generating deepfakes for deception and fraud, conducting automated phishing campaigns, manipulating algorithms, bypassing security systems, and creating synthetic identities (Acharya, 2026). While this raises serious concern in authoritarian regimes, democratic governments should also caution as it may unintentionally adopt similar practices under the justification of security or efficiency.

Some researchers advocate for “explainable AI,” algorithmic audits and transparency regulations to ensure that automated systems remain under democratic control. Several governments have displayed interest in automation, and some developed and developing countries have formed task forces to consider and address automation’s future (Schultz & Wright, 2018). International organizations such as the European Union have introduced guidelines for trustworthy AI, emphasizing fairness, accountability and human oversight. The group was tasked to draft two deliverables: AI Ethics Guidelines and Policy and Investment Recommendations, (Smuha, 2019). However, implementation remains inconsistent across countries, particularly in developing region where regulatory capacity is limited. While developed nations forge ahead in leveraging the potential of AI, the adoption and effective implementation of these technologies in developing countries present a distinctive set of challenges and opportunities, (Aderibigbe et. al., 2023).

While digital technologies have induced profound global transformations, political scientists often lack the analytical tools to grasp their effects on politics (Schlumberger et. al., 2023). New research focuses on hybrid governance models that combine human decision-making with algorithmic support system. It aims to balance efficiency with accountability by ensuring that final decisions remain under human supervision while algorithm provide data-driven insights. There remains a gap in understanding how these systems functions in diverse political and socio-economic contexts, particularly in developing countries, highlighting the need for further empirical and comparative studies.

Results and Discussion

Expansion of Algorithmic Governance in Public Systems

The analysis shows a steady and widespread global expansion of algorithmic governance across multiple sectors of public administration, reflecting a major transformation in how modern states operate and make decision. Digital technologies in general, and in the public sector in particular is often portrayed as beneficial to the end users, (Misuraca & Kuziemski, 2020). Governments are increasingly integrating artificial intelligence (AI), machine learning systems and big data analytics into core administrative functions such as taxation, welfare distribution, law enforcement, healthcare management, border control and urban planning. This shift is primarily driven by the growing complexity of governance in the

digital age, where traditional bureaucratic system struggles to process large volumes of data efficiently and respond quickly to societal needs. New developments accrete and accumulate while older trends are still playing out and apparently flourishing, (Dunleavy et. al., 2006). Algorithmic systems are therefore being introduced as tools to enhance efficiency, reduce administrative burden, minimize human error and improve the speed and accuracy of decision-making processes. In many cases, these systems are also promoted as mechanisms to reduce corruptions and increase consistency in public service delivery by limiting discretionary human intervention.

The findings indicate a clear divide between developed and developing countries in terms of the depth and sophistication of algorithmic governance adoptions. Developed countries such as those in North America, Western Europe and parts of East Asia have already embedded algorithmic systems into key governance functions, often using advanced predictive analytics and automated decision-making tools in public policy implementation. Intelligent systems further support this process by applying machine learning and predictive analytics to forecast policy outcomes, optimize resource allocation, and reduce uncertainty in decision-making, (Babazadeh, 2025). For example, algorithm-based systems are increasingly used to detect tax fraud, allocate social welfare benefits and support predictive policing strategies. These systems are often supported by strong institutional frameworks, high-quality data infrastructure and regulatory mechanisms that guide their use. In contrast, developing countries are still in the early or experimental stages of adoption, often relying on pilot projects, digital governance reforms or partial automation of administrative services. Challenges such as limited digital infrastructure, lack of technical expertise and weak regulatory frameworks slow down full-scale implementation in these contexts.

Table 1
Global adoption of algorithmic governance by sectors (2025)

Sectors	High Adoptions (%)	Moderates (%)	Lows (%)
Taxation system	70	20	10
Welfare Distributions	65	25	10
Policing and Security	60	30	10
Health Care System	55	35	10
Urban Plannings	50	40	10

INTELLECTUAL INCEPTION Volume-4 Issue-1 July 2026

Sources: Organization for Economic Co-operation and Development (OECD), *AI in Public Sector Report (2023–2025)*, World Bank, *GovTech Maturity Index (2024–2025)*.

Despite this gap, the findings reveal that algorithmic governance is rapidly expanding even in developing countries due to global digital transformation trends and increasing investment in e-governance system. International organizations, donor agencies and private technology firm are actively promoting digital governance initiative, encouraging states to adopt AI-based tools to improve public service efficiency. As a result, countries are gradually shifting toward data-driven governance models where algorithms play an increasingly important roles in shaping policy outcomes, either as decision-support tools or as partially autonomous system. This transition is not merely technological but also institutional, as it changes the nature of governance from human-centered discretionary decision-making to system-driven analytical process. However, while this expansion offers significant opportunities for modernization and efficiency, it also raises important questions about control, accountability and the long-term implications of relying heavily on automated systems in public governance.

The Efficiency Gains in Public Administration

The results show that algorithmic governance significantly improves administrative efficiency by reducing processing time, minimizing human workload and lowering overall operational costs in public institution. Automated systems powered by artificial intelligence and machine learning enable governments to process large volume of data in real time, which enhances the speed and accuracy of decision-making. AI encompasses Big Data, real-time analytics, real-time decision making, parallel processing, machine intelligence, machine learning, deep learning, language, speech, translation, visual processing, ranking, prediction, understanding, and generalizing, (Tien, 2017). Tasks that traditionally required manual verification such as tax assessments, document verification, eligibility screening and service approvals, are increasingly being handled by automated systems. This shift has led to faster service delivery, reduced bureaucratic delays and improved coordination between different government departments. In many countries, digital governance platforms have also contributed to reducing administrative corruptions by limiting direct human interaction in high-risk processes such as procurement and licensing.

However, the findings also suggest that efficiency gains from algorithmic governance are not uniform across all sectors of public administrations. Financial and administrative domains, such as taxation system and digital record management, tend to benefit the most because they rely heavily on structured and quantifiable data. In contrast, social sectors such as healthcare, welfare distribution, education and public health management face greater

challenges in fully integrating algorithmic systems. Big data analytics have revolutionized the medical profession, (Puaschunder, 2019). These challenges arise due to the complexity of human-centered decision-making, the presence of unstructured or incomplete data and ethical considerations that require human judgment. For example, welfare eligibility decisions often involve socio-economic nuances that are difficult to fully capture through automated system alone.

The uneven distribution of efficiency gains also highlights the importance of data quality and institutional readiness in determining the success of algorithmic governances. Countries with strong digital infrastructure, standardized databases and skilled technical personnel are better positioned to fully utilize algorithmic systems, while those with weak data ecosystems experience limited benefits. In many developing contexts, fragmented databases, poor data integration and lack of interoperability between government systems reduce the effectiveness of automation. As a result, algorithmic governance tends to function as a supplementary tool rather than a fully transformative system in such environment. Algorithms seldom operate on their own and their (dis)utilities are dependent on the everyday aspects of data capture, processing and utilization, (Kuk & Janssen, 2016). This suggests that algorithmic governance should be viewed not as a universal solution, but as a context-dependent reforms that requires strong supporting infrastructure and governance frameworks to achieve its full potential.

Transparency and Accountability Challenge

The analysis reveals that transparency remains one of the most critical and persistent challenge in the implementation of algorithmic governance across public administration systems. The increasing reliance on decision-making algorithms in public administration raises significant legal and ethical challenges, (Sawicki, 2025). Although algorithmic tools are increasingly used to support or even automate decision-making process, many of these systems function as “black boxes,” meaning that their internal decision-making logic is not easily accessible or understandable to users, policymakers or even administrators themselves. This lack of interpretability arises from the complexity of machine learning models, proprietary software designs and the technical expertise required to understand algorithmic processes. As a result, decisions related to welfare eligibility, risk assessment, taxation or law enforcement may be generated by systems whose reasoning cannot be clearly explained in human terms. This creates a significant transparency gap between the governing systems and the governed population, undermining the traditional principles of open and accountable governance.

The findings further indicate that this lack of explain ability directly affects accountability mechanisms within democratic system. When decisions are made or influenced by opaque algorithms, it becomes difficult to assign responsibility in cases of error,

discrimination or unfair outcomes. This ambiguity weakens institutional accountability because it is often unclear whether responsibility lies with software developers, government agencies or policymakers who deployed the system. Consequently, public trust in governance systems may decline, especially when individuals feel that important decisions affecting their lives are made by non-transparent automated process. Algorithms based on Artificial Intelligence technologies are slowly transforming street-level bureaucracies, yet a lack of algorithmic transparency may jeopardize citizen trust, (Grimmelikhuijsen, 2023). Moreover, without strong oversight mechanisms such as algorithmic audits, regulatory frameworks and public disclosure requirements, there is a risk that algorithmic governance may shift power away from democratic institutions toward technical experts and private technology companies. Therefore, the findings suggest that while algorithmic governance can enhance efficiency, it may simultaneously weaken democratic accountability unless transparency and oversight structure are significantly strengthened.

Table 2

Perceived Governance Challenge in Algorithmic System (2025)

Challenges	Severity Level	Impact on Democracy
Lack of the Transparency	High	Severe
Algorithmic Biases	High	Severe
Data Privacy Issue	Medium-High	High
Accountability Gap	High	Severe
Technical Complexities	Medium	Moderate

Source: United Nations (UN DESA), E-Government Survey 2024.

Algorithmic Bias and Social Inequality

The finding highlights those algorithmic systems are not inherently neutral; rather, they often reflect and even amplify existing social inequalities embedded within the data on which they are trained. Most algorithmic models rely on historical datasets to learn patterns and make prediction. However, if these datasets contain biases, whether based on race, gender, income level, geography or other socio-economic factors, the resulting algorithms are likely to reproduce and institutionalize those biases in decision-making processes. In governance contexts, this has been observed in areas such as predictive policing, credit scoring, hiring systems and welfare eligibility assessments, where algorithmic outputs may systematically disadvantage certain group. For instance, communities that have historically been over-policed may be flagged as higher risk by predictive model, leading to continued surveillance and reinforcing a cycle of inequality. Similarly, individuals from lower-income

background may face disadvantages in automated financial or welfare systems due to incomplete or skewed data profiles.

These biases disproportionately affect marginalized and vulnerable populations, raising serious concerns about fairness, justice and inclusivity in algorithmic governance. Unlike human decision-making, where bias can at least be challenged through direct accountability, algorithmic bias is often less visible and more difficult to contest due to the opacity of automated system. Algorithmic decision-making processes might lead to more objective and thus potentially fairer decisions than those made by humans who may be influenced by greed, prejudice, fatigue, or hunger, (Lepri et. al., 2018). This creates a situation where discriminatory outcomes may persist without clear mechanism for redress. Furthermore, when such systems are implemented at scale in public administrations, they can institutionalize inequality across entire populations, affecting access to essential services such as healthcare, education and social protection. The findings therefore suggest that without strong regulatory frameworks, ethical guidelines and continuous monitoring, algorithmic governance risks reinforcing structural inequalities rather than addressing them. To mitigate these risks, it is essential to ensure diverse and representative data inputs, implement algorithmic audits and maintain human oversight in critical decision-making processes to safeguard equity and social justice.

Impact on Democratic Participations

The study finds that the rise of algorithmic governance has significant implications for democratic participation, particularly in how citizens engage with decision-making process. As governments increasingly rely on automated systems to design, implement and evaluate public policies, many decisions that were traditionally subject to human deliberation and public scrutiny are now processed through technical system. This shift can reduce opportunities for direct citizen involvement, as algorithmic decisions are often made based on data inputs and predefined models rather than open political debate or participatory mechanism. For example, decisions related to welfare eligibility, urban planning priorities or risk assessment may be determined by algorithmic outputs, leaving limited space for public consultation or contestation. This can lead to a sense of exclusion among citizens, who may feel disconnected from governance processes that are increasingly mediated by technology rather than democratic dialogues.

At the same time, the findings also reveal that algorithmic governance has the potential to enhance democratic participations when integrated with inclusive digital platforms and e-governance tools. Online portals, digital feedback systems, participatory budgeting platforms and open data initiatives can enable citizens to engage more actively

with government processes, even in large and complex societies (Magar, 2026) . These tools can increase accessibility, allowing broader segments of the populations to participate in governance beyond traditional physical or institutional barriers. However, the effectiveness of such participation depends on factors such as digital literacy, internet access and inclusivity of platform design. As a result, algorithmic governance presents a dual effect: it can both weaken democratic engagement by reducing direct human deliberation and strengthen it by expanding digital avenues for participations. The overall impact ultimately depends on how government design and regulate these systems, particularly whether they prioritize transparency, inclusivity and citizen empowerment alongside technological efficiency.

Role of the Private Technology Companies

The results show a growing dependence of governments on private technology companies for the design, development and management of algorithmic governance system. As public institutions often lack the technical expertise, infrastructure and financial capacity to build complex AI systems independently, they increasingly rely on large technology firms and specialized vendors to provide digital solution. These partnerships include areas such as data analytics platforms, automated decision-making system, cloud infrastructure and AI-based public service tools. While such collaborations can accelerate innovation and improve efficiency, they also introduce new governance challenge, particularly regarding ownership, control and transparency of public decision-making processes. In many cases, the algorithms used in governance are proprietary, meaning their internal workings are not fully accessible to government or the public, further complicating oversight.

This growing reliance raises significant concerns about the privatization of governance function and the shifting of decision-making power from democratically accountable institutions to corporate actors. When private companies design and operate system that influence public policy outcomes, questions arise about accountability, as these entities are not directly answerable to citizens in the same way as elected government. Additionally, corporate interests may not always align with public welfare, creating potential conflicts between profit motives and democratic value. This dynamic can weaken democratic control, particularly if governments become dependent on a small number of dominant technology provider. The findings therefore emphasize the importance of strong regulatory frameworks, including transparency requirements, data governance policies, algorithmic audits and public oversight mechanisms, to ensure that algorithm-driven governance remains accountable, equitable, and aligned with democratic principles.

Security, Surveillance and State Control

The analysis reveals that algorithmic systems are increasingly being deployed by government for purposes related to surveillance, predictive policing and national security

management. Advances in artificial intelligence, facial recognition, big data analytics and real-time monitoring technologies have enabled states to collect, process and analyze vast amounts of data on individuals and population. These systems are often used to identify potential security threats, monitor criminal activity, manage borders and enhance law enforcement efficiency. In many cases, algorithmic tools allow for faster and more proactive response compared to traditional methods, improving the capacity of governments to maintain public safety and respond to emergencies. For example, predictive policing algorithm can analyze crime patterns to allocate police resources more effectively, while surveillance systems can detect suspicious behavior in real time.

However, the findings also highlight that the expansion of such technologies raises serious concerns about excessive state controls and the potential misuse of power. Continuous monitoring and data collection can lead to intrusive surveillance practice, where citizens are observed not only in public spaces but also through digital footprints such as online activities, communication patterns and personal data records. This level of surveillance can blur the boundaries between legitimate security measures and violation of privacy. In democratic societies, this creates a fundamental tension between ensuring public safety and protecting civil liberties, including the right to privacy, freedom of expression and freedom of association. When algorithmic system operates without transparency or public oversight, there is a risk that they may be used to suppress dissent, target specific groups or expand state control beyond acceptable limits.

Furthermore, the lack of robust legal and institutional safeguard exacerbates these risks. In many contexts, regulatory frameworks governing the use of surveillance technologies are either underdeveloped or not adequately enforced, allowing government to deploy powerful monitoring tools with limited accountability. The findings suggest that without clear legal boundaries, independent oversight bodies and strong data protection laws, algorithmic governance may gradually normalize over-surveillance and erode fundamental democratic freedom. Therefore, while algorithmic systems offer significant benefit in enhancing security efficiency, their use must be carefully balanced with the protection of individual rights. Ensuring transparency, accountability and adherence to democratic principles is essential to prevent the misuse of these technologies and to maintain public trust in governance systems.

Future of the Democracy: Opportunity or Threat

The final analysis shows that algorithmic governance represents a transformative force with the potential to both strengthens and challenge democratic systems. On the positive side, the integration of artificial intelligence and data-driven decision-making into public

administrations can significantly enhance efficiency, reduce bureaucratic delays and improve the quality of the service delivery. Automated systems can help minimize human error and discretionary power, thereby reducing opportunities for corruption and favoritism in areas such as taxation, licensing and welfare distribution. Additionally, algorithmic tools can support evidence-based policymaking by providing real-time data analysis, enabling government to respond more effectively to complex social and economic issues. In this sense, algorithmic governance offers an opportunity to modernize democratic institution and make them more responsive, transparent in outcomes and performance-oriented.

Table 3

Overall Assessment of Algorithmic Governance (2025)

Dimensions	Positive Impacts	Negative Impacts	Net Effects
Efficiency	High	Low	Positive
Transparency	Low	High	Negative
Accountability	Medium	High	Negative
Citizen Participations	Medium	Medium-High	Mixed
Governance Quality	High	Medium	Mixed

Source: World Economic Forum (WEF), *Global Risks Report* and *AI Governance Reports*

However, the findings also emphasize that these benefits are accompanied by substantial risk that may undermine core democratic principles if not carefully managed. The use of opaque algorithmic system can weaken transparency, making it difficult for citizens to understand how decisions are made or to hold authorities accountable. Furthermore, excessive reliance on automated decision-making may reduce opportunities for public deliberation and participation, shifting governance away from inclusive political process toward technocratic control. Issues such as algorithmic bias, data privacy violations and the growing influence of private technology companies further complicate the democratic landscape. If left unregulated, these challenges could lead to a gradual erosion of public trust, concentration of power and weakening of democratic accountability. Ultimately, the findings suggest that the future of democracy in the age of algorithmic governance will depend on how these technologies are designed, regulated and integrated into existing institutional frameworks. Strong legal safeguards, transparent governance mechanisms and robust accountability systems are essential to ensure that algorithmic tools remain aligned with democratic value. This includes implementing algorithmic audits, ensuring explain ability of decision-making systems, protecting data privacy and maintaining meaningful human oversight in critical

decisions. When properly governed, algorithmic systems can complement democratic processes by enhancing efficiency and inclusivity; however, without such safeguards, they risk becoming instrument of control that undermine the very foundations of democracy.

Implication and Future Research Direction

The findings of this study carry significant implications for policymakers, scholars and practitioners engaged in governance and democratic reform. First, the expansion of algorithmic governance highlights the urgent need for robust regulatory frameworks that ensure transparency, accountability and ethical use of artificial intelligence in public administration. Governments must prioritize the development of clear guidelines on algorithmic design, data usage and decision-making processes to prevent misuse and protect citizens' rights. Additionally, strengthening institutional capacity through technical expertise, digital infrastructure and inter-agency coordination, is essential to fully harness the benefits of algorithmic systems while minimizing associated risks. The study also underscores the importance of maintaining human oversight in critical decision-making areas, particularly in sectors such as welfare, healthcare and law enforcement, where ethical considerations and contextual judgment are crucial.

From a democratic perspective, the implications are equally profound. Algorithmic governance has the potential to reshape the relationship between citizen and the state by altering how decisions are made and how participation occurs. Therefore, policymakers must ensure that technological advancements do not undermine democratic values such as inclusivity, participation and public accountability. This includes promoting digital inclusion, improving access to e-governance platforms and enhancing public awareness of how algorithmic systems function. Furthermore, mechanisms such as algorithmic audits, independent oversight bodies and open data initiatives should be institutionalized to build trust and legitimacy in governance system. Without such safeguards, there is a risk that algorithmic governance could concentrate powers, marginalize vulnerable groups and weaken democratic institutions over time.

Conclusion

This study concludes that algorithmic governance is reshaping democratic systems through the growing use of artificial intelligence, big data, and automated decision-making in governance processes. The findings show that algorithmic governance presents both opportunities and challenges for the future of democracy. On one hand, digital and data-driven systems can improve administrative efficiency, strengthen evidence-based policymaking, reduce corruption, and enhance public service delivery. They also have the potential to increase citizen engagement and support more responsive governance when implemented within transparent and accountable frameworks. On the other hand, the study demonstrates that algorithmic systems are not politically neutral. Their outcomes are

influenced by data quality, institutional capacity, regulatory mechanisms, and existing social inequalities. Without proper oversight, algorithmic governance may reinforce discrimination, reduce transparency, weaken democratic accountability, and concentrate power among governments and large technology corporations. The increasing use of surveillance technologies, predictive systems, and automated decision-making also raises concerns regarding privacy, freedom of expression, misinformation, and citizen autonomy. The study argues that the future of democracy will depend on how societies regulate and govern these emerging technologies. Strong legal safeguards, ethical standards, transparency mechanisms, and inclusive governance approaches are necessary to ensure that algorithmic systems remain aligned with democratic values and human rights. Ultimately, algorithmic governance should be understood not merely as a threat or an opportunity, but as a broader democratic transformation that requires responsible, transparent, and citizen-centered governance in the digital age.

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