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Artificial intelligence in public administration: opportunities, challenges, and ethical considerations

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Abstract

This study explores the integration of artificial intelligence (AI) into public administration, focusing on its potential to enhance governance, service delivery, and decision-making. AI technologies such as machine learning, big data analytics, and natural language processing offer opportunities to improve efficiency and automate processes. However, challenges such as algorithmic bias, data privacy risks, and bureaucratic resistance hinder implementation. This paper reviews existing literature to identify key trends, challenges, and implications for policymakers. Using a literature review, this study synthesises research from Scopus and ScienceDirect, prioritising studies from the past ten years. A thematic analysis categorises findings into AI applications, social media, and big data in governance, as well as ethical concerns and adoption challenges. The review highlights AI's transformative potential while emphasising the need for strong regulatory frameworks, ethical guidelines, and capacity-building. Consequently, social media possesses abundant information that can be leveraged in the development of artificial intelligence. Hence, AI has the potential to modernise public administration, but its success depends on transparency, accountability, and inclusivity.

Keywords: *artificial intelligence, social media, machine learning, big data, public administration*

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Introduction

To date, the spread of information technology and new media, such as the internet and mobile phones, with their two-way communication capabilities, has facilitated extensive communication by connecting billions of people around the world. This development has not only accelerated the real-time exchange of information, but also fostered the creation of global social networks that enable interaction across geographical and cultural boundaries. With digital platforms such as social media, instant messaging apps and video conferencing, individuals and groups can now communicate, collaborate and share knowledge more efficiently than ever before. In addition, increased accessibility through mobile devices has democratized information, enabling active participation from different walks of life, including those who were previously technologically marginalized (Kietzmann et al., 2011; Leavey, 2013; Pinzon, 2013).

Various studies and academic references emphasize the crucial role of the internet, especially social media platforms, as a tool to obtain supporting data that is useful for government officials in formulating policies and improving the quality of public services. The existence of social media provides a constantly updated flow of information, allowing relevant authorities to track public aspirations, recognize problems faced by citizens, and

assess the effectiveness of regulations that have been enacted. Through sites such as Twitter, Facebook and LinkedIn, there is mutual communication between the public and policymakers, which in turn strengthens the principles of openness and accountability in government. Technologies such as big data and artificial intelligence (AI) can be used to analyze patterns, trends, and current issues among the public, thus providing a stronger basis for strategic policy formulation. On the other hand, social media also serves as a means of direct feedback, enabling rapid improvement of public services based on criticism or input from the public (Alexander, 2014; Chatfield et al., 2013; Chatfield & Reddick, 2018; Eom et al., 2018; Gross & Murthy, 2017; Jamali et al., 2019; Joseph et al., 2018; Jung & Park, 2016; Kim et al., 2016; Pathan, 2018; Peary et al., 2012; Ragini et al., 2018; Simon et al., 2015; Takahashi et al., 2015). Therefore, collaboration is imperative to expedite development initiatives, for which effective and proper communication is essential (Adedokun et al., 2010; Aruma, 2018).

The significant increase in the number of Information and Communication Technology (ICT) devices such as smartphones, computers and tablets has brought about a major transformation in the way individuals participate in social issues in recent decades. The availability of increasingly affordable devices and widespread internet access have enabled more people to connect with global information, voice opinions and engage in public discussions. Social media, online forums, and digital collaboration platforms have become the main means for people to express their aspirations, criticize policies, or garner support for various social movements (Sagun et al., 2009). Although the number of information and communication technology (ICT) users continues to increase significantly, unfortunately this huge potential has not been optimally utilized by the government for information collection and data collection purposes (Alexander, 2014; Anikeeva et al., 2015; Ehnis & Bunker, 2012; Flew et al., 2013; Hashimoto & Ohama, 2014; John Carlo Bertot et al., 2012; Kaigo, 2012; Kaminska & Rutten, 2014; Peary et al., 2012).

Furthermore, research on the utilization of artificial intelligence (AI) in government institutions is still very limited and has not been published comprehensively. Although AI technology has shown rapid development in the private sector, its application in the government bureaucracy faces various obstacles, ranging from regulatory aspects, infrastructure readiness, to organizational culture resistance. Interestingly, while the number of scholarly publications on AI integration in public administration is relatively few and elusive, most of the existing literature is unanimous in emphasizing the great potential of this technology in improving the effectiveness of public services (Chen et al., 2021; Gesk & Leyer, 2022).

The limited number of case studies available show how AI can revolutionize various aspects of government, from prediction systems for public needs, to automation of administrative processes, to big data analysis for policy making. However, the lack of in-depth research on concrete implementation creates a knowledge gap between theoretical potential and practical application. The main argument that keeps getting repeated in this limited literature emphasizes AI's ability to improve the accuracy, speed, and efficiency of public services, while reducing bureaucratic workload (Busch, 2025; Kumar, 2024; Qin & Li, 2024).

Key challenges in developing research in this area include limited access to often sensitive government data, lack of collaboration between academics and government

practitioners, and the complexity of measuring the real impact of AI implementation in a multidimensional bureaucratic context. More empirical studies are needed that not only explore the potential of AI, but also examine the implementation challenges, impact on governance, and ethical implications of its use in the public sector.

Therefore, this paper aims to address a critical gap in the literature by comprehensively examining the transformative role of artificial intelligence (AI) in disrupting and reconstructing public administration. In recent years, we have witnessed an increasingly globalized wave of digital transformation, where public institutions in various countries have begun to massively adopt various advanced technologies to revolutionize traditional bureaucratic practices. This phenomenon is not only limited to developed countries, but also a growing number of developing countries are seeking to utilize AI to improve operational efficiency, strengthen government transparency, and enhance decision-making processes in various public policy domains. Around the world, public agencies are increasingly adopting advanced technologies to enhance efficiency, transparency, and decision-making across policy domains and government functions (Criado & Gil-Garcia, 2019).

Research Methodoloy

This schoalrly work employs a narrative review of literature approach to examine the integration of artificial intelligence (AI) in public administration. It synthesises existing scholarly materials to explore AI's role in governance, particularly in policy formulation, service delivery, and decision-making. Relevant literature was collected from reputable journals, books, and conference proceedings available in academic databases such as Scopus and ScienceDirect. The selection of sources prioritised studies published within the last ten years, although seminal works providing foundational insights were also included.

The reviewed literature was analysed thematically, categorising findings into key areas such as AI applications in public administration, social media, and big data as governance tools, ethical concerns and transparency issues, and challenges in AI adoption. This thematic approach enabled a structured synthesis of existing knowledge while identifying research gaps and emerging discussions in the field.

This study is limited to a qualitative synthesis of secondary data and does not involve primary data collection or quantitative analysis. Whilst efforts were made to ensure a comprehensive review, certain constraints, such as limited access to paywalled materials, may have affected the scope of the study. Despite these limitations, the findings provide valuable insights into the potential and challenges of AI adoption in public administration, offering a foundation for future research and policy considerations.

Result and Discussion

Artificial Intelligence and Public Administration

Rapid and extensive technological innovations are reshaping the landscape of numerous sectors, including public administration. Public administrators encounter various challenging demands whilst serving the public (Tuominen & Hasu, 2020). The adoption of innovative technologies is underway across different bureaucracies in public sector management (Criado & Gil-Garcia, 2019). Given the constraints of limited resources, it

becomes imperative to prioritise and categorise these demands. In this context, artificial intelligence (AI) can prove immensely beneficial.

Artificial intelligence, encompassed within the broader field of science, focuses on developing intelligent manmade creations skilled of activities such as learning, planning, recognition, and problem-solving, among others. It stands out as one of the emerging innovative technologies employed to power conversational agents. These agents enable organisations to leverage their data in providing clients with the required information (Riikkinen et al., 2018). The concept behind conversational agents involves interacting with the user-client, learning from the conversation, and generating results that are based on the input data and information provided by the client-user. This entails a combination of various fields under the umbrella of artificial intillegence.

The integration of Artificial Intelligence into bureaucracy is experiencing important growth. Hence, the ustilisation of artificial intelligence in numerous areas such as welfare payments and decision-making, fraud detection, planning, and establishing drone paths (Martinho-Truswell, 2018). The most notable advancements in Artificial Intelligence have occurred in two overarching domains: perception and cognition. Perception involves acquiring, interpreting, selecting, and organising sensory information (Brynjolfsson & Mcafee, 2017). Within the category of perception, voice recognition and computational recognition are two forms of artificial intelligence. Another aspect of perception is high-level perception, which entails making sense of complex data (Chalmers et al., 1992). A well-developed high-level perception can prove invaluable in public administration. On the other hand, cognition or cognitive computing involves synthesising data from different sources and suggesting possible answers. Cognitive computing encompasses data mining and natural language processing, commonly referred to as machine learning. This cognitive approach enhances the ability to learn from various data inputs, contributing to the efficacy of artificial intelligence applications in public administration.

The concept of harnessing Artificial Intelligence is increasingly significant in contemporary times and has garnered heightened attention. The use of Artificial Intelligence can facilitate the delivery of more targeted demands in a more timely and efficient manner (Malawani et al., 2020). Scholars have extensively studied the application of artificial intelligence in service provision from various perspectives. Therefore, fostering collected innovative efforts within this emerging technological upsurge could stimulate transformative practices in the public sector (Criado & Gil-Garcia, 2019). Moreover, it is imperative for public administrators to invest in these innovative technologies, as policy implications underscore the need for creating new opportunities for collaboration among stakeholders (Brunetti et al., 2020).

Artificial intelligence concepts shaped by social sciences

Artificial intelligence has traditionally found its primary application in applied science, particularly within the field of engineering. Nevertheless, the increasing use and extensive research in this domain have paved the way for the integration of Artificial Intelligence into social science. Lauterbach (2019) highlighted several artificial intelligence concepts influenced by social sciences, including narrow artificial intelligence, artificial general intelligence, and artificial superintelligence.

Narrow Artificial Intelligence specialises in a single task, demonstrating proficiency in that particular area but lacking the ability to perform multiple tasks. An example is

recognising patterns in radiological images. On the other hand, artificial general intelligence replicates previous experiences or data to suggest actions in current situations, often incorporating a reward-punishment system. Lastly, artificial superintelligence, as outlined by (Bostrom, 2006) and Narain et al., (2019), represents an intellect surpassing the capabilities of renowned intellectuals in virtually every field, including scientific creativity, general wisdom, and social skills. Skills such as robotics and automation fall under the purview of artificial superintelligence, reaching a level where machines can act autonomously and learn from their actions.

Artificial intelligence technology stack

Machine learning

Machine learning is a technology that extracts information from data to construct a model using an algorithm situated within the broader field of artificial intelligence (Patterson & Gibson, 2008). Among the various models in machine learning, the neural network stands out.

A neural network is a distributed information processing structure comprising interconnected elements or nodes connected by unidirectional signal channels termed connections (Hecht-Nielsen, 1992). The strength of these connections between nodes is denoted as a parameter vector. The primary goal of the parameter vector is to minimise classification errors. The model established with a neural network can be employed in backpropagation to predict output (Hecht-Nielsen, 1992). Consequently, backpropagation serves as a mathematical tool that enhances the accuracy of predictions in machine learning.

Machine learning empowers systems to autonomously enhance their performance for a specific task by analysing pertinent data. It has played a pivotal role in the upsurge of artificial intelligence, influencing diverse applications such as search algorithms, product recommendation engines, speech recognition systems, fraud detection mechanisms, image recognition, and numerous other tasks. These applications, which were once solely reliant on human perception skills and judgment, have been significantly transformed and improved by the capabilities of machine learning (Lauterbach, 2019).

Machine learning models indeed learn from the data that is fed into their systems. They rely on a specific set of data to make judgments or generate outputs. This dataset serves as the training ground for machine learning algorithms, providing the foundation for their learning process. It is crucial to recognise that these datasets need to be regularly updated to ensure the continued relevance and accuracy of the machine learning model as it encounters new information and evolves over time. Regular updates help enhance the model's adaptability and effectiveness in making informed decisions or predictions based on current information available.

Artificial intelligence and policy

Furthermore, the application of artificial intelligence is still in its early stages, and there are noteworthy issues that require attention (Lauterbach, 2019). Firstly, the challenge of unbalanced data and algorithms highlights implicit biases in the values that influence the selection of data sets used to train a computer (O'Neil, 2016). O'Neil (2016) underscores the potential for administrators or system operators to introduce bias by favouring specific interests when mounting data. Secondly, the issue of transparency

arises. The outcomes of artificial intelligence are influenced not only by the available data but also by the algorithm and computations, factors that may contribute to biased results. However, understanding the inner workings of the algorithm remains incomplete, even for engineers and program developers. Thirdly, ethical considerations come to the forefront. The widespread accessibility of machine learning, including by malicious actors, raises concerns. If the government is lax and uploads trained data online without adequate security measures, there is a risk of exploitation.

In the context of policymaking, the use of neural networks for forecasting holds promise in decision-making (Cano et al., 1991). Despite the potential innovation in forecasting, there is a notable scarcity of research on its application in policymaking and analysis. This gap underscores the need for further exploration of the implications and effectiveness of forecasting using neural networks in the policymaking domain.

Artificial intelligence, big data, and social media

Big data technology has been identified as one of the instrumental technologies to leverage artificial intelligence (Barkham et al., 2018; Housley et al., 2014; Malawani et al., 2020; Rob Kitchin, 2014). Three significant dimensions characterise big data, as highlighted in the literature. The first dimension is volume, which pertains to the scale of data and the current and future storage structure capacity. The sheer enormity of the data involved makes manual warehousing, manipulation, and processing impractical (Barkham et al., 2018; Housley et al., 2014; Malawani et al., 2020; Rob Kitchin, 2014). The second dimension is variety, emphasising the diverse range and different forms of data. The third dimension, velocity, reflects the speed and real-time nature of the data provided by big data (Malawani et al., 2020).

The wealth of information available on social media presents both opportunities and challenges. Big data technology becomes crucial in analysing this extensive data, extracting meaningful insights, and making sense out of the vast and varied information available (Hussain & Manhas, 2016). It serves as a valuable tool for handling the complexities of diverse data sources and extracting actionable knowledge from the wealth of information generated by social media platforms.

Technological progress has indeed brought about substantial changes in institutions (Malawani et al., 2020). According to Scholz (2017), big data is increasingly seen as a surveillance tool that is already reshaping government and society. Consequently, institutions that do not harness the power of big data may find themselves at a significant disadvantage, as it is becoming a crucial tool for survival, influencing nearly every aspect of operations (Malawani et al., 2020; Scholz, 2017). The utilisation of big data is viewed as a strategic imperative, essential for staying competitive and responsive to the evolving landscape shaped by technological advancements.

Collected data through virtual databases holds significant implications for organisations, it proves to be a valuable and efficient resource for identifying emerging trends and understanding the pulse of their clients (Ghasemaghaei et al., 2018; Ma et al., 2018). Consequently, forward-thinking organisations are becoming more proactive in addressing not only general issues but also paying attention to the details contained within the data (Malawani et al., 2020).

The rapid increase of social media further accentuates the utility of online data in assessing an organisation's competitive strengths and weaknesses. This information is

instrumental in developing strategies to enhance services and mitigate negative attributes (Chiang, 2018; Ghasemaghaei et al., 2018; Zhang et al., 2018). Furthermore, online data can contribute to the establishment of an esteemed organisation that efficiently caters to the needs of its clients without compromising service quality (Barkham et al., 2018). Leveraging big data, organisations can precisely determine the public's needs and forecast trends during different seasons (Barkham et al., 2018). Therefore, the data collected online can serve as the foundation for constructing a framework that not only benefits the implementing organisation but also contributes positively to the broader public (Zhang et al., 2018).

Social Media

Social media functions as a virtual community where individuals can share information, knowledge, and whatnots (Kietzmann et al., 2011). It offers users the flexibility to integrate externally developed applications with interactive features into their profiles (Patton, 2007). Serving as a platform, social media brings together individuals with shared interests, fostering collaborative ideas and notions (Leavey, 2013; Pinzon, 2013). This platform has not only altered the conditions and rules of social interaction (Van Dijck & Poell, 2015) but has also transformed everyday activities, influencing user behaviour and lifestyles (Noorshella Binti Che et al., 2017).

Social media has become a crucial catalyst in organisational development by facilitating the easy circulation of information and opinions that can influence the political decision-making process (Baruah, 2012; Michaelsen, 2011). This dynamic contributes to the creation and enhancement of content, potentially bridging the gap between the government and the public in the realm of public policy (Dolan et al., 2017). Social media platforms play a pivotal role in fostering long-term relationships between service providers and beneficiaries through efficient support systems (Thompson et al., 2018), contributing to the promotion of social justice (Nyong'o, 1998).

Moreover, social media is now recognised as participatory media, where users are not merely consumers but actively engage in the creation and distribution of content (Freeman, 2011). This participatory nature transforms social media into a dynamic space for collaborative interaction, allowing users to have a more active role in shaping and sharing information.

AI Applications and Challenges in Context

Artificial intelligence holds significant potential to revolutionise public administration by addressing inefficiencies and enhancing decision-making processes. A key application is fraud detection, where AI systems analyse large datasets to identify anomalies in welfare programmes and other public services, thereby reducing corruption and increasing accountability. Similarly, AI-powered chatbots are transforming citizen services by providing 24/7 assistance for enquiries, improving accessibility, and reducing administrative workloads. Social media analytics further extend these capabilities, enabling public administrators to track public sentiment, monitor crises, and tailor policies based on real-time insights.

Despite its promise, the integration of AI into public administration presents notable challenges. A significant barrier is the lack of technical expertise within government agencies, where staff may lack the skills necessary to develop, implement, or manage

complex AI systems. Bureaucratic resistance to change further compounds this issue, as rigid hierarchies and traditional practices hinder innovation. Financial constraints also pose a challenge, particularly for resource-limited institutions, as the initial investment required for AI infrastructure can be prohibitive.

Addressing these challenges requires a multi-faceted approach. Strategic investment in workforce training and capacity-building programmes is essential to equip public administrators with the technical skills needed for AI adoption. Change management initiatives must foster a culture of innovation within bureaucratic structures, enabling smoother transitions to AI-driven practices. Additionally, governments should prioritise funding allocation for AI projects that demonstrate high impact, ensuring that financial resources are used efficiently and effectively. By tackling these barriers, public administration can fully leverage the transformative potential of AI, paving the way for a more transparent, efficient, and inclusive governance model.

Proposed Framework

The utilisation of the internet by governmental bodies for more consultative, participatory, and transparent governance, fostering collaboration among stakeholders, is now commonly termed Social Governance, or government 2.0 (Khan et al., 2014). The effectiveness of social governance is gauged by the extent to which the public is integrated into the network and the types of communication they are encouraged to engage in. Social media networking stands out as one of the strategies employed by governments to achieve these objectives (Mergel, 2010). Through social media, government institutions can enhance engagement, communication, and collaboration with the general public, ultimately contributing to a more inclusive and participatory form of governance.

Social media plays a vital role in organisational development, offering spontaneous, authentic, and personalised interaction with stakeholders (Bekkers et al., 2013). This platform facilitates the easy circulation of information and opinions that can influence the political decision-making process (Baruah, 2012; Michaelsen, 2011). Social media promotes interaction between the government and the public, emphasising the importance of user participation, content sharing, and networking through its real-time monitoring system (Bekkers et al., 2013). The use of network governance, characterised by horizontal forms of governing (Maes et al., 2018), helps create and improve content, addressing the gap between the government and the public in the realm of public policy (Dolan et al., 2017).

Social media also fosters long-term relationships between service providers and beneficiaries through its efficient support system (Thompson et al., 2018). As highlighted by Asongu and Odhiambo (2019), social media not only promotes democracy and reduces corruption in government but also influences policy development in the governance arena. The multifaceted impact of social media on organisational development and governance underscores its significance as a powerful tool in shaping public discourse, enhancing transparency, and fostering collaborative governance.

The influence of social media has been observed to bring about changes in the behavior of bureaucrats, contributing to improved governance (Kavanaugh et al., 2012; Klievink & Janssen, 2009; Oginni & Moitui, 2015). Kavanaugh et al., (2012) note that political efficacy and public trust can be enhanced by leveraging the features that social media offers, such as crowdsourcing, to collectively address specific problems. Social

media serves as a valuable tool for governments to inform and consult with the public. Simultaneously, it provides the public with a platform to exert pressure on the government, particularly during times of crises (Bott et al., 2014). The interactive nature of social media thus contributes to a more engaged and responsive form of governance.

Social media provides an open platform without restrictions on what can be posted and shared. This freedom has made it more convenient for the public to criticise corrupt officials, an act that might be overlooked by traditional news media providers due to the influence that corrupt officials may exert over them (Bertot et al., 2012). Consequently, social media has created opportunities for collaborative governance and empowered the public by allowing them to actively participate in discussions, share information, and voice their opinions without the limitations often associated with traditional media channels.

The enhancement of public service delivery is closely linked to the organisational structure and position, essential for meeting the rapidly changing demands of the public spurred by technological innovations and diverse needs (Malawani & Almarez, 2018). In the current landscape, technological innovation is imperative for an organisation's survival. Innovation can lead to improved efficiency, effectiveness, accessibility, lower costs, and reduced latencies (Otara, 2012). Indeed, innovation stands as one of the most critical requirements for any organisation in contemporary conditions. Faced with significant changes in the environment due to both local and international pressures, government organisations should consider expanding their scopes (Lappe, 2013).

Traditional bureaucracies, known for their rigidity, may struggle to adapt to faster-paced changes and must be unfrozen to allow for improvement. Allocating attention and evaluating various options to enhance efficiency is beneficial and should be considered, particularly as it directly influences public service delivery (Korvenoja, 2015). Adopting a flexible and innovative approach is key for organisations to effectively navigate the evolving landscape and meet the dynamic expectations of the public.

A positive organisational culture is formed by basic values, positive bureaucratic behaviors, and reinforcement (Achterbergh & Vriens, 2009; Roengtam et al., 2017). Integrated public service delivery is a characteristic of effective government, necessitating the resolution of issues within constitutional, legal, and jurisdictional limits (Scholl et al., 2012). Currently, cultural and legal considerations are crucial aspects that must be addressed in the adaptation of social media (Roengtam, 2017). It is essential for the government to evaluate the significance of the interaction between itself and the public, assessing whether it can serve as an engagement avenue for discussing serious issues (Meijer et al., 2012).

The culture of bureaucrats is a key factor that must be taken into account to achieve socially rooted and responsive public policies. Consequently, the application of social media methods should not proceed without a proper understanding of these cultural and organisational dynamics (Roengtam et al., 2017). A nuanced approach that considers cultural nuances and legal frameworks is essential for the successful integration of social media into government practices.

Policymaking is acknowledged to encompass various interest groups (Thatcher & Braunstein, 2015). This engagement and interaction, whether formal or informal, between government instrumentalities and interest groups are referred to as a policy network (Coleman, 2015). The concept of a policy network shifts decision-making from a vertical to

a more horizontal structure within states. Policy networks play a crucial role in the formulation and development of policies by involving different factors: fostering collaboration by balancing social-political needs and capacities; enhancing understanding of a particular problem; providing a mechanism for assessing various conflicts; and offering a favourable democratic perspective.

Collaboration has evolved with *technology*, enabling the public to co-produce public services with the government (Cordella & Paletti, 2017; Moon, 2017). Technology-based co-production, a form of crowdsourcing, leverages the collective information posted, shared, or stored online (Cordella & Paletti, 2017; Moon, 2017). Crowdsourcing serves as a method to gather information and compile a large amount of data with common thoughts and ideas originating from various sources (Cordella & Paletti, 2017; Grier, 2015; Moon, 2017; Tinati et al., 2017). This approach introduces new opportunities for government-public relationships, involving and including the public in matters vital to society, informing the public about programs and policies, and receiving feedback, establishing a direct communication link (Dolan et al., 2017; Thompson et al., 2018). These approaches are preferred not only for their efficiency (Ranjan & Malik, 2007; Singh & Yassine, 2018) but also for their cost-effectiveness in reaching a larger audience (Altuntas, 2017; Chiang, 2018; Ranjan & Malik, 2007).

Considering the information mentioned above, this paper argues that public administration may integrate artificial intelligence into its system to have more efficient delivery of service. Whereas, figure below entitled AI-Driven Framework for Public Administration represents the proposed framework.

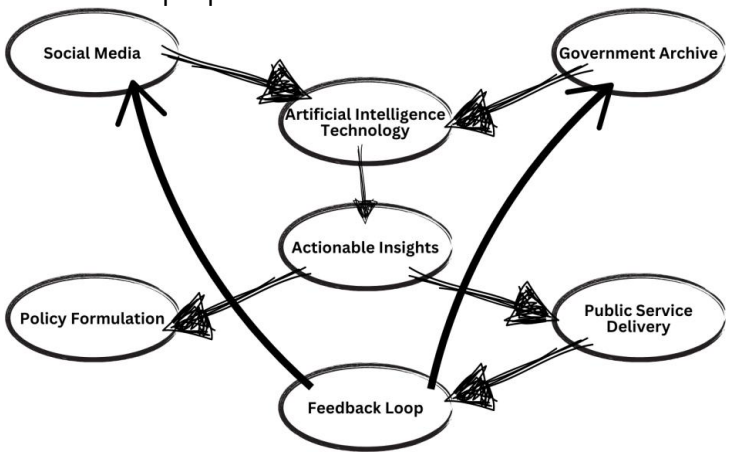

Figure 1. AI driven for public administration
Source: processed by author, 2025

AI-Driven Framework for Public Administration integrates data from two primary sources: social media and institutional archives. Social media offers real-time, diverse datasets that capture public sentiment and emerging trends, whilst institutional archives provide structured, historical data. These data streams are processed through AI technologies, including machine learning and big data analytics, to generate actionable insights. By combining these resources, the framework empowers public administrators to formulate evidence-based policies, enhance decision-making processes, and deliver more efficient and responsive services.

Central to this framework is a feedback loop that facilitates continuous improvement. As users interact with the system, their inputs and satisfaction levels inform

subsequent AI refinements. For instance, public feedback on policy outcomes, shared through social media, can be integrated into the system, enriching its learning algorithms and enabling more adaptive and effective governance.

Ethical and Societal Considerations

Whilst artificial intelligence offers transformative potential for public administration, its adoption raises ethical and societal concerns. First, biases in AI algorithms can perpetuate inequalities, as they often reflect the biases present in training datasets (O'Neil, 2016). Second, the use of social media data introduces privacy risks, particularly if data is not anonymised or consent is not obtained. Finally, the transparency of AI systems is critical; public administrators must understand how decisions are made to ensure accountability. To mitigate these risks, governments should prioritise ethical AI design, implement robust data privacy regulations, and enhance algorithm transparency.

Conclusion

The rapid advancement of artificial intelligence presents a unique opportunity for public administration to transform its operations and better serve society. By harnessing the power of AI technologies, governments can enhance service delivery, improve decision-making, and address longstanding inefficiencies. Social media data, when combined with institutional archives, offers a rich source of information for developing evidence-based policies that are responsive to the needs of citizens.

However, the integration of AI into public administration is not without risks. Ethical considerations, such as algorithmic bias, data privacy, and the transparency of AI decision-making processes, must be addressed to ensure fairness and accountability. Policymakers must also mitigate societal challenges, including the digital divide and the potential for job displacement, by adopting inclusive strategies that prioritise equity and accessibility.

The success of AI in public administration ultimately depends on the collaboration between government, private sector stakeholders, and the public. Investments in training, infrastructure, and change management are critical to fostering an environment where AI can thrive. As governments embrace this technology, they must remain vigilant in aligning its adoption with the principles of democracy, transparency, and public trust. Artificial intelligence is not just a tool for enhancing efficiency; it is a catalyst for reimagining governance in the 21st century. By addressing its challenges and leveraging its potential, public administration can create a more inclusive and responsive system that meets the evolving needs of society.

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