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The Urgency of Using Artificial Intelligence (AI) In Public Services

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Abstract. *The rapid development of information technology has driven transformation in various sectors, including public services. Artificial Intelligence (AI) is present as an innovative solution to improve the efficiency, accuracy, and quality of services provided by government agencies. This article discusses the urgency of implementing AI in public services as a strategic step to realize responsive, transparent, and data-driven governance. The use of AI can accelerate administrative processes, minimize human error, and increase public satisfaction with government services. This research uses literature as the primary method to examine various implementations of AI in the public sector both nationally and globally. The results of the study indicate that the application of AI not only supports bureaucratic efficiency but also serves as a key driver in realizing the digital transformation of government. Therefore, adaptive policies, clear regulations, and strengthening human resource capacity are needed so that the implementation of AI in public services can run optimally and sustainably.*

Keywords: *Artificial; Digital; Intelligence; Public Services; Transformation.*

1. Introduction

Public services are a fundamental aspect of the development and implementation of a country's autonomy (Undang Undang No 25 tahun 2009), as they form the basis of government organizations that interact directly with the public. In addition, the quality of public services is also one of the main indicators used to assess the performance of a government(Ferdian, Argenti, and Marsingga 2021). The government is required to provide fast, accurate, transparent, and accountable services to the public as a tangible manifestation of its constitutional obligation to fulfill the rights of citizens. However, in practice, public services in various countries, including Indonesia, still face various classic problems such as complicated bureaucracy, low efficiency, limited human resources, and a lack of innovation in the use of information technology. This has resulted in low levels of public satisfaction with the public services provided by government agencies.

In today's digital era, the development of information and communication technology has brought about major changes in various aspects of life, including in governance. One of the most significant technological advances is the emergence of *Artificial* Intelligence (AI). Artificial

Intelligence (AI) is a technology in the form of a computer program designed to mimic human intelligence, from thinking and analyzing to taking action. This technology enables computer systems or machines to perform various tasks that normally require human intelligence, such as decision making, data analysis, pattern recognition, and intelligent interaction with users(Atmaja 2024). The development of Artificial Intelligence (AI) technology provides a great opportunity for the public sector to undergo digital transformation in order to improve the quality of services to the community through process automation, predictive data analysis, and more personalized interactions with citizens(Achmad and Achmad 2025).

Artificial Intelligence (AI) technology has become an innovation that has gained widespread attention due to its ability to improve efficiency, effectiveness, and accuracy in government administrative processes. The application of AI in public services enables the automation of various processes, speeds up the handling of service requests, improves decision-making accuracy, and provides real-time data analysis-based predictive solutions(Judijanto Loso 2025). For example, AI-based chatbots can provide services to the public by answering questions automatically 24 hours a day without interruption(M. Erlangga Fauzi and Tata Sutabri 2025), AI systems can process population data in seconds, and *machine learning* algorithms can help detect potential fraud in public service processes. In other words, Artificial Intelligence (AI) can reduce operational time and costs through process automation and the application of sophisticated algorithms that minimize human error. Thus, AI can reduce dependence on limited human resources while improving the quality and speed of services(D. Latipah, E. Adityarini 2025).

However, the adoption of AI in public services cannot necessarily run smoothly. There are various challenges that must be faced, ranging from technological infrastructure readiness, budget constraints, to low digital literacy among civil servants. In addition, ethical aspects, data security, and public privacy protection are also important issues that must be considered in the application of AI. Therefore, a comprehensive regulatory framework and adaptive policies are needed to ensure that with a clear legal framework and adaptive policies, the application of Artificial Intelligence (AI) in public services can run safely and optimally, so that it can provide maximum benefits to the community without causing negative and detrimental impacts(Faisal 2025).

The urgency of implementing AI in public services is increasing amid growing public demand for better services in a shorter time. Governments are required to innovate and adapt to developments so as not to be left behind in this era of technological disruption technology. Therefore, the study of the urgency of implementing Artificial Intelligence (AI) in public services lies in its potential to overcome various challenges, such as bureaucratic inefficiency, limited access to services in remote areas, and the need for more responsive services to the community. This study is important to provide an in-depth understanding of the benefits, challenges, and appropriate AI implementation strategies to support bureaucratic reform and sustainable improvement in the quality of public services(Komarudin and Tjenreng 2025). Based on this background, the research questions in this study focus on two practical and contemporary legal

issues: (1) How important/urgent is AI in public services?; (2) How does AI influence public services?

This study aims to comprehensively analyze the urgency of implementing artificial intelligence (AI) in the public service system in Indonesia, covering aspects of bureaucratic efficiency, service quality improvement, and legal certainty in its implementation, as well as to analyze in depth the strategies, benefits, challenges, and recommendations for AI integration in government administration(Ramadian et al. 2025). This analysis focuses on identifying the extent to which AI can support the realization of transparent, accountable, and community-oriented governance.

2. Research Methods

This study used a normative method, namely a legal review of legislation, official documents, and literature related to the use of artificial intelligence (AI) in public services. This approach aims to analyze the suitability of existing regulations with the practice of AI implementation in the public sector and to identify the need for strengthening legal and ethical policies.

This legal approach was based on a literature study to analyze written legal norms and applicable legal principles. This research was conducted by examining various laws and regulations, official government documents, and scientific literature related to the use of *artificial intelligence (AI*) in public services. This approach was chosen because the topics discussed are closely related to legal and regulatory aspects in the application of AI, especially in the context of personal data protection, accountability in decision-making, and ethical frameworks and technical standards for the use of technology in government administration.

3. Results and Discussion

3.1. The Urgency of AI in Public Services

The application of artificial intelligence (AI) in public services reflects a major transformation in the way governments serve their citizens. Therefore, the development and application of AI in local government environments can no longer be considered an option, but rather an urgent need that requires institutional commitment, technological investment, and systematic capacity building of the apparatus(Sri, Latowa, and Sunadi n.d.). Findings from various sources show that AI not only functions as a technological tool, but also as a catalyst for bureaucratic reform that can improve efficiency, accuracy, and speed in the delivery of public services. In this context, the urgency of implementing AI becomes even more relevant, especially amid public demands for better, more transparent, and more accessible services.

One of the most visible results of the application of Artificial Intelligence (AI) in the public sector is increased administrative efficiency, where AI-based systems are capable of automating various processes that previously took a long time and involved a lot of human labor. The implementation of AI in public services as a whole has also had a significant impact on improving

the efficiency, quality, and accessibility of government services to the public (Salsabila, Indrawati, and Fitrie 2024). For example, in the processing of administrative documents such as permits, population registration, or social assistance applications, AI can speed up data validation, minimize human error, and reduce waiting times. Several agencies in Indonesia, such as the Directorate General of Immigration and the Population and Civil Registration Office, have begun to integrate data automation systems that use AI algorithms to speed up services to the public.

Artificial Intelligence (AI) is now one of the most influential technologies in the modern era, not only playing a role in improving efficiency, but also in expanding service accessibility for the community (Imam Zaenuddin 2024). AI- based chatbots and virtual assistants are now used to answer questions from the public in real-time, 24 hours a day. This innovation is particularly helpful in areas that are difficult to reach or for people who do not have the flexibility to come directly to the service office. In the context of the COVID-19 pandemic, the use of AI in the form of online services has proven to be an effective solution for maintaining the continuity of public services amid mobility restrictions.

However, the implementation of AI in public services is not without challenges. One of the crucial issues that arises is data security and privacy. AI requires large amounts of data to function optimally, and some of this data is sensitive, such as population data, health records, or community economic data. Without proper management and strict regulations, there is a risk of data leaks and misuse. Therefore, the urgency of AI is not only a technological issue, but also requires an ethical data management approach based on the protection of individual privacy rights.

Another challenge is the digital infrastructure inequality that still exists in various regions. AI is highly dependent on internet connectivity, server capacity, and the availability of digital devices. In many rural or marginalized areas, infrastructure limitations hinder the equitable implementation of AI. This risks creating service disparities between urban and rural communities and widening the existing digital divide. Therefore, the urgency of AI in public services must be accompanied by efforts to equalize infrastructure and digital literacy.

On the other hand, AI also makes an important contribution to *data-driven* policy. Governments can use AI to analyze trends, map community needs, detect potential problems, and even predict the impact of policies before they are implemented. Examples of this implementation can be seen in the use of AI in geospatial poverty mapping, or in social assistance distribution systems that identify beneficiaries more accurately. This proves that AI not only supports the operational aspects of public services, but also strengthens the government's strategic capacity to formulate fairer and more effective policies.

The urgency of AI implementation is also evident from global dynamics, where developed countries have made AI an integral part of public sector reform. Indonesia cannot be left behind in this regard. To that end, there needs to be a long-term policy commitment, the formulation

of adaptive regulations, and the development of the capacity of the state civil service (Undang-Undang No 5 tahun 2014)to manage and understand this technology. AI-based education and training are urgently needed to ensure that this technology truly benefits the wider community.

Overall, the results of the study show that AI has great potential to improve the quality of public services in terms of efficiency, accessibility, and accuracy. However, the urgency of AI must be viewed holistically, not only as a technological tool, but as part of a systemic transformation of public services that prioritizes the values of transparency, accountability, and fairness. With the right approach, AI can be an innovative solution in responding to the complex challenges of public services in the digital age.

Although artificial intelligence (AI) offers many benefits in terms of the efficiency and effectiveness of public services, its implementation has not been fully addressed by the existing regulatory framework. Some of the issues that need to be considered include:

a. Personal Data Protection

Personal data protection. AI systems work based on large amounts of data (big data), including sensitive data such as resident identity, medical records, economic status, and user preferences. Without strong legal regulations, this data is at risk of being misused, leaked, or used without the consent of the data subject. Law No. 27 of 2022 concerning Personal Data Protection (PDP Law) (Undang Undang No 27 tahun 2022)has become the legal basis in Indonesia, but its implementation still faces challenges, such as the lack of readiness of public institutions in fulfilling data protection principles such as transparency, access rights, correction rights, and data deletion.

b. Accountability and Legal Responsibility

In public services, decision-making often has a direct impact on citizens' rights, for example, decisions on social assistance, AI-based law enforcement, or denial of services based on algorithmic analysis.

c. Discrimination and Algorithmic Bias

AI has the potential to reinforce existing biases in training data. For example, if historical social assistance program data shows bias against certain groups, then AI trained using that data may automatically discriminate against that group.

d. Absence of Technical Regulations and Ethical Standards for AI

Indonesia still lacks specific technical regulations governing ethical standards, transparency, and AI algorithm testing, particularly in the public sector. Several countries, such as the European Union, already have proposals for an "AI Act" that classifies types of AI based on risk levels and regulates protection for the public.

1) The government could implement AI that has not been tested for ethical and safety suitability.

2) It is difficult for the public to seek redress if their rights are violated by automated systems.

5. Limitations on Public Participation and Appeal Mechanisms

Currently, the public does not have effective legal channels to file objections or appeals against AI-based decisions in public services. This contradicts the principles of good governance, which guarantee public participation, transparency, and the right to object to administrative policies.

3.2. The Influence of AI in Public Services

Artificial intelligence (AI) is the result of technological developments in the field of computer science that enable computer systems to process information and data quickly and provide machine-based analysis results in a short time. Along with advances in digital technology, AI has developed into an effective and easy-to-use tool in various aspects of daily life. In the context of public services, AI now plays an important role as a key component in the digital transformation of government. Based on various research results, literature studies, and implementation reports in a number of government sectors, it is known that the application of AI has a significant impact on improving the efficiency, speed, and quality of public services (Ferdinand 2024) in three main dimensions: bureaucratic efficiency, service quality, and data-based decision making.

First, in terms of bureaucratic efficiency, the application of AI has been proven to accelerate administrative processes that were previously done manually and were time-consuming. For example, in licensing and population administration systems, AI enables the automation of document validation, real- time data processing, and the integration of previously fragmented data between agencies. This has a direct impact on reducing waiting times, cutting bureaucracy, and saving operational budgets. For example, chatbot and virtual assistant systems implemented in public services allow people to obtain information or take care of basic services such as making ID cards, filing complaints, or registering for social assistance without the need for face-to-face interaction.

Second, in terms of improving the quality of public services, AI also contributes to creating more responsive and personalized services. With its strong data analytics capabilities, AI can map citizens' needs based on preferences, geographic location, and interaction patterns. This enables governments to develop more targeted policies and services, particularly in the context of social assistance distribution, health services, and education. For example, in the public health care system, AI is used to analyze disease trends based on hospital data and recommend early intervention. In education, AI systems are used to identify students who need academic intervention based on their learning performance.

Third, from a decision-making perspective, AI provides added value through its predictive analysis capabilities. The government can use AI to formulate policies based on more accurate and comprehensive data. For example, through predictive modeling, the concepts of e-government and smart cities are two main approaches that support each other in driving the digital transformation of the public sector. E-government (Reviandani, Bagus, and Harmawan n.d.) focuses on digitizing administrative processes and public services to make them more efficient and transparent, while smart cities focus on the application of integrated technology in various aspects of city life, such as transportation, energy, security, the environment, and community participation. Both have the same goal, which is to improve the effectiveness of governance while strengthening the interaction between the government and the community through the use of technology.

In this context, artificial intelligence (AI) plays an important role with its ability to analyze and predict areas that are prone to extreme poverty or public service inequality. With the support of AI, the government can implement intervention policies more quickly and accurately, in line with the principle of data-driven governance, which is now a global trend in data and technology- based public sector management (Mozin, Abdullah, and Sawali 2025).

However, despite the obvious positive impact of AI, there are also a number of concerns that need to be addressed. One of these is the risk of digital inequality, whereby people who do not have internet access or digital skills (Undang undang nomor 19 tahun 2016) may be left behind in accessing AI-based services. This widens the social gap, especially between urban and rural areas. In addition, ethical and legal challenges arise with the use of AI, which requires large amounts of personal data. Concerns about privacy, data security, and algorithmic bias are issues that have not yet been fully resolved.

The application of artificial intelligence (AI) in public services has brought about major changes in the way governments serve their citizens. Through various innovations such as intelligent chatbots, document automation systems, predictive analytics, and integration with the smart city concept, AI contributes to improving administrative efficiency, speeding up service processes, and increasing public satisfaction. The success of AI implementation depends not only on technological sophistication, but also on a comprehensive approach that includes technological infrastructure readiness, human resource competencies, adaptive policy support, and compliance with ethical principles. However, despite its benefits, the use of AI also poses new challenges, particularly in terms of accountability and transparency of public services, which must be maintained in accordance with the principles of good governance(Suriadi, Muliyono, and Lovita 2024). When decisions or recommendations are made by automated systems, the question arises: who is responsible if errors or discrimination occur? Without transparency in how algorithms work, it is difficult for the public to control or protest the results they receive. Therefore, the influence of AI in public services is not only technical in nature, but also touches on broader social, ethical, and legal aspects.

Overall, the analysis shows that the influence of AI in public services is multidimensional: it accelerates processes, improves quality, and strengthens policy capacity. However, these benefits will only be optimal if the government is able to overcome the accompanying challenges, such as developing adaptive regulations, increasing public digital literacy, and guaranteeing citizens rights in the digital age. Therefore, the use of AI in public services cannot be driven solely by technological innovation, but also requires an inclusive policy approach oriented towards social justice.

4. Conclusion

Based on the results of the study, the application of Artificial Intelligence (AI) in public services is of the utmost urgency because it can improve bureaucratic efficiency, improve service quality, and strengthen data-driven decision making. AI has been proven to accelerate administrative processes, minimize human error, and expand access to public services in a faster, more transparent, and more accountable manner. However, the implementation of AI also faces various challenges, such as issues of personal data protection, the accountability of algorithm-based decisions, the potential for discrimination due to data bias, limitations in digital infrastructure, and the technological literacy gap in society. Therefore, the use of AI in public services should not only be viewed from a technological perspective, but must also be part of a systemic transformation of governance. The government needs to develop strong technical regulations, ensure the protection of citizens' rights, improve digital literacy, and build the capacity of human resources within the civil service. With an inclusive, adaptive, and justice-based approach, AI can become a strategic instrument for realizing more modern, responsive, and sustainable public services.

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