

Artificial Intelligence in Public Service Delivery: Innovation, Efficiency, and Inclusion

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ABSTRACT

In the current scenario, Artificial Intelligence (AI) functions like an octopus, extending its reach into all aspects of governance and society. AI is widely used in public policy, smart cities, law enforcement, the judiciary, and electoral processes. It aids in automating tasks, streamlining operations, and enhancing efficiency by minimizing errors. Algorithms and machine learning models operate behind the scenes to manage complex tasks. In public service delivery—across healthcare, education, transport, and social welfare—AI applications are increasingly visible. Examples include chatbots for service interaction, health record analysis, and personalized medicine. In education, AI supports data-driven research, interactive learning, and modernized teaching. This article highlights AI as a key enabler of digital transformation in governance, focusing on its role in public service delivery. It will also explore AI's accessibility and inclusiveness, address associated risks and ethical concerns, and present global case studies to provide a broader perspective.

1. INTRODUCTION

Usage of AI in this arena has shown much potential to improve service responsiveness as well as accessibility particularly in areas such as smart cities, healthcare, and governance. To enhance AI's benefits, however, problems such as algorithmic bias and data privacy need to be addressed. By enhancing services, promoting citizen engagement, and streamlining operations through automation, AI has the potential to transform the delivery of public services. Chatbots, data analytics, and predictive modeling are

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some of the AI applications that can enhance decision-making, personalize experiences, and streamline procedures, all of which lead to a more responsive and effective government. More efficient, innovative, and inclusive public service delivery systems can be created by governments that meet needs by astutely employing AI. The following is a more detailed look at how AI can be used in public service delivery:

1.1: Innovation and Efficiency

Innovation in Public Services

AI enhances decision-making and automates processes to facilitate innovative solutions. Utilizations consist of AI-powered mobile apps that improve citizen participation and service delivery (Judijanto et al., 2024) (Madupati, 2024). Effective AI deployments that address complex societal problems and ensure accountability and transparency are exemplified by case studies (Söker, 2024).

- **Automation:** AI can mechanize mundane tasks, ease administrative burdens, and liberate human resources to pursue more complex issues.

Data Analytics: Large data sets may be examined by AI in order to discover patterns, predict trends, and inform policy decisions, leading to better and more data-driven governance.

Personalized Services: Through services being customized to the individual needs and interests of each user,

AI can improve citizen satisfaction and participation.

- **Smart City Initiatives:** Cities can become more sustainable and livable by using AI to improve urban planning, control energy use, and optimize traffic flow.
- **Efficiency and Cost Savings:**
- Through the automation of routine tasks and resource optimization, artificial intelligence (AI) enhances operational effectiveness (Söker, 2024; Caiza et al., 2024). AI's application in crisis management and continuity of service was brought to the spotlight through the COVID-19 pandemic, which accelerated its implementation (Judijanto et al., 2024).
- **Lowered Processing Times:** AI-enabled chatbots and automated processing can significantly reduce processing times for numerous public services, such as benefit claims and permit applications.

Better Resource Allocation: By identifying where resources are needed the most, eliminating wastage, and improving the quality of services, AI can help governments distribute resources with maximum efficiency.

1.2 Enhanced Citizen Engagement and Inclusion

AI has the potential to foster inclusivity through provision of customized services to different community needs, but it generates ethical issues concerning bias and transparency (Malvestiti et al., 2024) (Caiza et al., 2024). Sustained efforts are needed to foster ethical guidelines and digital skills among public servants so that AI can be integrated equitably (Malvestiti et al., 2024). On the other hand, although AI

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