Journal of US-China Public Administration, Jan.-Sep. 2026, Vol. 23, No. 1, 1-8
doi: 10.17265/1548-6591/2026.01.001

Artificial Intelligence in Public Administration in the U.S.: Lessons and Policy Implications for the Republic of Armenia

Harutyun Aleksanyan
Yerevan State University, Yerevan, Republic of Armenia

Artificial intelligence (AI) is rapidly reshaping public administration worldwide. In the United States, AI-enabled systems support automation, predictive analytics, fraud detection, and data-driven policymaking while simultaneously raising ethical concerns related to fairness, transparency, privacy, accountability, and discrimination. This article analyzes U.S. federal frameworks for ethical AI governance, including the Blueprint for an AI Bill of Rights, the NIST (National Institute of Standards and Technology) AI Risk Management Framework, and recent Executive Orders. Their strengths, limitations, and institutional implications are assessed in comparison with global approaches. Building on this review, the article proposes a context-adapted ethical AI governance model for the Republic of Armenia. Key recommendations include the adoption of a national AI strategy, establishment of oversight institutions, improvement of data-quality systems, strengthening procurement integrity, and embedding AI ethics in civil service reforms. The paper concludes that Armenia can leverage U.S. and global best practices to develop a transparent, accountable, and citizen-centered AI ecosystem.

Keywords: USA, artificial intelligence, public administration, policy implications, corruption, Armenia, policy recommendation

Introduction

Artificial intelligence (AI) has emerged as a transformative force in contemporary governance. It is one of the most important tools in public administration, allowing the state to make more effective, accurate, and faster decisions. It is used to analyze large amounts of data, prepare forecasts, and optimize public policy.

Governments deploy AI tools for automated decision-making, predictive policing, fraud detection, border control, tax analysis, digital public service delivery, and welfare administration (Wirtz, Weyerer, & Geyer, 2019; Margetts & Dorobantu, 2019). The United States—one of the earliest adopters of large-scale government AI—has accumulated a decade of experience integrating algorithmic systems across federal agencies.

Despite efficiency gains, AI introduces complex challenges: algorithmic bias, opacity of automated decision-making, disproportionate surveillance, data privacy risks, and the erosion of public trust (Whittlestone, Nyrup, Alexandrova, & Cave, 2019). For developing democracies like Armenia, AI presents a dual risk: reinforcing existing governance weaknesses while simultaneously opening new vectors for corruption, discrimination, and arbitrary decision-making.

This research was funded through a Department of State Public Diplomacy Section grant, and the opinions, findings and conclusions or recommendations expressed herein are those of the author(s) and do not necessarily reflect those of the Department of State.

Harutyun Aleksanyan, Dr., researcher, American Studies Center, Yerevan State University, Yerevan, Republic of Armenia.

This article evaluates U.S. experience and considers how Armenia can adapt global best practices to strengthen democratic accountability in its own emerging AI governance landscape.

Literature Review: AI in Public Administration

Scholarly literature emphasizes both opportunities and risks associated with AI adoption. AI improves efficiency through automation, reduces administrative burdens, enhances service delivery, and supports complex analytical tasks (Margetts & Dorobantu, 2019). Government chatbots accelerate communication with citizens; machine-learning tools assist with resource allocation, fraud detection, and risk assessment.

However, the literature also highlights significant ethical concerns. Biases in algorithmic systems have been documented in criminal justice, hiring, welfare administration, and financial services (O'Neil, 2016; Barocas & Selbst, 2016). Complex machine-learning models challenge transparency, explainability, and public accountability. Scholars therefore call for risk-based regulation, algorithmic impact assessments, independent oversight bodies, and robust legal frameworks (Floridi & Cowls, 2019; OECD, 2021).

The global regulatory shift—especially the EU AI Act—illustrates the need for democracies to ensure that AI strengthens rather than undermines human rights, transparency, and equality.

AI in U.S. Public Administration: Benefits and Applications

In the United States, many government agencies collect and analyze large amounts of data, which can contain personal, medical, and financial information (U.S. Congress, 2025). AI is applied to all major areas of public policy, including national security, defense, healthcare, tax administration, social security, emergency management, and justice (Centers for Disease Control and Prevention, 2025).

The use of AI in U.S. not only speeds up administrative processes, but also makes services better and cheaper. U.S. government institutions employ AI across multiple administrative domains. Predictive analytics assist the Federal Emergency Management Agency (FEMA) in disaster forecasting, while the Department of Health and Human Services (HHS) uses machine-learning algorithms to support epidemiological modeling and resource allocation. In the healthcare sector, AI is used for collecting and analyzing big data. For example, disease spread models, drug trial results, and public health indicators are analyzed using AI, which allows for predicting the spread of epidemics, improving treatment strategies, and optimizing the allocation of hospital resources. AI-enabled fraud detection has significantly reduced improper payments in federal benefits systems. The Triaging Notice of Concern Submissions program is used to automatically triage complaints and applications received from citizens or department employees. The IA determines which are urgent, which are risky, and which are routine, and sends them to the appropriate department. The U.S. public sector employs AI across a wide range of administrative domains. Federal agencies rely on predictive analytics, natural-language processing, and machine learning for improved accuracy and efficiency. Examples include:

- Federal Emergency Management Agency (FEMA) uses AI for disaster modeling and emergency planning.
- Department of Health and Human Services (HHS) applies machine-learning tools for epidemiological forecasting and resource allocation.
- U.S. Citizenship and Immigration Services (USCIS) uses natural-language processing systems to streamline communication and triage inquiries.
- Social Security Administration (SSA) employs AI to detect improper payments and identify fraud.

These technologies reduce processing times, increase accuracy, and strengthen administrative capacity. Between 2023 and 2024, the U.S. government recorded a nine-fold increase in generative AI applications—from 32 to 282 tools across 11 federal agencies. As of January 2025, federal agencies reported 2,133 AI use cases, of which 351 were classified as affecting civil rights or security (Office of the Federal Chief Information Officer, 2024).

This rapid expansion has required new regulatory mechanisms, institutional reforms, and strong oversight—offering valuable lessons for countries developing their own governance frameworks.

Institutional Approaches to AI Governance in the United States

The U.S. does not have a single national AI law. Instead, it applies a combination of executive directives, risk-management frameworks, procurement regulations, and sector-specific standards. Key governance instruments include:

Executive Orders on AI (2019-2024)

Recent Executive Orders mandate federal agencies to implement algorithmic risk assessments, ensure transparency in automated decision-making, require safety testing, and establish oversight capacity (Executive Office of the President, 2023).

Blueprint for an AI Bill of Rights (Office of Science and Technology Policy, 2022)

This framework outlines five principles:

1. Safe and effective systems;
2. Protection from algorithmic discrimination;
3. Data privacy;
4. Notice and explanation;
5. Human alternatives, consideration, and fallback options.

Strengths include its rights-based orientation and transparency obligations; a limitation is that compliance is non-binding. National Institute of Standards and Technology (NIST) “AI Risk Management Framework” (2023) (NIST) provides technical guidance for managing AI risks through measurement, mitigation, documentation, and evaluation. It supports agencies in establishing safe, ethical, explainable, and accountable AI systems.

Transparency and Data Accountability Requirements

Agencies are mandated to document algorithmic tools, publish datasets (where permissible), and engage stakeholders, enhancing anti-corruption safeguards.

Independent Algorithmic Audits and Impact Assessments

The IA can also make suggestions for improving the downloaded program based on its assessment and identified deficiencies. As part of the Financial Business Intelligence Insight Finder initiative, the IA collects and analyzes the department’s financial data, the IA presents a simple summary of the data, and identifies potential problems.

Office for Management and Budget (OMB) guidance requires federal agencies to perform algorithmic impact assessments and bias audits prior to deployment (OMB, 2020). This practice is directly relevant for Armenia.

Legal and Ethical Challenges of Using Artificial Intelligence in the US Government System

The main challenge associated with artificial intelligence is that it operates with algorithms that are considered “black boxes”, and citizens have no opportunity to understand why any conclusion was made against

them in an arbitrary field, from the provision of social benefits to the field of natural disaster risk assessment. The AI violates citizens' right to be informed because the models underlying the decisions are very complex, and there is no explanation function in the AI software. Artificial intelligence guides people, and makes decisions, instead of simply collecting and processing information. This phenomenon is called "nudging".

Despite its advantages, AI presents considerable risks. The U.S. experience illustrates recurring governance challenges: algorithmic bias in criminal justice risk-assessment tools such as COMPAS; privacy concerns in automated immigration adjudication; and opacity in algorithmic decision-making across federal agencies. These cases underscore the need for rigorous oversight, human-in-the-loop safeguards, algorithmic audits, and transparent risk-mitigation frameworks. Data from December 2024 show 1,700 cases of artificial intelligence use, of which 227 were assessed as affecting citizens' rights or affecting security.

These experiences underline the need for strong accountability mechanisms, human-in-the-loop systems, and transparent decision processes. 206 use cases received a one-year extension to meet management requirements for risks to citizens' rights or security (US Department of Justice, 2025).

Artificial Intelligence, Corruption Risks, and Integrity in Public Administration

Beyond efficiency and service delivery, artificial intelligence has a direct and increasingly significant impact on corruption risks and integrity systems in public administration. While AI tools can reduce discretionary power and human error—two classical sources of corruption—they may also introduce new forms of opacity and technological capture if not properly governed. The U.S. experience demonstrates that AI is neither inherently anti-corruption nor corruption-neutral; its governance design determines its institutional impact.

In the United States, AI has been used to strengthen integrity mechanisms through automated detection of irregular transactions, conflict-of-interest patterns, procurement anomalies, and benefit fraud. For example, machine-learning tools employed by the Social Security Administration and the Department of the Treasury analyze massive datasets to identify abnormal payment patterns that would be nearly impossible for human auditors to detect. These systems have contributed to the reduction of improper payments and enhanced ex post accountability. However, scholars caution that algorithmic anti-corruption tools may themselves become vulnerable to manipulation, biased data inputs, or selective enforcement if oversight mechanisms are weak (O'Neil, 2016).

A major integrity challenge arises when AI systems replace transparent administrative discretion with opaque algorithmic discretion. Unlike human decision-makers, algorithms often operate without clear reasoning pathways that can be challenged in court or reviewed by oversight bodies. This "black-box governance" risks shifting accountability away from public officials toward private vendors or technical experts, creating new corruption vulnerabilities in procurement, system design, and data management. The U.S. response has been to emphasize auditability, documentation, and explainability as integrity safeguards rather than purely technical performance.

For Armenia, where corruption prevention remains a central governance priority, AI systems deployed in taxation, customs, public procurement, and social welfare must be explicitly integrated into national integrity frameworks. Algorithmic decision-making should be treated as a potential corruption risk factor, requiring enhanced disclosure obligations, conflict-of-interest rules for AI vendors, and post-deployment audits. Importantly, anti-corruption agencies should develop technical capacity to evaluate algorithmic systems rather than relying solely on self-reporting by implementing institutions.

Artificial Intelligence and Civil Service Transformation

The integration of AI into public administration fundamentally reshapes the role of the civil service. In the United States, AI adoption has accelerated a transition from routine administrative tasks toward analytical, supervisory, and ethical oversight functions. Rather than replacing civil servants, AI systems increasingly require skilled public officials capable of interpreting outputs, questioning automated recommendations, and ensuring compliance with legal and ethical standards.

Federal agencies have responded by investing in digital service teams, interdisciplinary AI task forces, and targeted training programs that combine technical literacy with public-law competencies. This approach reflects an understanding that AI governance is not merely a technological issue but a core public-administration function. Civil servants are expected to act as "algorithmic stewards", responsible for ensuring fairness, accountability, and legality in automated systems (Margetts & Dorobantu, 2019).

In Armenia, civil-service reform remains focused primarily on organizational efficiency and digitization rather than algorithmic governance. Without targeted training, Armenian public officials may become passive users of AI systems designed and maintained by external contractors. This dependency risks undermining institutional learning, weakening accountability, and creating asymmetries of power between the state and private technology providers.

Embedding AI governance into civil-service reform would require three parallel measures. First, mandatory AI literacy programs should be introduced for senior and mid-level public officials, focusing on ethical risks, bias, explainability, and legal accountability. Second, specialized career tracks for data science, algorithmic auditing, and digital ethics should be established within the civil service. Third, ethical performance indicators—such as compliance with transparency and fairness requirements—should be integrated into performance evaluation systems for AI-related administrative units. By framing AI governance as a civil-service competency rather than an external technical service, Armenia can ensure that automated systems remain under democratic control and aligned with public-interest objectives.

The Future Developments and Political Impact of AI in the US Government System

The continued development of artificial intelligence is one of the main drivers of the next major changes in US government, creating new opportunities and challenges at the same time (Intel, AI in Government, 2025).

IA's innovative systems, powered by deep learning, natural language processing, and predictive modeling technologies, enable government agencies to analyze large and diverse data streams, optimize decisions in real time, and reduce the risk of human error.

Global AI Governance Frameworks: Comparative Analysis

European Union AI Act (2024)

The EU AI Act establishes the world's first comprehensive, binding regulatory framework for AI. Key features include: risk-based classification: unacceptable, high-risk, limited-risk, minimal-risk, strict obligations for high-risk systems, including human oversight, transparency, and accuracy dedicated AI supervisory authorities.

This model provides strong consumer and citizen protections (European Parliament, 2024).

OECD AI Principles (2019)

These principles—adopted by more than 40 countries—promote: inclusive growth, human-centered values, transparency and explainability, safety and robustness, accountability.

The OECD framework is voluntary but influential in shaping national strategies.

UNESCO Recommendation on the Ethics of AI (2021)

Adopted globally, this framework emphasizes: ethical impact assessment, human rights and dignity, cultural diversity, environmental sustainability.

UNESCO's recommendations are particularly relevant for developing states building initial AI governance structures.

Policy Implications for Armenia

Comparative Lessons: What Armenia Can Learn From the U.S. Institutional Ecosystem

The U.S. experience demonstrates that effective AI governance requires not only technological capacity but also a well-defined institutional architecture that distributes responsibilities across regulatory, technical, and auditing bodies. Federal agencies such as National Institute of Standards and Technology (NIST), OMB, Office of Science and Technology Policy (OSTP), and the General Services Administration (GSA) play complementary roles in standard setting, risk management, evaluation, and procurement. This multi-agency ecosystem provides procedural redundancy—an important safeguard for democratic accountability (Cavalier & Ternes, 2023). Armenia currently lacks such institutional layering; AI-related responsibilities are fragmented between the Ministry of High-Tech Industry, the Ministry of Justice, and sector-specific agencies, none of which hold explicit oversight authority over algorithmic systems. Developing a coordinated institutional framework modeled on U.S. experience would reduce ambiguity, strengthen accountability, and ensure consistent enforcement of AI standards.

Building Human-Centric AI Governance in Armenia

Global AI governance theory increasingly emphasizes human-centric principles, placing citizen rights, fairness, and transparency at the core of public-sector AI deployment (UNESCO, 2021). The U.S. AI Bill of Rights similarly prioritizes algorithmic fairness and human fallback mechanisms. Armenia's current digitalization trajectory, however, remains predominantly efficiency-oriented, emphasizing automation over human oversight. Integrating human-centric principles into Armenian administrative reform is essential for mitigating risks such as exclusion of vulnerable groups, opaque decision-making, or algorithmic discrimination in welfare and taxation systems. This approach also aligns Armenia with the Council of Europe's 2024 Framework Convention on AI, which calls for rights-based governance of algorithmic systems across member states.

Strategic Autonomy and AI Sovereignty

Another lesson from the U.S. experience concerns technological sovereignty. Although the U.S. cooperates with private-sector developers, it maintains strong internal capacities through federal AI research centers, public cloud platforms (FedRAMP), and major investments in federal digital service teams. Armenia's heavy reliance on external contractors—particularly international vendors—creates risks of dependency, limited transparency, and long-term costs. Investment in domestic AI talent, national computing infrastructure, and public-sector algorithmic expertise is critical for Armenia to maintain sovereignty over sensitive datasets (population registry, taxation, border data) and reduce exposure to geopolitical vulnerabilities in the South Caucasus.

Public Trust and Democratic Legitimacy

Research shows that public trust is a decisive factor in successful AI adoption in government (Fast & Horvitz, 2017). The U.S. enhances trust through transparency portals (AI.gov), disclosure requirements, and public consultations on federal AI policies. Armenia has comparatively low citizen trust in government institutions, and opaque algorithms may deepen skepticism or accusations of favoritism. Establishing mandatory public-facing algorithmic registries, similar to U.S. federal practice, could counteract misinformation, increase trust, and provide civil society with tools for monitoring administrative fairness.

Pathways for Harmonization With International Frameworks

Finally, the U.S. model offers Armenia an opportunity for regulatory harmonization with global standards. The NIST Risk Management Framework is increasingly used internationally and is compatible with the EU AI Act's risk-based approach. For Armenia, aligning domestic AI governance with both frameworks would strengthen cooperation with the United States and the European Union, support digital-economy integration, and increase competitiveness in cross-border data exchanges. It would also ensure that Armenian algorithms used in areas such as border management, cybersecurity, financial oversight, and migration comply with democratically grounded governance norms.

Key policy recommendations to Republic of Armenia:

1. Adopt a National AI Strategy aligned with EU and U.S. ethical governance frameworks.
2. Introduce mandatory Algorithmic Impact Assessments (AIA) for all high-risk public-sector systems.
3. Implement explainable AI requirements in government services.
4. Establish an independent national AI Ethics and Audit Authority.
5. Strengthen state technical capacity to reduce dependence on international contractors.
6. Reform procurement processes to include AI-specific feasibility studies, risk assessments, and transparent audit mechanisms.
7. Enhance data-protection legislation, including interoperability and data-quality standards.
8. Introduce mandatory civil-service trainings on AI governance, ethics, and risk management.
9. Mandate algorithmic transparency, including public disclosure of automated decision-making processes and appeal mechanisms.

These measures would help Armenia build an efficient, accountable, and citizen-centered AI governance environment.

Conclusion

The integration of artificial intelligence into the public administration system of U.S. directly affects the increase in management efficiency, as it allows for the automation of administrative processes, the reduction of human errors, and the optimization of the allocation of public resources.

The U.S. experience demonstrates that ethical AI governance requires a combination of institutional oversight, risk-based regulation, transparency, and human-centered protections.

Armenia stands at an early stage of AI adoption, with significant regulatory gaps but strong potential for reform. By adapting U.S. and global best practices—particularly in algorithmic transparency, data governance, and independent oversight—Armenia can ensure that AI strengthens public-sector efficiency while safeguarding democratic values and human rights. Future developments require increasing the role and influence of AI, and

state policy must be aligned with the capabilities of technology to ensure a manageable, secure, and efficient state system.

References

Barocas, S., & Selbst, A. D. (2016). Big data's disparate impact. *California Law Review, 104*(3), 671-732.

Cavalier, G., & Ternes, A. (2023). Governing artificial intelligence in the public sector: Institutional models and accountability mechanisms. *Government Information Quarterly, 40*(3), 101779.

Centers for Disease Control and Prevention. (Aug 22, 2025). CDC's vision for using artificial intelligence in public health. *CDC.gov.*

Council of Europe. (2024). *Framework convention on artificial intelligence, human rights, democracy and the rule of law*. Strasbourg: Council of Europe Publishing.

European Parliament. (2024). Regulation (EU) 2024/1689 of the European Parliament and of the council laying down harmonised rules on artificial intelligence (artificial intelligence act). *Official Journal of the European Union, L 1689*, 1-144.

Executive Office of the President. (2023). Executive order on safe, secure, and trustworthy artificial intelligence. The White House.

Fast, E., & Horvitz, E. (2017). Long-term trends in the public perception of artificial intelligence. *Proceedings of the AAAI Conference on Artificial Intelligence, 31*(1), 963-969.

Federal Emergency Management Agency. (2024). *Artificial intelligence and data analytics in disaster preparedness and response*. Washington, DC: U.S. Department of Homeland Security.

Floridi, L., & Cowls, J. (2019). A unified framework of five principles for AI in society. *Harvard Data Science Review, 1*(1).

Government of Armenia. (2021). Digitalization strategy of the Republic of Armenia 2021-2025 (Government Decision No. 1172-L).

Intel, AI in Government. (2025). Practical applications and benefits.

Law of the Republic of Armenia on Personal Data Protection. (2015). Official gazette of the Republic of Armenia.

Margetts, H., & Dorobantu, C. (2019). Rethinking government with AI. *Philosophy & Technology, 32*(2), 1-21.

National Institute of Standards and Technology. (2023). Artificial Intelligence Risk Management Framework (AI RMF 1.0).

OECD. (2021). OECD recommendation on artificial intelligence.

Office of Management and Budget. (2020). Guidance for regulation of artificial intelligence applications. U.S. Executive Office of the President.

Office of the Federal Chief Information Officer. (2024). Federal agency AI use case inventory.

Office of Science and Technology Policy. (2022). Blueprint for an AI bill of rights. The White House.

O'Neil, C. (2016). *Weapons of math destruction: How big data increases inequality and threatens democracy*. New York: Crown.

Shaikh, S. (Sept. 19, 2025). Balancing innovation and oversight: AI in the U.S. treasury and IRS: A survey. Retrieved from https://arxiv.org/abs/2509.16294

Social Security Administration. (2024). *Using artificial intelligence to prevent improper payments and detect fraud.* Baltimore, MD: SSA Office of Analytics, Review, and Oversight.

UNESCO. (2021). *Recommendation on the ethics of artificial intelligence.* Paris: United Nations Educational, Scientific and Cultural Organization.

U.S. Citizenship and Immigration Services. (2024). *Artificial intelligence and automation in immigration services: Annual technology report*. Washington, DC: U.S. Department of Homeland Security.

U.S. Congress. (2025). Algorithmic accountability act of 2025, S.2164, 119th Cong.

U.S. Department of Justice. (2022). Freedom of information act (5 U.S.C. § 552): Annual report.

U.S. Department of Justice. (June 30, 2025). National health care fraud takedown results in 324 defendants charged in connection with over $14.6 billion in alleged fraud.

Whittlestone, J., Nyrup, R., Alexandrova, A., & Cave, S. (2019). The role and limits of principles in AI ethics. *AAAI/ACM Conference on AI, Ethics, and Society.* Honolulu, HI, USA, January 27-28, 2019.

Wirtz, B. W., Weyerer, J. C., & Geyer, C. (2019). Artificial intelligence and the public sector. *International Journal of Public Administration, 42*(7), 596-615.