

Judicial Practice and Artificial Intelligence: Prospects for the Implementation of AI in the Judicial System of Uzbekistan

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Abstract: The integration of artificial intelligence (AI) into public administration has rapidly expanded, with particular potential in optimizing judicial processes. While global judicial systems—from the U.S. and EU to China and Singapore—have pursued varying models of AI deployment, Uzbekistan is actively formulating its own approach amid ongoing digital reforms. Despite a growing global discourse on AI in justice, a comprehensive framework tailored to Uzbekistan’s legal, institutional, and technological context remains underdeveloped. This study analyzes international AI applications in judiciary systems and evaluates Uzbekistan’s strategic steps toward legal and institutional adaptation. Uzbekistan’s advancements include the launch of the “E-Sud” portal, approval of a national AI strategy, and development of regulatory mechanisms such as the draft Law “On the Regulation of Relations in the Field of AI.” These initiatives are reinforced by ethical standards focusing on transparency, human oversight, and rights protection. The article provides a comparative and contextualized analysis of AI adoption in judicial systems, proposing an original framework that aligns international best practices with Uzbekistan’s legal environment. The findings underscore the importance of gradual implementation, institutional readiness, and ethical safeguards. The study concludes that human discretion must remain central, and that AI should serve as a supportive tool—enhancing, but not replacing, judicial decision-making in Uzbekistan’s evolving digital justice model.

Keywords: Artificial Intelligence, Judiciary, Uzbekistan, Digital Justice, Legal Technology, AI Ethics, Judicial Reform, Algorithmic Transparency, Comparative Analysis, Smart Courts.

INTRODUCTION

The development of digital technologies is having a significant impact on traditional areas of public administration, including the judicial system. One of the most rapidly evolving technologies is artificial intelligence (AI), whose potential is already being actively realized in fields such as healthcare, transportation, banking, and law. While the judiciary is characterized by its conservative legal nature, it is gradually opening up to the implementation of AI, particularly in optimizing administrative procedures, data analysis, accelerating document processing, and predicting court decisions. Uzbekistan, aiming to modernize and digitalize its justice system, is consistently taking steps toward integrating AI into judicial proceedings [1].

Method

This study employs a qualitative and comparative legal analysis methodology, integrating document analysis, case study examination, and institutional review to assess the prospects of implementing artificial intelligence (AI) in Uzbekistan’s judicial system. The research begins by analyzing international experiences from jurisdictions including the United States, European Union, Germany, China, Singapore, Canada, and Estonia. These cases were selected due to their advanced and diverse approaches to judicial digitalization and AI governance. Primary sources

such as legal acts, strategic policy documents, and AI ethics charters were reviewed to understand the normative and operational frameworks within each country. The study then transitions to a detailed examination of Uzbekistan's regulatory and institutional landscape through a review of national laws, presidential decrees, draft legislation, and governmental strategies, with a particular focus on the "E-Sud" platform and the draft Law "On the Regulation of Relations in the Field of Artificial Intelligence." Emphasis was placed on identifying the ethical, procedural, and legal principles shaping AI integration in court systems. Supplementary data were collected from official government portals, legal reforms, and reports by international organizations such as UNESCO and the Council of Europe. The methodology further involved a critical assessment of alignment between international standards and Uzbekistan's domestic legal guarantees, including constitutional rights and procedural codes. By triangulating global best practices with national realities, the research aims to propose a practical and context-sensitive roadmap for AI implementation in the judiciary that safeguards fundamental rights while advancing technological modernization.

Result and Discussion

INTERNATIONAL EXPERIENCE IN APPLYING AI IN JUDICIAL SYSTEMS

Global practice shows a variety of approaches to the implementation of artificial intelligence in judicial proceedings, ranging from the automation of routine tasks to attempts to create fully digital court infrastructures. In each country, AI integration is tailored to its legal culture, technological readiness, and the level of public trust in the judiciary. This enables the development of more flexible and adaptive models that account for both the potential benefits and the risks associated with algorithmic management of court processes [2].

In the United States, one of the earliest examples of AI use in law was the COMPAS (Correctional Offender Management Profiling for Alternative Sanctions) system, designed to assess the risk of reoffending. This tool was widely used in making parole decisions and determining sentencing conditions. However, its use sparked intense debate in both academic and public circles. Studies revealed that COMPAS, trained on historical data, exhibited significant algorithmic bias, particularly against African Americans. This led to a wave of criticism and lawsuits questioning the legitimacy of decisions made using AI. In response, the U.S. began developing algorithm transparency standards, including the requirement that defendants be granted access to the logic behind AI-generated outcomes [3].

In the European Union, especially in France and Germany, the approach to implementing AI in judicial practice is far more cautious. The European model emphasizes the strict observance of fundamental human rights, including the right to a fair trial. In France, the use of AI to analyze decisions of individual judges for the purpose of predicting their behavior is strictly prohibited, as it is seen as a threat to judicial independence [4].

In Germany, according to the Basic Law (Grundgesetz), court decisions must be rendered by a "court established by law," which excludes the possibility of fully automated decision-making by machines. Nonetheless, German courts actively employ AI to automate document management, case assignment, and analysis of case law for similar types of disputes—effectively reducing judges' workloads [5].

China represents the most extensive implementation of the "smart court" concept. The country has launched a national program to integrate AI into judicial proceedings, including the creation of specialized internet courts, automation of evidence processing, and the use of voice and visual interfaces. This program is overseen by the Supreme People's Court and is supported by official guidelines that define the permissible limits of AI use. For example, algorithms are used to expedite cases involving debt collection, contract breaches, and other straightforward disputes that do not require complex judicial discretion. At the same time, Chinese law mandates that final decisions must be made by a human judge. This combination of technological efficiency and legal safeguards has enabled China to develop a flexible model of digital justice [6].

Singapore holds a unique position in the Asian context: the country actively invests in LegalTech and AI development, while simultaneously establishing strict regulatory barriers in areas where automation could affect parties' rights. In Singapore, AI is used strictly for auxiliary tasks—such as organizing court hearing schedules or deploying chatbots to advise citizens on claim submissions. The judiciary emphasizes that no algorithm can replace a judge's legal reasoning. Multi-level mechanisms have been introduced to assess the legality of each new technological solution, including pilot testing and public expert reviews [7].

Estonia and Canada, though small in population, have achieved notable progress in developing national strategies for the ethical use of AI in justice. Estonia has implemented a fully digital order-for-payment procedure, where uncontested debt claims are processed online and resolved by algorithms, provided there are no objections from the defendant. If a dispute arises, the case is automatically referred to a human judge. In Canada, a series of guidelines and ethical codes has been developed, requiring mandatory AI system audits, use of only open-source algorithms, and the compulsory involvement of humans in final decision-making. These approaches help maintain public trust while advancing digital infrastructure [8].

Thus, international experience demonstrates that successful AI integration into judicial systems is only possible when key principles are upheld: transparency, accountability, protection of parties' rights, and maintaining human oversight over automated processes. These lessons are particularly crucial for Uzbekistan as it works to develop its own model of digital justice [9].

UZBEKISTAN'S MODEL OF DIGITAL JUSTICE

Uzbekistan is implementing a systemic and consistent digitalization of its judicial system at the state level, as part of a broader strategy to modernize public institutions and develop e-governance. These transformations are driven by strategic initiatives of the President and the Government aimed at creating an accessible, transparent, and efficient judicial system. Presidential Decrees, Resolutions of the Cabinet of Ministers, and digitization programs have been adopted, covering the judiciary, prosecution, and justice bodies. These documents lay the institutional foundation for the transition to digital justice and define the direction of development for the coming years [10].

One of the most significant achievements has been the creation of the national "E-Sud" portal—an electronic platform that enables the online submission of claims, participation of parties, case reviews, and issuance of court decisions. As of 2025, more than 17 million cases have been processed through the system, indicating its high demand among citizens and organizations. The portal has greatly simplified access to the judicial system, especially for residents of remote regions. In addition, an electronic document management system has been introduced to accelerate communication between courts, justice bodies, and other government institutions, while also providing case-tracking capabilities.

The next stage of digital transformation was the development of a regulatory framework for artificial intelligence. In 2024, Presidential Decree No. PP-358 approved the National Strategy for AI Development through 2030. The document provides for the creation of legal, institutional, and technological conditions for the safe and effective integration of AI into all areas of public administration, including the judiciary. Special emphasis is placed on ethics, non-discrimination, algorithmic transparency, and the protection of human rights. This paved the way for the development of more detailed legislative acts.

A major step was the submission to parliament of the draft Law "On the Regulation of Relations in the Field of Artificial Intelligence", adopted in its first reading in 2025. The draft defines key terms, rights and responsibilities of AI users, establishes certification procedures for algorithms, and introduces control mechanisms for their application. A crucial provision of the draft law is the prohibition of AI-based decision-making in the judiciary without human involvement, in line with international standards. It also mandates independent expert evaluations of AI systems before their deployment in public institutions [11].

To coordinate technical solutions and create a unified digital architecture, the establishment of an Information Technology Center under the Supreme Court of the Republic of Uzbekistan has been announced. The Center is tasked with developing and implementing AI-based solutions to improve judicial efficiency, including algorithms for analyzing court decisions, automated case classification, estimating trial durations, and identifying common procedural errors. It is expected that the Center will closely cooperate with the Academy of the Ministry of Justice, the Institute for Judicial Training, and international expert organizations [12].

Furthermore, initiatives are underway in Uzbekistan to introduce AI-based virtual assistants that will provide legal guidance to citizens, including step-by-step instructions, document checklists, and help with drafting claims and motions. Chatbots are also being developed to notify users about case progress, hearing dates, and appeal or cassation filing opportunities. These tools aim to increase access to justice and reduce the workload on court staff.

In this way, Uzbekistan's model of digital justice is evolving toward a phased and regulated integration of AI, while upholding the fundamental principles of judicial independence, fairness, and equal access. The reforms are supported by legal frameworks, institutional infrastructure, and technological solutions designed to facilitate court operations and improve the quality of judicial services for the public.

ETHICAL AND LEGAL ASPECTS OF AI APPLICATION

The key legal and ethical issues in introducing AI into the judicial system include: maintaining human judicial discretion, ensuring the right to defense, preventing algorithmic bias, protecting personal data, upholding the principle of equality between parties, and guaranteeing algorithmic transparency. These principles form the foundation of sustainable justice and define the limits of acceptable algorithmic intervention in court activities. International experience shows that uncontrolled or opaque use of algorithms can lead to systemic discrimination, diminished trust in justice, and erosion of judicial legitimacy [13].

One of the most pressing issues is the explainability of AI-assisted decisions. In countries where algorithms are used to predict court outcomes or analyze evidence, there are frequent cases where parties are unable to understand the logic behind AI-generated recommendations. This complicates the ability to appeal decisions and violates the right to a fair trial. These challenges necessitate the implementation of AI audit and certification mechanisms, as well as the establishment of independent bodies for ethical evaluation of algorithms.

At the international level, the normative foundation is provided by the Convention for the Protection of Human Rights and Fundamental Freedoms, particularly Article 6, which guarantees the right to a fair and public hearing within a reasonable time by an independent and impartial tribunal. The Council of Europe, in the European Ethical Charter on the Use of AI in Judicial Systems, outlined five fundamental principles: respect for human rights, non-discrimination, transparency, explainability, and human oversight. Similar positions are reflected in UN documents, including the Guiding Principles on the Use of AI in Public Institutions, endorsed by UNESCO and the Human Rights Commission[14].

For Uzbekistan, the introduction of AI in judicial proceedings requires careful alignment of these international standards with the provisions of national legislation. The Constitution of the Republic of Uzbekistan guarantees the right to judicial protection, the presumption of innocence, equality before the law, and a ban on discrimination. The Civil Procedure Code (Article 10) and the Criminal Procedure Code (Article 20) ensure adversarial proceedings and judicial discretion. Any AI system introduced into judicial practice must not replace these core principles but should instead serve as a tool to reinforce them.

Special attention must also be paid to the Law "On Personal Data", which regulates the processing of personal information, including court files, data of parties, and court decisions. Since AI algorithms are trained on large datasets, it is essential to ensure data anonymization, restrict access, and implement information security principles. The Law "On Electronic

Documents” legitimizes electronic document management and digital signatures, providing the legal foundation for the integration of AI into practice.

The draft Law “On the Regulation of Relations in the Field of AI”, adopted in its first reading, contains dedicated articles on the legal safeguards for the use of algorithms in the public sector. It enshrines principles of transparency, accountability, prohibition of decisions without human involvement, and the requirement for independent AI system reviews. It also provides for the possibility of legally challenging AI recommendations in court, thus creating a mechanism for legal protection.

In conclusion, ethical and legal regulation of AI in Uzbekistan's judiciary requires a comprehensive approach. It must be based on the harmonization of international standards, national legislation, and technological capabilities. Transparency, explainability, human involvement in decision-making, and protection of personal data must become the cornerstones of this system. Only under these conditions can the legitimacy of judicial proceedings be preserved and public trust in new technologies be strengthened[15].

PROSPECTS AND RECOMMENDATIONS FOR UZBEKISTAN

1. **Regulatory Consolidation of Ethical Standards:** Develop bylaws and algorithm audit methodologies based on the principles of transparency, explainability, and feedback mechanisms with citizens.
2. **Technical Infrastructure:** Establish a secure platform for storing and processing judicial data, digitize archives, and integrate systems with the “Single Window of Justice” and “my.sud.uz” platforms.
3. **Human Resource Development:** Provide LegalTech training to judges and court staff; create interdisciplinary teams including lawyers, programmers, and AI ethics specialists.
4. **Pilot Projects:** Launch limited AI systems for automating writ proceedings, pre-trial settlements, and case classification.
5. **Impact Assessment and Monitoring:** Establish a supervisory body under the Supreme Court to oversee AI usage and develop algorithm audit standards.

CONCLUSION

The integration of artificial intelligence into Uzbekistan’s judicial system represents not only a technological but also an institutional transformation—one that can fundamentally improve the quality, transparency, and accessibility of justice. International practice shows that when supported by proper regulatory, ethical, and procedural safeguards, AI can significantly enhance judicial efficiency, reduce case processing times, and alleviate the workload on judges. However, its implementation requires a cautious and phased approach.

In Uzbekistan, judicial digitalization has already entered an active phase. The "E-Sud" electronic platform has been launched, electronic document systems are being implemented, and legal frameworks are being developed to regulate AI technologies. The adoption of the AI Development Strategy through 2030 and the draft Law “On the Regulation of Relations in the Field of AI” demonstrate the state’s commitment to building an institutional base for digital transformation in the field of law. Nevertheless, future steps must focus not only on technological advancement but also on comprehensive protection of citizens' rights, judicial independence, and algorithmic accountability.

A crucial condition for the successful digital transformation of justice is the preservation of the central role of humans in decision-making. No matter how advanced it is, artificial intelligence must not replace the judge in the administration of justice. Its purpose should be to offer tools for analysis, automate routine procedures, and provide technical support—without interfering with legal reasoning or the essence of law enforcement. This is especially important in a multi-tiered legal system where each process requires an individualized approach.

Uzbekistan is uniquely positioned to adapt the best international practices to its national context and create its own model of “smart” justice—based on the principles of openness, fairness, and technological resilience. The country is already showing leadership in Central Asia in terms of digital reforms, and extending this success to the judicial sector may become a key step toward building accountable, fair, and people-centered justice.

Thus, the development of AI in the judicial system must proceed gradually, taking into account international recommendations, national legislation, judicial practices, and the technical readiness of the infrastructure. The professional community—including judges, lawyers, and scholars—should be actively involved in the discussion and implementation of these technologies to ensure that new tools serve the goals of justice rather than becoming a source of new risks. Only under these conditions can we speak of a true digital evolution of justice, rather than merely the formal automation of its processes.

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