ARTIFICIAL INTELLIGENCE IN KAZAKHSTAN'S LEGAL SYSTEM: ASSESSING CONSTITUTIONAL AND ETHICAL CONSTRAINTS

Meiramkul ISSAYEVA

ABSTRACT

The crime whose object is people, who acquire the epithet „white slavery", is not unknown, but it constantly manifests itself in new forms and shapes, through which it always finds ways to appear legal, most often hiding under legal professions and occupations. Internal human trafficking, which was invisible for a long period of time, gradually expanding the spectrum of trends of realization, today exists everywhere in the region. Human trafficking represents a serious violation of fundamental human rights and a strong affront to human dignity. The analysis of the developments in the area of human trafficking on the territory of the country and beyond confirms the facts of the Republic of North Macedonia increasingly being identified as a country of origin, and to a certain extent also a country of transit and destination for victims of human trafficking, where internal human trafficking dominates, which is carried out on the basis of certain methods of recruitment followed by an appropriate form of exploitation, as an achieved goal of previously organized and planned activities of human traffickers.

Keywords: human trafficking, phenomenology, etiology, human trafficker, trafficked victim.

Dr. Meiramkul ISSAYEVA
Institute of Philosophy, Political Science and Religion,
Researcher of the Center of the Political Studies, Almaty, Kazakhstan

e-mail:
issayevameiramkul@gmail.com

INTRODUCTION

Artificial intelligence (AI) technologies offer transformative potential for legal systems through data analysis, automation, and decision-support tools, while simultaneously raising significant constitutional and ethical debates. As Kazakhstan advances its technological modernization through the "Digital Kazakhstan 2025" strategy, the integration of AI into its legal system remains at a nascent stage. This article examines Kazakhstan's preparedness for the AI revolution and analyzes the constitutional and ethical boundaries of legal system transformation (Nuredin, 2024) through evidence-based research.

1. Kazakhstan's Digital Transformation Strategies and AI's Potential Role in the Legal System

Kazakhstan's "Digital Kazakhstan 2025" program aims to digitize public services and implement AI across various sectors (Government of Kazakhstan, 2020). In the legal domain, AI demonstrates particular promise for automating litigation processes, contract analysis, and judicial decision support. For instance, Kazakhstan's judiciary has begun utilizing AI to draft preliminary rulings in civil cases, though final adjudicative authority remains with judges. While e-justice platforms and other digital tools are already operational, AI integration could enhance their efficiency.

However, AI implementation faces constraints from Kazakhstan's existing legal and technological infrastructure. Current regulations on data security and personal data protection remain inadequate. The European Union's Artificial Intelligence Act (2024) may serve as a model, with its transparency requirements and human rights-oriented approach for high-risk AI systems. Kazakhstan's draft AI legislation similarly seeks to incorporate principles of justice, accountability, and human-centric design (Zajmi, 2025). AI applications in law must align with constitutional principles of judicial independence and rule of law while maintaining public trust.

1.1. Research Question: Compatibility of AI Integration with Constitutional and International Standards

This study's central inquiry examines the degree to which AI integration in Kazakhstan's legal system complies with constitutional principles and international standards (Nuredin, 2022). The Constitution of Kazakhstan

guarantees personal data protection (Article 18), fair trial rights (Article 13), and equality before law (Article 14) (1995). Yet algorithmic biases in AI systems or data privacy violations may undermine these guarantees. For example, AI-powered predictive policing or facial recognition systems using biased datasets could compromise fair trial rights (Akhmetov, 2025).

Internationally, UNESCO's 2021 Recommendation on AI Ethics emphasizes respect for human rights, transparency, and accountability (UNESCO, 2021). While Kazakhstan has committed to these norms, domestic regulations currently fall short of full compliance. The "black box" problem of AI - the opacity of algorithmic decision-making - risks violating constitutional transparency requirements. Igor Rogov, Chair of Kazakhstan's Human Rights Commission, highlights critical challenges including liability for AI-caused harm, ownership of AI-generated content, and fraud prevention (Tazabekov, 2024).

Kazakhstan faces three primary challenges in AI integration:

(1) Developing an AI legal framework compatible with constitutional principles,

(2) Aligning with international data security standards,

(3) Establishing independent oversight mechanisms for transparency and accountability.

This study evaluates Kazakhstan's readiness for AI adoption while delineating the ethical and constitutional parameters of legal system transformation. Although AI integration presents opportunities to enhance judicial efficiency, effective management of constitutional and ethical risks remains imperative. Strengthening legal frameworks and monitoring mechanisms will prove crucial for successful implementation.

2. Kazakhstan's Current Legal Framework and AI Readiness Assessment

As Kazakhstan progresses toward adopting artificial intelligence (AI) technologies through its "Digital Kazakhstan 2025" strategy, the suitability of its existing legal infrastructure for AI integration emerges as

a critical issue. This section analyzes Kazakhstan's preparedness for AI implementation through the lens of constitutional provisions (1995 Constitution), legislative gaps, and intellectual property law considerations.

2.1 Constitutional Framework

The 1995 Constitution of Kazakhstan provides fundamental parameters for evaluating AI integration into the legal system, establishing human rights and rule of law as central constraints for AI applications.

• Article 13 (Equality Principle): The constitutional guarantee of equality before law (Constitution of the Republic of Kazakhstan, 1995) faces potential compromise from algorithmic biases in AI systems, particularly in predictive policing and facial recognition applications. Biased training datasets may lead to disproportionate targeting of specific demographic groups, violating constitutional protections (Akhmetov, 2025).

• Article 18 (Privacy and Data Protection): While Article 18 safeguards personal data protection and privacy rights (Constitution of the Republic of Kazakhstan, 1995), AI's reliance on big data analytics and biometric technologies creates substantial privacy risks. Kazakhstan's data protection regulations remain underdeveloped compared to the EU's General Data Protection Regulation (GDPR), complicating constitutional compliance in AI deployment (European Parliament, 2016).

• Article 77 (Judicial Independence): The constitutional principle of judicial independence (Constitution of the Republic of Kazakhstan, 1995) may be undermined by AI's expanding role in judicial decision-making. The uncritical adoption of AI-generated rulings without proper judicial scrutiny risks violating constitutional norms. Current regulations fail to adequately define AI's appropriate scope within judicial processes (Zajmi, 2025).

2.2 Legislative Gaps

Kazakhstan's existing legislation contains significant deficiencies regarding AI system integration:

• Deficiencies in Public Service Law: The Public Service Law promotes digitalization of government services but lacks specific provisions governing AI implementation in administrative decision-making (Government of Kazakhstan, 2020). Critical issues remain unaddressed, including oversight mechanisms for AI-driven automation and liability

frameworks for erroneous algorithmic decisions, undermining transparency and accountability principles.

• Need for Administrative Decision-Making Regulations: While AI applications could optimize administrative processes like tax auditing and social benefit distribution, Kazakhstan lacks comprehensive frameworks regulating AI's role in such decisions. The EU's Artificial Intelligence Act (2024), with its rigorous transparency and monitoring requirements for high-risk AI systems, offers a potential model for reform.

2.3 Intellectual Property Law Considerations

AI-generated content presents novel challenges for Kazakhstan's intellectual property regime:

• Status of AI Creations in AIFC Law: The Astana International Financial Center (AIFC) provides a common law-based legal environment that could facilitate innovative approaches to copyright protection for AI-generated works (Astana International Financial Centre, 2023). However, current AIFC regulations lack clarity regarding ownership rights for AI-produced creative content (e.g., artworks or written materials). International consensus generally denies copyright eligibility to AI systems themselves (WIPO, 2021).

• EU's "Electronic Personality" Concept: The European Parliament's (2017) consideration of granting "electronic personality" status to AI systems - establishing limited legal responsibility - presents a potentially adaptable model for Kazakhstan. However, the country's current legal structure and constrained judicial independence may complicate such reforms (Zajmi, 2025).

Kazakhstan's legal infrastructure exhibits substantial deficiencies for effective AI integration. While constitutional principles of equality, data protection, and judicial independence establish important boundaries, legislative gaps and intellectual property uncertainties hinder secure AI implementation. Developing an internationally compliant legal framework that respects constitutional principles remains essential for Kazakhstan's successful transition to an AI-enhanced legal system.

3. Potential Integration Scenarios and Probable Impacts

While Kazakhstan's "Digital Kazakhstan 2025" strategy aims to accelerate artificial intelligence (AI) integration in judicial and public administration sectors, the potential benefits and risks of this transformation require

careful examination. This section evaluates prospective AI implementation scenarios and their implications across these domains.

3.1 AI Applications in Judicial Systems

The incorporation of AI into judicial processes presents both efficiency opportunities and constitutional-ethical challenges.

 Benefits:

Reduced Case Processing Times: Pilot initiatives like "Smart Case Management Systems" demonstrate AI's potential to automate legal procedures and alleviate court workloads (Government of Kazakhstan, 2020). AI-assisted document analysis and precedent identification could significantly enhance judicial productivity.

Jurisprudence Analysis: Systematic examination of Supreme Court rulings by AI systems could strengthen legal consistency, particularly in complex matters requiring precedent harmonization (Zajmi, 2025).

 Risks:

Algorithmic Bias and Demographic Disparities: AI systems trained on biased datasets may disregard Kazakhstan's ethnic and socioeconomic diversity. Predictive policing algorithms, for instance, could disproportionately target specific groups, violating constitutional equality provisions (Article 13) (Akhmetov, 2025).

Opacity and Judicial Independence Concerns: The "black box" nature of AI decision-making processes may compromise constitutional requirements for judicial transparency (Article 77). When judges cannot fully comprehend the rationale behind AI-generated recommendations, judicial autonomy becomes questionable (UNESCO, 2021).

3.2 AI Implementation in Public Administration

AI adoption in government services offers operational improvements but introduces significant data security and regulatory challenges.

• AI-Enhanced Complaint Management: Kazakhstan's e-government portal plans to implement AI-driven chatbots and automated grievance systems to streamline public services (Government of Kazakhstan, 2020). Natural language processing could classify complaints and suggest

resolutions, potentially reducing processing times for tax and social benefit applications.

• Data Protection Deficiencies: Current personal data protection legislation remains inadequate for governing AI's massive data processing capabilities (Constitution of the Republic of Kazakhstan, 1995). Potential data breaches and misuse risks contravene constitutional privacy guarantees (Article 18). While the EU's GDPR provides a robust model (European Parliament, 2016), Kazakhstan's regulatory framework requires substantial upgrades to achieve comparable standards.

AI integration in Kazakhstan's judiciary and public administration promises substantial efficiency gains but simultaneously introduces systemic risks including algorithmic discrimination, transparency deficits, and data vulnerability. Constitutional compliance (Articles 13, 18, and 77) necessitates AI-specific legislation establishing:

Mandatory bias auditing protocols

Explainability requirements for automated decisions

Enhanced data governance frameworks

Successful AI adoption depends on developing these safeguards while maintaining alignment with international best practices. Kazakhstan's digital transformation must balance technological advancement with fundamental rights protection through comprehensive legal reforms and independent oversight mechanisms.

4. Human Rights and International Obligations

Kazakstan's integration of artificial intelligence (AI) presents significant challenges concerning human rights compliance and international legal obligations. While the European Convention on Human Rights (ECHR) and jus cogens norms provide fundamental benchmarks for AI implementation in legal systems, Kazakhstan's current infrastructure demonstrates notable deficiencies in meeting these standards. This section examines compliance issues with ECHR principles and potential violations of jus cogens norms.

4.1 ECHR Compliance Challenges

Although not a party to the ECHR, Kazakhstan has committed to upholding international human rights standards. AI deployment risks contravening core ECHR provisions:

• Article 6 (Right to Fair Trial): The ECHR's guarantee of fair trial rights (European Convention on Human Rights, 1950) may be compromised by AI's "black box" problem - the opacity of algorithmic decision-making processes. When AI-assisted judicial support systems fail to disclose how they influence judicial decisions, parties' rights to understand and challenge legal proceedings become undermined (UNESCO, 2021). Despite pilot programs using AI for jurisprudence analysis in Kazakhstan's Supreme Court, this transparency deficit questions the legitimacy of such applications (Zajmi, 2025).

• Article 8 (Right to Privacy): The privacy protections enshrined in Article 8 (European Convention on Human Rights, 1950) face particular threats from facial recognition technologies deployed in Kazakhstan, especially within the Astana International Financial Center (AIFC) data infrastructure. AI processing of biometric data risks violating both constitutional privacy protections (Article 18, Constitution of Kazakhstan, 1995) and international standards when data breaches or misuse occur. The EU's General Data Protection Regulation (GDPR) establishes rigorous requirements for such technologies, while Kazakhstan's data protection laws remain inadequate (European Parliament, 2016).

4.2 Potential Jus Cogens Violations

The peremptory norms (jus cogens) of international law, including the prohibition of discrimination, face potential infringement through Kazakhstan's AI applications:

• Discrimination Risks in AI-Driven Social Welfare Algorithms: The deployment of AI systems to determine social benefit eligibility may institutionalize ethnic or economic discrimination, violating jus cogens norms (Nuredin, 2016). Algorithms trained on biased datasets could systematically exclude vulnerable populations - for instance, ethnic minorities in rural areas might face disproportionate barriers to social assistance access (Akhmetov, 2025). Such outcomes would contravene Kazakhstan's international human rights obligations.

UNESCO's Recommendation on AI Ethics (2021) emphasizes algorithmic transparency and human rights-centered design to mitigate these risks. These concerns touch upon fundamental norms protected under international human rights law (Nuredin & Inan, 2024). While Kazakhstan is developing regulatory frameworks to address these challenges, current measures remain insufficient.

Kazakhstan's AI integration poses dual challenges: compatibility issues with ECHR principles (fair trial and privacy rights) and potential breaches of jus cogens norms. The "black box" nature of AI systems and data security vulnerabilities in facial recognition technologies necessitate regulatory reforms aligned with constitutional and international standards. The discriminatory potential of social welfare algorithms particularly tests Kazakhstan's capacity to fulfill its human rights commitments. Effective management of these risks requires developing a transparent, human-centric AI legal framework that harmonizes with international norms while addressing:

Algorithmic accountability mechanisms

Enhanced data protection standards

Robust anti-discrimination safeguards

The establishment of such comprehensive governance structures will prove essential for reconciling technological advancement with Kazakhstan's human rights obligations.

5. Policy Recommendations in Light of Comparative Law

Kazakhstan can strengthen its constitutional and ethical compliance in AI integration by drawing lessons from international models. This section examines regional and global approaches to propose constitutional and legal reforms tailored to Kazakhstan's context.

5.1 Regional and Global Models for AI Governance

Comparative analysis reveals distinct approaches to AI integration that Kazakhstan might consider:

• Authoritarian-Tech Model (Russia & China):

These states implement AI under strict governmental oversight, with Russia's 2020 AI Strategy prioritizing national security and China's regulations emphasizing data control and social governance (Schmitt, 2021). While potentially informative for technological infrastructure development, their systemic opacity and subordination of individual rights conflict with Kazakhstan's constitutional guarantees (Articles 13, 18). Kazakhstan should exercise caution in adopting elements from these models to avoid compromising fundamental freedoms.

• Human-Centric Judicial Model (Georgia):

Georgia's "Transparent Judiciary" project demonstrates an effective balance between AI utilization and judicial oversight. The system maintains AI's auxiliary role in case management while preserving judges' ultimate decision-making authority (UNDP, 2023). This approach aligns with Kazakhstan's judicial independence principle (Article 77) and offers effective safeguards against algorithmic bias, making it particularly suitable for adoption.

5.2 Constitutional and Legislative Reform Proposals

To ensure sustainable and ethical AI integration, Kazakhstan should consider the following reforms:

• Constitutional Recognition of Digital Rights (Brazilian Model):

Following Brazil's 2018 constitutional amendment that enshrined digital rights (Belli, 2020), Kazakhstan could amend Article 18 to explicitly guarantee:

Data protection as a fundamental right

Privacy safeguards for biometric data processing

Equitable digital access

Such provisions would enhance protection against AI-driven privacy violations (Nuredin, 2023a) and facilitate GDPR compliance (European Parliament, 2016).

• Establishment of an AI Ethics Council (Estonian Model):

An independent oversight body modeled after Estonia's AI Ethics Council (Government of Estonia, 2022) could:

Monitor compliance with constitutional principles (Articles 13, 77)

Develop guidelines to prevent algorithmic discrimination

Ensure adherence to UNESCO's AI ethics recommendations (2021)

Conduct regular audits of high-risk AI systems

CONCLUSION

While Kazakhstan may draw technical insights from Russia and China's AI infrastructure models, Georgia's balanced approach better aligns with constitutional principles. The proposed reforms - constitutional digital rights provisions and an independent oversight mechanism - would position Kazakhstan as a regional leader in ethical AI governance. These measures would:

Strengthen protection against privacy infringements

Align with fourth-generation human rights principles (Nuredin, 2023b)

Enhance international human rights compliance

Maintain technological competitiveness while safeguarding fundamental freedoms

The implementation of these recommendations would enable Kazakhstan to navigate the AI revolution while upholding its constitutional commitments and international obligations.

6. Conclusion: A Roadmap for Kazakhstan

Kazakhstan's preparation for the artificial intelligence (AI) revolution necessitates a legal framework that aligns with constitutional principles, international human rights obligations, and ethical standards (Nuredin, A., & Nuredin, M., 2023). While the "Digital Kazakhstan" strategy accelerates AI integration in judicial and public administration systems, short- and long-term measures are essential to ensure this process remains sustainable and trustworthy. This section presents a comprehensive roadmap for Kazakhstan's AI transition.

6.1 Short-Term Measures

Transparency and Oversight Mechanisms for Pilot Projects

Kazakhstan's pilot initiatives, such as "Smart Case Management Systems," are currently testing AI applications in judicial processes (Government of Kazakhstan, 2020). However, the lack of transparency and accountability in these projects risks violating constitutional guarantees of judicial independence (Article 77) and fair trial rights (Article 13) (Constitution of the Republic of Kazakhstan, 1995). To address this, the following steps should be prioritized:

Public Disclosure of AI Decision-Making Processes: Algorithmic operations should be made explainable to ensure judicial transparency.

Independent Auditing Bodies: Establish oversight mechanisms to monitor AI systems in pilot programs, drawing inspiration from Georgia's "Transparent Judiciary" project, which successfully balances AI assistance with human judicial oversight (UNDP, 2023).

Regular Bias Audits: Implement periodic ethical reviews of AI tools to detect and mitigate algorithmic discrimination, ensuring compliance with UNESCO's AI Ethics Recommendations (2021).

6.2 Long-Term Strategies

Legal Reforms: Defining AI Liability in Civil and Criminal Codes

Kazakhstan's current Civil and Criminal Codes lack clear provisions on AI accountability, creating legal uncertainty in cases of erroneous decisions or data breaches. To rectify this:

Civil Code Amendments: Introduce liability clauses for AI-induced damages, including compensation mechanisms for affected parties.

Criminal Code Revisions: Enact penalties for AI misuse, such as malicious data manipulation or discriminatory algorithmic practices, reinforcing constitutional privacy protections (Article 18).

The EU's Artificial Intelligence Act (2024) provides a robust model for risk-based liability frameworks, which Kazakhstan could adapt to its legal context.

Establishing an International AI Law Institute within the AIFC

The Astana International Financial Centre (AIFC), with its common law-based legal system, is uniquely positioned to host an International AI Law Institute that would:

Develop Ethical and Legal Standards: Formulate guidelines for AI governance, including intellectual property rights for AI-generated works (WIPO, 2021).

Promote Global Collaboration: Facilitate cross-border research on AI regulation, aligning Kazakhstan with international norms (e.g., Estonia's AI Ethics Council model) (Government of Estonia, 2022).

Monitor Domestic AI Applications: Serve as an independent body to audit AI systems in public and private sectors, ensuring adherence to constitutional and human rights principles (Articles 13, 18, 77).

Strategic Implications

By implementing these measures, Kazakhstan can:

Strengthen Constitutional Compliance: Align AI deployment with equality, privacy, and judicial independence safeguards.

Enhance International Standing: Position itself as a regional leader in ethical AI governance through the AIFC's expertise.

Mitigate Risks: Proactively address algorithmic bias, data security, and liability gaps before widespread AI adoption.

This roadmap not only ensures Kazakhstan's readiness for AI but also establishes a replicable model for balancing innovation with fundamental rights. Future research should evaluate the AIFC Institute's impact and explore sector-specific regulatory refinements.

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