

## ARTIFICIAL INTELLIGENCE AND SOCIAL JUSTICE: OPPORTUNITIES AND RISKS

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**Abstract:** This article provides an in-depth analysis of the complex relationship between artificial intelligence (AI) and social justice. It examines both the opportunities AI offers in strengthening social protection and justice, as well as the associated risks and challenges. The paper includes examples, strategies, and recommendations specific to the context of Uzbekistan. Furthermore, it discusses the principles of fair AI, policy directions, and the importance of citizen participation in ensuring equitable technological development.

**Keywords:** artificial intelligence, social justice, digital equality, technological development, human rights, digital divide, automation, social protection, digital ethics, algorithmic fairness, data security, discrimination, economic transformation, digital governance, ethical responsibility.

### Introduction

The 21st century can rightly be called the era of intellectual and technological revolution, where Artificial Intelligence (AI) is gradually and deeply integrating into various spheres of human life. Modern systems, infrastructures, state governance, education, healthcare, and transportation are all undergoing significant transformation due to AI's rapid development. It has become nearly impossible to imagine an efficient system without AI intervention.

However, alongside its transformative power, the impact of artificial intelligence on society also raises serious concerns about social justice, equality, and potential risks. The main theme of this paper revolves around a crucial question: **Can artificial intelligence serve as a tool to promote social justice, or will it become a mechanism that reinforces injustice and inequality?**

This article is structured around four key dimensions: the opportunities presented by AI, the associated risks, strategic approaches to maintaining balance, and contextual analyses supported by practical examples.

### I. Artificial Intelligence and Social Justice: Theoretical Foundations

## 1. The Concept of Social Justice

The concept of social justice has been widely discussed across various theoretical schools, political philosophies, and legal doctrines. Its fundamental principle is that despite differences in individuals' opportunities, resources, rights, freedoms, and outcomes, the most vulnerable members of society should be protected, and overall social stability should be maintained.

According to **John Rawls' "Theory of Justice"**, the difference principle asserts that a just system should be arranged so that any inequalities benefit the least advantaged members of society. Inspired by Rawls' ideas, some modern scholars have sought to extend his framework to the ethical evaluation of artificial intelligence systems.

When studying the relationship between AI and social justice, several theoretical dimensions play a key role:

- **Distributive Justice:** Resources, opportunities, and benefits should be distributed fairly across society through AI applications.
- **Procedural Justice:** AI decision-making processes must ensure transparency, human oversight, and equal treatment under the law.
- **Fairness and Non-Discrimination:** AI algorithms should not reproduce or amplify existing biases within data.
- **Accountability and Responsibility:** It is crucial to determine who bears responsibility for AI-generated decisions — developers, users, or governments.

Thus, artificial intelligence represents a **dual-edged force** — it has the potential both to strengthen and to undermine social justice, depending on how it is designed, implemented, and regulated.

## II. Positive Impact of Artificial Intelligence on Social Justice (Opportunities)

The following section explores how artificial intelligence (AI) can create opportunities to enhance social protection and promote justice within society, supported by examples and practical cases.

### 1. Equal Access to Information and Services

AI enables the digitalization of numerous public services, including governance, education, healthcare, and counseling. This transformation opens new opportunities, particularly for residents of rural and remote areas.

For example, within Uzbekistan's national AI development strategy, services such as the **Lex.uz chatbot** help citizens gain quick access to legal information and government updates. Similarly, initiatives under the **"Digital Uzbekistan 2030"** strategy aim to expand digital inclusion by integrating rural populations into modern communication networks and online systems.

These advancements reduce the **"digital divide"** and help create more equal opportunities for all members of society.

## 2. Reduction of Human Bias

Human decision-making—especially in hiring, credit approval, and insurance—can be influenced by bias related to gender, ethnicity, race, or social class. AI systems, if properly designed and regulated, can help minimize such biases by introducing standardized, data-driven decision-making models.

In education, for instance, AI-assisted assessment and scholarship allocation can eliminate subjective human judgments, ensuring fairer distribution of opportunities among students.

## 3. Analytical Power and Efficient Use of Data

AI's analytical capacity allows it to process vast amounts of data and predict social trends or risks in advance. In social research, AI can be used to assess citizens' needs, identify vulnerable groups, and develop social risk profiles.

For governments, this means **more targeted allocation of resources** and optimization of social welfare programs, ensuring that aid reaches those who need it most.

## 4. Assistive Technologies and Inclusivity

AI-based assistive technologies are transforming the lives of people with disabilities by promoting inclusivity and independence:

- Speech-to-text systems, voice recognition tools, and smart devices allow individuals with visual or hearing impairments to participate more actively in society.
- Mobility-supporting robots, real-time translation and subtitling, and emotion recognition technologies help improve communication and accessibility.

Hence, AI serves as a **powerful enabler of social inclusion**, providing equal participation opportunities for individuals regardless of physical limitations or social background.

## III. Negative Impact of Artificial Intelligence on Social Justice (Risks and Challenges)

Along with the opportunities mentioned above, the misuse or unregulated deployment of AI technologies may cause serious harm to social justice. The following section discusses the key risks and challenges associated with AI implementation in modern society.

### 1. Job Loss and Automation

During automation, AI systems increasingly replace humans in performing routine and repetitive tasks. This poses a significant threat to low-income and low-skilled workers, who are at a higher risk of unemployment.

The transition to automation requires **reskilling and retraining programs** to prepare workers for new professions. In developing countries, including Uzbekistan, this issue is particularly pressing, as the labor market and vocational education systems are not yet fully adapted to rapid technological changes.

### 2. Digital Divide and Technological Inequality

Access to AI benefits requires technical infrastructure, digital literacy, internet connectivity, and electronic devices. Wealthier and urban populations tend to have these resources, while people in remote or underdeveloped regions are often left behind.

This deepens the so-called “**digital divide**”, undermining social equity. Furthermore, large corporations and developed countries that possess advanced AI resources gain more advantages, while smaller nations and companies face limited participation — exacerbating **global inequality**.

### 3. Algorithmic Bias and Discrimination

AI algorithms rely on data, and if the data contains historical biases or stereotypes, the algorithm can reproduce and even amplify them. Such bias can lead to **unfair outcomes** in areas such as credit scoring, judicial sentencing, and recruitment.

Research indicates that maintaining a balance between **fairness** (equal opportunity) and **accuracy** in AI decision-making is challenging, often leading to ethical dilemmas and discrimination risks.

### 4. Loss of Human Oversight in Decision-Making

When critical decisions — such as loan approvals, judicial rulings, or employment selections — are based primarily on AI systems, human judgment and accountability diminish. This situation threatens human rights, transparency, and ethical safeguards.

Moreover, many AI systems operate as “**black boxes**”, meaning their internal processes are difficult to interpret. This lack of explainability fosters distrust, errors, and potentially unjust decisions.

### 5. Privacy Violations and Misuse of Personal Data

AI systems handle vast amounts of personal and sensitive data. Improper collection, storage, or use of such information poses significant risks to privacy and individual rights.

Technologies like **deepfakes**, illegal surveillance, and manipulative profiling can be abused under the guise of AI innovation.

In Uzbekistan, discussions in the national parliament have begun regarding **AI-related legislation** that aims to ensure data protection and clarify accountability for AI-generated content, reflecting growing awareness of these ethical and legal challenges.

## IV. Artificial Intelligence and Social Justice in the Context of Uzbekistan

Along with the global analysis, it is important to examine the examples of Uzbekistan. Below is an analysis of AI policy, practice, and possible directions in Uzbekistan.

### 1. Uzbekistan’s Artificial Intelligence Strategy and Legislation

The Government of Uzbekistan has recently adopted the Artificial Intelligence Development Strategy. This strategy supports the concept of a “human-centered approach”: AI systems should serve to meet human needs and promote innovation without radical restrictions.

According to reports, in 2025, the Parliament of Uzbekistan approved, in the third reading, a

law regulating the use of AI. The new law introduces fines for the misuse of personal data and establishes that decisions based on AI should not be made solely by AI but must include human involvement.

In addition, the Legislative Chamber of the Oliy Majlis approved the draft law on AI in the first reading, which addresses such aspects as ethical rules, data protection, and responsibility.

## 2. Practical Examples of AI and Its Use in Public Services

- **Lex.uz chatbot:** Citizens use an AI-based chatbot service to receive legal advice, which provides quick and convenient access to legal information.
- **Digitization and AI integration in public services:** For example, in some government services, AI is used to automatically analyze applications and improve service efficiency.
- **Use of AI in the legal system:** AI is being applied to improve legal consultations, the verification of court documents, and legal search systems. According to Daryo news, quoting Vladimir Norov, it was stated that it is necessary to introduce AI systems in courts.

## 3. Possible Problems That May Arise in Uzbekistan

- In Tashkent and major cities, AI infrastructure, internet speed, and digital culture may be more developed, while in remote areas these opportunities are likely to be limited.
- **Lack of technical specialists:** The reserve of qualified personnel to create AI algorithms and models may be limited.
- **Delay in legislation and regulation:** Since the AI revolution is happening rapidly, laws, ethical norms, and control mechanisms may lag behind.
- **Quality and bias of databases:** In the context of Uzbekistan, data may be uneven and insufficiently collected in remote areas, which increases the risk of errors and unfairness in AI models.
- **Public trust and transparency issues:** A lack of understanding of where and how decisions based on AI are made — the so-called “black box” — can lead to mistrust.

## 4. Target Directions and Recommendations for Uzbekistan

### 1. Strengthening the Legal and Regulatory Framework

— AI-related laws and regulations should be adopted quickly, but not through “strict restrictions,” rather through a “principle-based regulation.”

— It is important to include aspects such as responsibility, data protection, and human participation in decision-making in Uzbekistan’s AI law (there are already reports that the AI law has been approved).

— Special rules should be added to criminalize the creation of harmful content using deepfake and AI technologies.

### 2. Development of Technical and Ethical Standards

— Integration of human values and ethical principles into AI systems (ethics by design).

— Application of algorithmic fairness, transparency, audit systems, and explainability models.

— Establishment of independent inspection and control bodies.

**3. Education and Training of Specialists**

- Introduction of AI-related courses and training of specialists in higher education institutions.
- Conducting AI training programs and courses for small businesses and rural areas.
- Exchange of international experience and cooperation.

**4. Development of Inclusive Policy**

- Improving infrastructure in remote areas (internet, electricity, computers).
- Making personal assistive technologies more common.
- Developing inclusion strategies to ensure that all groups, including persons with disabilities, the elderly, and women, can benefit from AI opportunities.

**5. Transparency, Accountability, and Citizen Participation**

- AI decisions should not be a “black box”; explanations and justifications must be required.
- Citizens and social institutions should participate in AI policies and projects.
- Local and international cooperation should be strengthened (for example, experiences of UNESCO, OECD, and the EU AI Act).

**V. Preliminary Analytical Model: The Basic Principles of Fair AI**

Below are the principles and recommendations that should be taken into account in the development of fair AI systems that promote social protection.

Principle	Explanation	Practical Recommendation
<b>Transparency and Explainability</b>	The AI system must be able to explain why it made a particular decision.	Use “explainable AI” methods in decision-making models and include user-friendly explanation modules.
<b>Fairness and Reduction of Discrimination</b>	The model must not replicate core biases present in the data.	Apply balanced datasets and fairness metrics such as demographic parity, equal odds, etc.
<b>Redistribution/Compensation</b>	The benefits of AI should be fairly distributed among social groups.	Reinvest profits from AI applications into society to support those who do not directly benefit.
<b>Data Protection and Privacy</b>	Privacy principles must not be violated when AI processes data.	Apply differential privacy, anonymization, minimal data usage, and ensure user consent.
<b>Human-Centered Governance and Intervention</b>	Human oversight should remain in decision-making	Operate AI in a “recommendation” mode, with human verification for critical decisions.

Principle	Explanation	Practical Recommendation
	processes.	
<b>Government and Citizen Participation</b>	Public opinion must be considered in forming AI policies.	Conduct public consultations, involve citizens, and establish audit and monitoring bodies.
<b>Sustainability and Long-Term Oversight</b>	AI systems should consider long-term social impacts.	Implement monitoring, control, iterative audits, and regular update mechanisms.

These principles are derived from global best practices and theoretical discussions (for instance, the fairness principles analyzed in the article “Toward a Theory of Justice for Artificial Intelligence”). In Uzbekistan, it is crucial to integrate these principles into central policy frameworks and adapt them to national and local contexts to ensure ethical, transparent, and sustainable AI development.

## VI. Examples, Research, and Experiences

Below, we will reinforce the theory through global and regional examples.

### 1.Global Examples

- **AI in Judicial Systems:** In the United States, AI tools have been used in some court proceedings to assess the likelihood of recidivism; however, criticisms have arisen regarding their bias (Black offenders’ cases).
- **Credit Assessment:** Companies such as Amazon and PayPal have used AI models to evaluate credit risk, but in some cases, there has been a risk of rejection for low-income groups.
- **Generative AI and Authorship:** The issue of determining who holds authorship rights over creative content (music, poetry, artworks) generated by AI is being studied. In the article “Democratizing Innovations” by Gulyamov Saidakhrarovich and others, this issue is analyzed from the perspectives of social justice and income distribution.

### 2.Examples of Refugee Social Protection

Using AI structures to provide services for refugees and internally displaced persons in need of shelter: language translation, legal advice, and social integration platforms. Such systems can serve to protect the rights of refugees and assist in their integration.

### 3. Experience of Uzbekistan or Central Asia

Although AI policy is still developing in the Central Asian region, Uzbekistan's AI strategy can serve as an example of the following initiatives:

- **lex.uz chatbot** — a system that provides legal advice.
- **Adoption of laws regulating AI policy.**
- **Legislative proposals to control the consequences of deepfakes.**

Artificial intelligence can be a powerful tool for promoting social justice, but if not approached carefully, it can also become an instrument that reinforces injustice and inequality.

In conclusion, it can be said that the role and impact of artificial intelligence should be evaluated not only from the perspective of technological progress but also from the perspectives of social justice and societal stability.

When applying AI, we must not overlook the most vulnerable members of humanity and must accept justice as the foundation.

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