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Narrative Review Article

Artificial Intelligence: A Technology in the Service of Justice or a Threat to Judicial Ethics

(A Comparative Study in the Legal Systems of Iran, the United States, and the European Union)

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Abstract

Introduction: The rapid development of Artificial Intelligence (AI) has significantly transformed the landscape of judicial decision-making, raising crucial questions concerning justice, ethics, and the role of human oversight. This comparative study examines AI as both a tool for enhancing justice and a potential threat to judicial ethics within the legal systems of Iran, the United States, and the European Union. By analyzing the theoretical foundations of justice, the opportunities created by AI, the emerging ethical challenges, and the corresponding policy responses in each system, the present research explores both the benefits and the inherent risks of incorporating AI into judicial processes. It seeks to answer whether artificial intelligence serves as a technology that advances justice or as one that undermines judicial ethics.

Material and Methods: This paper employs a descriptive-analytical approach to explore the topic. It also examines existing challenges within Iran's judicial system and compares them with the experiences of other countries in the field of AI through a comparative analysis.

Conclusion: The findings indicate that while AI can improve efficiency, consistency, and access to justice, it also poses challenges such as algorithmic bias, lack of transparency, gaps in legal accountability, and the erosion of human moral judgment. The study identifies three distinct models of "technological justice": The ethical - judicial model of Iran, emphasizing human and moral oversight; The functional–procedural model of the United States, focusing on efficiency and case-based adaptability; and the fundamental rights - based model of the European Union, centering on fundamental rights and risk management in policy-making. Ultimately, the research concludes that the effective integration of artificial intelligence into judicial processes requires a careful balance between technological innovation, ethical assurance, human presence, and culturally grounded legal frameworks.

Keywords: *Artificial Intelligence, Judicial Ethics, Comparative Law, Justice, Legal Policy.*

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INTRODUCTION

In the past decade, the growing expansion of artificial intelligence (AI) technologies has confronted legal systems worldwide with new opportunities and challenges [1, 2]. One of the most sensitive domains into which this technology has penetrated is the judicial system - where human decision-making, judicial ethics, and justice stand as fundamental values [3]. AI can function through tools such as judicial data analysis, prediction of recidivism, or even issuing quasi-judicial decisions, thereby enhancing the

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speed, accuracy, and efficiency of adjudication processes [4].

However, the application of AI in adjudication and judicial proceedings raises profound questions regarding responsibility, transparency, impartiality, and human dignity [5]. In cases of algorithmic error or discrimination, who should be held accountable? Can replacing human judgment with algorithmic decision-making undermine the principles of natural justice? These challenges acquire different dimensions depending on the legal context in which they emerge.

In the Iranian legal system, judicial justice - grounded in the principles of Islamic jurisprudence and the Constitution - derives from moral and divine concepts. Therefore, the involvement of AI in judicial decision-making must align with the principles of Sharia and Islamic justice [4]. By contrast, the legal system of the United States emphasizes individual freedoms, algorithmic transparency, and civil liability for technological harm [6]. Meanwhile, the European Union, through regulations such as the AI Act and the GDPR, has sought to establish an ethics-oriented framework for the development and use of AI in the judicial domain, one that safeguards human dignity and promotes social justice [7].

Accordingly, the main research question of this study is as follows: Does artificial intelligence, within the mentioned legal systems, serve the cause of justice, or does it pose a threat to judicial ethics? By conducting a comparative analysis of the approaches of Iran, the United States, and the European Union, the study aims to achieve a clearer understanding of the balance between technological efficiency and the foundational values of justice. As recent studies have shown, the precise calibration of the relationship between human and machine in the process of adjudication is the key to achieving "technological justice" without compromising judicial ethics.

MATERIAL AND METHODS

The present study employs a descriptive-analytical approach to explore the topic. It also examines existing challenges within Iran's judicial system and compares them with the experiences of other countries in the field of AI through a comparative analysis.

DISCUSSION

Comparing the Theoretical Foundations of Justice and Judicial Ethics in Three Legal Systems

Justice and judicial ethics are among the fundamental concepts in the philosophy of law and procedural justice. In every legal system, these concepts are rooted in distinct cultural, moral, and epistemological assumptions. In the age of artificial intelligence, these theoretical foundations play a decisive role in how technology is regulated and applied within the judicial system. The following sections provide a comparative examination of the foundations of justice and judicial ethics in the legal systems of Iran, the United States, and the European Union.

A) Iran: Divine Justice and Jurisprudential Ethics

In the Iranian legal system, the concept of justice is rooted in the Islamic worldview; justice is not merely a legal rule but a moral and divine virtue that must be reflected in the conduct of the judge and in the judicial structure itself. From the perspective of Islamic jurisprudence, a judge must possess qualities such as faith, justice, moral commitment, and knowledge of religious law. Hence, adjudication is not regarded as a purely technical or mechanical process [4]. This foundation leads to a cautious and skeptical attitude toward replacing human decision-making with AI algorithms. As researchers [3] have noted, the use of technology in judicial

procedures should be designed in such a way that the judge continues to play the ultimate role in interpreting and determining justice, rather than merely executing an algorithmic output. In other words, in the Iranian legal framework, justice goes beyond formal equality in decisions and encompasses "righteous intent," "fairness," and "divine purpose." Therefore, any reliance on AI without human supervision may be deemed inconsistent with the principles of Islamic justice and judicial ethics.

B) The United States: Procedural Justice and the Ethics of Accountability

In the American legal system, the concept of justice is grounded not in divine or moral virtues but in constitutional principles and individual freedoms. The fundamental principle of Due Process of Law, enshrined in the Fifth and Fourteenth Amendments to the U.S. Constitution, ensures that no individual shall be deprived of rights without a fair legal process [5]. In the age of AI, this principle translates into a need for algorithmic transparency, the right to contest machine-generated decisions, and institutional accountability. According to studies [6], the United States, instead of imposing broad restrictions or bans on AI, focuses on developing ethical frameworks and mandating transparency in decision-making. An example of this approach is found in the Executive Order on Safe, Secure, and Trustworthy AI (2023). Within this framework, judicial justice means ensuring procedural fairness, data impartiality, and equal access to technological justice. Judicial ethics in the U.S. is thus not based on the virtue of the judge but rather on systematic accountability and social oversight of technology.

C) The European Union: Fundamental Justice and Technology-Oriented Ethics

In the European Union, justice and judicial ethics are grounded in the principles of human rights and human dignity. The Charter of Fundamental Rights of the European Union (2000) and the European Convention on Human Rights define justice primarily in terms of "respect for human dignity" and "the right to a fair trial." These principles are directly reflected in the EU's AI policies. The draft Artificial Intelligence Act explicitly enshrines the principle of "human-in-the-loop decision-making" and includes requirements for transparency, algorithmic auditing, and the prohibition of high-risk AI systems in the judicial sector [7]. As highlighted in the article Artificial Intelligence in the Judiciary: A Critical View, unlike the instrumental approach of the United States, the European Union seeks to build "institutional ethical trust" in AI - meaning that technology is permitted only if it strengthens, rather than undermines, the values of justice, equality, and fundamental human rights [8]. Accordingly, judicial justice in this system is founded upon balancing technological efficiency with human ethics. This approach has positioned the European Union as the world's leading jurisdiction in the ethical and legal regulation of artificial intelligence.

From a comparative perspective, it can be said that the foundation of justice in Iran is based on divine ethics and the moral character of the judge; in the United States, it is grounded in procedure and institutional accountability; and in the European Union, it rests upon fundamental rights and human dignity. Consequently, the three systems hold differing views on the role of AI in adjudication: Iran is primarily concerned with threats to judicial ethics and the erosion of the judge's human role; the United States emphasizes technological responsibility and transparency; and the European Union deems technological justice legitimate only when it adheres to ethical and humanistic principles.

These philosophical and legal distinctions reveal that justice in the age of artificial intelligence is a relative concept, shaped by the cultural and legal context of each system. Therefore, no single,

universal approach can be prescribed for all jurisdictions.

Opportunities of Artificial Intelligence for Judicial Justice

Recent developments in the field of Artificial Intelligence (AI) have created remarkable opportunities for transformation within judicial systems. The purpose of employing this technology is not to completely replace humans, but rather to enhance the quality of decision-making, improve the efficiency of judicial proceedings, and realize a more effective form of justice. Although there are challenges and potential threats, the advantages of AI in serving justice can be examined in three main areas: improving efficiency and expediting proceedings, enhancing the quality and consistency of judicial rulings, expanding public access to justice, and supporting human decision-making to reduce judicial error.

A) Increasing Efficiency and Expediting Proceedings

One of the chronic problems facing judicial systems worldwide is the delay in proceedings and the overwhelming volume of cases. AI can facilitate adjudication by automatically analyzing documents, classifying cases, and suggesting draft judgments [9]. In Iran's judicial system, recent studies have shown that the use of machine learning algorithms for recording and analyzing case histories can significantly reduce decision-making time without undermining the principles of justice [10]. In the United States, projects such as COMPAS (Correctional Offender Management Profiling for Alternative Sanctions) have been employed to assist judges in assessing the risk of recidivism. Although such projects have been criticized for algorithmic bias, they nonetheless demonstrate that the proper use of big data can increase both the speed and accuracy of judicial decisions [11].

B) Enhancing the Quality, Accuracy, and Consistency of Judicial Rulings

In many legal systems, inconsistency among judges' rulings constitutes a major challenge to procedural justice. With its capacity to process vast amounts of data, AI can assist judges in identifying similar precedents, interpreting laws more coherently, and detecting potential contradictions in judgments [7]. In the European Union, several projects under the supervision of the European e-Justice Portal and research programs such as Predictive Justice have been implemented to improve the consistency of judicial decisions and the predictability of case outcomes [8]. From the standpoint of justice, such mechanisms strengthen the principle of equality before the law, as similar cases are adjudicated under similar conditions. Moreover, by relying on algorithmic analysis, judges can reduce cognitive errors and mistakes arising from workload pressures, allowing them to focus more on legal reasoning and ethical considerations.

C) Expanding Public Access to Justice

Another significant achievement of AI is the facilitation of citizens' access to legal information and services. AI-based legal chatbots provide preliminary legal consultations, automatic translation of laws, and contract text analysis at minimal cost. In a study conducted by researchers [3], it was shown that the use of AI-based digital systems can reduce the burden on courts and enhance interaction between citizens and the judiciary. This development represents an effective step toward achieving distributive justice, particularly for marginalized groups and remote areas. In the European Union, the use of AI technologies in online legal advisory platforms forms part of the Digital Justice Strategy 2021–2027, which aims to promote public participation and trust in the digital justice system [7].

D) Supporting Human Decision-Making and Reducing Judicial Error

AI can function as a Decision Support System for judges rather than as a replacement. Data analysis systems can detect inconsistencies in judgments or potential violations of procedural principles and issue warnings [6]. In this way, technology helps to enhance decision quality while maintaining the ethical and human element at the center of the process. Such human–machine collaboration can lead to a form of "Techno-Justice" that balances efficiency with morality [8]. In sum, AI - when accompanied by ethical principles and human oversight - can serve as an instrument of judicial justice. This technology not only accelerates judicial processes but also contributes to the uniformity and transparency of judicial decisions through large-scale data analysis. As researchers [5] emphasize, the use of AI in modern judicial systems is legitimate and beneficial only when "human justice" remains central to its design and implementation.

Threats and Ethical Challenges to Judicial Ethics Arising from Artificial Intelligence

Although AI holds great potential for enhancing efficiency and consistency within judicial systems, its expansion without ethical and legal safeguards can pose serious threats to justice and judicial ethics. The main challenges in this regard include algorithmic bias, lack of transparency in machine decisions, legal responsibility for judicial errors, the erosion of the human role of judges, and violations of privacy and human dignity.

A) Algorithmic Bias

One of the most critical threats in applying AI to adjudication is bias in data and algorithms. AI can only be as just as the data on which it is trained. Numerous studies have shown that historical judicial data may contain racial, gender, or class-based discrimination, which - if left uncorrected- can be reproduced and even amplified in the system's outputs [12]. A well-known example is the COMPAS system in the United States, designed to predict recidivism, which in practice showed bias against racial minorities [13]. This phenomenon illustrates that machine justice, without ethical scrutiny of data, can violate the principles of equality and judicial impartiality.

B) Lack of Transparency and the "Black Box" of Judicial Decisions

Transparency is one of the cornerstones of judicial ethics, as the legitimacy of a judicial decision depends on its intelligibility and the possibility of critique. However, deep learning algorithms—particularly "black box" models - render their decision-making processes incomprehensible to humans [14]. In such cases, if AI produces an unjust outcome, neither the judge nor supervisory bodies can examine the reasoning behind it. This not only weakens judicial accountability but also limits the citizen's right to effectively appeal an unfair judgment [15]. Similar concerns exist in Iran's legal system; as a researcher [4] emphasizes, decisions that lack reasoned justification are inconsistent with the spirit of Islamic adjudication, which is grounded in rational argumentation and moral persuasion.

C) Legal Responsibility for Judicial Errors

A fundamental question in AI-based judicial ethics is: who bears responsibility in the event of an error by an AI system? Is it the judge using the system, the software developer, or the judicial institution itself? Comparative studies indicate that no legal system has yet provided a definitive answer to this question [16]. In the United States, responsibility typically falls upon the human user, whereas the European Union, through the AI Act, attempts to establish a framework for shared responsibility between developers and users by classifying "high-risk systems." In Iran, no specific regulation yet exists on this issue, and from a jurisprudential standpoint, assigning responsibility to a machine is impossible due to the absence of intent and will; hence, responsibility remains with the human actor [17].

D) The Erosion of the Judge's Human and Moral Role

In many legal traditions, the judge is not merely an enforcer of the law but the "conscience of justice." A judicial decision results from a combination of legal knowledge, moral experience, and human judgment. Delegating parts of this process to AI may gradually weaken the judge's moral authority and reduce his or her ethical responsibility in decision-making [8]. A researcher [6], in a comparative study of President Biden's Executive Order and EU regulations, concludes that while both systems aim to ensure ethical technology, the risk of eroding "judicial virtue" through overreliance on machines remains significant. In Iran, based on jurisprudential principles, the judge must be a "free moral agent" acting with righteous intent; therefore, automated decision-making without human judgment lacks ethical legitimacy [4].

E) Violation of Privacy and Human Dignity

Another major ethical concern is the potential violation of individuals' privacy during the processing of judicial data. AI algorithms require vast amounts of personal and judicial data for training, and without proper data protection safeguards, sensitive information may be exposed or misused [7]. In the European Union, the General Data Protection Regulation (GDPR) and the AI Act impose strict limitations on the processing of judicial data and automated identification of individuals [5]. In contrast, Iran still lacks a comprehensive legal framework for personal data protection within the judicial sphere, which may undermine procedural justice and public trust in a digital judiciary [3].

Overall, the ethical challenges of judicial practice in the age of AI can be summarized in two dimensions: Epistemic and structural challenges such as transparency, data bias, and legal responsibility; and moral and human challenges such as preserving human dignity and the ethical role of judges.

Therefore, the essential condition for the legitimate and just use of AI in adjudication is the establishment of ethics-centered regulatory frameworks that leverage technological benefits without undermining the principles of justice and human morality. As researchers [5] emphasize, technological justice can only be realized when the human remains at the center of decision-making.

Policies and Legal Responses in Each Legal System

In response to the opportunities and threats posed by artificial intelligence (AI) within the judiciary, different legal systems have adopted distinct policies and legal responses. The following section examines the approaches of Iran, the United States, and the European Union.

A) Iran: An Emerging Legal Framework

In Iran, explicit and systematic efforts to regulate the legal use of AI in the judiciary are still at an early stage. Nevertheless, there is growing scholarly attention toward defining jurisprudential and legal principles capable of addressing the ethical challenges raised by AI; for instance, the emphasis on maintaining the human role of the judge, ensuring transparency, and providing reasoned judgments [4]. One of the key considerations in Iran is the alignment of new technological concepts with Islamic jurisprudence and constitutional teachings. For example, the notion of liability in technological errors must be examined through the lens of Islamic law to establish an indigenous legal framework. In addition, some legal studies have proposed that Iran should develop specific regulations for the use of Decision Support Systems, crime prediction algorithms, and judicial data analytics - particularly in cases where personal data and citizens' fundamental rights may be at risk [3].

B) The United States: Judicial and Policy-Based Frameworks

In the United States, the legal response to the use of AI in the judiciary is a combination of case law, executive orders, and both federal and state-level policies. Studies indicate that existing U.S. legislation still cannot fully hold AI-producing companies accountable for discriminatory or biased outcomes [18]. Moreover, policy reports such as OECD: Governing with Artificial Intelligence have proposed frameworks for promoting transparency, accountability, oversight, and ethical standards in judicial AI applications. Examples include setting rules for automated decision-making systems, requiring data disclosure, establishing judicial oversight of AI use, and guaranteeing citizens' right to effective appeal [19]. A practical example is the study Adjudication of Artificial Intelligence and Automated Decision-Making Cases in Europe and the USA, which analyzes judicial cases and responses across both regions. It shows that U.S. courts have, in certain instances, addressed algorithmic discrimination and civil rights violations, occasionally ruling that the use of some automated systems must be restricted or monitored [20].

C) The European Union: Comprehensive and Systematic Regulation

The European Union (EU) represents one of the most advanced legal systems in responding to the challenges of AI. Its policies and legal responses include several foundational instruments: The EU Artificial Intelligence Act (AI Act) classifies AI systems related to judicial processes as "high-risk" systems and imposes strict requirements such as transparency, risk assessment, auditing, human-in-the-loop decision-making, and the protection of procedural rights.

Regulation on the Digitalisation of Judicial Cooperation governs collaboration among national and cross-border judicial bodies, outlining how digital technologies and AI can be used to facilitate cross-border justice and improve access to legal services.

Framework for Fundamental Rights Protection: EU law mandates adherence to fundamental principles such as data protection, fairness in decision-making, impartiality, and the right to a fair trial. The AI Act and related data governance regulations reinforce these principles in judicial applications.

Table1: Comparative review in the legal systems of Iran, the United States, and the European Union

Dimension	Iran	United States	European Union
Status of specific regulations	Status of specific regulations Native requirements are emerging; specific regulations are not yet fully developed.	Existing legal regulations + case law + state policies; challenges in accountability and transparency.	Comprehensive regulations, including AI Act, data protection regulations, digital justice laws
Classification of AI systems	Less documented; proposals for dividing systems based on risk but difficult to implement.	Automated systems typically rely on case evidence and judicial review in each case.	High-impact systems legally recognized as risk-based; certain activities prohibited; human control required
Accountability/liability	More in the hands of humans and judicial authorities; the issue of corporate liability is less visible.	Mix of civil liability, civil rights, executive orders; challenges in accurately determining liability in complex systems.	Responsibilities more clearly defined; legal oversight and binding rules for developers and users of the judicial system
Transparency and right to object	Jurisprudential emphasis on reasoning and transparency; lack of positive regulations	Courts rely on judicial procedures and litigation; some guidelines and policies exist for transparency	Legal requirements for transparency and the possibility of independent oversight; guarantee of procedural rights and

			objection to automated decisions

Nevertheless, several policy challenges remain. First, legal frameworks must remain adaptable to the rapid pace of technological change - rigid rules without regular updates could stifle innovation. Second, there is a pressing need for independent supervisory bodies with the technical expertise to detect algorithmic errors and biases. Third, training programs for judges, lawyers, and technology experts are essential to enhance understanding of AI concepts, technology ethics, data protection, and social impacts. Finally, civil society participation - including contributions from technology law scholars and citizens- is crucial to ensure social legitimacy and legal justice in AI governance.

Comparative Analysis

A comparative review of the three legal systems - Iran, the United States, and the European Union- regarding the integration of AI into judicial processes reveals that each system, based on its ethical foundations, legal structure, and technological policies, has followed a different path in regulating the intersection of justice, technology, and judicial ethics. Yet, important commonalities among these systems suggest the emergence of a global paradigm of "digital judicial ethics" [5].

A) Comparative Foundations of Justice and Judicial Ethics

In the Iranian legal system, justice is grounded in Sharia-based and moral-jurisprudential principles. A judicial decision is not merely a legal act but also a moral and religious one [21]. In contrast, in the United States, justice is primarily built on due process, transparency, and institutional accountability [18]. The European Union, on the other hand, defines justice in connection with fundamental human rights and the protection of human dignity [7].

Thus, while all three systems emphasize the ethical dimension of adjudication, the nature of that ethics differs: In Iran, divine–jurisprudential ethics; In the United States, procedural and civil-rights-based ethics; In the European Union, human-rights- and data-oriented ethics [6].

B) Balancing Technological Efficiency and Human Justice

Although all three systems aim to use AI to enhance the efficiency of the judiciary, their methods of balancing technological advancement and human-centered justice differ. In the United States, policy efforts focus primarily on efficiency, cost reduction, and expedited adjudication - sometimes at the expense of transparency or with the risk of algorithmic bias [20]. In the European Union, regulations such as the AI Act seek to manage this tension through mandatory human oversight and risk assessment mechanisms [22]. In Iran, the prevailing perspective is that efficiency should not eliminate the judge's moral and personal role; instead, AI should function as a consultative and analytical tool rather than a replacement for human judgment.

C) Divergence in Legal and Policy Responses

From a policy standpoint, the European Union - with its comprehensive regulatory instruments such as the AI Act and GDPR - represents the most advanced system. These regulations adopt a preventive and risk-based approach emphasizing transparency, accountability, and the protection of fundamental rights [7). In contrast, the United States follows a reactive and case-based approach, where AI-related legal issues are primarily shaped through judicial precedents and executive directives [6]. In Iran, no specific legislation yet governs the judicial use of AI, but academic and

policy-level initiatives have begun to outline a localized and Islamic framework [4].

D) Common Challenges and Fundamental Differences

Comparatively, several shared challenges emerge across the three systems: algorithmic bias and lack of transparency in judicial data, legal liability for AI-related judicial errors, and the necessity of preserving the human role in adjudication [3, 5, 8].

However, their responses to these challenges differ substantially: The European Union relies on comprehensive regulation and institutional oversight. The United States combines legal precedents with policy mechanisms. Iran pursues a moral–jurisprudential interpretation aimed at localizing technological justice [7].

Based on this comparison, three principal models of technological justice can be identified, as summarized in the table below.

Table2: Three principal models of technological justice

Legal system	Technological justice model	Characteristics
Iran	Moral–jurisprudential model	Emphasis on human intention, religious legitimacy, and caution in machine judgment
United States	Functional–procedural model	Focus on efficiency and accountability; case-based and adaptive approach to regulation
European Union	Fundamental rights justice- data driven	Preventive legislation, preserving human dignity, and controlling technological risk

This comparative analysis demonstrates that while the European Union possesses the most coherent institutional response to ethical and technological challenges, Iran has richer ethical foundations and can, through the localization of digital justice principles, propose a distinctive model [4, 5]. Meanwhile, the United States remains in a transitional phase, shaping its framework through judicial experiences and federal policy development (18).

Ultimately, technological justice in adjudication does not signify replacing humans with machines; rather, it entails redesigning the relationship between humans, law, and technology. Each legal system must strike a balance among technological innovation, ethical values, and fundamental rights. As studies [6] note, "the true challenge of digital justice lies in finding the point at which technology remains in the service of humanity and not the other way around."

Policy and Legal Recommendations for Ethically-Oriented Use of Artificial Intelligence in Judicial Systems

The comparative experience of Iran, the United States, and the European Union demonstrates that the effective regulation of artificial intelligence (AI) in judicial systems requires the adoption of multilayered policy and legal frameworks that preserve both technological innovation and the fundamental principles of human justice [5]. In this regard, a set of policy and legal recommendations can be proposed at various levels:

- Developing a Specific Legal Framework for Judicial AI: In Iran, there is an evident legal gap regarding the judicial application of AI. It is recommended that the legislature, drawing inspiration from the European Union's AI Act and the United States' ethical technology principles, enact a comprehensive "Artificial Intelligence and Justice Law." Such legislation should address the following areas: A precise

definition of "automated judicial decision-making" and its distinction from human judgment; Determination of civil and criminal liability arising from algorithmic errors; The mandatory presence of a "human supervisory element" at every stage of judicial decision-making; Implementation of religious and ethical oversight in the design and use of AI systems [3].

- Transparency and Independent Oversight of AI Systems: One of the most effective measures to prevent bias and algorithmic discrimination is to establish mandatory mechanisms for transparency in data and algorithms [8]. Therefore, it is proposed that developers of judicial AI systems be required to provide technical documentation, training datasets, and ethical audit reports. An independent body - such as a "Judicial Technology Ethics Commission" - should be established in each country to monitor algorithmic fairness and accuracy. Furthermore, legal provisions should explicitly recognize the right to review and appeal AI-based decisions [7]. In the European Union, such oversight mechanisms are already integrated into the risk assessment frameworks of the AI Act [22], which can serve as a model for other countries, including Iran.
- Education and Capacity-Building for Judges and Lawyers: Modernizing judicial education is a key requirement for engaging effectively with emerging technologies. Judges, lawyers, and legal experts should be trained in areas such as artificial intelligence, data bias, technology ethics, and digital rights to ensure effective oversight of AI systems [4]. In the United States, similar initiatives have emerged in law schools under the title "AI and Law" programs, aimed at enhancing technological literacy and judicial competence [18].
- Establishing Common Ethical and Technical Standards: It is recommended that legislative bodies, the judiciary, academic institutions, and technology companies collaborate to develop a shared set of ethical and technical standards for the development and application of AI in adjudication. These standards may include: The principles of fairness and algorithmic impartiality; Prohibition of biased or incomplete data; Data protection obligations; Ensuring the explainability of AI-generated decisions [5]. In the United States, such standards are often implemented through soft law mechanisms (guidelines and best practices), whereas in the European Union, they are codified through binding hard law instruments [6].
- Strengthening International Cooperation and Exchange of Experience: As artificial intelligence transcends geographical boundaries, international cooperation in sharing judicial data, standards, and regulatory experiences is essential. The European Union's initiatives - such as the European e-Justice Portal and the Regulation on the Digitalization of Judicial Cooperation - demonstrate that cross-border coordination can significantly enhance digital justice [22]. Iran can also benefit from these experiences by collaborating with international organizations such as the OECD and UNDP to design a localized yet globally aligned framework.
- Localizing AI Ethics within Iran's Cultural and Jurisprudential Context: Ultimately, the most significant recommendation for Iran is the localization of technological ethics within the framework of Islamic jurisprudence on justice and human dignity. As studies emphasize, adjudication in the Islamic legal system is an inherently moral and spiritual act, and AI must not undermine this human dimension [4, 23]. Establishing a Jurisprudential–Technological Committee within the judiciary

to assess the compliance of AI systems with Islamic values could form the foundation of a new paradigm of "Digital Justice Jurisprudence."

In Summary, AI policymaking in the judiciary should rest upon four essential pillars: Transparency and technological accountability; Preservation of the human and moral role of judges; Protection of personal data and human dignity; Alignment with the principles of justice and the constitutional values of each legal system. As scholars note, technological justice becomes genuine only when technology serves human values and not the other way around [5].

CONCLUSION

The evolution of artificial intelligence over the past decade has profoundly transformed the traditional boundaries of adjudication, justice, and legal ethics. A comparative examination of the legal systems of Iran, the United States, and the European Union reveals that this technology embodies two simultaneous and contrasting faces: on the one hand, an effective tool for enhancing justice, transparency, and access to judicial services; on the other, a potential threat to the fundamental principles of judicial ethics and human dignity. In Iran, judicial justice is rooted in Islamic jurisprudence and moral foundations; therefore, the use of AI must be regulated within religious, ethical, and humanistic boundaries. This system emphasizes preserving the human role of judges and avoiding the mechanization of justice. In contrast, the U.S. legal system, with its pragmatic and efficiency-driven approach, employs AI within the framework of due process and institutional accountability. Yet, the absence of a comprehensive national framework has led to challenges such as algorithmic bias and ambiguity in legal liability for automated decisions. The European Union, through coherent instruments such as the AI Act and GDPR, represents a preventive and human-rights-based approach. Among the three, the EU has made the greatest effort to balance technological advancement with the preservation of human dignity.

From a comparative perspective, three distinct models of technological justice can be identified: The Iranian moral–jurisprudential model, which subordinates technology to human and divine values; The U.S. functional–procedural model, emphasizing efficiency and accountability; The EU rights-based model, centered on the protection of human dignity.

Despite their differences, all three systems converge on one fundamental point: the indispensable role of the human judge in the process of adjudication and decision-making. The judge is not merely a data analyst but the guardian of moral and social values of justice—a role that no algorithm can fully replace.

Consequently, technological justice finds its true meaning not in the elimination of humans, but in the ethical coexistence of human and machine. To achieve this goal, future policymaking must rest on three core pillars: Transparent, multi-level legislation regulating the judicial use of AI; Guaranteed human and ethical oversight at every stage of automated decision-making; Localization of digital justice principles in accordance with each legal system's cultural and moral values.

ETHICAL CONSIDERATIONS

Ethical issues (such as plagiarism, conscious satisfaction, misleading, making and or forging data, publishing or sending to two places, redundancy and etc.) have been fully considered by the writers.

CONFLICT OF INTEREST

The authors declare that there is no conflict of interests.

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