THE INTEGRATION OF ARTIFICIAL INTELLIGENCE IN JUDICIAL PROCESSES: FROM UTOPIA TO PRACTICAL APPLICATION

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Abstract: Artificial intelligence (AI) has become an essential tool in several sectors for automating tasks and analysing large volumes of data to improve both efficiency and decision-making. This article explores the application of AI in the judicial context, highlighting the benefits and challenges of this technology. AI can accelerate judicial processes, increase accuracy, and reduce the workload of professionals, but it also faces technical and social difficulties, such as algorithm transparency and potential discriminatory bias. The present article suggests the adoption of semiautomated and consulting models, in which AI serves as support for judicial decisions, maintaining human supervision to ensure impartiality and justice.
Keywords: Artificial intelligence; Judgement; Judicial decision making; Legal technologies; Traceable decision.

Introdution

In 2023, the Court of Justice of Pernambuco in Brazil made headlines by implementing the ELIS platform[3], a groundbreaking AI tool designed to screen and analyse tax enforcement processes. The introduction of ELIS dramatically reduced processing times; for example, activities that would have been carried out by civil servants and magistrates in the area of tax enforcement over 18 months could be completed in just 15 days. In consequence of this, there was a significant increase in terms of efficiency. There was also widespread approval from judges and judicial staff. This success story exemplifies the transformative potential of artificial intelligence in the judicial area, paving the way for broader adoption and integration of AI technologies in legal processes.

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[3] (TJPE Conquista 3o Lugar Em Prêmio Por Ideias Inovadoras - TJPE, n.d.)

The integration of AI in judicial processes represents a significant shift in how legal systems operate, promising for enhancing efficiency, accuracy, and fairness. However, the implementation of such advanced technology also raises critical questions and challenges. The proposed problem centres on how AI can be effectively integrated into the judiciary to streamline processes without compromising justice and transparency.

The aim of this investigation is to explore the necessary parameters for a successful implementation of AI in the judicial context, highlighting the benefits and addressing the potential drawbacks. This study aims to provide a comprehensive analysis of AI's impact on the judiciary, focusing on improving process efficiency and ensuring consistent and informed decisions.

The research methodology employed in this study includes a detailed literature review, an analysis of the current AI applications in various judicial systems worldwide, and an evaluation of case studies where AI has been successfully integrated. This approach allows for a thorough understanding of the practical applications and theoretical implications of AI in the judiciary.

The main conclusions drawn from this investigation indicate that while AI can significantly enhance judicial efficiency and accuracy, it is essential to maintain human oversight to ensure fairness and transparency. This study also underscores the need for transparent and explainable AI models to foster trust and acceptance among legal professionals and the public. In addition to this, this piece of research highlights the importance of interdisciplinary collaboration in developing AI tools tailored to the specific needs of the judiciary.

This article delves deeper into these findings, providing insights and recommendations for policymakers, legal practitioners, and technologists on how to navigate the complexities of integrating AI into judicial processes. By understanding the nuances and potential of AI, we can harness its power to create a more efficient, fair, and transparent judicial system.

1 AI: a monster or a miracle?

Artificial intelligence has been increasingly used in many business sectors as a way to automate routine tasks, improve reaction times for dealing with certain issues, mitigate deficiencies in processes, and analyse large datasets to assist in more accurate managerial decision-making. Originally used in industrial chains, AI has evolved for application in other fields. Not long ago, we have witnessed the mechanization and robotization of industries, aiming to use robots to increase process efficiency and introduce machines to perform repetitive tasks on the factory floor, reducing workers' effort in certain tasks and freeing them to perform less strenuous routines that

require a higher degree of intellectual involvement (Majumder & Dey, 2024). This also led to an improvement in occupational health quality.

The AI revolution stems from the continuous progression of science, seeking task automation and efficiency gains in production processes, in addition to maximizing data processing for optimal purposes. We moved from the first computer, the ENIAC[4], to increasingly complex problem-solving networks, which started with a simple algorithm and that has given way to artificial intelligence developed by engineers who seem intelligent processing of data generated in the vastness of big data in a cloud computing scenario (Ammannati, 2021; Ammannati et al., 2021; Majumder & Dey, 2022; Miloslavskaya & Tolstoy, 2016).

AI, regardless of the field in which it is applied, is at a point of inherent technological achievements, capable of providing responses such as suggesting movies which match a user's profile, based on their tastes and interactions with a given platform, Netflix would be a perfect example of this (Arruda, 2024; Steck et al., 2021). We are moving towards neural networks (Covington et al., 2016; Fang et al., 2020), attempting to reproduce human abilities in machines, such as when we generate voice processing on Alexa for even more complex situations and models based on deep learning, namely, to diagnose diseases from image analysis.

After the initial years of dealing with the possibilities of AI and its consequences for the labour world, such as the fear of humans being replaced by machines, nowadays we can interact daily with systems, platforms, and virtual assistants of various levels of complexity, partially demystifying the fear of the unknown. However, many doubts, questions, and concerns persist, often due to technical ignorance or lack of interdisciplinarity in the creation of certain tools, whether due to companies' lack of interest in humanizing their models or scientists' aversion to the digital revolution phenomenon, which harms society in general.

The fact is that technology is evolving increasingly, and we need to address this process. As we will see in this article, from a legal approach, initiatives for confronting, contingency, and guiding artificial intelligence already exist and, although embryonic, have served as parameters to master this new technology so that it is not created based on selfish economic, social, or political ideas, leading society to a new era of masked exploitation. However, these policies and laws advocate a conscious and beneficial application of artificial intelligence[5], valuing the human element

[4] (ARRUDA, 2019).

[5] (Proposal for a REGULATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL LAYING DOWN HARMONISED RULES ON ARTIFICIAL INTELLIGENCE (ARTIFICIAL INTELLIGENCE ACT) AND AMENDING CERTAIN UNION LEGISLATIVE ACTS, 2021).

and reaffirming historical and legal achievements, allowing us to enjoy the benefits of this technology while minimizing its side effects.

This article aims to explore more deeply which parameters should be observed when considering implementing AI in the judicial context, considering the known positive aspects of this technology applied to other business niches, and to raise the negative points of its use.

Furthermore, the judicial process and its phases are studied in particular to observe how AI can improve and assist in the efficiency of this process, by providing more agile solutions based on the information inserted in the process (Majumder & Dey, 2022). This is enhanced by the detailed data analysis that this technology employs. At the end of the article, it is intended to contribute to the advancement of scientific research in this field, particularly in its practical aspect in the judicial process, to help demystify the use of AI in the judicial environment, emphasizing that, as in the commercial use of technology, it responds according to the purpose for which it is designed (Deeks, 2019).

2 Opportunities and Challenges for the Judiciary

The judiciary, like a large company or public institution, faces common problems with its own peculiarities. In a company, the business model is strategic, aiming for profit and social scalability. In the judiciary, the judicial process is complex and specific according to the subject matter, whether civil, administrative, criminal, or labour, with unique regulations in each country. After the 2000s, we have witnessed the disruption of digital platforms, as a result of the fusion of internet-based businesses and algorithmic management, such as intermediate-level AI, usually machine learning. This integration brought challenges and benefits, such as the taxi driver deep indignation regarding these platforms competition, lack of legislation, taxation and permission issues, and labour questions.

Despite business losses, such as Kodak's bankruptcy, the business model of digital platforms shows great growth potential. Technological gains include operational efficiency, increased accuracy in data-based decisions, personalization of customer experience, cost reduction, increased productivity, and greater customer satisfaction (Arruda, 2022; Carvalho, 2021; Cockburn et al., 2018; Gupta, 2021; Russell et al., 2015). With machine learning, it is possible to predict market trends and consumer behavior, offering competitive advantages.

Artificial intelligence has revolutionized many sectors, including the judiciary, offering advanced tools to optimize processes and increase efficiency. Recent advances in deep learning have significantly impacted the legal domain, with notable achievements in legal event detection,

legal question answering, and judgment prediction (He et al., 2024). The results of this research point to the mitigation of the problem of case overload and shortage of legal professionals, improving efficiency and accuracy in the analysis of complex cases.

Natural language models, such as large language models (LLMs), have made great progress in traditional natural language processing (NLP) tasks, providing new perspectives for judicial intelligence (Ding et al., 2024; Qin et al., 2024; X. Wang et al., 2023; Y. Wang et al., 2023; Wei et al., 2023; Yang et al., 2024; Zhao et al., 2024). However, simulating judicial decision-making is a complex task that requires a deep understanding of legal nuances and considerations of ethics and social justice (Aini, 2020). Therefore, challenges such as specialized knowledge of the judicial domain, complex hybrid reasoning, and intricate ethical relationships are fundamental for the development of effective judicial agents.

SimuCourt, a judicial benchmark developed to evaluate judicial agents in various cases, exemplifies how AI can be applied in the judicial process, covering criminal, civil, and administrative cases (He et al., 2024). This system uses a multiagent approach to simulate judicial debates, retrieve precedents, analyse cases, and issue clear judgments, simplifying the decision-making process and increasing judicial efficiency. The structuring and automation of workflows involving the analysis of a large amount of text documents were also highlighted as areas of potential improvement through AI application (Salomão, 2022; Sartor & Branting, 1998).

However, the implementation of AI in the judiciary has also its challenges and concerns. The transparency and interpretability of algorithmic models are essential for ensuring public trust and procedural justice (Canalli, 2022). Opaque algorithms (Christin, 2020; Pasquale, 2015), which do not offer satisfactory explanations for their predictions, can compromise the publicity and reasoning of judicial decisions. Additionally, the possibility of algorithmic discrimination, where algorithms can generate discriminatory results based on factors such as race, ethnicity, or age, is a significant concern (Barysė & Sarel, 2024).

The use of AI also raises questions regarding moral responsibility and the need to maintain human intervention in the judicial process. Blind trust in automated systems can alienate responsibility and human judgment, which are essential elements for justice and transparency in the legal system (Santos et al., 2024). Therefore, it is important that AI be used as a complementary tool rather than a substitute for human expertise.

In terms of an ideal model for the judiciary, a semiautomated system that allows for human supervision and control is preferable. This system should focus on accelerating the judicial process, allowing judges to dedicate more time and energy to critical aspects of the case, such as determining

facts and evidence, applying the law, and forming judgement outcomes (Han et al., n.d.). Integrating legislation, judges' experience, and consensus in algorithmic decisions can also contribute to more flexible and adjustable decisions[6].

Public and professional acceptance of AI in the judiciary also depends on adequate digital education and overcoming the fear of the unknown. Many legal professionals are still reluctant to adopt advanced technologies due to unsatisfactory past experiences or fears of becoming redundant (Barysė, 2020). However, careful and gradual implementation, coupled with an adequate educational approach, can overcome these challenges, ensuring that AI is an ally in the fair and efficient administration of justice.

3 Applying AI in the field: what to prioritize?

As previously mentioned, the use of artificial intelligence (AI) in the judiciary represents a revolution with the potential to improve efficiency, reduce process overload, and ensure more consistent and informed decisions. To adapt AI to the context of judicial decision-making, we must divide the process into smaller stages (Taruffo, 1998). These stages could, for example, be the following: acquisition and subsequent analysis of the information brought to the court's attention, comparison of the specific case with relevant legislation and judgments, and generation of a final physical product.

The acquisition of information, the first stage of the process, involves collecting, filtering, prioritizing, and understanding data. In this case, AI could automate the search for relevant jurisprudence, documents, and evidence using natural language processing (NLP) and machine learning techniques to organize and prioritize essential information (Gnanasekaran et al., 2022; Parasuraman & Elumalai, 2021; Tofangchi et al., 2021).

In the information analysis stage, AI analyses and interprets the data, making inferences and predictions based on large volumes of historical data and identifying patterns, a complex task when performed solely based on human cognitive capacity. As a matter of fact, studies in this regard already exist, such as the SimuCourt platform, which uses legal knowledge bases to provide detailed analyses and recommendations (He et al., 2023).

The next stage consists of decision selection. In this process, AI can assist in prioritizing and classifying decision alternatives, suggesting possible sentences based on relevant precedents and legislation. Decision models based on decision trees and other interpretable algorithms are

[6] (*THE JUDICIAL DEMAND FOR EXPLAINABLE ARTIFICIAL INTELLIGENCE - Columbia Law Review*, n.d.)

especially useful because they allow for tracking the reasoning behind the recommendations (Han, 2023).

Finally, AI could support the execution of decisions by drafting sentence drafts and issuing orders to expedite the judicial process. Automating repetitive tasks, such as issuing warrants, is already a reality in systems such as Mandamus in Brazil, which automates judicial procedures and distributes tasks efficiently (Araújo et al., 2022).

It is perceived that the introduction of AI in the judicial process should initially be implemented through a consultative model. In this case, the use of AI would support the judiciary rather than supplant the decisions of a judge or other judicial officer in their routine work activities. Thus, the AI model would suggest decisions, and the responsible judge would review and validate them, which seems to be the most appropriate and least impactful strategy in terms of public opinion. This adoption strategy would maintain judicial independence while taking advantage of AI's ability to analyse large volumes of data quickly and accurately. Technically, using models such as decision trees and supervised learning algorithms would provide the transparency and traceability needed for the decision-making process (Giannakos).

When discussing the possibilities of implementing AI in courts, we must elucidate some innovative legislative initiatives in this regard. On a global scale, four initiatives stand out: the EU Artificial Intelligence Act (AI Act), the General Data Protection Regulation (GDPR), the UK's AI White Paper, and the European Commission's Ethical Charter on the use of AI in judicial systems.

The AI Act proposed by the European Union established a comprehensive framework for the regulation of artificial intelligence systems. AI systems based on risk are categorized into three main tiers: unacceptable risk, high risk, and limited or minimal risk. The Act defines AI as software developed with techniques and approaches such as machine learning, logic/knowledge-based approaches, and statistical approaches that, for a given set of human-defined objectives, generate outputs such as content, predictions, recommendations, or decisions influencing the environments with which they interact (Artificial Intelligence Act, 2024).

The AI Act sets several limits: it prohibits AI systems that pose a clear threat to the safety, livelihoods, and rights of people, such as those employing subliminal techniques or exploiting vulnerabilities of specific groups (Unacceptable Risk, Article 5). It requires strict obligations for AI systems used in critical infrastructures, educational or vocational training, employment, essential private and public services, law enforcement, and judicial processes. These systems must undergo rigorous conformity assessments, data governance measures, and human oversight (High Risk, Article 6). It imposes transparency obligations, requiring users to be informed when interacting

with such systems (Limited Risk, Recital 53). Additionally, it encourages voluntary codes of conduct for developers of AI systems not classified as high or unacceptable risk (Article 112, n. 7).

The UK AI White Paper[7] adopts a principles-based approach to AI regulation, aiming to encourage innovation while ensuring safety, security, and public trust. It does not initially impose statutory requirements but provides a framework based on five key principles: safety, security, and robustness; appropriate transparency and explainability; fairness; accountability and governance; and contestability and redress (Michelle Donelan, 2023).

The principles established by the UK AI White Paper include ensuring that AI systems are secure and robust against adversarial attacks (safety, security, and robustness). AI systems must also be transparent and provide explanations understandable to users (appropriate transparency and explainability). Furthermore, AI systems should be fair and not discriminate against individuals (fairness). There must be clear accountability for AI decisions (accountability and governance), and users should have mechanisms to contest and seek redress against decisions made by AI systems (contestability and distress).

The European Commission's Ethical Charter[8] on the use of AI in judicial systems highlights the types of decisions poorly suited to automation and promotes principles for the ethical use of AI. This includes ensuring transparency, impartiality, integrity, and the preservation of fundamental rights (European Commission, 2018). The key principles of the ethical charter are that AI decision-making processes should be transparent and understandable (transparency), AI systems must operate without bias and ensure fairness (impartiality), AI must be used responsibly and ethically, maintaining the integrity of judicial processes (integrity), and AI should respect and uphold fundamental human rights (preservation of fundamental rights).

In EU, the GDPR[9] provides a robust legal framework that addresses the use of AI, particularly through Article 22, which prohibits decisions based solely on automated processing, including profiling, that significantly affect individuals, unless explicit consent is given or it is necessary for contractual performance (GDPR, 2016). Article 22 outlines the prohibition of fully automated decision-making that significantly affects individuals, emphasizing the need for human oversight (Article 22, n. 1). It also ensures that individuals have the right to obtain human intervention, express their point of view, and contest decisions (Article 22, n. 3).

[7] (A Pro-Innovation Approach to AI Regulation - GOV.UK, 2023)
[8] (CEPEJ European Ethical Charter on the Use of Artificial Intelligence (AI) in Judicial Systems and Their Environment - European Commission for the Efficiency of Justice (CEPEJ), 2019)
[9] (*Regulamento - 2016/679 - EN - GDPR - EUR-Lex*, 2016)

The proposed AI applications in the judicial context align well with the protective measures established by these legal frameworks. The AI Act's emphasis on risk-based categorization and stringent requirements for high-risk applications ensures that judicial AI systems are subject to rigorous scrutiny and governance, promoting transparency and fairness. Similarly, the UK AI White Paper's principles of accountability, transparency, and contestability resonate with the proposed consultative AI model, where human oversight is maintained to safeguard judicial integrity.

The European Commission's Ethical Charter further supports the ethical deployment of AI in judicial systems, advocating for transparency and the preservation of fundamental rights, which are integral to the proposed AI applications. Finally, the GDPR's provisions ensure that automated decision-making in Portugal respects individual rights and includes necessary human intervention, aligning with the proposed incremental and consultative implementation of AI in the judiciary.

Therefore, the proposed AI applications in the judicial system are in concordance with the legal frameworks, ensuring that the use of AI enhances efficiency and accuracy while upholding the fundamental principles of justice and human rights.

4 Transforming Utopia into a Viable Reality

The implementation of artificial intelligence (AI) in the judicial system has proven to be a promising innovation in several countries. China, for example, already uses "Internet courts" that facilitate the resolution of online disputes with AI components, improving process efficiency and agility (Barysė & Sarel, 2024). In the United States, the COMPAS system is employed to assess the likelihood of defendant recidivism using machine learning. Although it has faced controversies due to allegations of racial bias, the system stands out for its attempt to incorporate objective analysis into the judicial decision-making process(Lopes, 2024).

In Brazil, the Mandamus project[10], implemented in the Court of Justice of Roraima, exemplifies the use of AI to automate judicial procedures. Using natural language processing and machine learning, Mandamus accelerates the issuance, distribution, and management of judicial warrants, optimizing the work of judicial officers and saving resources. Another example is the Radar program in the Court of Justice of Minas Gerais, which judged 280 cases with a single click, demonstrating AI's efficiency in accelerating judgments (Limberger et al., 2022).

[10] (*MANDAMUS - Tecnologia Do TJRR é Disponibilizada Para Tribunais de Todo o País*, 2021).

The ELIS platform[11] in the Court of Justice of Pernambuco is another important initiative. Developed to handle tax foreclosure and debt collection processes, the automation procedure is based on AI, specifically through the Katalon platform. The programmed procedural steps initially involve organizing cases, identifying whether the collection of a particular debt is still possible, and determining if the period has already exceeded the five years allowed by law for the collection from individuals. Additionally, the platform also operates in the recognition of legal precedents. However, it is important to note that human supervision is checked twice: once by a court employee and again by the judge responsible for the case adjudication. Similarly, the Justiça 4.0 program[12] in Brazil integrates various AI solutions to improve judicial services, including warrant automation and hearing transcription.

We would also take a look at as it has been a pioneer in implementing AI in the judiciary. This country has developed a robot judge to handle simple legal disputes, such as small claims. This system allows the parties to submit relevant documents, and the AI makes a decision that can be reviewed by a human judge. The initiative aims to reduce case backlogs and increase judicial system efficiency (Joshi et al., 2023; Lal et al., 2023; Srivastava, 2023).

These examples show that AI can be a valuable tool for optimizing judicial processes, ensuring greater speed and efficiency. However, it is essential to address issues such as bias, transparency, and the need for human supervision to ensure that AI is used fairly and equitably. In Portugal, the implementation of a pilot project could occur in administrative proceedings where AI is deployed according to the consultative model (Cui et al., 2019). In this case, AI would assist and optimize the study of cases based on algorithms that indicate the actions to be taken step by step in the procedural stages. Thus, when a case is ready for a judge to issue a ruling, the judge will receive the case already analysed, greatly facilitating the decision-making process. It is important to note that this is not binding on the AI's suggestion.

It should be emphasized that this detailed AI integration process would need to be implemented through a scientific project designed by a multidisciplinary team comprising at least technology professionals specializing in AI implementation in businesses, legal professionals, judicial staff, and judges.

[11] (*Innovare – Programa de Inteligência Artificial Resulta Em Recuperação de Verba Pública e Combate Ao Crime Organizado - TJPE*, 2019)
[12] (*Justiça 4.0 - Portal CNJ*, n.d.).

Additionally, collaboration with universities and research institutes would be fundamental to developing and testing these models, ensuring compliance with European and Portuguese legislation on data protection and transparency.

Legal references, such as the General Data Protection Regulation (GDPR) and the proposed EU AI Regulation, are essential to ensure that the use of AI in the judiciary respects fundamental rights and provides a fair process. Therefore, with a regulated and well-planned approach, AI has the potential to significantly transform the judicial system, increasing the efficiency and quality of decisions.

5 Insights for AI Application in the Judiciary

To choose the most suitable AI model for a specific judicial process, it is essential to consider the types of tasks the AI should perform. Supervised classification, for example, is ideal for tasks where categories are well defined and known, such as the initial screening of judicial processes and document classification. Unsupervised learning can be useful for identifying patterns in large volumes of unlabelled legal data, such as analysing trends in case law.

In terms of technical difficulties, a significant challenge is the accuracy of AI algorithms. To provide accurate and reliable predictions, algorithms need to be trained with large volumes of high-quality data (Majumder & Dey, 2022, 2024). Additionally, the transparency and interpretability of AI models are vital, as judicial decisions require clear and understandable justifications for all parties involved. A lack of transparency can lead to distrust and resistance in adopting these technologies.

Socially, the implementation of AI in the judiciary faces resistance due to fears that automation might compromise impartiality and fairness. Moreover, there are concerns that algorithms may perpetuate existing biases, as evidenced by the use of the COMPAS system in the US, which showed some results indicating discrimination in its recidivism predictions (Angwin et al., 2022).

To ensure that the principles of the judicial process are effectively maintained when using AI, it is necessary to focus on several areas of improvement. Firstly, the quality of the data used to train AI models must be ensured, ensuring that the data are representative and free of biases (Dhar et al., 2023; Yektamoghadam et al., 2024). Secondly, investment in creating transparent and explainable systems is needed, where algorithms can provide clear justifications for their decisions (i.e., the algorithm should be designed to allow audits of its processes, even if this means limiting its processing capacity in favour of information reliability). This can be achieved through the

development of interpretable AI and the use of post hoc explanation techniques (Bhalla et al., 2023; Bianchi et al., 2024; Fang et al., 2023; Mhasawade et al., 2024; Retzlaff et al., 2024).

It is also important to note that AI can enhance certain principles of the judicial process, such as speed and efficiency. Automated systems can process large volumes of data much faster than humans, helping to reduce delays in judgments. Another important point is the use of AI to identify and correct implicit biases in judicial decisions. Machine learning algorithms can be trained to detect potentially biased decision patterns, alerting judges to these patterns and helping to promote more impartial and objective decisions (Chen & Loecher, 2019).

However, despite these benefits, many points have yet to be fully explored in current research. For example, there is a lack of in-depth studies on how AI can be integrated into the implementation phases of judicial decisions, where human sensitivity is indispensable. There is also little research on how AI can be used to increase transparency and public trust in judicial systems.

To apply these insights in Portugal, it would be beneficial to start with pilot projects in specific areas of the judicial system, such as administrative case screening or trend analysis in case law (Drozd, 2022; Fagan & Levmore, 2019). European references, such as the use of AI in Estonian courts, which have already implemented a robot judge for lower complexity cases, can serve as models for developing and implementing similar systems in Portugal.

Conclusion

The inclusion of artificial intelligence (AI) in the judicial process is key for the modernization and efficiency of the legal system. It is essential that law not turn its back on this innovation but adopts it with an open mind, recognizing the paradigm shift it represents. It must be ensured that AI respects the fundamental principles of the judicial process, such as the right to access courts, fairness, reasonable time, the legality of decisions, the independence and impartiality of courts, and the free appreciation of evidence. Procedural management should harmonize adaptation, adequacy, agility, and efficiency, with the introduction of AI guided by the general principles of law applied to maximize technological benefits. This can increase public trust, especially if accompanied by social education, to minimize concerns.

For future work, it is important to explore topics such as algorithm transparency, the impact of AI on the fairness of judicial decisions, and the development of methodologies to mitigate biases. This study provides an initial view of AI integration into the judicial process, highlighting the need for more in-depth and practical research. A multidisciplinary approach that combines legal and technological perspectives is fundamental for ensuring harmony between technological

development and the reliability of the AI-assisted judicial process. Collaboration between legal and technology professionals will be essential to avoid conflicts and ensure fair and efficient outcomes.

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