RCMOS – Revista Científica Multidisciplinar O
Saber. ISSN: 2675-9128. São Paulo-SP.

Ano VII, v.1 2026 | submissão: 08/11/2026 | aceito: 15/11/2026 | publicação: 20/11/2026

Artificial intelligence in the legal system: technological efficiency and challenges for justice

Inteligência artificial no sistema jurídico: eficiência tecnológica e desafios para a justiça
Inteligencia artificial en el sistema jurídico: eficiencia tecnológica y desafíos para la justicia

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Undergraduate final project submitted to the Law program at Real Faculdade de Brasília as a partial requirement for the Bachelor of Laws degree. Brasília, DF, 2026.

Abstract:
Artificial intelligence is undoubtedly one of the most important technological innovations of today's society, impacting various sectors, including the legal field. The evolution of digital technologies has enabled the creation of systems that can process large amounts of data, automate processes, and support decision-making. In the legal field, these tools are already being used for jurisprudence analysis, drafting documents, process management, and even predicting judicial outcomes. However, the introduction of artificial intelligence into the legal system also generates important discussions about ethics, responsibility, and the consequences for legal professionals. The present study aims to examine how artificial intelligence is being used in the legal field and its impacts on the legal profession. The research was conducted through a literature review, based on books, scientific articles, and academic papers on technology and law. The findings demonstrate that artificial intelligence does not replace the lawyer, but alters the way the lawyer performs their duties. The combination of technology with legal knowledge promises not only greater efficiency in the justice system but also the need for new skills for professionals in the field.

Keywords: AI. Legal field. Law and technology. Innovation. Legal career.

Resumo:
A inteligência artificial é, sem dúvida, uma das mais importantes inovações tecnológicas da sociedade atual, impactando vários setores, entre eles o jurídico. A evolução das tecnologias digitais possibilitou a criação de sistemas que podem processar grandes quantidades de dados, automatizar processos e apoiar a tomada de decisões. No campo jurídico, já se empregam essas ferramentas para análise de jurisprudência, elaboração de peças, gestão de processos e até previsão de resultados judiciais. No entanto, a introdução da inteligência artificial no sistema jurídico também gera discussões importantes sobre ética, responsabilidade e as consequências para os profissionais do direito. O presente estudo visa examinar como a inteligência artificial está sendo utilizada no campo jurídico e seus impactos na profissão de advogado. A pesquisa foi realizada por meio de uma revisão bibliográfica, com base em livros, artigos científicos e trabalhos acadêmicos sobre tecnologia e direito. Os achados demonstram que a inteligência artificial não substitui o advogado, mas altera a maneira de atuação do advogado no exercício de sua função. A junção da tecnologia com o conhecimento jurídico promete não só uma maior eficiência no sistema de justiça, mas também a necessidade de novas competências para os profissionais do setor.

Palavras-chave: IA. Jurídico. Direito e tecnologia. Inovação. Carreira jurídica.

Resumen:

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La inteligencia artificial es, sin duda, una de las más importantes innovaciones tecnológicas de la sociedad actual, impactando varios sectores, entre ellos el jurídico. La evolución de las tecnologías digitales posibilitó la creación de sistemas que pueden procesar grandes cantidades de datos, automatizar procesos y apoyar la toma de decisiones. En el campo jurídico, ya se emplean esas herramientas para análisis de jurisprudencia, elaboración de piezas, gestión de procesos e incluso previsión de resultados judiciales. Sin embargo, la introducción de la inteligencia artificial en el sistema jurídico también genera discusiones importantes sobre ética, responsabilidad y las consecuencias para los profesionales del derecho. El presente estudio pretende examinar como la inteligencia artificial está siendo utilizada en el campo jurídico y sus impactos en la profesión de abogado. La investigación fue realizada por medio de una revisión bibliográfica, con base en libros, artículos científicos y trabajos académicos sobre tecnología y derecho. Los hallazgos demuestran que la inteligencia artificial no sustituye al abogado, pero altera la manera de actuación del abogado en el ejercicio de su función. La unión de la tecnología con el conocimiento jurídico promete no sólo una mayor eficiencia en el sistema de justicia, sino también la necesidad de nuevas competencias para los profesionales del sector.

Palabras clave: IA. Ámbito jurídico. Derecho y tecnología. Innovación. Carrera jurídica.

1 Introduction

Technological evolution has generated major changes in today's society, significantly affecting the way people communicate, create knowledge and perform their functions at work. In recent decades, the progress of informatics, the internet and especially artificial intelligence has promoted structural transformations in various sectors, including the legal system, which is characterized by strong conservatism and a great dependence on human analysis. According to Feigelson, Silva and Lemos (2019), the incorporation of technologies into Law represents a structural change in the form of production and application of legal norms.

The introduction of artificial intelligence in the legal area brings a new perspective on conventional working methods, allowing automation of functions, analysis of large data sets and aid in decision-making. For the analysis of jurisprudence, the elaboration of procedural documents and process management, technological tools are being used to increase the efficiency and speed of the judicial system. According to Nunes, Lucon and Oliveira (2020), the use of automated systems in the judicial process contributes significantly to the optimization of repetitive tasks and data analysis.

Artificial intelligence is the term that refers to a group of technologies that can emulate human cognitive functions, such as learning, reasoning and deciding. According to Russell and Norvig (2016), we are referring to computer systems that were designed to perform activities that, under normal circumstances, would require the intelligence of a human being. However,

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even if these systems have high technical potential, it is important to ask how far they can understand the complexity of legal reasoning, which goes beyond logic and encompasses interpretation, values and social context.

In this context, the increasing adoption of artificial intelligence in the legal field cannot be seen only by the bias of technological efficiency. Although its benefits are widely recognized, its use also raises important questions about the reliability of automatic decisions, transparency of algorithms and preservation of basic principles of the legal system. Finally, the dissemination of these tools raises discussions on the future of the legal career, especially regarding the possible replacement of human functions and the need for law professionals to adapt.

Therefore, a critical reflection on the application of artificial intelligence in law is essential, which examines not only the possibilities but also the limits and risks involved. In this sense, we can formulate the following research question: how artificial intelligence influences the legal system and what ethical and professional challenges emerge from its application?

The general objective of this work is to study the implementation of artificial intelligence in law and its implications for the practice of legal operators. Specific objectives include: understanding what is and how artificial intelligence has developed; recognizing its main uses in law; examining the consequences for the legal profession; and discussing ethical and regulatory dilemmas that arise with the use of these technologies.

With this, the work was organized into five sections to achieve these objectives. Next, it brings the theoretical foundation, which discusses the most important concepts and fundamentals about artificial intelligence and its application in the legal field. Next, the methodology used in the research is presented. Next, the effects of artificial intelligence on law are discussed and discussed. Finally, the final considerations are presented, summarizing the main results and reflections of the research.

2 Theoretical framework

2.1 Concept and evolution of artificial intelligence

Artificial intelligence (AI) is among the most important technological innovations of today, being applied in various areas of society, including legal. In general, AI is a set of computer systems created to perform functions that until then required human cognitive skills,

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such as learning, logical reasoning, pattern recognition and decision-making. In this context, Russell and Norvig (2016) characterize artificial intelligence as the field of research and construction of agents that can act rationally, making choices based on defined data and goals.

This definition, although it is the most commonly accepted one, shows a functional view of artificial intelligence, focused on producing results equal to humans, without worrying about replicating the cognitive processes that generate them. In its trajectory, AI evolved through several stages, starting with methods based on fixed rules and expert systems, until reaching more advanced models that are based on machine learning (machine learning) and deep learning (deep learning), which can process large amounts of data and improve their performance autonomously.

The increase in computational capacity, together with the availability of large volumes of data, was crucial for the advancement of these technologies, enabling the creation of more complex and efficient systems. Artificial intelligence, today, already performs functions with specialty, such as natural language recognition, predictive analysis and automation of decision-making processes, which justifies its growing presence in the legal environment.

But despite all its technical potential, it is essential to have a critical look at what you can actually do. When definitions are made that compare artificial intelligence to human intelligence, this can lead to the conclusion that these systems understand complex contexts as well as us. However, this equivalence is quite problematic. Unlike human cognition, which is based on interpretation, subjectivity, values and social experiences, artificial intelligence systems work based on statistical patterns extracted from data previously provided to them.

In this context, it is valid to ask how far the understanding of artificial intelligence goes, especially with regard to law, whether it really understands the legal context or just replicates patterns found in databases. Law, as a space for norms and interpretations, goes beyond simple application of rules, encompassing the analysis of principles, weighing values and attention to the particularities of each case. Thus, employing automated systems in this context can create the illusion of impartiality, disguising the limitations that technology itself has.

> The use of artificial intelligence in the legal field should be critically analyzed, considering that such systems are not neutral because they reflect the data and criteria defined by their developers, and may reproduce inequalities and biases existing in society. (FRAZÃO; MULHOLLAND, 2019)

Moreover, the need for historical data to train algorithms raises important issues, as these data may incorporate distortions and inequalities already present in the legal system. Thus, artificial intelligence not only replicates patterns, but can also reinforce prejudices, which

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compromises the impartiality of decisions. This shows that, however technological evolution of AI brings important innovations, it does not replace the need for human supervision and critical analysis of the results it presents.

Thus, when addressing both the concept and the evolution of artificial intelligence, it is essential to avoid a purely descriptive analysis, always remembering that its capabilities, even the most impressive ones, are far from limitless. In the field of law, such limits acquire an even greater importance, because it is not only about technical efficiency, but also the protection of essential principles such as justice, equity and legal certainty. Therefore, artificial intelligence should be seen as an auxiliary resource, not as a substitute for human interpretation, whose complexity is still not fully replicated by computational systems.

2.2 artificial intelligence in Law: advancement or risk?

In recent years, especially in recent decades, artificial intelligence has found a growing space in the legal sector, motivated by technological progress and the search for more efficiency in the justice system. It is in this scenario that so-called lawtechs and legaltechs enter, i.e. companies and technological solutions aimed at automation and improvement of processes in the legal field, changing the way law is exercised. Among the most notorious applications of artificial intelligence, let us mention automated analysis of jurisprudence, the generation of procedural parts, the administration of judicial proceedings and the adoption of predictive systems that estimate probabilities of judicial decisions from historical data.

These tools have helped to reduce the time spent on repetitive activities, which allows law professionals to devote themselves to more strategic tasks. Moreover, the use of intelligent systems makes it possible to organize large amounts of legal information, something that would be impractical if only done by human analysis. Thus, artificial intelligence is perceived as a tool for updating the legal system, in line with the demand for a faster procedural procedure and a more efficient judicial provision.

The rise of the use of these technologies is not restricted to the private sector. Courts and public agencies are also adopting artificial intelligence solutions to optimize process management and reduce the number of accumulated actions. Initiatives such as automation of screening processes and the identification of precedents, which are being implemented in Brazil, show that technology is already part of the day-to-day Judiciary. This shows that digitization of law is a way without turning back, with artificial intelligence playing a crucial role.

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However, we should be careful to trace a direct relationship between artificial intelligence and the evolution of the legal system. Although its benefits are clear, this view can hide structural risks that affect both the practice of law and the definition of justice itself. The growing trust in automated systems calls into question the autonomy of the legal professional, who can begin to work excessively guided by the results generated by algorithms, which would reduce his critical and interpretative capacity.

Finally, the use of artificial intelligence in law brings an extra complexity to the decision-making process, especially with regard to predictive systems. By anticipating possible results based on patterns of the past, these systems can indirectly shape human decisions, generating a feedback effect that reinforces preexisting beliefs. This posture can stop the development of law, restricting innovation in interpretation and adequacy to the new needs of society.

Another aspect that deserves attention is the supposed neutrality of technology. Often, artificial intelligence tools are seen as objective and exempt, which may result in excessive confidence in their outputs. However, these systems are elaborated based on data from the past and criteria established by those who created them, therefore, are not free from prejudice.

> Artificial intelligence systems are not neutral, because they depend on historical data that may contain biases and discriminations, which requires control and governance mechanisms capable of ensuring the protection of fundamental rights and equity in automated decisions. (DONEDA et al., 2021)

Therefore, the uncritical use of these tools can lead to the perpetuation of inequalities and distortions existing in the legal system, disguised as technical and impartial decisions.

Thus, it is clear that artificial intelligence in the legal sphere cannot be seen only as a technical innovation, but also as a subject that calls for critical analysis. Its benefits, however significant, do not dispense with human supervision and attention to its limitations. The issue is not to accept or reject technology, but to understand its effects in a balanced way, ensuring that its application favors the evolution of the legal system without hurting its essential principles.

Therefore, artificial intelligence must be viewed as both an opportunity and a risk: the opportunity to make the system more efficient and accessible, and the risk of creating new forms of dependence, excessive standardization and weakening of legal autonomy. How this technology will integrate into law will largely depend on the ability of professionals and institutions to use it in a critical, conscious and ethical way.

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2.3 Practical applications of artificial intelligence in the legal system

The use of artificial intelligence in the legal field has advanced significantly, involving several phases of legal activity and affecting both the work of professionals and the functioning of institutions. According to Nunes, Lucon and Oliveira (2020), artificial intelligence already integrates different stages of the judicial process, increasing efficiency in data analysis. Among applications, we can mention automated analysis of jurisprudence, the elaboration of parts and contracts, the management of processes and the construction of predictive systems. In addition to reporting these applications, it is crucial to understand what they mean in practice and how they affect the logic of law.

The analysis of jurisprudence with the aid of artificial intelligence systems is one of the most common applications in the area of law. They enable the rapid localization of important precedents, the organization of judicial decisions and the extraction of interpretive patterns from large volumes of data. This functionality makes legal work much more efficient, saving research time and increasing access to information. But this ability to recognize standards can also have a significant side effect: the propensity to make decisions homogeneous. By favoring consolidated interpretations, these systems can discourage new readings, which can hinder the evolution of law and its adaptation to the new needs of society.

Another significant application is automation in the writing of legal documents, such as petitions, contracts and opinions. The use of automatic models allows for greater uniformity and speed in document generation, especially in cases that are repeated. From the perspective of efficiency, this is a significant advance. However, this automation also raises questions about the quality and depth of legal argumentation. Excessive use of models can limit professional creativity, leading to more automated and less critical action, which may affect the personalization of legal solutions.

With regard to process management, artificial intelligence has been applied to classify processes, identify recurring issues and help in the screening of demands. In the Judiciary, these technologies help reduce the accumulation of processes and structure the workflow, which makes everything more agile. However, one cannot ignore the risks that automation of crucial stages of the process can bring, even with all these advantages. The poor classification of demands or prioritization according to algorithmic criteria may compromise access to justice, particularly in situations where it is crucial that there is a human intervention to perceive details that make the difference.

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Among the various applications of artificial intelligence in law, predictive systems are undoubtedly one of the most controversial “Predictive systems help in risk analysis but do not replace legal interpretation” (NUNES; LUCON; OLIVEIRA, 2020).

Analyzing historical data, these systems can predict probabilities of judicial results, helping lawyers and other professionals in the right to make strategic decisions. Although functionality can help in decision-making and risk assessment, it also raises important issues. The predictability generated by predictions based on patterns of the past may lead to a repetition of consolidated understandings, contributing to a logic of “decision by tendency” rather than individualized analysis of each case. In this sense, the efficiency that these systems offer can be accompanied by a decrease in interpretative autonomy.

Moreover, the increasing use of these technologies makes it even more urgent to reflect on the interaction between technology and human judgment. Law goes beyond the mere application of norms, with regard to the interpretation of intricate situations, the weighting of principles and the appreciation of social issues. Although human analysis may be replaced in part by automated systems, this can harm this interpretive dimension, especially when we rely too much on the results generated by artificial intelligence.

The practical applications of artificial intelligence in the legal system, therefore, reveal an ambivalent panorama. On the one hand, they generate significant gains in efficiency, organization and access to information. On the other hand, they raise questions about the standardization of decisions, the reduction of professional autonomy and the risk of not taking into account the particularities of each case. Therefore, more than simply incorporating these technologies without criteria, it is essential to use them critically, understanding that their effectiveness results from a harmonious combination between technological innovation and qualified human expertise.

2.4 Impacts of artificial intelligence on the legal profession

The growing integration of artificial intelligence to law has generated profound changes in legal practice, According to Lemos (2021), technology redefines the role of the law professional, requiring new skills. What requires a reformulation of the lawyer's role. Contrary to a simplistic view that proposes replacing lawyers with machines, what is really evident is a transformation in the dynamics of the profession, where operational tasks are automated and strategic and analytical skills gain prominence.

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Historically, much of the legal work consisted of repetitive tasks, such as jurisprudence research, writing standard pieces and organizing documents in processes. With the growth of artificial intelligence, these steps began to be carried out more quickly and accurately by automated systems, reducing the need for human intervention in these functions. This makes the law operator gradually removed from his place of speech and placed, increasingly, in functions of interpretation, legal argumentation and strategic decisions.

This change, despite being a chance of evolution to the practice of law, brings significant challenges. The need for new skills, such as the use of technological tools and the interpretation of results produced by algorithms, transforms the desired professional profile in the legal sector. The lawyer, in this sense, is no longer a mere legal operator, but an agent that must unite legal and technological knowledge, which requires constant updating and adaptation.

However, this reconfiguration does not occur homogeneously, which may result in asymmetric effects among workers. Professionals who work in offices and institutions that have more access to technological resources will be able to benefit more quickly from the advantages of artificial intelligence, while those who have less access to these tools may find it difficult to remain competitive. Thus, the arrival of technology in law not only alters the profession, but can also accentuate disparities that already exist in the legal market.

Another important issue is the possible decrease in professional autonomy According to Frazão (2019), dependence on automated systems can impact decision-making autonomy. The increasing adoption of automated systems for analysis and recommendation of decisions can generate a technological dependency that indirectly affects legal reasoning. When the law operator starts to believe without questioning the results that algorithms offer, there is a risk of an emptying of interpretation, which is an indispensable element for the exercise of advocacy. Thus, technology, which initially shows itself as an ally, can, when poorly applied, curtail the criticism of the jurist.

Furthermore, automation of certain activities can directly impact the legal labor market, especially in initial positions, which are usually occupied by professionals who perform operational tasks. This decrease in functions can make it more complicated for new professionals to enter the market, while increasing the requirement for those already in the game and wanting to stand out. This shows that the effects of artificial intelligence go beyond the way of acting and also affect the structure of career opportunities.

However, it is also necessary to recognize that artificial intelligence can help value legal work in its most complex layer. Technology, by removing professionals from repetitive tasks,

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allows them to focus more on the construction of arguments, analysis of concrete cases and the search for more appropriate and fair solutions. In this perspective, artificial intelligence presents itself as a tool that can improve legal practice, whenever used with a critical and conscious look.

It is therefore clear that one cannot linearly understand the effects of artificial intelligence on the legal career. It is a process that has many dimensions, with opportunities and threats. The mere exchange of the law professional for a robot is not a real possibility, but the change in the profession is evident. The great challenge, then, is to ensure that this transformation does not compromise autonomy, critical thinking and essential values that guide the practice of law.

Thus, instead of simply adapting to technological innovations, the lawyer must adopt a critical attitude towards them, identifying their limits and possibilities. Artificial intelligence, far from being the end of the legal career, demonstrates how much it takes to evolve, keeping the human being at the center of the interpretation and application of law.

2.5 Ethical challenges in the use of artificial intelligence in the legal system

The implementation of artificial intelligence in the legal sphere, despite indicating considerable progress in efficiency and automation, entails several ethical challenges that cannot be underestimated. Although technology has advanced in various areas, law is intrinsically related to the protection of fundamental rights, the promotion of justice and the maintenance of social order, which makes the implementation of automated technologies a delicate subject. Therefore, it is crucial to carry out a thorough critical analysis of the use of algorithms-based systems, particularly with regard to transparency, responsibility and impartiality in the decisions they make.

One of the great ethical problems of artificial intelligence in law is the lack of transparency of algorithmic systems, often described as “black boxes”. Several of the most sophisticated models, in particular those that use machine learning, function in a very complex and opaque way, which makes it difficult to understand how they reach certain conclusions. The absence of explanation is a direct affront to legal principles that require decisions to be based in a clear and accessible manner. If the creators of certain algorithms themselves cannot fully elucidate their functioning, it is questionable the value of these algorithms in situations that require rational and verifiable justifications.

Another important aspect that stands out, in addition to transparency, is the accountability of automated decisions. In the classic model, legal decisions are made by human

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agents, who can be held responsible for their actions. But when artificial intelligence systems are actively integrated into the decision-making process, there appears a gray area on responsibility: who is responsible for an algorithmic error? Who is responsible for the system: the developer, user or institution that adopted it? This lack of clarity undermines legal certainty and highlights the urgency of establishing specific regulatory frameworks for the application of technology in the field of law.

Another crucial point is the risk of reproduction and expansion of prejudices “Historical data can carry biases that are reproduced by artificial intelligence systems” (DONEDA et al., 2021). Artificial intelligence systems learn from historical data, which may contain prejudices, discriminations and inequalities that already exist in the legal system. Thus, instead of increasing impartiality, technology can reinforce, in an automated and large-scale manner, discriminatory patterns. Furthermore, the situation worsens because these biases often disguise themselves as technical neutrality, making it difficult to recognize and challenge them.

Thus, the question of impartiality cannot be approached in a simplistic way when it comes to artificial intelligence. The assumption that automated systems are intrinsically objective disregards the fact that all technology results from human decisions, from the choice of data to the definition of evaluation criteria. Therefore, the uncritical use of these tools can endanger essential values of law, such as equality and due legal process.

Finally, the implementation of artificial intelligence in the legal system raises fears about the dehumanization of decisions. Law goes beyond the mere technical application of laws; it is also a matter of sensitivity, empathy and understanding of the nuances of each situation. Although automated analysis replaces, even if partially, human judgment, this can lead to excessively uniform decisions that cannot capture important nuances. At this point, efficiency cannot be sought to prejudice the quality and justice of decisions.

An important aspect is data protection, especially considering that in order to function, artificial intelligence systems need to access huge amounts of information. This data should be used strictly in accordance with the principles laid down by law, such as those of purpose, necessity and transparency. Abusive or excessive processing of data can threaten fundamental rights such as privacy, which demonstrates that technological innovation must occur within well-established legal limits.

Faced with these challenges, it is clear that the insertion of artificial intelligence in the field of law goes beyond a simple technological improvement: it is an issue that requires constant and deep ethical reflection. It is not a matter of repudiating technology, but of defining

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parameters for its use, so that gains will not harm the basic values of law. It is essential that the creation of an ethical model for the use of artificial intelligence integrates innovation, regulation and human supervision.

Thus, artificial intelligence in law must be understood as a powerful but potentially problematic tool, whose use requires caution, responsibility and critical sense. Missing these elements, an instrument of effectiveness can become a risk to the very notion of justice, which reinforces the urgency of a continuous and profound debate on its limits and consequences.

3 Methodology

The research in question is of a basic nature, because it aims to enrich the theoretical knowledge about the use of artificial intelligence within the scope of law, without a practical objective of immediate application of the results obtained. With regard to the objectives, the research is exploratory in nature, as it seeks to provide a greater understanding of the theme, enabling a more detailed analysis of the impacts, benefits and challenges of the use of technology in the legal area.

Regarding the approach, the research is classified as qualitative, considering that it is based on the analysis and interpretation of theoretical contents, without the use of statistical methods or quantification of data. Qualitative research allows a deeper understanding of phenomena, especially when it comes to changes that artificial intelligence is bringing into the legal system.

With regard to methodological procedures, we used bibliographic research, based on material already published, such as books, scientific articles, dissertations, theses and academic publications that address artificial intelligence and law. This type of survey allows a critical analysis of the main theoretical contributions on the subject, which enables the construction of a consistent and well-founded framework.

Data collection took place through the selection and analysis of secondary sources, with emphasis on works by renowned authors in the area and recent publications that discuss the interaction between technology and the legal system. Academic books, scientific articles available in digital databases and institutional documents dealing with the application of artificial intelligence in the legal context were used as instruments for collecting academic books.

The interpretation of the data was made in a critical and attentive way to the reading of the selected material, in order to recognize similarities, differences and gaps in the literature

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consulted. This study allowed us to understand the various theoretical positions on the subject and, in a reasoned and organized manner, analyze the repercussions of artificial intelligence in the practice of law.

Thus, the methodology used proved to be appropriate for the objectives of the study, enabling an organized and grounded analysis on the subject, supported by relevant and updated theoretical frameworks.

4 Analysis and discussion

4.1 Is the efficiency promised by artificial intelligence real?

The incorporation of artificial intelligence into the legal system has been widely justified by the promise of increasing efficiency, especially with regard to procedural speed and optimization of tasks. In fact, automated systems are able to perform repetitive tasks in much less time and analyze large volumes of data quickly and accurately, overcoming human capacity. It is in this aspect that artificial intelligence presents itself as a real solution to one of the biggest challenges of the current Judiciary: slowness.

However, the direct association between artificial intelligence and efficiency requires a more cautious analysis. It is evident that these technologies help in reducing the time of processing processes and in the best organization of legal information, but this efficiency cannot be seen in an absolute way or in isolation. The notion of efficiency, in law, is not only synonymous with speed, but also covers the quality of decision, its adequacy to the specific case and respect for the fundamental principles of law.

In this sense, it is essential to ask whether the speed desired with the use of artificial intelligence does not compromise, in certain contexts, the quality of judicial provision. This happens because law is not a simple mechanical calculation of application of rules, but an interpretive exercise, which requires weighting of values and considering the specificities of each case. In situations that require a sensitive interpretation, such as in issues of fundamental rights or complex social conflicts, relying on automated systems can restrict the depth of analysis.

Finally, the efficiency that artificial intelligence offers can favor patterns and regularities present in past data, leading to a possible standardization of choices. Although standardization is desirable in some aspects, especially for legal certainty, its application without criterion may impair individualization of cases, which is a fundamental principle of

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law. Thus, operational efficiency may conflict with the need for decisions that are fair and contextualized.

There is also another important aspect that relates to the nature of legal activity, which is not limited to solving problems, but also to creating solutions that fit into particular contexts. Algorithmic logic, which focuses on detecting patterns, is a good solution for repetitive tasks, but fails when faced with new complex situations or problems that have no previous examples. These are situations in which human intervention is still absolutely necessary, proving that the efficiency of technology does not overcome the jurist's interpretation.

In addition, excessive confidence in technology can distort the perception of efficiency. Speed in delivering results may give the feeling that they are of better quality, even if the analysis is shallow or based on few criteria. This phenomenon reinforces the need for a critical posture by law enforcement operators, who must understand that technical efficiency does not necessarily equal material justice.

So, despite artificial intelligence bringing great progress in terms of process optimization and management of legal information, it is essential to evaluate its contribution to system efficiency in a balanced way. In law, true efficiency is not synonymous with speed, but rather the ability to generate fair, well-founded decisions that meet the particularities of each situation. Thus, the challenge lies not only in incorporating technologies, but in ensuring that their use does not compromise the values that sustain the legal system itself.

4.2 Invisible risks of legal automation

The increasing adoption of artificial intelligence in the legal system has often been associated with gains in efficiency and modernization. However, behind these apparent advantages, there are less visible but deeply relevant risks that impact the quality of decisions and the very structure of law. They are risks such as algorithmic bias, dependence on technology and homogenization of decisions that require an accurate critical reflection.

One of the main challenges refers to algorithmic bias, often hidden under the appearance of technical neutrality. Artificial intelligence systems are trained from historical data, which reflect past decisions, institutional practices and existing social standards. Thus, technology does not generate autonomous interpretations, but replicates and sometimes amplifies existing trends. Thus, if the history of judicial decisions is full of distortions, inequalities or treatments that are not uniform, this can lead to the amplification of these same problems by algorithms.

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The supposed impartiality of artificial intelligence, in turn, can hide the persistence of harmful practices, making it more difficult to detect and adjust them.

> Algorithmic bias represents one of the main challenges of artificial intelligence, as it can reproduce and amplify existing inequalities in an automated way, making it difficult to identify and correct them in the legal context. (MAGRANI; SILVA, 2020)

Moreover, the algorithmic bias presents a particularly worrying characteristic: its invisibility. The difference is that, unlike a human decision, which can be clearly challenged and justified, the criteria of an automated system are not always visible. This hinders the contestation of results and compromises fundamental principles of law, such as contradictory and broad defense. Thus, technology can, instead of reducing inequalities, strengthen them in a more subtle and elaborate way.

Another important risk is the growing technological dependence of law professionals. As artificial intelligence systems become increasingly responsible for data analysis, organization of information and even the recommendation of decisions, the tendency is that we gradually delegate these functions to machines. This dependency can affect the intellectual autonomy of legal professionals, who start relying on the results produced by algorithms without appropriate questioning. This may, in the long term, result in an impoverishment of criticism, causing legal reasoning to become excessively based on automatic references.

This dependence is evident not only at the personal level, but also at the institutional level. Courts and institutions that organize their processes based on automatic systems can find themselves in trouble when trying to function without these tools, establishing a problematic technological dependency. Any failure, limitation or inconsistency in the systems can have serious consequences, especially when placing an excessive trust in their accuracy.

The uniformity in decisions is another point that deserves to be highlighted. Artificial intelligence, because of its nature of finding standards in large data sets, favors the solutions that have already been tested and approved. Although this standardization can bring predictability and security with regard to legislation, its application without criteria may harm the individualized analysis of each case. As a hermeneutic practice, the right demands an appreciation of the particularities of each case, which is not possible in many cases for algorithmic models based on generalizations.

The trend towards standardization can create an “indirect automated decision”, in which the judge, influenced by technological recommendations, starts to reproduce previously identified patterns, reducing the space for interpretive innovation. This may lead to a certain

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rigidity in the legal system, making it more difficult to adapt to new social realities or situations that do not fit into traditional norms.

Moreover, these risks are not independent, but interactive and reinforcing. The combination of algorithmic bias, dependence on technology and standardization of decisions creates a system that, at first sight, is efficient, but structurally restricted, where speed and predictability are prioritized to the detriment of criticism and individualized justice.

Thus, it is clear that legal automation is not a process without consequences or neutral. Its dangers, often hidden, demand that law professionals adopt an attentive posture, understanding not only what these technologies offer, but also its restrictions and consequences. Therefore, more than just making use of artificial intelligence, it is essential to know how to use it critically, ensuring that its application does not endanger the pillars that support the legal system itself.

4.3 The irreplaceable role of human beings in law

Every day, artificial intelligence becomes more present in the daily life of the legal system, leading to questions about the replacement of human labor by automated systems. However, as it deepens, it is perceived that this view is restrictive, since the right is not limited to the mere automatic application of rules, according to Nunes and Marques (2020), artificial intelligence must act as an auxiliary tool, rather than a substitute for human judgment, but rather to an intricate interpretive process based on values, principles and social contexts. In this regard, human work remains essential and irreplaceable, even with the advancement of technology.

Legal thinking is not based solely on formal logic or pattern recognition, as is the case with artificial intelligence. Therefore, it requires interpretation, argumentation, but, above all, knowing how to deal with the unexpected, what does not fit into known models. Each situation has its peculiarities that require contextual analysis, sensitivity and balance, characteristics that algorithms cannot fully replicate. The judicial decision, then, is not only technical but also evaluative, because it involves choices that express essential principles of the legal system.

Law has a social function that goes beyond the mere solution of disputes. It works to ensure justice, protect fundamental rights and mediate interests in a diverse society. Thus, human presence becomes indispensable for legal decisions to take into account not only the normative aspects, but also the social and human repercussions that are at stake. Automation of this aspect could lead to decisions that, although correct in formal terms, would prove inadequate in substance.

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Another significant aspect is the ethical responsibility that accompanies the practice of law. The jurist is not limited to applying rules, but also bears the consequences of his choices, and it is necessary for his positions to be clear and well-founded. The inclusion of artificial intelligence in this process does not remove this responsibility, but, on the contrary, requires an even more rigorous control over the criteria that technologies employ. In this regard, it is up to the human being to remain the agent responsible for validating, interpreting and applying the results generated by automated systems.

The relationship between artificial intelligence and human labor should therefore be seen as a complementarity, not as a replacement. Technology can help optimize tasks, organize information and assist in decision-making, but it is not able to completely replace human judgment. Blind trust in automated systems can reduce critical reflection, impairing the quality of legal decisions.

Preserving the autonomy of the professional of law is crucial for the legal system to operate effectively. Overdependence on technological tools can hinder the ability to question and innovate in interpretation, fundamental to the evolution of law. Human intervention, therefore, not only complements technology, but also serves as a control to ensure that its application complies with legal precepts.

In this way, artificial intelligence does not diminish the function of human beings in law, but redefines it. When a lawyer starts to exercise more strategic, interpretive and decision-making activities, he reaffirms its relevance in a scenario where technology is increasingly present. Artificial intelligence can increase that capacity when used critically and responsibly, but will never replace it.

Therefore, the future of law is not limited to replacing human beings with machines, but creating a harmony between technology and legal interpretation. The human being must remain at the center of justice, even with the evolution of technology, because the humanization of law is still the most crucial aspect.

5 Final considerations

This study aimed to investigate the use of artificial intelligence in the legal field, in order to understand how it affects the work of professionals in the area and the ethical dilemmas that arise from its application. It was investigated, therefore, how these technologies affect the functioning of law and what this change means for current legal practice.

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Indeed, artificial intelligence undoubtedly represents a major advance in the efficiency of the legal system, as the analysis demonstrated. Its ability to automate tasks, manage large amounts of information and support decision-making makes it possible to reduce the slowness of processes and optimize the activities of the legal sector. In this scenario, technology is an important tool in combating historical problems of the Judiciary, especially with regard to management and procedural processing time.

However, this efficiency is neither total nor free from problematic issues. In the course of the work, it was clear that artificial intelligence also brings significant risks, often not perceived in a more superficial analysis. The algorithmic biases, the opacity of systems, the homogenization of decisions and technological dependence demonstrate that the incorporation of these tools can influence not only the way professionals operate, but also the quality of the judicial provision itself. Thus, the promise of modernization should be viewed with caution, because improvements in efficiency do not necessarily mean fairer decisions.

In the case of the law profession, it was observed that artificial intelligence does not replace the law professional directly, but redefines their activities. The automation of operational tasks allows the work to focus on more strategic, interpretive and analytical aspects. However, this change can increase disparities in access to technology and demand that professionals adapt constantly, which shows that its effects are not the same for all.

Moreover, the ethical dilemmas that emerge from the use of artificial intelligence in law underline the urgency of a cautious implementation. The themes of transparency, accountability and impartiality are evidence that technology is not neutral and that its use should be guided by strict criteria, capable of preserving the basic principles of the legal system. In this scenario, human presence remains essential, not only as a factor of interpretation, but also as an instance of supervision and validation of decisions made.

In light of the above, it is verified that artificial intelligence, however significant innovation for the legal system, cannot be seen as the final solution to the structural problems that permeate it. The effectiveness of artificial intelligence in the legal field is directly linked to the way it is applied, and it is essential that its use is made in a balanced, critical and based on legal values. The tomorrow of law, therefore, does not go through the extinction of human beings in favor of the machine, but rather by building a relationship that complements itself, where technology amplifies man's action, without reducing his autonomy and interpretive power.

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Finally, there is the need to carry out a more in-depth study on the subject, especially regarding the regulation of the use of artificial intelligence within the scope of law and the definition of clear ethical standards for its use. Technological evolution will probably increase the presence of these tools in the legal field, making it essential to develop methods that integrate innovation and responsibility, ensuring that the search for efficiency does not overlap with commitment to justice.

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