ARTIFICIAL INTELLIGENCE IN THE BRAZILIAN PRISON SYSTEM: AN INSTRUMENT OF STATE CONTROL AND GUARANTEE OF THE RIGHTS OF THE RE-EDUCATING

Mayara Stéffany da Silva Araújo[1] and Ivan Luiz Rufino da Silva[2].

ABSTRACT

This research was born from the observation of the use of new technologies by the public sector, the high number of incarcerated people and the possibility of using Artificial Intelligence as a tool for state control and guarantee of rights in the Brazilian prison system. This experiment seeks to analyze the possibility of implementing Artificial Intelligence, through algorithms, as a form of state control and guarantee of rights in the Brazilian prison system and its possible practical effects. The choice for this framework stems from the possibility of creating instruments and ways of collecting data that help the control of the State and enable the guarantee of rights in the prison system. Thus, it was necessary to verify the Brazilian scenario on the subject, based on the implementation of this technological tool in the prison system. The result was obtained through the methodological procedure of bibliographic review in works of criminal law, artificial intelligence and criminology, highlighting the use of national and foreign literature.

Keywords: Artificial Intelligence. Algorithms. State Control. Guarantee of Rights. Prison System.

---

[1] Doctorate student in Law at the Catholic University of Pernambuco as a CAPES scholarship holder. Master in Law from the Cesmac University Center. Postgraduate degree in Criminal Law and Criminal Procedure from Faculdade Cesmac do Agreste. Associate member of the Brazilian Institute of Criminal Sciences. Lawyer.

[2] State Attorney (Alagoas). Lawyer. PhD and Master from the Federal University of Pernambuco. Professor of the Undergraduate and Master's Degree in Law at the Cesmac University Center.

INTRODUCTION

No scientific research is born, or should be born, without a restlessness that precedes it. In the case of this study, the non-conformity and motivation arose from the observation: 1) the growing use of new technologies by the public sector; 2) the high number of people incarcerated in Brazil; 3) the possibility of using artificial intelligence as a tool for state control in the Brazilian prison system.

Advances in the areas of computer science and engineering "have given rise to the development of information wedge technologies that impact political, social, legal and economic logic." (Lemes, 2019, p. 10). Within this context, it seeks to analyze the emergence of electronic text and computer-mediated work as a "possibility of improvement and replacement of human work" (Zuboff, 2015, p.77).

In this context, it should be noted that technological advancement has impacted and its use has been increasingly recurrent by the Brazilian judicial system, which finds, from the use of new technologies, especially through Artificial Intelligence (AI), mechanisms of agility, efficiency and effectiveness. Thus, this research is based on the hypothesis that the use of Artificial Intelligence (AI) can be used by the State as a form of control and guarantee of the rights of incarcerated people, seeking, for this purpose, to understand the consequences and perspectives produced by the implementation of this new technology in the Brazilian prison system.

It should be noted, from the outset, that the type of Artificial Intelligence (AI) object of this study is algorithms, which is justified in the result it intends to achieve, that is, it is necessary to have a specific objective. As França Junior, Bruno Santos and Felipe Nascimento (2020, p. 225) adduce, "machines react to the information that is passed on to them as provided for in the mathematically molded formulas (or in the algorithm) for the scope of their programming.

Thus, seeking to reflect the creation of new social tools through scientific evolution, criminal sciences are challenged by the unpredictability and brevity of accelerated technological development. To this end, there is a need to review the theoretical bases on which the criminal justice system is based, and "the foundations that justify the law must adapt to the changes in the way people interpret human actions and on which agents are capable of performing them, under the aegis of the performance of Artificial Intelligence in society" (Araújo, p. 13, 2021).

Thus, this research has as its general objective to verify the possible consequences and practical effects triggered from the implementation of Artificial Intelligence (AI), through algorithms, as an instrument of state control and guarantee of rights in the Brazilian prison system. To achieve the general objective, the first specific objective is to establish the interactions and challenges that are subjected to Artificial Intelligence (AI) and algorithms, focusing on studies on technology, criminal justice and law. Then, to verify the possibility of implementing the use of Artificial Intelligence (AI), through the algorithmic system, as an instrument of state control and guarantee of rights in the Brazilian prison system, considering the high number of people incarcerated in Brazil. Finally, to analyze the impacts that the implementation of Artificial Intelligence (AI), through algorithms, as a form of state control and guarantee of rights in the Brazilian prison system can trigger in the practical field, taking into account the special care that must be given to human rights, the protection of personal data, the promotion of equality and the prohibition of discriminatory practices.

In order to overcome the problem presented here, obviously without the intention of exhausting the theme, especially due to the complexity of the subject, which is still in full development, with technological discoveries and discussions about the future that still do not allow conclusive answers, the method used is the hypothetical-deductive, with the help of the bibliographic review technique, in works that deal with technology, criminal law, digital law and criminology, thus aiming at the construction of the theoretical basis for the development of the arguments presented, highlighting that such bibliographic review came from national and foreign literature.

THE USE OF NEW TECHNOLOGIES IN BRAZILIAN LAW

To understand the use of new technologies in Brazilian law, it is essential to understand that advances in the areas of computer science and engineering have driven the development of technological mechanisms that have impacted political, social, legal and economic logic. Thus, from the creation of electronic text and computer-based tasks, the possibility of improving and replacing human work arose (Zuboff, 2015, p.77).

It is emphasized, therefore, that "the expansion of the information society is related to the expansion of computer machines and software" (Silveira, 2020, p. 158). Thus, the "development of programs for information processing devices during their initial phases was determined by algorithms that followed rules." (Silveira, 2020, p. 158).

In view of the technological innovations present in today's world, it is worth highlighting the Artificial Intelligence (AI) tool, which was introduced through the Fourth Industrial Revolution and has been the subject of constant and necessary discussions, due to the various impacts it develops in the practical field. In this sense, Ana Paula Gonzatti da Silva (2022, p. 348) argues that this new technology is:

> Responsible for a shift in the standards of contemporary society that ends up shaping our daily lives, this area of computer science is capable of developing devices that simulate the human capacity to reason, make decisions, and perceive. Its exponential growth – especially due to the increase in the capacity of computers, which have become faster, more powerful and with extraordinary memory capacity, and the impressive addition of digital data – has made its resources have become an essential component of technological supply in all areas and that its use is increasingly Attributed a huge potential.

Thus, it should be noted that Artificial Intelligence (AI) consists of the ability of electronic devices to function and perform tasks using algorithms that simulate human reasoning (Damasceno, Vasconcelos, 2018). That is, Artificial Intelligence (AI) "works through algorithms, which represent a sequence of operations applied to a certain number of data, for the performance of tasks by a machine." (Carvalho, 2018, p. 01)

According to Francisco Júnior and Bruno Santos (2023, p.14), it is observed that artificial intelligence "enables the use of technology to create systems capable of performing activities previously only performed by human beings, with patterns that reproduce human intelligence," including tasks such as learning, reasoning, planning, perception, language comprehension, and robotics. It can be seen, therefore, that advances in the area of computing and informatics, especially in the field of Artificial Intelligence (AI), gradually drive the mimicking of skills attributed to human beings through the creation of intelligence machines.[3]

Technological acceleration impacts everything from people's behavior to the more traditional sectors of the economy. "The era of living in the current world is exponential, and the speed of transformations leads subjects to an unprecedented change in pattern at a global level." (Porto, p. 106, 2022). In the professional and business fields, technological acceleration has unfolded in what is called digital transformation, which has been made possible by the development and the possibility of easy access to new technologies.

---

[3] The implementation and effective use of new technological tools can help society in its various sectors. Within the perspective adopted in this research, the implementation of these tools improves working conditions, reduces operating costs, improves the institutional image, accelerates the procedural progress, ensures the guarantee of rights and among others.

As Alexandre Pimentel and Beatriz Orengo (2021, p. 306) assert, "the development of disruptive technologies is an irreversible fact, of constant and exponential growth." Thus, in view of the technological innovations present in today's world, it is worth highlighting the Artificial Intelligence (AI) tool, which has been the subject of constant and necessary discussions, due to the various impacts it develops in the practical field. Artificial Intelligence (AI) consists of the ability of electronic devices to function and perform tasks using algorithms that simulate human reasoning (Damasceno, Vasconcelos, 2018). That is, Artificial Intelligence (AI) "works through algorithms, which represent a sequence of operations applied to a certain number of data, for the performance of tasks by a machine." (Carvalho, 2018, p. 01)

The use of new technologies has been increasingly recurrent, especially in Brazil, when, as Alexandre Pimentel and Beatriz Orengo (2021, p. 307) adduce, "new technologies have promoted marked transformations in the most diverse aspects of human life." To this end, it should be noted that there are, in the literature, three types of Artificial Intelligence (AI): the general, considered as that of humans, which involves several abilities in a single agent; the specific, which is programmed to store a significant volume of data and perform specific tasks; and superintelligence, which has not yet been achieved, but It is expected to be and capable of surpassing human intelligence, making its own decisions and performing tasks that not even humans are capable of doing.(JUNIOR; SANTOS, 2023)

In view of the aforementioned species of Artificial Intelligence (AI), it should be noted that this research seeks to analyze a modality of Artificial Intelligence inserted within the specific class, that is, algorithms, whose purpose is to verify whether this new technology can be used as a form of state control and guarantee of rights in the Brazilian prison system. In the words of Augusto Jobim Amaral (2020, p. 15), algorithmisms consist of:

> A multidimensional set of political practices that can be reactualized by various assemblages, practices that are technologically willing to hijack the vital rhythm that makes any meaning vibrate, that is, modes of a device 'given' to inform, plan repeatable functions and conform probable futures under standardly deepened logics of pain.

It can be seen, therefore, that an algorithm is nothing more than a set of rules or step-by-step procedures for solving a problem. Therefore, in the face of the new era experienced, driven by data, it is necessary to verify how the processing and processing of

this data can improve the legal system, contributing to the effectiveness of access to justice and the realization of rights (Di Pietro, Machado and Alves, 2019).

Thus, in view of the chains of this technology in the Brazilian scenario, it becomes relevant to verify its applicability and effects produced in the Brazilian scenario. Thus, this research started from the initial effort to understand the use of Artificial Intelligence (AI), through algorithms, as an instrument of control and guarantee of rights in the Brazilian prison system. Emphasizing, from the outset, that although the path to the use of technologies is practically without return, "great care will be taken so that people (or groups) with totalitarian discourses do not appropriate such resources for the maintenance and unembarrassed expansion of the exercise of punitive power." (JUNIOR, SANTOS and NASCIMENTO, 2020, p. 07)

To this end, it was based on the idea that it was of great urgency and importance to analyze the possible effects triggered by the implementation of Artificial Intelligence (AI), through algorithms, in the Brazilian prison system as a way of controlling state power and guaranteeing the rights of incarcerated people. It should be noted, from the outset, that Brazil has the third largest prison population in the world (CNJ), therefore, measures aimed at assisting state control and enabling the guarantee of the rights of incarcerated people are urgent and necessary, "in view of achieving effective access to justice" (Di Pietro, Machado and Alves, 2019).

In this sense, França Júnior, Bruno Santos and Felipe Nascimento (p.235, 2020) highlight that:

> Tools that emerge as auxiliaries can, over time, be presented as more efficient substitutes for the activities developed by human beings. Patrols, investigations and trials carried out by *robots*, equipped with the most advanced artificial intelligence, full of the most complex algorithms, programmed to produce justice. A *fast trial* system, with uniform and fast responses, specially shaped for a society that is in a hurry.

It is easy to see the interest and effort of the Brazilian State to advance and expand the digital agenda in the country, as can be seen in the following examples: Ordinance No. 68, of March 7, 2016, which approved the Digital Governance Strategy of the Federal Public Administration for the years 2016 to 2019 (Brasil, 2016); Ordinance No. 107, of May 2, 2018, which revised the strategy and assigned to the Secretariat of Information and Communication Technology the competence determined in the ordinance (Brasil, 2018); of the Brazilian Strategy for Digital Transformation (E-Digital), published in 2018 by the

Ministry of Science, Technology, Innovations, and Communications, proposing to explain the challenges faced, and to establish strategic actions and indicators to monitor the progress of digital goals (Brasil, 2018).

It should be noted that there is still no regulation on the use of Artificial Intelligence in Brazil. However, there is currently a preliminary report, discussed through Bill No. 2,338 of 2024, which aims to regulate the use and development of Artificial Intelligence in the country. The text seeks the creation of a national system for the design, development, implementation, use, adoption and responsible governance of Artificial Intelligence systems in Brazil, with the objective of protecting fundamental rights, stimulating responsible innovation and ensuring the implementation of safe and reliable systems, for the benefit of the human person, the democratic regime and economic development. scientific and technological.

In the words of ADMS, GONÇALVES, THOMÉ and ERAGA (P. 03, 2024), from the report provided for in Bill No. 2,338 OF 2024, two objectives are extracted, which are:

> 1)   establishes rights to protect the most vulnerable link in question, the natural person who is already impacted daily by artificial intelligence systems, from the recommendation of content and targeting of advertising on the Internet to their analysis of eligibility for credit and for certain public policies;
> 2)   By having governance tools and an institutional arrangement for inspection and supervision, it creates conditions of predictability regarding its interpretation and, ultimately, legal certainty for innovation and technological development.

Thus, considering the interest of the Brazilian State in expanding the digital agenda in the country, the use of Artificial Intelligence (AI), through algorithms, as a way of exercising state control and guaranteeing the rights of incarcerated people is presented as the object of this research, in order to understand the limits of this tool and the effects that its implementation can trigger in the Brazilian prison system.

ARTIFICIAL INTELLIGENCE AND THE BRAZILIAN PRISON SYSTEM: IMPLEMENTATION FROM THE ALGORITHMIC SYSTEM

The current reality, in practically all its aspects, is affected, to a greater or lesser extent, by the effects of technology. In any area of activity, it is possible to verify the influence of technologies as a way to maximize production and save time, as well as new ways to perform functions and make life easier, whether in the professional and/or personal sphere. In the legal field, the reality is the same, since relationships are constantly affected by new technologies and their perspectives, which are not limited to the speed of time.

In the face of the phenomenon of digital transformation, new technological resources are emerging and gaining great proportions. Thus, considering the growing expansion of new technologies in the current world and their incidence in the legal and administrative areas, this research seeks to verify the use of new technological tools in the Brazilian penitentiary system. To this end, it should be noted that such technological innovations must meet regulatory guidelines for the conscious and sustainable use of technology in judicial systems, whose objective is to "ensure that rapid and exponential technological development is always used in favor of the common good and respect for the fundamental rights of the human person" (Giacomolli, 2022, p.116).

To this end, it is necessary to highlight that the use of new technologies in the criminal justice system has a worrying potential, given that the greater the number of people using technology in the criminal sphere, the greater the concerns about the possibility of erosion of the values that traditionally sustain a democracy, as well as the need to pay attention to the possibility of erosion of the values that traditionally sustain a democracy, as well as the need to pay attention to people with totalitarian discourses not appropriating such resources for maintenance and unembarrassed expansion of the exercise of punitive power (Riboli, 2019).

Thus, Alexandre Pimentel and Beatriz Orengo adduce that (2021, p. 306), "the development of disruptive technologies is an irreversible fact, of constant and exponential growth." Thus, in view of the technological innovations present in today's world, it is worth highlighting the tool of Artificial Intelligence (AI), which has been the subject of constant and necessary discussions, due to the various impacts it develops in the practical field. Artificial Intelligence (AI) consists, therefore, in the ability of electronic devices to function and perform tasks using algorithms that simulate human reasoning (Damasceno, Vasconcelos, 2018). That is, Artificial Intelligence (AI) "works through algorithms, which represent a sequence of operations applied to a certain number of data, for the performance of tasks by a machine." (Carvalho, 2018, p. 01)

Artificial Intelligence (AI) is currently "one of the most important technologies (Araújo, p. 19)". The form of development and growing evolution of intelligence tools has reached a new technological level, since it has modified the foundations of various branches of society, impacted legal diplomas and reached sectors that were previously exclusive to human action. It can be seen, therefore, that Artificial Intelligence (AI) is revolutionizing society's way of life, work, relationships and the form of communication, as

this tool is increasingly inserted in daily human tasks, either through the use of software inserted in computer programs and cell phones or through intelligence devices with the ability to perform activities that were previously only performed by man.

It is in this scenario, in which society and the market have already adhered to Artificial Intelligence (AI), even without specific legislation, that it becomes essential to verify the relationship between technological tools and their incidence in the field of criminal sciences.

In view of the growing expansion of Artificial Intelligence (AI) in the world today and its incidence in the legal area, this research seeks to verify the possibility of implementing Artificial Intelligence (AI) in the Brazilian prison system as a form of state control and guarantee of the rights of re-educates, as well as the possible effects and consequences generated from its execution. To this end, it should be noted that technological innovations must meet regulatory guidelines for the conscious and sustainable use of technology in judicial systems, whose objective is to "ensure that rapid and exponential technological development is always used in favor of the common good and respect for the fundamental rights of the human person" (Giacomolli, 2022, p.116).

Thus, as provided for in Resolution 332/2020 of the National Council of Justice, the use of Artificial Intelligence (AI) in the legal system must be based on the following principles: 1) Respect for fundamental rights; 2) Non-discrimination; 3) Quality and security (of systems and data); 4) Transparency, impartiality and fairness; 5) User control or user self-determination.

To this end, it is necessary to highlight that the Artificial Intelligence (AI) in evidence in this research will be executed through the algorithmic system, understood as algorithms, which consist of a sequence of rules applied to a number of data that allows solving similar problems, as a form of state control and guarantee of rights in the Brazilian prison system. In the words of Paulo Elias (2024, p. 01):

> An algorithm, in a broad sense, is a set of instructions, such as a cake recipe, instructions for playing a game, etc. It is a sequence of rules or operations that, when applied to a number of data, allows you to solve similar classes of problems. In computer science and telematics, the set of perfectly defined logical rules and procedures that lead to the solution of a problem in a number of steps. In other clearer words: they are the guidelines followed by a machine. In essence, algorithms are just a way of mathematically representing a structured process for accomplishing a task. Kind of like the rules and workflows, that step-by-step that we find in the decision-making processes in a company, for example.

It is also relevant to highlight that through artificial intelligence in the field of criminal sciences, the information society evolves, "because algorithms take advantage of all this data to make or suggest decisions in an assertive way, as well as being able to point out risks and expose correlations or inconsistencies." (Rocha, Waldman, 2020, p. 138).

It is based on the hypothesis that the use of Artificial Intelligence (AI), through algorithms, as a form of state control and guarantee of the rights of incarcerated people can trigger several effects. It should be noted, therefore, that it is the use of new technologies in criminal sciences and for that, as a form of state control and guarantee of the rights of incarcerated people in Brazil can raise doubts, uncertainties and assumptions, on the other hand, "it also produces expectations, since artificial intelligence makes it possible to make inferences, connections, and correlations in the selection of data" (Rocha, Waldman, 2020, p.138). Artificial Intelligence in its various forms is used "whenever there is a need for rapid information processing for the delivery of a result or decision-making, as well as where the use of physical force of robots is required, which go beyond human capabilities or their efficiency" (Araújo, p. 45, 2021).

In the words of Sergio Silveira (2020, p. 160), "the algorithm or algorithmic system operates the invention of data that can generate various effects", thus, the use of this form of Artificial Intelligence (AI) presents itself as a possible instrument for the exercise of state control and guarantee of rights in the Brazilian prison system, since, "the process of creating data extraction algorithms are solutions that allow quantifying elements, details and everything that can serve a predictive purpose" (Silveira, 2020, p. 162).

Therefore, analyzing the implementation of Artificial Intelligence (AI), through algorithms, as a form of state control and guarantee of rights in the Brazilian prison system is of enormous urgency, bringing to the field of debate and analysis the possible consequences and perspectives of its execution in the practical field.

It should be noted that initiatives to implement Artificial Intelligence (AI) within the criminal justice system have been presented effectively. In this sense, Bianca Gonçalves and Silva Lopes (2023) highlight the positive effects resulting from the use of Artificial Intelligence (AI) as a way to combat gender violence, highlighting that this technological tool can analyze large amounts of data on this type of violence and propose the creation of more effective public policies. Corroborating the understanding, Ana Paula Gonzatti da Silva (2022, p. 347) argues that:

The advantages obtained by incorporating these new techniques are enormous, since they significantly improve the capacity for data analysis. In view of this, there are numerous examples of the use of AI by States in order to prevent and repress crime, ranging from lawen forcement activities (especially predictive policing activity) to predictive algorithms (used to assess the criminal dangerousness of a subject) and evidence collection.

In addition to the exercise of state control and evidencing the guarantee of the rights of the inmates who make up the Brazilian prison system, the use of new technologies through algorithms can be used as a way to reduce over-incarceration, through the creation of a system that automatically monitors the end of the sentence serving period, as well as efficiently alert the notary service about the periods of analysis of the possibility of granting certain penal execution benefits, preventing several people from being abandoned in the system, without regime progression or monitoring of their situation (Caetano, Oliveira, 2021).

Thus, considering that the expansion of the informational society is directly related to the expansion of computational machines and software, implementing the use of Artificial Intelligence (AI), through algorithms, in the Brazilian prison system becomes imperative, given the potential for positive effects to be produced in the practical field. In the words of Fábio Porto (p. 106, 2022), "the era of living in the current world is exponential, and the speed of transformations leads subjects to an unprecedented change in pattern at a global level". In the professional and business fields, technological acceleration has unfolded in what is called digital transformation, which has been made possible by the development and the possibility of easy access to new technologies.

CONSEQUENCES AND PERSPECTIVES OF THE USE OF ARTIFICIAL INTELLIGENCE IN THE BRAZILIAN PRISON SYSTEM

The criminal sciences are constantly adapting to society, increasingly seeking to combine the science it produces with the philosophical currents of each era. The current trend, not only in the field of knowledge, but worldwide, is the increase in the use of technology, especially the so-called Artificial Intelligence (AI). It is noticeable, therefore, the need to make visible the digital transformation in Law, integrating the forensic area with correct and structured sources of information, with the ability to learn to collaborate in the decision-making process, as well as to avoid manual and repetitive work (Morais da Rosa, p. 03).

The use of this new technology, as Gustavo Pedrina (2019, p. 1590) adds, "can create more balanced justice systems, with fairer results in their decisions, but it is necessary to analyze the results of these technical innovations from a scientific point of view, with all the cautions and tests that science recommends." Therefore, the high potential of Artificial Intelligence (AI) is perceived, which impacts, through computerization and the use of intelligent mechanisms[4], the development of various sectors of society.

It is likely that in the near future, Artificial Intelligence (AI) will present itself as the answer to several problems of humanity, including panoramas of studies of the human mind, as what once seemed impossible is becoming possible from the diffusion of Artificial Intelligence (AI) methods, when cognitive activities can be performed or improved through the use of intelligent machines and specific programs. Although it is unlikely that this new technology will completely replace human work, there is no denying that it provides scenarios that simulate human decision-making and, in doing so, demonstrate the possible reasons for the action. Thus, "it is necessary to treat the technology as a non-neutral technique that is still evolving, as well as to present the real point of its development, removing myths and unvalidated versions of use." (Pedrina, 2019, p.1591)

Increasingly present in society, new technological tools are expanding to the most diverse legal activities. In this research, we seek to verify the use of Artificial Intelligence in the Brazilian prison system as a form of state control and guarantee of rights. In this sense, Alexandre Pimentel and Beatriz Orengo (2021, p. 307) highlight that:

> The process of incorporating these new technologies into the legal world requires, however, that their uses observe the fundamental rights enshrined in the Federal Constitution. To this end, it is necessary that more in-depth studies be carried out, so that the potential use of the new tools can be investigated and these can be well used, thus being able to constitute extremely relevant mechanisms in helping procedural speed and judicial decision-making, therefore, in the very realization of fundamental rights.

Preliminarily, it should be noted that there is no way to establish a critical analysis of the consequences and perspectives of the use of Artificial Intelligence (AI) in the Brazilian prison system if there is no minimum understanding of how it is structured and organized. And here algorithms come into play. In the words of Rodrigo Guimarães (2019, p. 1564), it is the algorithms that give life to the machine, which "are characterized by a set of

---

[4] Such mechanisms are based on the possibility of a non-human agent developing and performing activity on their own, through a set of available information.

mathematical instructions, they are a sequence of tasks that tell the computer what it must do to achieve an expected result in a limited time."

Thus, for a computer to be understood as endowed with Artificial Intelligence (AI), it is "necessary to provide it with as many algorithms as necessary to teach the computer, making it have the representation of knowledge and be able to overcome the natural language barrier." (Guimarães, 2019, p. 1564 and 1565). It can be seen, therefore, that the representation of knowledge[5], in this case, is the act of describing knowledge in detail so that Artificial Intelligence (AI) understands how, where and when to apply such information, based on previous experiences.

In the context addressed in this research, it is assumed that a computer equipped with Artificial Intelligence (AI), through the algorithmic system, has the potential to assist or even replace human labor within the Brazilian prison system, thus aiming at the exercise of state control and the guarantee of the rights of the re-educated. To this end, as a way of executing this new technology, it seeks the creation of algorithms aimed at analyzing compliance with requirements provided for in the penal codes (Penal Execution Law, Criminal Procedure Code and Penal Code), and from this, the effectiveness of State control and the guarantee of the rights of those prisoners by the criminal system.

To this end, it should be highlighted, as Eduardo Riboli (2019, p. 02) adds, that "the change to an information society, increasingly linked to cyberspace, presents new challenges, especially for the judicial authorities and the legal system of each country." In this way, the creation of an algorithmic system whose purpose is to assist state control and guarantee the rights of inmates in the Brazilian prison system is efficient, as long as the possible challenges that may arise for the Brazilian legal system are taken into account, considering that this tool is an innovation arising from Artificial Intelligence (AI).

Despite being a current technological tool, the use of Artificial Intelligence (AI) abroad is widely used in the field of criminal sciences. In countries such as Singapore, Finland, Hong Kong and the United States of America, smart prisons [6]are already a reality,

---

[5]The sense of knowledge employed refers to the information that a "software" needs to present a behavior considered intelligent. That is, with the acquisition of knowledge it is possible to develop a program linked to a bank that stores a contained memory of information about a certain particularity.

[6] Such nomenclature is defined based on the use of Artificial Intelligence (AI) in the prison system, through an algorithm, which seeks to store data regarding the criminal history of a re-educate, from his entry and exit in the establishment, classification of the crime committed, time of sentence served, information on transfer between institutions and among others. Such data is used to make decisions on how to best manage sentence fulfillment, in order to produce more positive results, reduce the commission of crimes and facilitate decision-making by the State.

so the implementation of the use of algorithms in the Brazilian prison system is not a mere utopia, presenting itself, in fact, as a tool suitable for state control and guarantee of the rights of inmates (Silva, 2023).

Thus, in this scenario of technological evolution and assimilation of new technologies, the creation of an algorithmic system [7]that seeks to verify compliance with the requirements for: progression of sentence regime; conditional release; remission of sentence; unification of sentences and detraction of sentence, can be presented in a possible and effective way to guarantee the rights of re-educating students. in addition to contributing to the decarceration and cost reduction of the State. Effectiveness and guarantee of rights, efficiency, aid in state control and cost-benefit are presented as favorable consequences for the implementation of the use of Artificial Intelligence (AI), through algorithms, in the Brazilian prison system.

The effectiveness and guarantee of rights is ensured in the automatic granting of benefits to inmates based on the fulfillment of requirements provided for in criminal legislation. That is, from the moment that the inmate meets all the requirements for the granting of a benefit (regime progression, for example), the algorithmic system, equipped with artificial intelligence and created for this purpose, will identify the conditions met and, automatically, grant the benefit to the one who is incarcerated.

The exercise of state control is configured from the possibility of automatic granting of benefits to the incarcerated, at which time it will be able to identify in advance those who will be entitled to the benefits, in order to organize itself with the flow of re-educating people from the prison system, in addition to the possibility of reducing processes whose purpose is the granting of said benefits. Regarding efficiency, it consists of training machines to act in the tasks of procedural organization and identification of the fulfillment of requirements for granting benefits, generating, for this, time savings to the servers who performed the mission, considering the agility of the activity developed through the algorithmic system.

In this sense, Felipe Giacomolli (2022, p. 109) assures that the possibility of using Artificial Intelligence (AI) in the criminal justice system is an efficient measure, highlighting that:

---

[7] It should be noted that what is proposed with the implementation of the use of Artificial Intelligence in the Brazilian prison system is the expansion of the possibilities for a more productive and beneficial work for the whole society, not the massive replacement of legal professionals by an algorithmic system.

This advance stems from the development of disruptive technological innovations in the context of the Fourth Industrial Revolution, from which computers themselves become capable of making decisions much faster and more effectively than humans, since an algorithm operated by an intelligent computer model will automatically analyze a huge amount of data and information in a fraction of seconds, whereas the human mind is capable of processing a small amount of data in a much longer time.

It can be seen that this movement to introduce Artificial Intelligence (AI) systems in the field of justice, which is called by some the technological turn in Law, has been consolidating and rapidly permeating all levels of jurisdictional provision (Giacomolli, 2022). In the criminal justice system, it is believed that the use of the algorithmic system is an efficient measure to guarantee the rights of inmates and the exercise of State control. As Gustavo Pedrina (2019, p. 1602) asserts, "this type of application can be recognized as a better technique for the instruction of the criminal process, based on better delimited parameters, making the criminal process faster and more precise."

There is still much to be discussed, clarified, explored and delimited about the use of Artificial Intelligence (AI), through algorithms, in the Brazilian prison system as a form of state control and guarantee of the rights of re-educates. However, the debate already initiated in this research demonstrates the possibility and potential effectiveness of the use of this new technology in the prison system.

In this way, understanding how the use of Artificial Intelligence (AI), through algorithms, as a way to guarantee the rights of inmates and control by the State impacts the criminal justice system and how it will be possible to take advantage of this new technology in improving procedural performance becomes inevitable and urgent.

CONCLUSION

In the face of constant political, legal and technological transformations, contemporary civil society is inserted in a process of change, with new technologies being the main responsible, through the information society. In this way, a society run by machines is no longer utopian, since contemporaneously social dynamics have been the result of the answers offered by Artificial Intelligences (AI).

Due to the growing expansion of technological tools in society, the criminal justice system must adjust to keep up with and face the new challenges arising from this evolution. However, although it is essential and urgent that the criminal justice system

adapts to this constant evolution and mutability of technological resources, such adaptation needs to respect and guarantee the provisions provided for in the Federal Constitution.

Thus, the research sought to present a new model of tool that seeks to assist state control and guarantee the rights of the incarcerated who make up the Brazilian prison system, based on a mode of social and economic development in which technology plays a relevant and efficient role. From this perspective, if we consider Law as a process of adaptation of society, we can visualize the theme researched through the definition of social circles studied by Pontes de Miranda, still in the nineteenth century, since social interaction is undergoing adaptations capable of bringing values that justify the creation of new institutions.

However, it should be noted that the topic addressed is in the study and improvement phase, that is, in the absence of constitutionally oriented legal regulation that meets and regulates the specificities pertinent to the use of this technological mechanism in Brazil, Artificial Intelligence for the purpose mentioned here is in the study phase based on obedience to the precepts stipulated in the Federal Constitution. To bet that the use of algorithms is presented as a solution or way to facilitate human work is to believe that the use of new technologies can become efficient and be improved according to the need for which artificial intelligence will be developed.

Thus, it was sought to demonstrate the possibility of implementing Artificial Intelligence (AI), through algorithms, as a form of state control and guarantee of rights in the Brazilian prison system. In view of the possibility of different results resulting from the use of this new technology in the prison system, the research invested in an attempt to demonstrate that Artificial Intelligence (AI), through algorithms, can assist and guarantee the rights of incarcerated people, since it can be used as a way to reduce over-incarceration, through the creation of a system that automatically monitors the end of the sentence period, as well as efficiently alert the notary service about the periods of analysis of the possibility of granting certain penal execution benefits, preventing several inmates from being abandoned in the system, without regime progression or monitoring of their situation.

It is believed that a study that attempts to evaluate the possibility of implementing this new technology in the given prison context can highlight gaps to be filled, points to be improved and rights to be guaranteed, within the scope of incarcerated people in Brazil,

provided that standardization, governance and inspection mechanisms are established to avoid violations of the provisions provided for in the Federal Constitution.

Thus, highlighting differentiating and plural contours obliges the criminal justice system, through state power, to position itself, reflect and build new conceptions of guaranteeing rights. In this sense, it was observed that Artificial Intelligence (AI), through the algorithmic system, can be seen as a convenient, effective and innovative instrument, as long as the need to think about the new challenges arising from the use of this new technology, as well as the preservation of fundamental rights and relevant social values, is disregarded.

REFERENCES

1. Adms, L. I., Gonçalves, M. P., Thomé, C. V. B., & Eraga, C. M. (2024, March 27). Desafios para a regulação da inteligência artificial no Brasil. ConJur. https://www.conjur.com.br/2024-mar-27/desafios-para-a-regulacao-da-inteligencia-artificial-no-brasil/

2. Amaral, A. J. (2020). Algoritarismos. In J. Sabariego, A. J. Amaral, & E. B. C. Salles (Eds.), Algoritarismos (pp. 1–20). Tirant lo Blanch.

3. Araújo, V. E. L. (2021). Reflexos da inteligência artificial no direito penal: Veículos autônomos e a responsabilidade criminal [Master's dissertation, Universidade Federal de Minas Gerais]. https://repositorio.ufmg.br/

4. Brasil. Senado Federal. (2023). Projeto de Lei nº 2338 de 2023. Dispõe sobre o uso da Inteligência Artificial. https://legis.senado.leg.br/sdleg-getter/documento?dm=9347622&ts=1720545987618&disposition=inline

5. Brasil. Senado Federal. (2024). Relatório preliminar de regulamentação da Inteligência Artificial no Brasil. https://static.poder360.com.br/2024/04/relatorio-preliminar-inteligencia-artificial-senado.pdf

6. Carvalho, C. C. B. (2018, June 10). A inteligência artificial na Justiça dos EUA e o Direito Penal Brasileiro. ConJur. https://www.conjur.com.br/2018-jun-10/claudia-bonard-inteligencia-artificial-direito-penal-brasileiro/

7. Caetano, M. A., & Oliveira, T. B. (2022). Sobre a legitimação de um juiz-robô: Um flautista de Hamelin para a justiça? In F. R. D'Avila & M. E. Azambuja (Eds.), Anais do I Colóquio Nacional do IEDC (pp. 1–20). Citadel.

8. Conselho Nacional de Justiça. (2020). Resolução nº 332 de 21/08/2020. Dispõe sobre a ética, a transparência e a governança na produção e no uso de Inteligência Artificial no Poder Judiciário e dá outras providências. https://atos.cnj.jus.br/atos/detalhar/3429

9. Damaceno, S. S., & Vasconcelos, R. O. (2018). Inteligência artificial: Uma breve abordagem sobre seu conceito real e o conhecimento popular. Caderno de Graduação - Ciências Exatas e Tecnológicas - UNIT - Sergipe, 5(1), 1–10.

10. Elias, P. S. (n.d.). Algoritmos, inteligência artificial e o Direito. https://www.conjur.com.br/dl/algoritmosinteligencia-artificial.pdf

11. Lemes, M. M. (2019). Inteligência artificial, algoritmos e policiamento preditivo no poder público federal brasileiro [Undergraduate monograph, Universidade de Brasília].

12. Giacomolli, F. (2022). A virada tecnológica do sistema de justiça criminal brasileiro: Do Projeto Victor à Resolução 332/2020 do Conselho Nacional de Justiça. In Anais do I Colóquio Nacional do IEDC - Direito e Tecnologia (pp. 1–20). Citadel.

13. França Junior, F. A., Santos, B. C. L., & Nascimento, F. C. L. (2020). Aspectos críticos da expansão das possibilidades de recursos tecnológicos na investigação criminal: A inteligência artificial no âmbito do sistema de controle de punição. Revista Brasileira de Direito Processual Penal, 6(1), 211–246. https://doi.org/10.22197/rbdpp.v6i1.343

14. Gonçalves, B. M., & Lopes, N. A. (2023, May 12). O uso da inteligência artificial no combate à violência política de gênero. UOL. https://noticias.uol.com.br/opiniao/coluna/2023/05/12/o-uso-da-inteligencia-artificial-no-combate-a-violencia-politica-de-genero.htm

15. Guimarães, R. R. C. (2019). A inteligência artificial e a disputa por diferentes caminhos em sua utilização preditiva no processo penal. Revista Brasileira de Direito Processual Penal, 5(3), 1555–1588. https://doi.org/10.22197/rbdpp.v5i3.313

16. Miranda, P. (2005). Sistema de ciência positiva do Direito (2nd ed., Vol. 1). Bookseller.

17. Morais da Rosa, A. (2019). A questão digital: O impacto da inteligência artificial no Direito. Revista de Direito da Faculdade de Guanambi, 6(2), 1–20.

18. Pedrina, G. M. L. (2019). Consequências e perspectivas da aplicação de inteligência artificial a casos penais. Revista Brasileira de Direito Processual Penal, 5(3), 1589–1606. https://doi.org/10.22197/rbdpp.v5i3.314

19. Pimentel, A. F., & Orengo, B. S. (2021). Perspectivas de aplicação da inteligência artificial no direito processual: Análise sobre as diretrizes éticas e eficiência jurisdicional. Revista Brasileira de Sociologia do Direito, 8(3), 305–325. https://doi.org/10.29327/rbsd.2021.003.001

20. Di Pietro, J. H. O., Machado, E. D., & Alves, F. B. (2019). Inteligência artificial e direito: Estabelecendo diálogos no universo jurisdicional tecnológico. Em Tempo, 18, 1–10. https://revista.univem.edu.br/emtempo/article/view/3203

21. Riboli, E. B. (2019). Eu sei o que vocês fizeram no verão passado: O uso de software de espionagem como meio de obtenção de prova penal. Revista Brasileira de Ciências Criminais, 156, 91–139.

22. Rocha, B. A. B., & Waldman, R. L. (2020). Os reflexos da inteligência artificial no direito e os novos desafios da carreira jurídica. Revista de Direito do Trabalho e Meio Ambiente do Trabalho, 6(1), 131–150.

23. Santos, B. C. L., & França Junior, F. A. (2023). Limitações acerca da reprovabilidade jurídica de agentes inteligentes. Revista Direito, Inovação e Regulações, 2(5), 11–21.

24. Silva, A. P. G. (2022). Inteligência artificial e cooperação jurídica internacional em matéria penal à luz do devido processo legal. In Anais do I Colóquio Nacional do IEDC - Direito e Tecnologia (pp. 1–20). Citadel.

25. Silva, R. F. M. P. (2023). A justiça da inteligência artificial e algoritmos de apoio à decisão em sistemas de gestão de ofensores [Master's dissertation, Universidade da Beira Interior].

26. Silveira, S. A. (2020). Sistemas algorítmicos, subordinação e colonialismo de dados. In J. Sabariego, A. J. Amaral, & E. B. C. Salles (Eds.), Algoritarismos (pp. 21–40). Tirant lo Blanch.

27. Zuboff, S. (2015). Big other: Surveillance capitalism and the prospects of an information civilization. Journal of Information Technology, 30(1), 75–89. https://doi.org/10.1057/jit.2015.5