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AI Use in Criminal Matters as Permitted under EU Law and as Needed to Safeguard the Essence of Fundamental Rights

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ABSTRACT

In this article we shall attempt to systematically chart the curent AI legislation, as well as the most important proposals for legislation at the level of the EU and to point the clashes and common ground with some of the major aspects present in criminal law that are linked with the protection of the essence of fundamental rights. The image of man as a natural prey to suggestion and influence has made some believe that artificial intelligence represents the proper solution for ensuring not only impartiality in a justice system, but also efficiency. This encouraged a relatively uncomplicated view on the AI applications that would facilitate the work of police and judicial authorities through identification, data management, facial recognition, crime prevention and risk assessment. Underpinning this reassuring hope is the concern for the protection of the essence of fundamental rights. Anchored in the practical examples arriving via the professional experience of magistrates, the use of AI can have adverse effects, undermining fundamental rights, such as the right to non-discrimination, the right to protection of personal data and to a private life, the right to freedom of expression, and the right to a fair trial given the increased risk of reproducing bias and perpetrating discrimination, not to mention the ability of criminals to make use of it for their own illegal purposes. Assumptions on the interaction of AI and the essence of fundamental rights start from the

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very nature of man and the structure of society and the EU legislator has tried to gather all of these essential elements under the *roof* of a limited number of policies and legislation instruments.

Keywords: AI, criminal law, the essence of fundamental rights.

1. INTRODUCTION

A constant reassessment of the impact of AI gives rise to different attitudes at the level of the EU legislator and in the middle of the judicial professions. Our methodology shall link together personal experience from the life of a lawyer and a prosecutor and the views of the EU legislator.

The European Parliament has expressed its views on AI in multiple policy contexts, for instance in its resolution of 14 March 2017 on fundamental rights implications of big data: privacy, data protection, non-discrimination, security and law-enforcement,in its resolution of 20 January 2021 on artificial intelligence: questions of interpretation and application of international law in so far as the EU is affected in the areas of civil and military uses and of state authority outside the scope of criminal justice and through the report of the European Parliament's Civil Liberties, Justice and Home Affairs (LIBE) Committee on AI in criminal matters. Council too has recognised the specific fundamental rights requirements arising from AI use in law enforcement, while emphasising AI's potential to such an extend that in its December 2020 conclusions on internal security, set an objective that, by 2025, law enforcement authorities should be able to use AI technologies in their daily work, 'subject to clear safeguards'.

There are plenty of clashes, as well as common ground and we meant to identify them as we analysis the current EU view on the use of AI. The belief that AI would represent an important risk in relation to fundamental rights is taken into consideration by responsible policy makers, ethical reseachers, as well as those that simply oppose progress. This statement represents an interesting contrast to an argumented view that AI would perform a mainly reinforcing role with respect to the fundamental rights of a person. Both the risks and the opportunities brought by AI technology center around its ability for information gathering, data interpretation, information disemination and the potential ability of changing decisions and attitudes.

Unlike those that choose either to see AI as a threat or as an opportunity, we shall suggest that AI is in fact a necessary instrument as its necessity stems from the fact that the volume of information has increased beyond the human capacity, the complexity of the world reaches new levels every day and the

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expectations of each of us have increased steadily over the course of time. We suggest that there is a causal link between these three elements and the need to use AI.

At this point it seems more important to establish the basic legislative infrastructure, than to worry unduly about the AI content in its activity. The regulations on AI shall play a vital role in determining whether the AI technology shall be perceived as a totalitarian and reprehensible instrument or it shall win sympathy by fostering international, national, and individual concrete and abstract prosperity, as well as access to an improved justice system.

At least four abstract, cross-disciplined and horizontal benefits could be claimed on behalf of the role of AI in relation to the development of the justice system. We believe that these four benefits would start with the first one, which would be in nexus with the fact that AI could, from the incipit of its usage, break down traditional instruments, that are beginning to be thought of as inimical to the modernisation development but were lacking proper replacement till this moment. Secondly, we believe that AI would help to promote the attainment of an integrated approach that shall work across all fields of activity, making justice a trully inter-disciplinary system. Thirdly, we have reasons to believe that AI would assist in the management of information, considering the ever encreasing number of cases, and in the development of new technical skills that would be used to tackle the growing complexity of the cases. Fourthly, we believe that AI could be harnessed to the complex task of rapid management of data towards the expansion of fundamental rights protection.

At least two important general obstacles to success were frequently overlooked. The first of these was the culturally-bound model of development which characterized much of the thinking especially when debating the justice system. A second obstable that was overlooked was the wide range of factors that already limite our fundamental rights, but that can be treated through AI.

There are some that assume that the current state of protection of the fundamental rights is ideal, but it is far from the current reality, and this can be proven easily by considering the constant case-law of ECHR, but also the fact that most of the world does not receive proper appreciation of its protection of fundamental rights. Society, left to itself, without new developments, would not bring about attitude changes conducive to the requirements of developing a better framework for the protection of the essence of fundamental rights, as well as increasing the number of people benefiting from this framework.

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2. THE NEXUS BETWEEN AI AND FUNDAMENTAL RIGHTS

We believe that any type of regulation that would try to foster the development of AI without infringing upon fundamental rights would have to consider the rights that are in the biggest danger. We have identified in the Charter for fundamental rights of the European Union several fundamental rights that shall be placed at the forefront of the interaction with current and future AI technology: the right to human dignity (Article 1) (Kanuck, 2019), respect for private life and protection of personal data (Articles 7 and 8)(Ishii, 2019), the right to freedom of expression (Article 11)(Llansó, van Hoboken, Leersen, Harambam, 2020), the right to freedom of assembly (Article 12)(Muller, 2020), the freedom of art and science (Article 13)(Flach, 2012), the freedom to conduct business (Article 16)(Dirican, 2015), the right to protection of intellectual property (Article 17(2)(Gervais, 2020), non-discrimination (Article 21)(Frederik, Zuiderveen, 2020), equality between women and men (Article 23)(Leavy, 2018), the rights of the child (Article 24)(Fosch-Villaronga, van der Hof, Lutz, 2021), the integration of persons with disabilities (Article 26)(Guo, Kamar, Wortman, Wallach and Morris, 2020), consumer protection (Article 28)(Lippi, Contissa, Lagioia, 2019), the workers' rights to fair and just working conditions (Article 31)(Korinek and Stiglitz, 2019), environmental protection and the improvement of the quality of the environment (Article 37)(Hojageldiyev, 2019), the right to an effective remedy and to a fair trial, the rights of defence and the presumption of innocence (Articles 47 and 48)(Završnik, 2020).

The assumption of massive AI impact results from its specific characteristics, as well as general opinion on favour of it being a technology that is characterised by opacity, complexity, dependency on data and autonomous behaviour that can adversely affect a number of fundamental rights enshrined in the EU Charter of Fundamental Rights. AI emerges in a world in which disinformation, missinformation and fakenews represent visible results of the technological development and its impact upon people's attitude, allegiances, and behaviour.

In order to use AI systems, we ought to focus on creating legislation with a high level of protection for those fundamental rights that are most at risk, as well as acknowledge at the level of the policy making system that in order to address the various sources of risks brought about by AI technology, we would have to work on a clearly defined, researche based, in compliance with the legislation, risk-based approach. Legislation, policy making and research and development can create the proper environment for AI technology. AI technology should prove compatible with fundamental rights as long as it is

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managed through proper legislation that sets requirements for trustworthyness, proportionate obligations on all value chain participants and ample mechanisms able to promote the protection of the rights. The aim should be to prevent the chilling effect of bias attitudes, impressions, preferences, perceptions on the coding behind any AI system used in relation to the justice system or that could interact with fundamental rights.

3. THE DYNAMICS BROUGHT BY AI INTO CRIMINAL LAW: EVIDENCE, DECISION-MAKING AND LEGISLATION

Concern about AI in criminal law is chiefly focused on the potential effects of AI on AI-based evidence in criminal proceedings and on an increasing set of decisions taken by smart robots and AI systems (Pagallo & Quattrocolo, 2018).

One experiment, conducted by the Dutch authorities in 2018, used AI skills such as generic intelligence, quick decision making, the ability to process lots of data in a short amount of time, stable decision making, defined tasks, analytic skills in speech recognition software, automated anonymization of judgements, criminal sentence analysis, debt problems analysis and an AI Knowledge based system. In practice the AI Knowledge based system analysed and searched for similar cases based on imported text, pleadings, extracted the facts itself and searched similar facts in other cases, searched for matching and ranking and for common cases such as traffic violations, no default cases, asylum, and custody cases.

Another experiment, in 2018, conducted by the Austrian authorities integrated AI into judicial policies so as to have AI for analyzing incoming mail, build automated routing of all incoming documents (structured and unstructured, scanned and via ELC), without manual processing of the administration staff of the courts, AI for digital file management and AI for analysis in investigation data, AI for anonymization of court decisions, AI for optimiziation of internal workflows, AI for decision support and AI for optimization in data acquisition.

3.1 Evidence

It is expected that as AI shall become a constant component of society it will start to produce content that shall represent evidence. There are voices that raise arguments against this potential outcome,

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as there exists a concern with the role of AI-driven technology in the justice system. There are lively scientific debates upon the role of AI-driven technology, some that would argue it is their role to simply record, while others believe that it would present the danger of transforming reality before the court.

Nevertheless, this type of evidence shall find its way in the court room. The obvious advantage of AI-driven evidence would be the fact that, on condition of proper programming, it would result into a neutral read of reality, which is not in some way dependent on cultural conventions, but on coding, a coding that can be improved. There are a number of problems with the possibility of using AI-driven evidence, but advantages do exist.

The analysis of content that results from the monitoring of human behaviour by machines and software bots shall create data that would fall within the category of machine evidence. AI evidence would present itself as a selection of and impartial comment on reality as it unfolded and it would transmit to the authorities photographs, films, data as evidence of reality unfolding. This type of evidence would have to be less littered with so called preferred meanings. Preferred meanings are associated with evidence provided by persons, as there is the risk for evidence to coincide with the perceptions of the dominant sections of society or with the personal prejudice of the person.

AI evidence, in an ideal context, would have the function of presenting defamiliarized data that would be spontaneously honest and continously confronted by other means of evidence. Nevertheless, the manner in which AI technology would be constructed in order to provide impartial evidence would have to completly safeguard against prejudice. Thus, from the start we would be dealing with a technology that is created based on the principle of impartiality. At our present time, it would be difficult for us to state that all evidence presented in court presents reality in an impartial, documented and devoid of bias manner. Although AI content, presented as evidence, could offer information that would be closer to an impartial view, as it would be designed this way, it is still difficult to accept it in competition with evidence coming from people that are not inherently impartial. Despite this paradox, we shall witness a difficult period in which types of evidence shall compete.

This new type of evidence shall pose procedural challenges in criminal justice systems across the world because they have traditionally been tailored for human testimony. Nota bene, we shall be dealing with information proffered as evidence in courts that deal with criminal cases that has been directly generated by AI-driven systems that not only observe, but evaluate in their own manner the behaviour of

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human beings. AI-driven systems could exist to predict future behaviour in an attempt to enhance safety, safeguard the law and prevent infractions.

In order to illustrate our case, we shall refer to a poignant example of this type of evidence, namely automated driving. Probably it is common knowledge that automated driving existence whenever driving is assisted by technology through a growing range of safety features that include instruments that not only observe, but also evaluate a driver's ability to control, pilot and retake control of a vehicle where necessary. Thus, a consumer product generates data. In the EU, for instance, we are already in the presence of new intelligent devices, including drowsiness detection and distraction warning systems. These AI-driven systems monitor human behaviour and will become mandatory in new cars beginning with 2022. In our present days and especially in the future, in the event that human-machine interactions cause harm or an accident involving an automated vehicle, such as car accidents which continue to be common in the EU, there is likely to be a plethora of machine evidence, or data generated by AI-driven systems, potentially available for use in a criminal trial.

It is not yet clear if and how this data can be used as evidence, however, there is a sense in which AI-driven systems involve some crucial changes from preceding signifying evidence gathering. As an AI-driven system maintains in its work a natural distance from reality, it penetrates deeply into the complex web of social relationships without getting tangled in it. AI-driven systems could find a place in criminal fact-finding and adversarial and inquisitorial systems, although the current approach of this issue is very differently perceived (Gless, 2020).

3.2 Decision-making

Decision making is a vital issue in criminal procedure and the involvement of AI-driven technology in it deserves a critical revision. For the weakness of any criminal case lays in its inability to explain the necessity, proportionality and legal arguments of a decision. There is consensus that decision making in criminal law, not without the due measure of legal and legitimate compulsion, represents a vital component within the legal process of establishing guilt or innocence.

Formally, the legitimacy of the criminal investigation derives from the accountability of those that investigate. We focus upon the sovereign will of those, that based on the law and on the evidence, decide on the outcome. The interests of those that are responsible with the decision making process in a criminal trial must be aligned with or made equivalent to the general interests of the society.

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Criminal law is depicted as the part of law where argumentation represents the most important component as it must grasp all the conditions which make freedom and impartiality possible. Decisions in this field may affect the freedom of people, and because human beings regard their freedom as one of the most precious things, there can be no doubt upon the legitimacy of the truth. Consequently, if a public offender decides to prosecute a suspect, he has to have good reasons for doing so and AI-driven technology can represent a proper instrument in gathering the necessary information to support either a claim of guilt or a claim of innocence.

In the next phase, the judge who finds a suspect guilty must firmly ground his decision and an AI-driven system can provide a large number of cases for the judge to choose the best argument. A perceived problem would be with the ability to measure the exposure of the judge to the AI chosen content. It should not be concluded that once the AI-chosen content becomes an instrument in supporting the activity of those involved in the criminal trial there is unlikely for us to contemplate a sizeable difference of outlook among these professionals. Professionals, through their current training, are less inclined to be influenced by human behaviour, but there is a real question on the impact of AI content. Magistrates are taught how to understand the means through which another person can influence their decision making process. This knowledge comes from years of experience.

Things are not so clear when we debate the way AI content would influence the decision-making process. Magistrates are more prepared to discover human influence, as well as understand the lack of impartiality of a person that could be a witness, for example, but interacting with AI-content would be something of a novelty. There exists a distinct care with the possibility of these quite different formulations of the social nature, coming from an AI system, might influence in a negative manner the decision process taking place in a criminal trial.

However, there is also the possibility for this type of data to permeate the judgement of a magistrate less pervasively. It will depend on the view of the person on the AI system, seen as a tool that can be used to gain efficiency and impetus in a criminal trial, as an authoritative information source, on which the magistrate risks to become more dependent as the complexities of social differentiation and the pressures of a rapidly changing worl threaten to become too much or an independent source of opinion. Such AI-systems, at this point in time, can be divided into rule-based systems, statistical systems and case-based systems.

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Case-based systems tend to be most popular nowadays, probably because they provide the judge with interesting information about similar cases (penalties, grounds), while his discretionary sentencing-competence is respected. Furthermore, the AI systems have been seen as systems that assist the decision making process and systems that make their own independant choice (Lima, 2018). We believe that different AI tools would be needed for judges and public prosecutors as their task presents significant differences. This represents just an example of variable that ought to be taken into consideration, as while the public prosecutor intends to put forward a sentence claim that is in accordance with the severity of the offence, it is the task of the judge to find a balance in the severity of the case and the person of the suspect. This means that it is easier to provide the public prosecutor with guidelines than to do the same for the judge. The position of the suspect and victim is again different, not only in terms of relation with the infraction, but also in terms of procedural rights.

Underlying all these reactions is a common assumption: that the AI does indeed have considerable or can develop considerable influence over the manner in which evidence is gathered and decisions are being taken in a criminal proceeding; that in this sense AI is powerfull and, thus, dangerous. The solution centers around working on a proper algoritm that would embed it with ethical behaviour (Barabas, 2020).

It does not appear as self-evident; therefore, it does not represent a priority task for the research world, the potential of AI of being used by the criminal world or the situation in which an AI can become rogue and infringe upon the law and our rights. We believe that this ought to be the primary concern, as from ancient times criminals have tried to use technology to increase their ability to commit crimes. For instance, robbers use weapons, thiefs use surveillance equipment, smugglers use fast boats, drug traffickers use drones, Darknet has become an illegal market for stolen personal data, credit cards and weapons and cyber crimes happen on a daily basis on the internet, a tool imagined to become an instrument for science, social connection, communication and information (Dremliuga, Prisekina, 2020).

Evidence already exists that underlines the ability of organised criminal groups of understanding technology. In fact, based on statistics and evidence gathered, the energy and ingenuity with which fraud rings and cyber criminals have deployed AI-based solutions has matched that of institutions meant to prevent such a behaviour. Moreover, the businesses and organisations that work to protect themselves from bad actors such as fraud rings and cyber criminals have become a daily target. In fact, the reality is that AI machines have been put already to malicious use and this use has resulted into judicial effects, damages and prejudices. There is a wide range of methods in which AI machines have been used in illegal activities, for example, from click farms to complex model extraction schemes (Vaithianathasamy, 2019).

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A natural evolution would be for the criminal world to move from AI as an instrument, to AI as an escape goat and to AI as an independent criminal. For the second example, consider the fact that there are companies that started to employ algorithms in order to replace employees as the leading cause of corporate misconduct. For as long as contemporary legal theorists can recall, the legislator has defined through legislation the concept of corporate misconduct in terms of employee misconduct. This misconduct covered a broad range of activities and behaviours ranging from civil discrimination to criminal insider trading.

Today, however, breakthroughs in AI technology, as well as the development of automated data allows automated systems to make an important number of corporate decisions, for example, it can decide the person that is deserving of a loan or what stock should be recommended for purchase. Nota bene, reporting does not simply mean collecting facts. It does not represent a matter that is limited to collecting facts and fact related information. Facts do not exist on their own, as we have been convinced till this moment, but are located within wide-ranging sets of assuptions. The introduction of AI technology might change these types of assumptions or eliminate them. These technologies introduce valuable efficiencies, but they do remove or reduce the incidence of corporate harm.

Unless the law adapts, and it can only adapt on condition that the overall mentality adapts, corporations will become increasingly immune to civil and criminal liability. To some point the legislator is trying to maintain an equilibrium between a highe degree of responsability and a low degree of responsability, but with this new technology we might find ourselves in the situation in which not only corporations, but medium or small companies, can easily transfer responsability from employees, for which they are liable, to algorithms, for which they are not liable (Mihailis, 2020). A lack of liability shall put in danger the consumer, as well as block innovation and improvement. Nevertheless, such crimes have received little concern from the publica although they represent a danger to the property and financial resources of the individual.

What if a person would order a robot or a controlled machine to hurt another human being? (Hallevy, 2010) Criminal liability for acts committed by AI systems deserves a serious analysis that ought to involve the ability of AI to accomplish *an actus reus*, being in command of a corresponding *mens rea*, the existence of the necessary cognitive capacities that would constitute responsibility (Lagioia, Sartor, 2020). The discussion would have to center around similar criminal activity accomplished by an online bot, the Random Darknet Shopper, in order to distingusih between criminal activities by humans and by artificial systems. Thus, we can imagine an actual evolution, in terms of judicial terminology, from the

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status of simple tools, instruments that are meant to augment human behaviour, to the status of "electronic persons" or even actual subjects of law.

3.3 Legislation

The magnitude of the technical, ethical, political, and social problems is appreciated by current legislative proposals that are meant to regulate the use of AI. Public concern about AI results into three major problems that need to be considered whenever legislation is being created to foster the use of AI systems. Anxious about this new technology, nervous at the assumed consequences of AI use, regulations on AI entities become complicated because of three reasons.

The first one is represented by the conceptual difficulties in defining AI systems. The second difficulty in constructing a proper legislation is in nexus with the existing party liability mechanisms, such as corporate liability, which is unsuitable for non-humans. The third difficulty, which is probably the most difficult to tackle, stems from the real fact that criminal liability, and liability in general, has always been naturally assumed to belong to a human offender, meaning that AI entities cannot satisfy the mens rea element of criminality and it will present a difficult task to uncover a chain of causation between the incriminated act and the human operator or creator.

Underlying all these reactions and barriers, finally, there is the fact that the purpose of sentencing is so deeply rooted in society that its application to non-human involvement would be inappropriate. AI systems ultimately show that criminal law and social expectations are inextricably linked. This paper accordingly raises two talking points: the role of criminal law going forward, and whether AI entities will ever be accepted into the wider society. An argument for its acceptance results from the current proposal on AI regulation. In line with our discussion we have identified that the proposal for a Regulation laying down harmonised rules on artificial intelligence (Artificial Intelligence Act) focuses on limiting the use of AI in the following justice related scenarios:

- when it is used by law enforcement authorities for making individual risk assessments of natural persons in order to assess the risk of a natural person for offending or reoffending or the risk for potential victims of criminal offences;
- when it is used by law enforcement authorities as polygraphs and similar tools or to detect the emotional state of a natural person;
- when it is by law enforcement authorities to detect deep fakes

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- when it is by law enforcement authorities for evaluation of the reliability of evidence in the course of investigation or prosecution of criminal offences;
- when it is by law enforcement authorities for predicting the occurrence or reoccurrence of an actual or potential criminal offence based on profiling of natural persons or assessing personality traits and characteristics or past criminal behaviour of natural persons or groups;
- when it is by law enforcement authorities for profiling of natural persons in the course of detection, investigation or prosecution of criminal offences;
- when it is for crime analytics regarding natural persons, allowing law enforcement authorities to search complex related and unrelated large data sets available in different data sources or in different data formats in order to identify unknown patterns or discover hidden relationships in the data.
- when it is by competent public authorities to assess a risk, including a security risk, a risk of irregular immigration, or a health risk, posed by a natural person who intends to enter or has entered into the territory of a Member State;
- when it is by competent public authorities for the verification of the authenticity of travel documents and supporting documentation of natural persons and detect non-authentic documents by checking their security features;
- when it is to assist competent public authorities for the examination of applications for asylum, visa and residence permits and associated complaints with regard to the eligibility of the natural persons applying for a status.

It is obvious that Certain AI systems intended for the administration of justice and democratic processes should be classified as high-risk, considering their potentially significant impact on democracy, rule of law, individual freedoms as well as the right to an effective remedy and to a fair trial. In particular, to address the risks of potential biases, errors and opacity, it is appropriate to qualify as high-risk AI systems intended to assist judicial authorities in researching and interpreting facts and the law and in applying the law to a concrete set of facts.Such qualification should not extend, however, to AI systems intended for purely ancillary administrative activities that do not affect the actual administration of justice in individual cases, such as anonymisation or pseudonymisation of judicial decisions, documents or data, communication between personnel, administrative tasks or allocation of resources.

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4. CONCLUSIONS

The purpose of this article is to point out the most relevant risks in this scenario. It should be obivous that there is no ambition from the part of the authors to deliver a definitive answer as technology, legislation and policy represent changing elements, but, rather, it is the ambiton of the authors to trigger a discussion on the need to set specific, clear, researched questions about if and how AI can be integrated into the criminal justice system.

AI used in the justice system has the potential to replace labour-intensive, paper-based systems which create error, duplication, inefficiency, processes that are hard to administer and even harder to navigate for citizens. People would have the benefit of seeing during their lifetime a replacement of this conservative system into systems that focuse on the efficient use of descriptive analytics, as well as of models, predictive analytics, text, content and data mining that would include, without being limited to, object recognition and statistics. So as to better understand the vision, we would have to think in terms of access to the justice system. In terms of access it would result into a transformation that would involve the use of legacy, old, ancient, stored data and content into a complex understanding of the person. By using the stored data or by collecting new data the system would be able to help redesign services towards the benefit of the person. A proper AI system can be used to manipulate, understand and analyse previously unused internal information to improve the current and future administration of justice.

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