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# AI in Law Enforcement, Education, Healthcare and the Response from European Institutions

## Abstract

Artificial Intelligence (AI) is not merely a technological advancement but represents a revolutionary approach to many processes occurring in everyday life. AI can impact, among other things, the teaching and learning process (Education) or the prevention, screening and treatment of diseases (Healthcare). Finally, AI may have an impact on Law Enforcement and the Judicial system in general. The first purpose of the research was to show that AI may be applied similarly in Education, Healthcare and Law Enforcement, that is, to support decision-makers and/or as a fully automated decision-making entity. The second purpose of this research was to provide a glimpse at the response of the European Union (EU) and the Council of Europe to the development of AI. The results of the analysis showed that it is indeed possible to point to similar types of situations in Education, Healthcare and Law Enforcement, where AI is applied. At the same time, the work on the regulations of European Institutions seems to take into account the different types of situations in which AI is applied. The method used in this paper is of a descriptive character with references made to scientific, popular science literature and legal acts.

**Keywords:** Artificial Intelligence, law enforcement, police service, human factor, European Union, Council of Europe

## Introduction

Artificial Intelligence (AI) may be understood as the substitution of machine logic for human cognition (LIBICKI 2021). In other words, AI tries to make computers do the same things that minds do (BODEN 2018). This represents a revolutionary approach to many processes that occur in everyday life. AI and its technologies are present in, among other things, Education, Healthcare and Law Enforcement (understood not only as criminal law). The first purpose of the research was to show that AI may be used similarly in Education, Healthcare and Law Enforcement, that is, to support decision-makers and/or as a fully automated decision-making tool. The second purpose of the research was to give a glimpse at the response of the European Union (EU) and the Council of Europe to the development of AI.

The method used in the paper is of a descriptive character with references made to scientific, popular science literature and legal acts. The formal requirements of the publication limit these considerations. This paper was presented at the 1<sup>st</sup> LEPSY Central European Exchange Programme for University Studies (CEEPUS) Research and Cooperation Conference organised by Ludovika University of Public Service on 12 March 2024 (online).

## AI in Education and Healthcare

AI may impact, among other things, the process of providing and receiving an educational service (Education) or the process of prevention, screening and treatment of diseases (Healthcare).

AI may support the process of providing an educational service by making some “teaching tasks” easier (from a teacher’s perspective). As a first example, we may refer to AI, which can gather data on student learning behaviour and plan the best teaching path for educators (CUI et al. 2018). As a second example, we may refer to computing to construct virtual classrooms and virtual laboratories by fusing physical space with virtual space (JAIN–RAGHURAM 2024). This is an example of scientific assistance, whose task is to create a “friendly scientific environment”.

AI may also support the process of receiving an educational service by making some “learning tasks” easier (from a student’s perspective). As a first example, we may refer to real-time language translation during the learning process (İÇEN 2022). It makes global information much more accessible to students everywhere and may be

considered an aid in the process of acquiring knowledge. In the second example, we may refer to AI that may help learners with hearing or visual impairments. For example, it may convert text to speech and speech to text to enable people with visual, hearing, or speech impairments to access content, ask questions and communicate with their peers (UNESCO 2023a).

The above-mentioned examples are typical of technologies that help in the process of providing and receiving educational services.

However, we may also point to chatbots enabling students to receive extensive answers in many areas of knowledge (JAIN–RAGHURAM 2024). This is more of an example of a self-teaching technology (without human intervention). The student receives an educational service (knowledge) not from a human (teacher) but “from technology” (a chatbot).

The above-mentioned methods, that is, those that do not assume human intervention and/or participation in the learning and/or teaching process, may pose threats to those whom the education system is intended to serve. Stuart J. Russell drew attention to certain threats that the above-mentioned AI technologies (methods) may pose: “Firstly, they cannot – or could not – have a conversation with the student, answer questions or develop a relationship. Another problem is that AI tutoring systems do not understand the content that they teach. They might present content about chemistry, but they do not understand chemistry, which means that even if they were able to have a conversation with the student, they could not answer questions properly” (UNESCO 2023b: 17). This shows that the lack of awareness on the part of AI may harm the conscious recipients of services provided by AI. This especially occurs when AI is not controlled by humans.

Moreover, AI that does not assume human intervention and/or participation in the learning and/or teaching process may pose a threat to the entire system of education of a state. First, the state and its education system may lose their capacity to teach because of a lack of teachers. This may occur in crisis situations that cannot be ruled out, that is, when AI is unable (even temporarily) to perform its tasks. Second, we should consider what to do with teachers being replaced by AI. Third, the question arises as to whether and when the operation of AI can be attributed to humans or authorities. This last issue is important for the broader vertical relationship between an individual and authorities (also in the context of individual rights and freedoms).

There are some similarities between AI applications in Education and Healthcare. Analysing medical data, making predictions, assisting in diagnoses and supporting

treatment decisions are the main ways that AI is applied in Healthcare. These are situations in which AI is supportive.

However, there are also many manual, automated and AI tools in robotic surgery (BOAL et al. 2023). AI may also eliminate many routine diagnostic tasks currently performed by radiologists and pathologists. “Among the medical specialities most poised for transformation by AI are those involved in interpreting visual data for diagnostic purposes – namely pathology, radiology, and dermatology. Companies are rapidly developing AI systems that automate tasks, such as analysing tissue slides, medical images, and skin lesions, to detect diseases. These technologies promise greater efficiency, accuracy, and consistency relative to human specialists in identifying potential tumours, fractures, and skin conditions” (GEORGE–GEORGE 2023).

### AI in Law Enforcement

There are objective prerequisites and reasons for applying AI to Law Enforcement. “They are conditioned upon the fact that modern policing is required to solve many issues – reducing crime, optimisation of law enforcement agencies, improving the efficiency of resources to ensure the activities of law enforcement agencies, increasing public confidence in law enforcement, and reduction in corruption” (DEMPSEY et al. 2023). However, it is also emphasised that the role of AI in Law Enforcement, from the perspective of law enforcement agencies and their officers, varies considerably depending on general familiarity with the concept of AI and how much individual jurisdiction employs these technologies in their communities (DEMPSEY et al. 2023).

In addition to criminal law, AI is used in other areas of public law. As in the case of Education and Healthcare, in the case of Law Enforcement, we can point to AI aimed at helping decision-makers and fully automated decision-making. Surveillance may monitor communication, and sensors and trackers in mobile phones “can be used to monitor or infer locations, transactions, and character traits, including needs, preferences, and interests of individuals” (CUSTERS 2023). In the above-mentioned manner, AI supports decision-making in the public sector. The results of surveillance are supervised and assessed by decision-makers (law enforcers) (BINKOWSKI 2023).

It is said that a secret source of power of surveillance is “the secret massive-scale extraction of human-generated data” (ZUBOFF 2022). People leave a lot of digital tracers everywhere. This makes surveillance effective. It is also said that “the lawful abolition

of secret massive-scale extraction is democracy's Golden Sword that can interrupt the power source upon which all surveillance capitalism's destructive economic operations, governance takeovers, and social harms depend" (ZUBOFF 2022).

There are numerous examples of AI fully automated decision-making in Law Enforcement which may also be defined as a technology that "sets the rules and enforces compliance with these rules, without any intervention of human enforcers" (CUSTERS 2023). Automated Border Control e-gates may be an example of fully automated decision-making. They are currently operating in most airports worldwide. Facial, fingerprints and iris recognition algorithms allow (or not) to pass passport control (automatic gate). These algorithms simultaneously set rules and enforce compliance with these rules at the same time without human intervention (SANCHEZ DEL RIO et al. 2016; KOWALCZEWSKA-KIJEWSKA 2022). A typical example of private law is an online provider of products and services that unilaterally sets terms and conditions. If a consumer rejects accepting such conditions, they will not have access to the service.

Bart Custers distinguished two major ways in which AI (technology) plays an increasingly important role in Law Enforcement, namely via surveillance and via technoregulation. He understands technoregulation as a technology that "sets the rules and enforces compliance with these rules, without any intervention of human enforcers" (CUSTERS 2023).

Cinara Rocha and João Carvalho pointed out eight main uses or possible uses of AI in the Judicial system (ROCHA-CARVALHO 2022): 1. Similar cases "push systems" (they are designed to automatically "push" similar cases to help judges and staff reflect on specific cases); 2. Litigation risk assessment systems (based on judicial statistics and analysis of similar cases; they provide basic information that could evaluate possible judgment results in advance); 3. Document-assisted generation systems (designed to help judges write judicial documents); 4. Speech to text systems (they convert spoken language into written text used in courtroom records or hearings); 5. Risk prediction systems (they are used in the penal system and are supposed to predict risks for violent crime, sexual crimes and recidivism); 6. Chatbots (they answer questions submitted to the Judiciary via a keyboard or verbally concerning a relevant case, verdicts, laws, how to bring a lawsuit, how to investigate legal rights and how to obtain evidence); 7. Emotions recognition systems (they can identify the speaker's emotional state); 8. Filtering systems (they organise information according to a defined criterion and take action, such as grouping cases and returning or allocating cases to judges).

## The response of the EU and the Council of Europe

The European Commission for the Efficiency of Justice (CEPEJ) of the Council of Europe adopted in December 2018 the first European text to set out ethical principles relating to the use of AI in Judicial systems (European Commission for the Efficiency of Justice – CEPEJ 2018). CEPEJ has identified the following core principles to be respected in the field of AI and justice: principle of respect of fundamental rights, principle of non-discrimination, principle of quality and security, principle of transparency, impartiality and fairness; principle “under user control”.

In December 2023, the European Parliament and the Council of the European Union reached a political agreement on the AI Act (European Commission 2023). The new rules will follow a risk-based approach: minimal risk (AI systems identified as minimal risk will benefit from free-pass and absence of obligations); high-risk (AI systems identified as high-risk will be required to comply with strict requirements including human oversight; it will include, among other things, administration of justice and democratic processes), unacceptable risk (AI systems considered a clear threat to the fundamental rights of people will be banned; for example, systems that manipulate human behaviour); specific transparency risk (AI systems such as chatbots – in this case, users should be aware that they are interacting with a machine; deep fakes and other AI-generated content will have to be labelled as such). Companies that do not comply with the rules will be fined (European Commission 2023).

As announced on the Commission’s website fines will range from €35 million or 7% of global annual turnover (whichever is higher) for violations of banned AI applications, €15 million or 3% for violations of other obligations and €7.5 million or 1.5% for supplying incorrect information (European Commission 2023).

The above-mentioned “regulation” may be named a world-first attempt at the horizontal regulation of AI systems. However, this “regulation” is not free from criticism (VEALE – ZUIDERVEEN BORGESIUUS 2021; THELISSON–VERMA 2024).

## Conclusion

AI and its development are changing every aspect of our lives and posing serious ethical and regulatory challenges. This requires work at both national and international levels. The most frequently cited risk associated with AI in the literature is bias, which may violate fundamental rights and result in discrimination (ROCHA–CARVALHO 2022).

It can be concluded that Education, Healthcare and Law Enforcement experience significant developments in AI. This study presents two types of situations involving AI. First, AI supports decision-makers. Second, AI is a fully automated decision-making system. This applies to all the three areas discussed. Processes related to data collection and analysis may be examples of the first situation. Chatbots are an example of a second situation. Given the EU's risk-based response to AI, it is safe to say that the first type of situation can be covered (in principle) by high-risk regulations. The second situation (mainly chatbots) is covered by specific transparency risk regulations.

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