

development of technology. Considering that, to ensure information security in the field of the Internet of Things it is necessary, first of all, to apply self-regulation, which should be ensured through close cooperation between technology companies and civil society. This minimizes government intervention in this area, which will contribute to the rapid development of innovative technologies. There is only the need for legal regulation of relations between civil society, consumer protection organizations and technology companies. First of all, efforts should be directed at protecting human rights from violations related to the functioning of the Internet of Things. It is necessary to prevent such violations by monitoring the installation of proper protective software on all devices connected to the Internet.

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MUZYKA V. V.

National University «Odesa Law Academy»,
Post-graduate student at the Department of European and International Law

USING ARTIFICIAL INTELLIGENCE IN JUSTICE SYSTEM AND THE MAIN CHALLENGES TO HUMAN RIGHTS REALIZATION

This article examines the issues of the operation and use of AI-powered systems and algorithms in justice system, and the main concerns they raise. It also analyses the most relevant examples of AI use, its ability to predict and the factors associated with predictive justice that may negatively affect human rights. Notwithstanding all the concerns, it is argued that AI-powered systems or algorithms may be used in harmony with human rights standards.

Key words: *artificial intelligence, AI, human rights, predictive algorithm, AI-judge.*

The reality of the world «as it is» is such that artificial intelligence (AI) might play a greater role than we think. Peoples all around the world use it in their everyday lives because AI brings obvious benefits, improve our lives and even makes us happier. However, relying enormously on AI may also

destroy people`s lives, violate human rights or heavily restrict them [1]. This is a key reason why various legal issues concerning the use of artificial intelligence and its compliance with human rights standards merit considerations.

Today AI systems may not only understand but also predict human behavior, what increases the desire to make use of it. But only few persons know how algorithm operates, whether it could provide unbiased results and what safeguards are implemented in a system designed, if any.

To exemplify some potential problems associated with the application of artificial intelligence, one must consider the leading case on this issue – the Loomis case. In 2017 Eric Loomis failed to challenge the decision of the Supreme Court of Wisconsin in the State v Loomis case. He did not succeed in overturning the decision of the Wisconsin Supreme Court concerning the use of COMPAS, risk-assessment software, in criminal sentencing. That algorithm considered Loomis as high risk for all the three types of recidivism: pre-trial, general and violent recidivism [3, para. 15]. The State representative emphasized all types of recidivism had to be considered since «all of these are factors in determining the appropriate sentence» [3, para. 18]. The Court in the person of Judge Scott actually did it by emphasizing at the hearing that «[t]he risk assessment tools that have been utilized suggest that you're extremely high risk to reoffend» [4, p. 18].

The main problem is that COMPAS was proprietary risk assessment software. It means the accuracy of scores could not be challenged because no one knew why Loomis was designated high risk and how this program calculated risks. Moreover, COMPAS was designed to calculate all scores by relying on gender of a suspect and on data about a similar data group («norming» groups) [3, para. 15]. Loomis thus insisted that his right to be sentenced based on accurate information, the right to individualized sentence and the right to be free from discrimination were violated [4, p. 18-19]. Indeed, there is still a room for discussion whether or not risk assessment played a determinative role in making a final decision. Whatever it was, it is certain that judges took into consideration the risk-assessments results despite COMPAS has been developed for the use of a particular state department, not for courts.

This decision has been criticized by human rights defenders and other activists, and raised serious concerns. First, the reliance of AI algorithms depends on the data they are trained on. If these data are biased, algorithm will be biased as well. And in the case mentioned, relying on gender and race did not (or hardly) serve the interests of justice. Moreover, if the cost of error is a human life, a person should know what factors are determinative for predictive algorithms and should be given the reasoning, which is behind the court decision to impose a particular criminal sanction.

Importantly, in 2016 a special project to predict *ex ante* decisions of the European Court of Human Rights revealed that AI system was able to predict its decisions with 79% accuracy in 584 cases. The most decisive factors for prediction were facts of each case. As regards to data set, it contains all the relevant cases associated with the application of Article 3 (prohibition of

torture), 6 (fair trial) and 8 (respect to private and family life) of the European Convention on Human Rights. AI-powered machine also relied upon the text extracted from sections or subsections of each case [2]. The result achieved raise an important question: whether or not the model of decision-making of AI-judges, which best match legal realism, is acceptable and may be applied to all cases.

Though in case with ECHR, it was no more than an experiment, there are some states that seriously think about using robo-judges at national level. For example, Estonia is about to use AI-judge in near future. Documents relating to a particular case will be fed into the robo-judge, which will analyze them and make a final decision. Since this project needs improvement, advice from practitioners will be considered for the purpose of refinement of the operation of a robo-judge [5]. Furthermore, an AI-powered judge is expected to deal with small legal disputes (of less than €7,000) and its decisions may be challenged before a human judge.

In any case, the impact of artificial intelligence systems and algorithm on the enjoyment of human rights depends on states that should impose legal framework and private sector that are responsible for its development. As noted Dunja Mijatović, European Commissioner for Human Rights, «the right balance between technological development and human rights protection» is what we need [1].

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