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Проф. др Славко Царић“
„ДВЕ ДЕЦЕНИЈЕ РАЗВОЈА ПРАВНЕ МИСЛИ“**

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AI - EASY LIFE OR EASY WAY FOR HIDDEN DISCRIMINATION?¹

Abstract:

In the last few decades, AI has become an inseparable part of human lives, going deeper with time into all their pores, facilitating day-to-day activities, and accelerating the progress of global society. However, being a creation of a man, AI also reflects some of his features, which could lead to bias in its work and discrimination of individuals or certain groups of the population. This defines the subject of the paper in which the authors research the influence of bias and discrimination by AI, and potential mitigation strategy for bias as a possible way of preventing discrimination in practice, with special reference to the EU and its approach to this issue. In concluding remarks, the authors suggest possible ways to remove bias in AI to mitigate discrimination, but they also express doubts about the long-term success of this goal.

Keywords: AI, bias, discrimination, EU

1. INTRODUCTION

A man- the most complex and perfect being ever created and lived on the planet Earth. Being aware of his capabilities, he never fails to quench the thirst for further progress and the search for „perfection“. Yet, at the same time, he is conscious of his restrictions and inability to reach that „perfection“ on his own. Thus, in the era of accelerated technological development, man has decided to share the role of the creator of the future with supreme technology through artificial intelligence (AI). Even though the first AI system was designed in 1955, the birth of AI usually

¹ Paragraphs 1,2, and 4 are by Tamara Staparski; paragraphs 3, 5 and 6 are by Valentina Ranaldi

connects to the famous Conference at Dartmouth College² initialized by Professor John McCarthy and held in 1966.³ From that point, AI being the “science and engineering of making intelligent machines”⁴, started to evolve rapidly and became an inseparable part of human lives. Since “intelligence is the computational part of the ability to achieve goals in the world”⁵ this may seem like a logical step in order to achieve those goals and facilitate everyday life. However, by giving the supreme technology the possibility to acquire and develop intelligence on its own, a man has opened the “Pandora’s box“. According to Paul Varilio⁶ „When you invent the ship, you also invent the shipwreck; when you invent the plane you also invent the plane crash; and when you invent electricity, you invent electrocution... Every technology carries its own negativity, which is invented at the same time as technical progress“. So, whether and what kind of negativity is brought about by the rapid evolution of AI?

2. BIAS AND DISCRIMINATION IN AI

Equality- a simple word with a powerful meaning, but very often misused and underestimated. Each person comes into this world as a unique individual made up of specific characteristics unique to him, and sharing, on the other hand, certain characteristics with others. And precisely all those similarities and differences that characterize us represent the beauty of the kaleidoscope of global society. However, although each person is an individual whose traits and particularities should be valued and respected, the history of human civilization is replete with examples of the misuse, and degradation of the human personality, often based on biases. In order to reduce these abuses to a lesser extent and to respect the personality of each individual or the group to which he belongs, the International Community led by the UN has dedicated special attention to the protection of fundamental rights against discrimination through the diversity of legal system acts. In this regard, the right to equality and non-discrimination is recognized in Article 2 of UDHR⁷ and represents the subject matter of multiple human rights instruments, such as ICCPR

2 In the summer of 1956, a small group of scientists came up with the idea of organizing the Dartmouth Summer Research Project on Artificial Intelligence. The event which took place at Dartmouth College in Hanover, New Hampshire for six to eight weeks, is to be considered as the key point event during which the AI, as a field, was born.

3 Flasiński, M. (2016). *Introduction to Artificial Intelligence*. Switzerland: Springer International Publishing, p. 4.

4 Artificial Intelligence, in Professor John McCarthy (26 August, 2023). Retrieved from: <http://jmc.stanford.edu/artificial-intelligence/what-is-ai/index.html>

5 Ibid.

6 A French philosopher and theorist best known for his papers about technology.

7 Universal Declaration of Human Rights (1948), United Nations, 217 A (III), p. 2.

(Articles 2 and 26)⁸, CRPD (Article 5)⁹, CRC (Article 2)¹⁰, ICESCR (Article 2)¹¹, and CMW (Article 7)^{12, 13}. All of them seek to protect vulnerable groups or individuals subject to discrimination on various grounds, such as race, colour, sex, language, religion, political or other opinion, national or social origin, property, birth or other status¹⁴. Even so, it is in human nature to unjustifiably discriminate different ones, thus, giving AI wider possibilities and freedom in making conclusions, people believe that computer systems and software solutions frequently make accurate, impartial judgments. Nonetheless, in practice, all systems based on AI can occasionally make incorrect, discriminating, or arbitrary decisions.¹⁵ Discussions on fairness and bias in AI have become more frequent as the use of AI systems has increased and potential biases as „a systematic error in decision-making processes that results in unfair outcomes” and discrimination have come to light.¹⁶ Taking into account that AI systems are a human product of the most rapid technological progress, the existence of bias in AI systems is also conditioned by the human factor. These types of AI systems produce discriminatory or incorrect outputs or provisions for some individuals or groups they belong to, based on their innate or acquired characteristics. They have the potential to unjustly distribute opportunities, resources, or data, violate civil liberties, endanger people’s safety, fail to provide everyone with the same level of service, and have a negative impact on their welfare by being insulting or offensive, for example.¹⁷ Having in mind that in

8 International Covenant on Civil and Political Rights (1966), United Nations Treaty Series, 999, pp. 2, 13.

9 Convention On The Rights Of Persons With Disabilities (2006), United Nations Treaty Series, 2515, p. 4.

10 Convention on the rights of the child (1989), United Nations Treaty Series, 1577, p. 2.

11 International Covenant on Economic, Social and Cultural Rights (1966), United Nations Treaty Series, 993, p. 2.

12 International Convention on the Protection of the Rights of All Migrant Workers and Members of Their Families (1990), United Nations, A/RES/45/158, p. 263.

13 The right to equality and non-discrimination, in Icelandic Human rights Center (26 August, 2023). Retrieved from: <https://www.humanrights.is/en/human-rights-education-project/human-rights-concepts-ideas-and-fora/substantive-human-rights/the-right-to-equality-and-non-discrimination>

14 Universal Declaration of Human Rights, op. cit. Article 2.

15 Beck, S. et al. (2019). *Artificial Intelligence and Discrimination*. München: Lernende Systeme – Germany’s Platform for Artificial Intelligence (26 August, 2023). Retrieved from: https://www.plattform-lernende-systeme.de/files/Downloads/Publikationen_EN/AG3-1_Whitepaper_Executive_Summary_final_200204.pdf p. 2.

16 Ferrara, E. (2023). *Fairness And Bias in Artificial Intelligence: A Brief Survey of Sources, Impacts, And Mitigation Strategies*. Los Angeles: University of Southern California, p. 2.

17 Smith, G. and Rustagi, I. (2020). *Mitigating Bias in Artificial Intelligence: An Equity Fluent Leadership Playbook*. Berkeley: Berkeley Haas Center for Equity, Gender and Leadership, p. 4.

the last few decades, AI systems have become an inseparable part of everyday life, this automatically implies that biased situations multiply with the development and frequency of use of AI systems. In that regard, AI-based decision-making has great potential to create new sorts of biases by evolving new categories and parameters and amplifying pre-existing prejudices.¹⁸ Bias in AI can come from a wide range of sources, such as data collecting, algorithm development, and user interpretation, while machine learning algorithms¹⁹ have the capacity to recognize and replicate bias in the data used to train them, leading to outputs that are unjust or discriminating.²⁰ In order to prevent discrimination as a final result, it is necessary to determine and eliminate bias from the AI. However, it is questionable to what extent this is feasible seeing that artificial intelligence seems like a “black box” to humans since it is based on machine learning algorithms that incorporate data in ways that are difficult for humans to comprehend.²¹

3. CASES OF BIAS IN AI

Since man’s goal is to make his daily life easier through the development of artificial intelligence, improving the complexity of the algorithms on which artificial intelligence is based significantly contributes to the achievement of this goal. They help to automate the processes that humans perform on a daily basis, as well as to successfully implement those that are beyond the reach and capabilities of humans. As the existing algorithms can predict, label, analyze, and process data and draw conclusions based on them, thereby facilitating the decision-making process for people it can be concluded that the era of accelerated technological development has significantly moved the boundaries of understanding a “brighter” future. However, apart from the benefits, the algorithms mentioned have a tendency to significantly violate fundamental rights. Taking into account the biases that enter AI in the already mentioned ways and intentionally or unintentionally cause discrimination, and how AI has entered the pores of our daily lives, this implies many cases of discrimination by AI in practice. In the following, a couple of real-life cases of discrimination against individuals or members of groups that share certain characteristics by AI will be presented.

Example 1: In the Netherlands, the tax authorities deployed algorithms that incorrectly classified almost 26,000 parents as having applied for childcare benefits falsely. A disproportionately high percentage of those parents were immigrants. The families involved experienced significant financial and psychological problems as a result of the enormous repayment obligations they were compelled to make.

18 Ntoutsis, E. et al. (2020). Bias in data-driven artificial intelligence systems—An introductory survey. *WIREs Data Mining and Knowledge Discovery*, 10(3), p. 2.

19 The method used by the AI system to complete its task.

20 Ferrara, E. op. cit., p. 2.

21 Bathaee, Y. (2018). The Artificial Intelligence Black Box and the Failure of Intent and Causation. *Harvard Journal of Law & Technology*, 31(2), p. 901.

The authority for data protection came to the conclusion that the AI system that the tax authorities were using was discriminatory in its data processing. The described situation has evolved into a warning about the harm that judgments made by biased algorithms can cause to individuals.²²

Example 2: Since 2014 the team of Amazon has been developing computer algorithms for reweaving job applicants' CVs in order to mechanize the selection process of the best candidates for filling positions. In the process of selecting potential candidates, Amazon used its "five-star rating" policy applied by customers when purchasing products on Amazon. However, by 2015, Amazon's software engineers found that their artificial intelligence, which they use to evaluate and select candidates, was biased against women, and that the AI system's training data were the source of the issue. Namely, the information used included recruiting trends going back ten years, during which time men predominated in the technology industry. As a result, the machine thought that men were a better choice over women for employment.²³ In essence, Amazon's recruitment technology trained itself to prefer male candidates, downgrading resumes that included the word „women's". Amazon software specialists tried to fix the problem and make it gender neutral, but unsuccessfully in the long run. Eventually, Amazon stopped using this AI tool for candidate selection.²⁴ However, the possibility that Amazon's example is unique is very low since nowadays the usage of algorithms in the recruiting process is widespread.

Example 3: On March 13, 2016, Microsoft released an AI chatbot²⁵ Tay for Twitter to autoreply on comments and questions that users post. It was the most complex chatbot of its time, as it was characterized by significant human-like features in speech, such as humor and random responses. Tay represented a young American woman with the appearance of knowledge of modern culture, slang, and good communication skills, and was primarily intended for entertainment. In her conversations with Twitter users, she was friendly trying to entertain users. However, her positive attitude did not last long. Shortly after, she became rude and aggressive in her comments, and since being able to learn from interactions with people, she began to express her opinions regarding different issues, making racist remarks in return. Her life span was very short, and Microsoft decided to shut it down after only 16 hours of communication and learning from Twitter users.²⁶

22 European Union Agency for Fundamental Rights (2022). *Bias in Algorithms – Artificial Intelligence and Discrimination*. Luxembourg: Publications Office of the European Union, p. 17.

23 Kumar, R. (2021). Biases in Artificial Intelligence Applications Affecting Human Life: A Review. *International Journal of Recent Technology and Engineering (IJRTE)*, 10(1), p. 54.

24 Amazon scraps secret AI recruiting tool that showed bias against women, in Reuters (28 August, 2023). Retrieved from: <https://www.reuters.com/article/us-amazon-com-jobs-automation-insight/amazon-scrap-secret-ai-recruiting-tool-that-showed-bias-against-women-idUSKCN1MK08G>)

25 Chatbot is a computer program based on AI that imitates human conversation, replying to customer questions by automating responses to them.

26 Neff, G. and Nagy, P. (2016). *International Journal of Communication*, 10, pp. 4921-

4. MITIGATION OF BIAS IN AI AS POTENTIAL PREVENTION OF DISCRIMINATION

Previously presented examples show that sources of bias in AI are diverse and numerous, but among them, inputs and training data play the biggest role, including outputs of self-learning systems. The best way to describe this is through the concept of “Garbage In, Garbage Out” which represents the idea of the quality of data used for training AI. If the data used as input were incorrect, the output given by AI is not likely to be accurate or useful. In other words, a system’s output is influenced by the input it receives.²⁷ The major obstacles to eliminating discrimination from AI are the algorithms’ lack of transparency, their ongoing learning process, the absence of data neutrality, and ambiguous roles.²⁸ According to researchers and algorithm specialists, there are different ways to eliminate it from AI. The three most common imply *pre-processing data* used in the training process of AI models to guarantee that it reflects the entire population, where the crucial step is to spot and correct data biases prior to the model being taught; *model selection* methods used for data analysis, with two approaches- the one using methods that prioritize fairness, and the other that prioritizes fairness and mitigate bias; and, finally, *post-processing decisions*, which entails modifying the results of AI models to eliminate bias and guarantee fairness. However, each of these approaches faces numerous obstacles and limits, including ethical issues, such as how to rank various forms of bias.²⁹

As has been shown so far, any form of bias existing in AI results in discrimination against individuals or certain groups, if equal or unequal treatment is not justified. In addition to the mentioned technical solutions, the authors believe that closer cooperation between legal experts and those in technical fields would significantly contribute to mitigating bias, which will result in the absence of discrimination by AI. In order to achieve this, it is necessary to harmonize technical development with numerous existing instruments of human rights protection, as well as to adopt new legal solutions that will adequately accompany accelerated technological progress and provide the necessary protection of fundamental human rights in an appropriate manner.

5. DISCRIMINATION IN AI AND EU LEGAL SYSTEM

Bias and discrimination are not a creation of the new age and AI, but are a product of human nature and are deeply rooted in human relations. In order to protect and correct historical injustice by marginalized individuals and certain groups, and to

4922.

27 Garbage in, garbage out (GIGO), in TechTarget (28 August, 2023). Retrieved from: <https://www.techtarget.com/searchsoftwarequality/definition/garbage-in-garbage-out>

28 Beck, S. et al. op. cit., p. 2.

29 Ferrara, E. op. cit., p. 6.

prevent further discrimination, the EU has adopted a wide range of legal documents to achieve these goals. The first mention of discrimination as such can be seen in Article 14 of the ECHR³⁰, however, discrimination achieves autonomy only with Protocol 12 to the Convention³¹. How important the fight against discrimination is for the EU is shown by Article 19 of the TFEU³² and Article 21 of the EU Charter of Fundamental Rights³³, and through numerous EU Directives. However, the first major step towards protection against discrimination by AI was made by adopting the CETS 108³⁴ in 1981 and the GDPR in 2016 and its Article 22³⁵ containing provisions on automated decision-making. Although the adoption of these legal instruments represents a certain degree of protection of human rights from AI, the EU soon became aware of their limitations and the necessity to make a legal system with a special emphasis on relations between humans and AI. In this context, the EU began the process of drafting the first piece of legislation ever produced to regulate the use of AI in March 2018. The EU High-Level Expert Group on AI published in 2019 “Ethics Guidelines for Trustworthy AI” which provide important guidance to ensure that the development, implementation, and usage of AI systems adhere to the seven essential criteria for trustworthy AI, including “diversity, non-discrimination and fairness”.³⁶ A year later, those seven essential criteria were presented and elaborated in “Assessment List for Trustworthy AI (ALTAI)”, including an explanation for preventing unfair bias.³⁷ In the White Paper published on the 19th of February 2020, the European Commission highlighted numerous benefits of AI and the potential risks it brings, like secretive decision-making, discrimination based on different factors, invasion of our privacy, or use for illegal activity, and pointed out that EU’s policy regarding AI is “at the service of all Europeans – improving their lives while respecting their rights”.³⁸ The aforementioned guidelines and the thorough, extensive work of EU experts

30 Convention for the Protection of Human Rights and Fundamental Freedoms (1950), Council of Europe, Europe Treaty Series No. 005, p. 13.

31 Protocol No. 12 to the Convention for the Protection of Human Rights and Fundamental Freedoms (2000), Council of Europe, European Treaty Series No. 177.

32 Treaty of Lisbon amending the Treaty on European Union and the Treaty establishing the European Community, signed at Lisbon, 13 December 2007 (2007), Official Journal of the European Union, Vol. 50, 2007/C, p. C 306/30.

33 Charter of fundamental rights of the European Union (2000), Official Journal of the European Communities, 2000/C, p. 364/13.

34 Convention for the Protection of Individuals with regard to Automatic Processing of Personal Data (1981), Council of Europe, Europe Treaty Series No. 108.

35 Regulation on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (Data Protection Directive) (2016), Official Journal of the European Union, L, p. 119/46.

36 High-Level Expert Group on Artificial Intelligence (2019). Ethics Guidelines for Trustworthy AI. European Commission, p. 2.

37 High-Level Expert Group on Artificial Intelligence (2019). Assessment List for Trustworthy AI (ALTAI) European Commission, p. 16.

38 European Commission (2020). White Paper On Artificial Intelligence - A European approach to excellence and trust, p. 1.

served as the foundation for the preparation of the EU AI Act whose purpose is to ensure that AI systems are overseen by people, are safe, transparent, traceable, non-discriminatory, and environmentally friendly.³⁹ By the end of this year, it is expected that an agreement will be reached with the EU member states on the final form of the law.

Although the EU for the first time in history managed to regulate AI, taking into consideration the length of the process of adopting the EU AI Act (5 years) and the velocity of the development of AI, the question arises as to what extent the EU AI Act will be able to respond to current and future the requirements of AI, whose development has not stagnated in the last five years, but on the contrary, has been progressing at a rapid pace.

6. CONCLUSION

.During her speech at the Annual Judicial Seminar 2021 of the ECHR, Prof. Peggy Valcke said „The truth is that the machine is simply reproducing the biases and beliefs of those who program and operate it“.⁴⁰ Although there may be a desire and belief that AI can be neutral in reasoning and decision-making, the fact is that it is a creation of a man, who is still “just” a human being with all his faults and virtues. As a result, whether intentionally or unintentionally, he is passing on to AI his negative aspects. Thus, in order to prevent further discrimination by AI, first and foremost, a man needs to conquer his nature, which looking at the past and present times will be very hard to achieve. The elimination of bias in AI, which can be accomplished by implementing a specific legal regulation for AI and the collaborative effort of legal and technological experts, will help to further reduce discrimination.

On the other hand, taking into account the expectations in the speed and direction of the development of AI, as well as the fact that man already today encounters challenges with some processes of AI that significantly violate his rights, it is hard to believe that he will be able to control the machines that he gave the ability of self-learning, thinking, and freedom of decision-making.

It remains to be seen what impact this will have on man and his fundamental rights in the future.

Because, after all, everything begins and ends with man.

39 AI Act: a step closer to the first rules on Artificial Intelligence, in European Parliament (29 August, 2023). Retrieved from: <https://www.europarl.europa.eu/news/en/press-room/20230505IPR84904/ai-act-a-step-closer-to-the-first-rules-on-artificial-intelligence>

40 Valcke, P. (2001). The use of Artificial Intelligence in the justice system, with emphasis on judicial decision-making. European Court of Human Rights (30 August, 2023). Retrieved from: https://www.echr.coe.int/documents/d/echr/Speech_20210910_Valcke_JY_ENG



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VEŠTAČKA INTELIGENCIJA - LAK ŽIVOT ILI LAK NAČIN ZA PRIKRIVENU DISKRIMINACIJU?

Apstrakt:

Poslednjih decenija, veštačka inteligencija je postala neodvojivi deo ljudskih života, zalazeći tokom vremena sve dublje u njihove pore, olakšavajući svakodnevne aktivnosti i ubrazavajući razvoj globalnog društva. Međutim, budući da je kreacija čoveka, veštačka inteligencija takođe reflektuje neke njegove karakteristike, što može da dovede do pojave predrasuda u njenom radu i diskriminacije pojedinaca i određenih grupa populacije. Ovo određuje predmet rada u kojem autori istražuju uticaj predrasuda i diskriminacije od strane veštačke inteligencije, i potencijalne strategije ublažavanja predrasuda kao mogućeg načina sprečavanja diskriminacije u praksi, sa posebnim osvrtom na pristup EU ovom problemu. U zaključnim napomenama, autori predlažu moguće načine uklanjanja predrasuda iz veštačke inteligencije u cilju ublažavanja diskriminacije, ali takođe izražavaju i sumnju u dugoročni uspeh ovog cilja.

Ključne reči: *veštačka inteligencija, predrasude, diskriminacija, EU*

REFERENCES:

1. AI Act: a step closer to the first rules on Artificial Intelligence, in European Parliament (29 August 2023). Retrieved from: <https://www.europarl.europa.eu/news/en/press-room/20230505IPR84904/ai-act-a-step-closer-to-the-first-rules-on-artificial-intelligence>
2. Amazon scraps secret AI recruiting tool that showed bias against women, in Reuters (28 August, 2023). Retrieved from: <https://www.reuters.com/article/us-amazon-com-jobs-automation-insight/amazon-scraps-secret-ai-recruiting-tool-that-showed-bias-against-women-idUSKCN1MK08G>).
3. Artificial Intelligence, in Professor John McCarthy (26 August, 2023). Retrieved from: <http://jmc.stanford.edu/artificial-intelligence/what-is-ai/index.html>
4. Bathaee, Y. (2018). The Artificial Intelligence Black Box and the Failure of Intent and Causation. *Harvard Journal of Law & Technology*, 31(2), pp. 890-938.
5. Beck, S. et al. (2019). Artificial Intelligence and Discrimination. München: Lernende Systeme – Germany’s Platform for Artificial Intelligence (26 August, 2023). Retrieved from: https://www.plattform-lernende-systeme.de/files/Downloads/Publikationen_EN/AG3-1_Whitepaper_Executive_Summary_final_200204.pdf
6. Charter of Fundamental Rights of the European Union (2000), Official Journal of the European Communities, 2000/C, pp. 364/1-364/22.
7. Convention for the Protection of Human Rights and Fundamental Freedoms (1950), Council of Europe, Europe Treaty Series 005, pp. 1-62.
8. Convention for the Protection of Individuals with regard to Automatic Processing of Personal Data (1981), Council of Europe, Europe Treaty Series No. 108, pp. 1-9.
9. Convention On The Rights Of Persons With Disabilities (2006), United Nations, Treaty Series, 2515, pp 1-31.
10. Convention on the rights of the child (1989), United Nations Treaty Series, 1577, pp. 1-15.
11. Del Carmen Firera Colmenares, S. and Vakil, M. (2022). *Bias in the Context of Artificial Intelligence Systems: Analyzing the risks and contributors from a data perspective*. Lund: Department of Informatics, Lund School of Economics and Management, Lund University.
12. European Commission (2020). White Paper On Artificial Intelligence - A European approach to excellence and trust
13. European Union Agency for Fundamental Rights (2022). Bias in Algorithms – Artificial Intelligence and Discrimination. Luxembourg: Publications Office of the European Union.
14. Ferrara, E. (2023). *Fairness And Bias in Artificial Intelligence: A Brief Survey of Sources, Impacts, And Mitigation Strategies*. Los Angeles: University of Southern California, pp. 2-16.

15. Flasiński, M. (2016). *Introduction to Artificial Intelligence*. Switzerland: Springer International Publishing.
16. Garbage in, garbage out (GIGO), in TechTarget (28 August, 2023). Retrieved from: <https://www.techtarget.com/searchsoftwarequality/definition/garbage-in-garbage-out>
17. High-Level Expert Group on Artificial Intelligence (2019). Assessment List for Trustworthy AI (ALTAI) European Commission.
18. High-Level Expert Group on Artificial Intelligence (2019). Ethics Guidelines for Trustworthy AI. European Commission.
19. International Convention on the Protection of the Rights of All Migrant Workers and Members of Their Families (1990), United Nations, A/RES/45/158, pp. 263-273.
20. International Covenant on Civil and Political Rights (1966), United Nations, Treaty Series, 999, pp. 1-26.
21. International Covenant on Economic, Social and Cultural Rights (1966), United Nations Treaty Series, 993, No. 14531, pp. 1- 12.
22. Kumar, R. (2021). Biases in Artificial Intelligence Applications Affecting Human Life: A Review. *International Journal of Recent Technology and Engineering (IJRTE)*, 10(1), pp. 54-55.
23. Neff, G. and Nagy, P. (2016). *International Journal of Communication*, 10, pp. 4915-4931.
24. Ntoutsis, E. et al. (2020). Bias in data-driven artificial intelligence systems—An introductory survey. *WIREs Data Mining and Knowledge Discovery*, 10(3), pp. 1-14.
25. Paul Virilio, in Wikiquote (26 August, 2023). Retrieved from: https://en.wikiquote.org/wiki/Paul_Virilio
26. Protocol No. 12 to the Convention for the Protection of Human Rights and Fundamental Freedoms (2000), Council of Europe, European Treaty Series No. 177, pp. 1-4.
27. Regulation on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (Data Protection Directive) (2016), Official Journal of the European Union, L, pp. 119/1-199/88.
28. Smith, G. and Rustagi, I. (2020). *Mitigating Bias in Artificial Intelligence: An Equity Fluent Leadership Playbook*. Berkeley: Berkeley Haas Center for Equity, Gender and Leadership
29. Treaty of Lisbon amending the Treaty on European Union and the Treaty establishing the European Community, signed at Lisbon, 13 December 2007 (2007), Official Journal of the European Union, Vol. 50, 2007/C, pp. 306/30-306/271.
30. Universal Declaration of Human Rights (1948), United Nations, 217 A (III), pp. 2-8.
31. Valcke, P. (2001). The use of Artificial Intelligence in the justice system, with

emphasis on judicial decision-making. European Court of Human Rights (30 August 2023). Retrieved from: https://www.echr.coe.int/documents/d/echr/Speech_20210910_Valcke_JY_ENG

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