

HUMAN RIGHTS AND LAW IN THE AGE OF ARTIFICIAL INTELLIGENCE

Minh Tuan Dang, Vietnam National University, Hanoi

ABSTRACT

Artificial intelligence (AI) brings values, but at the same time, causes harm to human rights. By clarifying the negative impacts of AI on human rights, the article analyzes the need and requirements for developing laws on AI to promote the values and eliminate negative impacts on human rights. The article reviews the process of developing rules and guidelines on AI governance with a focus on protecting human rights. However, the article also points out the difficulties and challenges in regulating AI.

Keywords: Artificial Intelligence, AI, Human Rights, Law, Governance, Technology.

INTRODUCTION

There has not been a generally agreed-upon definition of artificial intelligence (AI); instead, AI is often regarded in several different ways (Thuy et al., 2018). With the exceptionally rapid development of technology, the concept of AI has changed, developed and expanded. In the most general sense, AI has come to be understood as a series of computational techniques and associated processes that are used to improve the ability of machines to perform intellectual tasks, such as pattern recognition, computer vision, and language processing (National Science and Technology Council, 2016). Its function can also extend to activities that include predicting future events and solving complex tasks.

In this regard, AI can bring great values to human development, but it may also create substantial risks and cause harm. The negative impact of AI on human rights has recently attracted the attention of some international organizations, institutions and nation states. It may be too far to conclude that AI will enslave people, or even one day it will destroy humanity. However, it is commonly agreed upon that AI systems have both positive and negative impacts on human beings. This two-fold scenario makes it indispensable to find ways to promote positive points, while limiting risks and negative impacts of AI on individuals and human rights. One of the most effective ways is to adopt a system of rules to control AI systems. Law should play a central role in protecting human rights in the age of AI. However, the development of AI, which is seemingly an aberrant technology, makes it difficult to regulate AI.

This article analyzes the relationship between AI and human rights and law. The article demonstrates that AI has created negative impacts on human rights; however, governance and law on AI remains left behind and the requirements for managing AI have not been met. The rapid and complex development of AI applications makes AI regulation and control a very difficult and challenging task. If this problem is not fully perceived and comprehensively addressed, the consequences it creates may be extremely serious and unpredictable. However, a lot of more effort and innovation in the field of AI regulation need to be done in order to better protect

human rights. The article includes four sections. Following this introduction, section two analyzes why human rights are linked with AI. Thereafter, the article demonstrates the negative impacts of AI on human rights. Then, it studies the law-related difficulties and challenges in the age of AI.

Although some empirical studies and selected figures are summarized and analyzed in the research, this study mainly utilizes a qualitative (and not quantitative) approach. This article is mainly based on archival review of journal articles, intergovernmental organization (IGO) and nongovernmental organization (NGO) reports and recommendations, and law, regulations and practices on AI governance. The materials are analyzed under a “*law and society*” approach, synthesized further with my consultation with of AI governance and law experts, as well as my observation of how AI is perceived and applied in different nation states. Human rights based approach is used for the study on the impact of AI on human rights and responsibilities of stakeholders in human rights protection. “*Good governance*” based on transparency and accountability is also the criteria for analyzing the problems and proposing recommendations on AI governance and law for a better human protection.

The topic of the impact of AI on human rights and the requirement to develop AI regulations has only been studied recently; however, these studies are very preliminary. The article contributes to fill this gap.

MATERIALS AND METHODS

The main sources for writings this article are materials of the publications and archives. Data analysis is descriptive qualitative. Comparative method is used to compare different AI rules and practices. A systematic method does achieve a variety of accessible and comparable disciplines (law, public governance, human rights, etc.).

FINDINGS AND DISCUSSION

The Link between AI and Human Rights

How does AI affect human rights? The link between AI and human rights is reflected in some following ways:

First of all, the fact that AI can replace humans and engage in many areas of life creates problems relating to human rights. The non-infringement into human life is the central matter of human rights. However, in that AI replaces humans, engages, or even dominates human life is raising concerns, for example: What are human morality and values in relation to AI? Can AI have morality and values similar to humans? How are those morality and values of humans affected by AI? Is there any existence of equality with the engagement and intervention of AI? What are the consequences on human rights if AI is abused and dominated by economic powers or dictatorship? (Font-Reaulx, 2018) Those questions may never be answered and will continue to exist as a part of society. However, it is clear that they create real concerns for human life and rights (Mathias, 2018).

Secondly, AI is not only understood under the term of technology but also under the term of society. It includes technology systems which are used, absorbed and impacted on society. All

of the AI aspects are put into a social context and have direct influences on society. AI appears increasingly and in numerous parts of our lives, such as criminal justice, finance, healthcare, education, human resources, and online content moderation. It brings many benefits and values to people, contributes to the implementation of human rights; however, it also results in several negative impacts (Filippo et al., 2018).

Thirdly, the inherent disadvantages of AI can create risks to human rights implementation. AI development is based on existing technologies but it causes more problems and dangers than the previous technologies, particularly when it comes to accountability and trust.

Using AI for decision-making based on complicated and sophisticated algorithms is difficult for people to comprehend, as they cannot track, trace and seek the origins of AI's decisions or recommendations or from whence they stem. Humans create AI to help them make decisions and suggestions, but it is highly challenging for them to know or understand how AI can behave the way it does, which generates huge problems related to transparency and accountability.

As with all technologies, AI makes errors, but it is more dangerous because AI is considered to be a very accurate system even better than humans so the results from AI are often placed at a comparably higher level of reliability. Moreover, AI results are based on data; thus, it lacks or limits the awareness of how those decisions and suggestions are made in particular circumstances. For this reason, when errors occur, people still rely on the wrong results, which cause serious influences on their life and rights. In fact, there are some case studies concerning this problem; for instance, the face recognition system of Google Photo 2015 was found to have an egregious error: it was occasionally labeling photos of black people as gorillas. Another example is a software system used by U.S Customs and Border Patrol to identify criminals and terrorists that still has 0.1% error, corresponding to 75,900 people being misidentified in 2016.

Finally, if the implementation of AI, with its inherent risks, becomes a part of our life, the next point is how to set the rules of AI management, in order to enhance its advances, minimize its limits, and avoid possible negative impacts on society. Unlike humans, it is difficult to establish a code of conduct for AI. Internationally, regionally and within many countries, attention is paid to establish codes of conduct, policies and legal rules of AI governance.

The Negative Impacts of AI on Human Rights

AI has impacts on human right in a number of social aspects. According to research at Havard University, AI creates both opportunities and risks to human rights. In particular, it negatively affects the maintenance and amplification of existing social prejudices, creates inequalities in society, deeply affects the rights of privacy, and poses challenges for many existing mechanisms (Filippo et al., 2018). The basic rights directly affected by AI include right to equality and non-discrimination, right to participation, right to privacy and personal information security, freedom of expression, and right to work.

The Right to Equality and Non-Discrimination

AI systems reflect social prejudices and create inequalities in society, especially when it comes to minority individuals and groups. Many AI systems contribute to user's decisions, suggestions by using and assessing the data relating to social characteristics, occupation, race, health, and skin color, which causes a serious discrimination against the disadvantaged individuals and groups. For example, a computer system used to detect the risk of re-offending by individuals in the U.S criminal justice system misclassifies African-Americans having a "high-risk" of recidivism-double the rate for Caucasians (Filippo et al., 2018). In addition, there is evidence showing that AI operations can "*systematically and unfairly discriminate*" in many integral parts of social life, such as accessing services, employment and financial support, or criminal justice. With extensive deployment, biased AI systems can be a big problem for ensuring fairness and non-discriminatory behavior in society (Matthew & Sujaya, 2018).

The Right to Primacy and Personal Information Security

AI systems are trained by accessing and analyzing Big Datasets. Data will be collected to generate feedback systems, adjusting and refining continuously. This dataset violates the privacy rights and information security. Analyzing data with an AI system can disclose individuals' personal, protected and sensitive information. In fact, many AI systems are used by both private companies (especially technology companies such as Google, Facebook, and Twitter) and governments. Private companies use the individual information for their business purposes and make profits, while governments use AI for their management purposes, such as video control systems or face recognition systems in many countries around the world.

Surveillance and privacy rights are two sides of the same coin (Matthew & Sujaya, 2018). The greater the surveillance becomes, the more seriously the privacy rights are affected. In fact, nowadays, AI-powered surveillance software is more popular and powerful, resulting in privacy rights and private data protection increasingly being violated. The increased use of this software has collected a huge dataset about individual activity in both online networks and physical life, and then people can abuse or use it in improper way.

Various privacy rights and personal information are affected because of the way data is collected and used by AI systems. The e-commerce platform, inter alia, can generate and build a huge dataset of its customers without the buyers' knowledge or consent. The system can identify a user, even when he or she remains incognito; can analyze the information and uncover sensitive information about people based on their non-sensitive information, create profiles make decisions based on its collected information.

The Right to Freedom of Expression

AI has serious impacts on the right to access, searching, and sharing of information. Many AI systems are designed to work within a social network interface and search engine to control users' information in various ways. Controlled information means is no longer freely created, used, and shared. For instance, Facebook takes advantage of its users' information to

manipulate them and others in use and sharing of information. Google Search system shows a list of results based on the search content. Sharing of information can have more negative impacts when governments use the same AI technology to censor and control information. For example, the Chinese government has replaced some state censorship agencies with AI. iQiyi, Chinese popular video platform. iQiyi uses AI to detect sexual and violent content, as well as politically sensitive content, which negatively affects pluralistic communication and diversity in views. In addition, it prevents discussion, sharing, and exchange of information in society and, in the long run, can lead to polarization among social classes due to lack of connection and exchange of information.

The matter gets serious when AI's control of information is used for unjust purposes, as control systems are used to propagandize, control and disperse information. Because of this, the use of AI might affect democracy and people's right to self-determination. AI systems are being used increasingly to propagandize, control and orient behavior through social network users. As a result, these campaigns are controlled by false information that created to propagandize, influence public opinion. Meanwhile, if people see that their information is controlled, tracked, and oriented, they will no longer trust the information they receive and will no longer feel safe to freely express their thoughts. They will change their expression behavior instead.

Information controlled by AI's faults might have and even more negative impact on exercising freedom of expression. AI is not perfect; it makes mistakes like every other technology. Therefore, using AI in the creation and dissemination of information also affects freedom of expression. Companies use AI to detect and remove ineligible information, especially due to legal requirements concerning terrorism, hate speech, and fake news. However, due to its limitations, AI can be wrong in removing eligible information.

The Right to Participation

The AI issues about information rights mentioned above show the possible harm to people's political participation rights. According to a Brookings Institution report, "*technological advancements in AI and cyber capabilities will open opportunities for malicious actors to undermine democracies more covertly and effectively than what we have seen so far*" (Alina and Spencer, 2018). AI systems can be used for ill, such as spreading false information, or leading citizen perception to change their behaviors. AI chat-bot platforms can be used for many different purposes, including evil purposes affecting the right of individuals to participate. The alleged intervention campaigns of Russia into the 2016 U.S. presidential election through social media platforms shows the unpredictable damage AI can inflict on the right to participate. Studies have shown that Bots have been and will continue to be used to manipulate media in many countries around the world to intervene in democratic elections (Mark, 2018).

The Right to Work

The increasing use of AI technologies instead of humans poses many challenges to the work rights. In fact, the process of automating and using technology leads to the rise of unemployment. The labor market is affected not only by the decline in employment

opportunities, but also by the changes in the labor market structure, in which traditional jobs are declining and high technology jobs are becoming more and more prevalent, while disadvantaged groups in society face difficulties in accessing jobs that require high levels of education and technology.

AI Law for Human Rights

The development of AI systems in social life is an unrevised trend. Similar to the development of industrial revolutions and machines, AI offers many benefits to social life. On the other hand, it creates many negative consequences and impacts on people. Therefore, it is essential to take advantage of the values that AI brings and to develop solutions to solve or minimize the negative impact of AI on human rights. In order to do that, it is indispensable to adopt a set of laws to control AI systems, however, difficult and challenging this might be in the age of AI.

The law, which provides a system of rules to control AI systems that ensure all subjects involved in the development and operation of AI systems, must have the responsibility to respect human rights. Governments need to develop policies and laws to regulate and ensure conditions for subjects to comply with their obligations, and encourage them, especially enterprises, to ensure their responsibilities for human rights. Governments must also be accountable for controlling their own activities using AI. Access Now's Report provides two groups of solutions for governments and the private sector, including Governments using AI must ensure compliance with open public procurement standards; mandatory assessment of human rights; ensure transparency and accountability; and establish remedy responsibilities and procedures (for violated rights). Meanwhile, the use of AI by the private sector must ensure the implementation of human rights standard assessment in accordance with the UN principles of business and human rights; ensure the highest possible transparency and accountability; establish an appropriate accountability and corrective mechanisms.

Transparency and accountability are the obligations of all those who use and apply AI. There is an argument that AI includes systems that are very complex, even inexplicable, so setting transparency and accountability will hinder, harm, and even kill innovation. However, this argument is considered exaggerated and unsuitable for today's development of AI. Transparency and accountability will not kill the creation.

The process of developing and implementing effective control mechanisms needs to go through several stages and often takes time and effort. At the first stage, it is indispensable to develop principles, standards and guidelines to identify, mitigate and overcome the negative impacts of AI on human rights. In the past two years, AI principles have started to emerge. The Asilomar AI principles were developed in 2017 as a result of the Asilomar conference on AI benefits, providing guidelines for AI study, ethics, and values that the use of AI must adhere to and at the same time evoke issues to address in the long term. At the same time, the US Association for Computing Machinery (ACM) issued a statement and a set of seven principles of transparency and accountability of the algorithm to address a narrower but closely related problem. The year 2007 is also known for the emergence of many other initiatives and rules for AI, such as the Japanese Society for Artificial Intelligence's Ethical Guidelines in February

2017; Draft Principles from the Montréal Declaration on the Responsible AI in November 2017; The IEEE's General Principles of Ethical Autonomous and Intelligent Systems in December 2017. In 2018, a number of initiatives and rules came into existence such as the Partnership on AI, the UK AI principles (adopted by Select Committee on Artificial Intelligence of the UK House of Lords, and Google's AI ethics principles (Jess et al., 2019). The Michael Dukakis Institute and Boston Global Forum (USA) have proposed the concept of the Artificial Intelligence World Society (AIWS), a set of norms and best practices for the development, management, and use of AI so that the technology is safe, humane, and beneficial to society.

The EU is one of the pioneers in AI management for human rights. In December 2018, the European Commission on Judicial Efficiency (CEPEJ) promulgated the Ethical Charter on the use of artificial intelligence in the judicial system to ensure respect for the use of AI in judicial activities in accordance with the fundamental rights recognized and protected by European laws, particularly regarding equal rights, non-discrimination and protection of personal data rights (Thao, 2019). In August 2019, the European Union developed the Ethics Guidelines for Trustworthy Artificial Intelligence. Based on fundamental rights and ethical principles, the Guidelines list 7 key requirements that AI systems should meet to be trustworthy:

1. Human agency and oversight- AI should not trample on human autonomy. People should not be manipulated or coerced by AI systems, and humans should be able to intervene or oversee every decision that the software makes.
2. Technical robustness and safety- AI should be secure and accurate. It shouldn't be easily compromised by external attacks (such as adversarial examples), and it should be reasonably reliable.
3. Privacy and data governance - Personal data collected by AI systems should be secure and private. It shouldn't be accessible to just anyone, and it shouldn't be easily stolen.
4. Transparency- Data and algorithms used to create an AI system should be accessible, and the decisions made by the software should be "*understood and traced by human beings.*" In other words, operators should be able to explain the decisions their AI systems make.
5. Diversity, non-discrimination, and fairness - Services provided by AI should be available to all, regardless of age, gender, race, or other characteristics. Similarly, systems should not be biased along these lines.
6. Environmental and societal well-being - AI systems should be sustainable (i.e., they should be ecologically responsible) and "*enhance positive social change.*"
7. Accountability- AI systems should be auditable and covered by existing protections for corporate whistleblowers. Negative impacts of systems should be acknowledged and reported in advance.

The emergence of codes of ethics and guidelines for developing and operating AI in recent times has reflected the increasing interest in AI governance among the international community in general and some countries in particular. It plays an important role in the process of developing a system of AI rules for human rights (Jess et al., 2019). However, the overall picture shows that the results on a global scale are still very limited. The new principles in the form of ethics and guidelines are highly general, unclear, which even come into conflict in practice, and can be interpreted differently (Jess et al., 2019). This fact affects the development and enactment of laws and regulations governing AI management.

International law to protect human rights in the age of AI is mainly based on the adoption of conventions and treaties on human rights. The rights-based approach still needs to be used in the development and implementation of AI law and regulations. However, with the development of AI, the current international law provisions cannot meet the requirements of addressing AI

violations of human rights. Meanwhile, the United Nations has not focused on the development of regulations and mechanisms to address the impact and risks of AI on human rights (Christiaan & Corinne, 2018). At the regional level, with the exception of the European Union, there are no regional rules governing AI. Meanwhile, many countries have not paid much attention to the issue of AI management for human rights (Huong & Giao, 2019). Even in the United States - the world center of artificial intelligence with a profound legal system, the legislative activity on artificial intelligence is mainly just on the process of law projects (Lan, 2019).

The risks and negative impact of AI on human rights require the need to control and regulate AI with human rights foremost; however, the rapid development of complex AI systems and their applications in social life create difficulties and challenges for AI control and regulation. Indeed, the development of an AI rules system is an extremely difficult task. AI, with its anomalies makes not only politicians, but also the academics confused. There still exist many unclear, even very controversial conceptions on AI issues such as determining the legal status of artificial intelligence and responsibility for the consequences of AI to human rights (Nhat, 2019; Ngoc & Giao, 2019). The development of AI also creates changes many legal phenomena according to traditional approaches and perceptions (Anh, 2018), posing many legal challenges, especially when it comes to controlling and regulating AI (Tran, 2018). One of the fundamental legal challenges developing and using AI poses, is to ensure a balance between promoting, innovating and protecting basic human rights and values (Leenes et al., 2017). AI management has to promote its values to people and human rights, while striving to eliminate its negative effects and negative effects on human rights.

For effective AI management, AI laws needs to be set in a global context—global AI law. AI is an application system that is built and operated on a global scale, acting at all levels (international, regional, national, local) in all areas of social life, in particular as it involves human rights. Therefore, AI management for human rights should be considered a global issue and responsibility. Developing international policies, conventions and rules for AI management is an indispensable task. In the Layer 5 of AIWS model, in order to be effective the development of AI in the support of humanity depends on a global consensus. International conventions, regulations, and agreements for AI development in support of Next Generation Democracy are therefore essential for the success of AIWS (Michael, 2019). Therefore, the research needed to build an international and regional law system governing AI is one of the key requirements and tasks for law researchers.

Effective AI management not only requires hard law under the traditional approach (the system of mandatory rules), but also requires soft law (system of ethics, guidelines, regulations of organizations, associations and more). With the characteristics of AI, formal law cannot keep up and fully adjust to rapidly emerging AI issues, so it is necessary to have additional soft-law sources that play the role of regulating and controlling AI. Businesses and associations, employing AI, will become subjects that can also play an important role in building and adhering to the rules of AI management for human development. Although these rules are not legally binding, they can be effectively complied with through voluntary implementation in the corporate community and for the development of those businesses. In the soft legal system, AI management requires not only the role of international organizations, and governments, but also the participation of all subjects in society. Recognizing and clarifying the role of soft law and its

relationship to formal law and the participation of diverse subjects in AI management is an important focus for research on AI law and governance.

In terms of the content of law, it is needed to identify the limits and shortcomings of existing laws in relation to the issues raised by AI. In particular, it is necessary to focus on developing lawful regulations to protect our most cherished rights, such as the law on information, access to information, data protection, political participation, elections, employment, equality and non-discrimination. The law should clarify the basic concepts, human rights and responsibilities of the parties, and build mechanisms to control and enforce those rights and responsibilities, whenever AI is employed in the decision-making process.

CONCLUSION

The development and application of AI a social development trend with many benefits. However, AI also poses many risks and challenges to society, especially in ensuring human rights. If this problem is not fully perceived and comprehensively addressed, the consequences it creates may be extremely serious and unpredictable. The development of AI and technology is very rapid, while governance and law remains left behind and the requirements for managing AI have not been met. Therefore, the international community and individual countries need to put more effort into promoting research and other initiatives, as well as the development and enforcement of policies and laws governing AI management in ways that will meet the needs of society and encourage development in the present and future.

AI governance is a new issue, but it attracts attentions over the concern for the protection of human rights. AI Government as a new concept and development from E-Government applies to AI in public sector governance that will build the AI world society. In general, AI management is primarily regulated by ethics and principles, which becomes the main sources for governments to enact and enforce specific policies and laws governing AI.

The development of AI systems will have a great influence on legal policies worldwide. Regions, at the forefront of Europe, will come to study and promulgate common regulations in concert with national laws and regulations. At the same time, countries need to adjust their legal system and even consider changes to their Constitutions to meet the requirements of an AI society. In order to be effective, it is necessary to change methods, approaches, and legal content toward a modern, global, and flexible system of rules for the development and usage of AI in the context of the 4th industrial revolution.

CORRESPONDING AUTHOR

Assoc. Prof. Minh Tuan, Dang, VNU School of Law, Vietnam National University, Hanoi.

REFERENCES

Alina, P., & Spencer, P.B. (2018). *The future of political warfare: Russia, the West, and the coming age of global digital competition: Brookings*. Retrieved January 16, from <https://www.brookings.edu/wp-content/uploads/2018/03/the-future-of-political-warfare.pdf>

- Anh, N.H. (2018). Changes of legal phenomena to the challenges of the industrial revolution 4.0. In N.T.Q. Anh, V.C.Giao (Eds.), *The Fourth Industrial Revolution and Issues of Vietnamese Legal Reform*. Hanoi: The National Political Publishing House.
- Christiaan, V., & Corinne, C. (2018). Artificial intelligence: What's human right got to do with it? *Data & society points*. Retrieved August 28, 2019, from <https://points.datasociety.net/artificial-intelligence-whats-human-rights-go-to-do-with-it-4622ec1566d5>
- Filippo, R., Hannah, H., Vivek, K., Christopher, B., & Levin, K. (2018). Artificial intelligence & human rights: Opportunities & risks. *Berkman Klein Center for Internet & Society at Harvard University*.
- Font-Reaulx, P. (2018). AI: The consequences for human rights: Initial Findings on the expected future use of AI in authoritarian regimes. *Human Rights Commission United States Congress*. Retrieved April 18, 2021, from <https://humanrightscmission.house.gov/sites/humanrightscmission.house.gov/files/documents/FHI%20-%20Artificial%20Intelligence%20the%20Consequences%20for%20Human%20Rights.pdf>
- Huong, L.T.T., & Giao, V.C. (2019). The impact of artificial intelligence on human rights: A number of theoretical and practical issues. In N.T.Q. Anh, V.C.Giao, M.V. Thang (Eds.), *Artificial Intelligence with Law and Human Rights*. Hanoi: The Judiciary Publishing House.
- Jess, W., Rune, N., Anna, A., & Stephen, C. (2019). The role and limits of principles in AI ethics: Towards a focus on tensions. *Association for the Advancement of Artificial Intelligence*. Retrieved June 28, 2021, from https://www.researchgate.net/publication/334378492_The_Role_and_Limits_of_Principles_in_AI_Ethics_Towards_a_Focus_on_Tensions
- Lan, N.N. (2019). Legislation on artificial intelligence of the United States. *Artificial Intelligence with Law and Human Rights*. Hanoi: The Judiciary Publishing House.
- Leenes, R., Palmerini, E., Koops, B., Salvini, P., Lucivero, F. (2017). Regulatory challenges of robotics: some guidelines for addressing legal and ethical issues. *Law, Innovation and Technology*.
- Mark, L. (2018). Governing artificial intelligence: Upholding human rights & dignity. *Data & Society*. Retrieved June 26, 2021, from <https://datasociety.net/library/governing-artificial-intelligence/>
- Mathias, R. (2018). Human rights and artificial intelligence: An urgently needed Agenda. *Carr Center for Human Rights Policy*.
- Matthew, L.S., & Sujaya, N. (2018). Artificial intelligence and human development: Toward a research agenda (White Paper). *International Development Research Centre*.
- Michael, D. (2019). *AI world society and AI-government*. Retrieved June 18, 2021, from <https://dukakis.bostonglobalforum.org/wp-content/uploads/sites/15/Concepts-of-AIWS-and-AI-Government-pdf>
- National Science and Technology Council. (2016). *Committee on technology, preparing for the future of artificial intelligence*. Washington, D.C.: Executive Office of the President.
- Ngoc, H.T.B., Giao, V.C. (2019). Ethical and legal responsibilities of robot: A number of theoretical and practical issues. In N.T.Q. Anh, V.C.Giao, M.V. Thang (Eds.), *Artificial Intelligence with Law and Human Rights*. Hanoi: The Judiciary Publishing House.
- Nhat, D.V. (2019). Legal status and rights of artificial intelligence. In N.T.Q. Anh, V.C.Giao, M.V. Thang (Eds.), *Artificial Intelligence with Law and Human Rights*. Hanoi: The Judiciary Publishing House.
- Thao, N.B. (2019). Artificial intelligence and access to justice. In N.T.Q. Anh, V.C. Giao, M.V. Thang (Eds.), *Artificial Intelligence with Law and Human Rights*. Hanoi: The Judiciary Publishing House.
- Thuy, N.T., Thuy, H.Q., Hieu, P.X., & Thanh, N.T. (2018). *Artificial intelligence in the digital age: World context and link with Vietnam*. Retrieved May 18, 2021, from <https://uet.vnu.edu.vn/tri-tue-nhan-tao-trong-thoi-dai-boi-canhh-gioi-va-lien-voi-viet-nam/>
- Tran, K. (2018). The fourth industrial revolution and the issue of legal control and regulatory mechanism. In N.T.Q.Anh, N.H. Cuong (Eds.), *The Fourth Industrial Revolution and Issues of Vietnamese Legal Reform*. Hanoi: The National Political Publishing House.