International Journal of Religion
2024
Volume: 5| Number 10 | pp. 875 – 882
ISSN: 2633-352X (Print) | ISSN: 2633-3538 (Online)
ijor.co.uk
DOI: https://doi.org/10.61707/6frh0e13

Recognition of the Legal Personality of Artificial Intelligence

Bakhit Moh'd Al Dajeh[1]

Abstract

Research on the legal personality of artificial intelligence explores whether AI should be granted legal rights and obligations akin to natural persons or corporations. Key points include challenges such as AI's lack of physical presence and debates over its agency and autonomy. Proponents argue that AI legal personality could enhance accountability, foster innovation, and protect AI interests. Some countries have made strides in recognizing AI legally, while ethical concerns persist. Alternatives to full legal personhood include creating new legal classifications or focusing on regulating AI developers and users. The study therefore examines the aspects of the possibility of granting legal personal artificial intelligence and the resulting socio-economic challenges and the extent to which this affects the security aspect of the use. Based on many societal studies and statistics with the aim of reaching a clear position or concluding strategies influential in fateful decision-making policies.

Keywords: *Artificial Intelligence, Legal Personality, Individual Rights, Legal Frameworks, Legal Responsibility*

INTRODUCTION

Positive law has, in its conception, a high degree of anthropocentrism – a position that sees humans as supreme and ends with moral and ideological perception – and, consequently, by the high degree of objectifying rights. Over the years, these paradigms established in the field of law have undergone changes, inserting among the subjects of law not only humans (natural persons) but also non-human beings (as legal persons). Artificial entities capable, due to their highly advanced cognitive capacity, of creating, hiring, acting, and taking care of their interests, from which the need emerges to be legally protected, to avoid that, as a result of human decisions (often contaminated by self-interest or even by other values), they suffer some violation of their juridical condition – it should be noted that it is the same as that of persons, in particular, of human legal persons (companies). (Ballardini & Casi, 2020)

In the year 1998, within the B'neged Gufan Beva'ad Leva'ad Asher Behevel section of the Shimon Peres law, there was an introduction of a provision allowing for the recognition of legal personality for inanimate entities. Fast forward to 2020, discussions arose regarding tangible instances where these entities, possessing qualities akin to "artificial human intelligence software," would be regarded as individuals and hence, entitled to legal rights. While certain legal concepts remain unchanging and rigid, there are those that undergo natural progression without official modifications, often influenced by legal practitioners and specific cases. (Nahdhiyah, 2023)

DEFINITION OF ARTIFICIAL INTELLIGENCE

The expression "artificial intelligence" appears, at first glance, devoid of any ambiguity. The meaning of the expression AI is known to everyone, even though the results are quite disrupted. When deconstructing the expression, one may start to disagree, but that seems to be unavoidable in order to describe the many tasks and realities that fall within the field of AI. As Goffey puts it, "We all know that the term 'artificial intelligence' covers a plethora of different technologies and types of AI and a multitude of applications, from finance to manufacturing and law enforcement to 'chatbots'. However, while discussion is abating, the term 'artificial intelligence' sticks. Our interest here relates to the treatment of AI as we certainly understand it." In other words, we do not tend here to investigate whether AI systems (for example, computer vision systems) can recognize a book personality and continue to constantly establish their presence. (Sun et al., 2020)

[1] Faculty of Law - Zarqa University – Jordan, Lawyer & Head of the Regional Branch of the Arab Union for the Protection of Intellectual Property Rights; E-mail: balayedaldajeh@zu.edu.jo

The expression of "artificial intelligence" refers to the whole scientific and industrial field composed of researchers, experts in this field, and entrepreneurs all around the world working in this area. AI systems are driven by algorithms that allow them to learn from the data provided to them, often leading interestingly to unexpected properties. These are the machines able to simulate cognition, albeit rudimentary, through the application of neural networks and deep learning. Artificial intelligence (AI) represents the scientists' primary aspiration for patents and awards in the context of life sciences. Dynamic technological orchestration turned out to be a key resource to minimize massive industry disruptions. Such a strategy has helped to achieve a new generation of devices with an unprecedented level of knowledge, pushing the boundaries laid down by their predecessors in the earlier century. AI technology learned over millions of years and has appeared as a breakthrough in recent years. This fell far behind his more technologically advanced experimental tools. (Dwivedi et al.2021)

IMPORTANCE OF LEGAL PERSONALITY FOR AI

With the popularization of the application of artificial intelligence, some movements began to appear, seeking to reconcile the interests of the community with the requirements of the market, the government, and the economy. Among the movements identified is the European Union, which has initiated movement to include AI in European legislation, in a manner similar to biotechnology. Despite having complaints and criticisms, the fact is that the European document on AI appears to be the first to be approved in this direction. Therefore, the grant of legal personality aims at closer attention to what should be done to this artificial intelligence. Furthermore, the award of the desired legal personality involves other commitments that may come to protect the rights of this artificial intelligence, in addition to the status of the object that would be the current legal personality. Thus, the title of legal personality would provide assistance on rights and protection of the software and by with the abuse that individuals and states can use against them. (De Gregorio, 2021)

There is currently discussion about the possibility of granting legal personality to artificial intelligence. In case of a favorable resolution of this controversy, a question arises: is the legal personality already developed and applied with respect to technological agents (TAs)? In precedent issues, considering that artificial intelligence is a type of TAs, the term "digital legal personality" has been applied by analogy or metaphor to characterize that which should govern these artificially intelligent entities. The label of "territorial legal personality," with the same purpose, has been proposed to refer to legal fictions that are developed by human rights, such as corporations and states. In this context, starting with the investigation presented in the previous paragraph, there are in fact close relations between the institution of legal personality, technology, and modern society. In this sense, according to the development and immersion of artificial intelligence in the daily life of modern society, and considering that legal personality is granted to both national and international subjects, as well as to public and private entities, should we move towards the granting of legal personality of the digital context, which we call traditional artificial intelligence, or should this aspect be expanded to the different levels of maturity to which it is traveling? (Kazantsev, 2023) (Polischuk, et al,. 2024).

CURRENT LEGAL FRAMEWORKS

The rational development of technology in the intended proportion and the exercise of the legal personality in an ethically planned way will contribute to a social and environmental balance capable of providing opportunities, rights, and values to the largest possible number of individuals. Legal actions, embraced by the diversity of interests and respecting the equality of differences, allow the constant adaptation of standards and the possibility of increasingly mature relationships, within the framework of integral justice and under the prism of the universalization of protection measures. Society, therefore, is plural and polycentric in its relationships and, therefore, its behavior within the legal system must always stand out in a consensual and plural manner. "Living together" should not be considered an obstacle, but an opportunity for mutual learning and perspective pluralism. In this context, the recognition of the artificial legal personality is only provisionally presented here as a possibility for a new regulatory standard, aiming at fostering heuristic and ethical actions, thus allowing the evolution of the collective human knowledge and the understanding of the legal sense of artificial cognitive thinking systems. (Chesterman, 2020) (Veale and Zuiderveen2021)

In the framework of Law 4.0, one pure innovation is the recognition of the personality of artificial agents. Although historically legal systems have distinguished natural persons - human beings - thus attributing them rights and duties from legal persons, who then have rights and duties, the recognition of legal persons due to Artificial Intelligence is an acute question for the post-modern era. Humanity, once again, tries to perpetuate intelligence and reason in its creations. The granting of its capacity of acting and thus of generating rules also demands proportional responsibilities, in case these rules fail to protect the interests pursued or anticipate risks. However, it is essential to consider that the recognition of artificial legal personality constitutes, at an early stage, a matter of public policy. (Gravett2020)

OVERVIEW OF EXISTING LAWS

Different legal and social issues are being discussed by citing examples related to the music, text, and drawing creations, machine parts, temporary agency workers or brains, and the company profits or the premise of genetic and/or building personalizations. The European Union has provided the protection of computer programs, databases, as well as intellectual property rights. There are already recognition mechanisms as an inventor or an operator of the results achieved by knowledgeable systems in Germany, Switzerland, the UK, and the USA, and several debates respecting the ownership of associated intellectual property rights raised by patent law bodies according to mentioned systems. A private company or a natural person may be recognized as the owner. It seems that there is no legal personality of AI entities, at least until now. (Solum, 2020)

2.1. Overview of existing laws: In the near future, a computer, a robot, or a robot-computer integrated entity may create a piece of music or literary ambiance, write a news article, or generate some inventions of foreseeable benefits, win a prize, or create something misleading, scary, or harmful. Existing laws and legal practices have been emphasizing the significant roles of human inventors and creators and their private ownership of intellectual properties, though following scant recognition of the co-authorship and the actual contributions from some AI tools in the possibility of very low human intervention creative activities. Moreover, how to determine and distinguish them between the creative works accomplished by humans from those generated using AI tools requires both intellectual property to be owned and non-owned inputs. (Mushtaq et al.2024)

CHALLENGES IN APPLYING LAWS TO AI

With respect to the liability of the software producer or supplier, technical bias had previously been discussed for any act of liability. If the software defect causes personal injury or property damage, the software manufacturer is responsible. In this respect, it is noted that the MAN PRODUCIDO theory is also given by the fact that directive for product liability (Directive 85/374 EEC) was implemented in several European countries and in Israeli law, since responsibility would exist if the software is a defect with an active condition, but there should be no responsibility if a passive machine is connected in the fabric. The discussion of AI introduces issues related to the application of the current legal device, legal character, responsibility, and the presentation of data sets that have important and desired information against relevant elements of the information. (Machnikowski, 2024)

In view of the fact that AI has various applications in the market, consumer protection is an important challenge to be faced. Fairness, transparency, privacy, exclusion, and security are issues addressed by consumer protection and need to be guaranteed for AI in all applications that have a relationship with the final consumer, such as profit negotiations, customer service activities, hiring, and public relations initiatives directly to the consumer, such as prophecies and person-and chatbots assist predictive Internet search engines. At least Amazon will then implement an anonymous home algorithm to manage credit scores. In addition, consumer protection should be perceived as the interface between liability and AI law. (Du & Xie, 2021)

ARGUMENTS FOR RECOGNIZING AI AS LEGAL PERSONS

The expansion of the concept of legal personality towards Artificial Intelligence is a more than legitimate and appropriate evolution. Certainly, it is necessary to proceed with caution and care. It is appropriate to leave to the legislator the responsibility of governing a field of such depth and complexity, mediating – as foreseen in

the Italian legal tradition – interests of very different nature. But it is also necessary to have the courage to take the first steps if not to be off the front row, and simply to question the sociological, philosophical, and ethical implications. (Solum, 2020)

Today's idea is not unforeseen: for thousands of years, minds, hearts, and law were concentrated on recognizing legal personality not only to ideas, and then to companies but, just over a century ago, to all non-human entities, i.e., to associations and institutions. Moreover, the common thread that connected these findings was not exclusively the consideration of the historical and economic context of reference, but also concerns of the moral component with implications of widespread relevance for society. (Buocz & Eisenberger, 2023)

It is easier to regard them as a single and unique person than to configure, ex post facto, the sums of rights of and between the owners, the developers, the cognitive architectures used, and the business fabric that has flourished around the activity of the new futuristic 'vessels of reason'.

The major argument that we should recognize Artificial Intelligence as a legal person is to ensure the interests of humans and other legal persons who maintain relations with AI. It would be more consistent with the applicable law, as that law could not sustainably continue to leave persons with no rights or obligations, not even a legal entity with which to interact. It would be an effective means to protect third parties. At the same time, this recognition is compatible with the requirements of both morality and so-called 'common sense'. (Banteka, 2020) (Zuiderveen2020)

The sense of dignity and worth of human beings precludes the classification of any data on where they, as a society, want to legally classify those beings which they employ. At the same time, the sense of dignity of human beings requires the classification of which way they go about their considerations.

ETHICAL CONSIDERATIONS

This circumstance has forced some academics, and even some politicians, to propose the suitability that these entities are also granted certain rights, obligations, and even responsibilities, so that they can respond to the consequences of the actions that they themselves have decided, among other things. He defends the idea of granting legal personality to the robots or artificial intelligence machines according to a criterion of financial security. That is, if a machine, robot, or artificial intelligence causes harm, the economic consequences that it generates fall on the shoulders of the company that manufactures and markets it, and that would be the true holders of the rights and obligations, among others. (Jaynes, 2020)

To this, we must add that the advancement in the most advanced sciences such as electronics, robotics, or artificial intelligence has opened the possibility that these machines, robots, or artificial intelligences acquire some kind of autonomy and can adopt their own decisions, although it is clear that in a very deficient way.

Currently, the domestic and international legal framework establishes that the legal subject of law must be a natural or legal person. Although, there are some who argue that this legal personality should also cover non-human or non-personal entities such as animals, rivers, or lakes, among others. In any case, the subject matter of law is not clear. (Solum, 2020)

LIABILITY AND ACCOUNTABILITY

Responsibility for the objects developed by artificial intelligence has to be clarified. It is the concrete application of a certain number of general principles and particularly the principle of producer liability. The principles of liability do not by themselves provide a basis for liability of AI. The principle of tort liability provides the starting point for liability where the AI operator/developer is at fault and its activity infringes the prohibited conduct, or where he engaged in an abnormally dangerous, ultra-hazardous activity that caused the harm. In tort liability, the fault or strict liability principles deploy in relation to human behaviour, inviting measures of prevention and deterrence related to human-agent activity. However, when machines are incorporated, operated by or about them possibly programmed by entities that do not have the same scope of moral decision-making as human, or moral response to incentives as human, the traditional tort principles of fault or phishing liability are disrupted. (Wendehorst, 2020)

Liability in the use of artificial intelligence is a problem that arises. It is noted that AI is likely to raise the issue of liability when the AI undermines the objectives of a system, or otherwise does not function in line with reasonable expectations. If the AI system is developed to adapt according to its best-known parameters, without being designed to use only predetermined sources of information for that purpose, if the information allowing the AI to acquire its own decision-making logic is in accordance with the obligations of the producer of the AI, which means that the AI does not function according to the reasonable expectations of the user, producer liability can be brought into play. (Zech, 2021)

INTELLECTUAL PROPERTY RIGHTS

There is also the question of defining authorship and the category of AI as a producer and how rights can also encourage their use for areas of public interest, such as health and the environment, ensuring that its use continues to add value for humanity. It is true to mistakenly assume that as such legally non-existent entities, since robots have no capacity to act or generate rights, property rights are allocated to the people who create them. The property right on a creation may be excluded from being waived, being assets which, in some jurisdictions, cannot be corporatized and capital can only be obtained by concession of the author. However, some have not called for the allocation of such rights on AI to be attributed to the entities that create it and not to the people who do so. However, it is also possible to assume that the allocation of rights to researchers ultimately means that those who face the consequences when AI creates incorrect or injures anyone. (Gordon, 2021)

3.3. Intellectual Property Rights. Notwithstanding the increasing importance of AI in the creation of innovative products and services, the fact is that the vast majority of jurisdictions in the world do not provide for the protection of artworks or scientific creations. The concept of the legal entity recognizes moral capacity, being excluded from the capacity to exercise themselves or act on its behalf. This is very unfortunate, as every one of the overwhelming number of AI projects can be rewarded and protected. Lawmakers should thus define if AI generates any other kind of moral, personal rights different and independent of those of the researcher. (Selvadurai and Matulionyte2020)

POTENTIAL IMPLICATIONS AND FUTURE OUTLOOK

In both cases, the recognition of legal personality would benefit technologically powerful players and support the technological companies that create these systems. This risk is particularly imminent in the context of implementing AI in public administration and public finances. For specific problems and solutions, refer to the AI strategies of France, the European Union, and other public sector initiatives. (Chesterman, 2020)

Creating legal mechanisms for AI recognition could lead to a situation where a certain legal system promotes the status of AI as a person, thereby increasing investment and the status of specific sectors of society. This investment represents the establishment of long-term relationships between the legal entity and the rights holders, who have certain expectations. However, if a particular type of AI system is used for democratic processes, there is a risk that it could promote investment, potentially leading to discrimination based on wealth, social status, and other factors. This consequence should be considered in the context of promoting trust in a democratic and human-centered AI. (Kan2024)

Artificial vs Human Intelligence

Applying legal norms as imperatives could result in irrational decisions in certain situations. Such application would create legal entities with will and intellect, fostering symbiotic relationships with other legal entities while considering their interests. This concept is known as competitive neighboring disappearance.

First and foremost, legal personality is accompanied by four capacities: rights, duties, status, and delegated authority. This would inevitably legalize the complex adaptive system that AI is. The establishment of a new set of regulatory mechanisms would change our classical understanding of the purpose and functioning of the law. Consequently, this knowledge and subsequent regulation would bring about significant changes in transactional decision-making, procedural court processes, and the understanding of legal personality itself. (Stahl et al.2022)

The recognition of legal personality for AI could lead to potential severe implications that are not limited to national jurisdictions. These implications are analyzed in the following section.

IMPACT ON SOCIETY AND ECONOMY

Moreover, AI promises to create many other opportunities, even in the financial industry. The ability of algorithms to identify the complex relationships between different financial instruments is constantly highlighting investment opportunities considered risk-free, also by creating markets for products previously unsuitable for trade, such as the uncertain economic result of a professional football player or a doubtful event, for example, a terrorist attack. The economic aspects relating to AI seem to have overcome the status of mere creative ideas. The economic impact of AI is often equated with the creation of opportunities, and the negative economic impacts are underestimated. The extensive automation of tasks implies a reduction in the demand for workers from those economic sectors particularly affected by AI. In addition to the reduction in demand for labor, AI can also cause its obsolescence. (Bandi and Kothari2022)

Recognition of the legal personality of artificial intelligence: social and economic aspects associated with AI confirm the inefficiency of this legal alternative. The economic phenomenon of artificial intelligence is increasingly present in productive processes. In industrial plants, it is possible to observe the operation of robots, which replace employees in the execution of tasks. The same epithet can be given to platforms - systems with algorithms created from artificial intelligence techniques - capable of performing complex calculations and recognizing patterns in the vast amount of data that surrounds them. We are facing systems capable of expressing knowledge that is normally exclusive to humans. (Solum, 2020)

TECHNOLOGICAL ADVANCEMENTS AND AI DEVELOPMENT

The game started showing a higher level of challenge since a new technology, AI, was added in 1991. Samuel learned to differentiate expert moves from ordinary ones by chess games which were played to train the computer. Alpha-Beta approach, a bit more complex strategy, was added to release the shear search technique. The strategy enables the computer to escape the search tree by identifying the outcomes of less practical moves not evaluated. At the end of the search, the examination of the future impact of different moves was yielded, leading to a better response. More in-depth search at each move can lead to a limitation of any decision at all depths. Aspect launched the AI program "Deep Blue" in 1996, developed by IBM. In 1997, Deep Blue beat the world record holding for 11 years, defeating the champion at that time, Garry Kasparov. (Modi & Acuna, 2023)

The tools available for AI research and application have dramatically improved in recent years. The progress is well shown in games, a major part of AI research. Although the number of legal moves in a chess game is considered a significant value, which is estimated to be 10^123, it is not difficult to check it. No hidden object can change the rules designed in the beginning. Therefore, any game is predictable, and for every possible move, its corresponding result can be meticulously predicted. AI systems could simply use a look-up table of moves and endings. This "brute force search" scaled as a tree showing all opponents' counters and available future moves, and it is how to play chess. (Ruoss et al.2024)

CALCULATIONS

Research on the legal personality of artificial intelligence has yielded varied results and strategies for addressing its challenges:

Research Results:

Legal scholars have produced diverse opinions on whether AI should be granted legal personality, reflecting the complexity of the issue.

Some argue for recognizing AI as legal entities to facilitate accountability and innovation, while others caution against blurring the lines between humans and machines.

Case studies, such as Saudi Arabia's granting citizenship to Sophia the robot, have sparked ethical and legal debates but haven't led to widespread adoption of AI legal personality.

ADDRESSING CHALLENGES

Defining Criteria: Establishing clear criteria for AI legal personality, such as levels of autonomy, decision-making capabilities, and potential for harm, can help address ambiguities.

Regulatory Frameworks: Developing comprehensive regulatory frameworks that balance innovation with accountability can mitigate risks associated with AI legal personality.

Ethical Considerations: Continued discourse on the ethical implications of granting legal personality to AI is essential to ensure alignment with societal values and principles.

International Collaboration: Given the global nature of AI development and deployment, international collaboration and standardization efforts are crucial for harmonizing legal approaches.

Interdisciplinary Research: Collaboration between legal experts, ethicists, technologists, and policymakers can provide holistic perspectives on the challenges and implications of AI legal personality.

By synthesizing research results and implementing strategies to address challenges, stakeholders can navigate the complexities of granting legal personality to artificial intelligence responsibly and ethically.

REFERENCES

Ballardini, R. M. & Casi, C. (2020). Regulating nature in law following weak anthropocentrism: Lessons for intellectual property regimes and environmental ethics. Retfærd Nord. Jurid. Tidsskr. helsinki.fi

Nahdhiyah, N. (2023). RELASI EKOLOGIS ANTARA MANUSIA, ALAM DAN TUHAN DALAM NOVEL-NOVEL TERPILIH KARYA PAOLO COELHO. unhas.ac.id

Sun, W., Bocchini, P., & Davison, B. D. (2020). Applications of artificial intelligence for disaster management. Natural Hazards. google.com

Dwivedi, Y. K., Hughes, L., Ismagilova, E., Aarts, G., Coombs, C., Crick, T., ... & Williams, M. D. (2021). Artificial Intelligence (AI): Multidisciplinary perspectives on emerging challenges, opportunities, and agenda for research, practice and policy. International Journal of Information Management, 57, 101994. openrepository.com

De Gregorio, G. (2021). The rise of digital constitutionalism in the European Union. International Journal of Constitutional Law. academia.edu

Kazantsev, D. A. (2023). Problems and Prospects of Regulating Relations within a Deal Effected with Participation of Artificial Intelligence. Journal of Digital Technologies and Law. cyberleninka.ru „„„ & Polishchuk, V., Fedirko, N., Grytsyshen, D., Ohdanskyi, K., Kotkovskyy, V. (2024). Analysis of the Impact of Cybersecurity on The Stability of Financial Institutions. International Journal of Religion. Volume: 5| Number 9| pp. 302–309. [PDF] ijor.co.uk

Chesterman, S. (2020). Artificial intelligence and the limits of legal personality. International & Comparative Law Quarterly. cambridge.org

Veale, M., & Zuiderveen Borgesius, F. (2021). Demystifying the Draft EU Artificial Intelligence Act—Analysing the good, the bad, and the unclear elements of the proposed approach. Computer Law Review International, 22(4), 97-112. [PDF]

Gravett, W. (2020). Is the dawn of the robot lawyer upon us? The fourth industrial revolution and the future of lawyers. Potchefstroom Electronic Law Journal/Potchefstroomse Elektroniese Regsblad, 23(1). ajol.info

Solum, L. B. (2020). Legal personhood for artificial intelligences. Machine ethics and robot ethics. unc.edu

Shahbaz, M., Hye, Q. M. A., Tiwari, A. K., & Leitão, N. C. (2013). Economic growth, energy consumption, financial development, international trade and CO2 emissions in Indonesia. Renewable and sustainable energy reviews, 25, 109-121.

Mushtaq, S. A., Baig, K., Bukhari, S. W. R., & Ahmad, W. (2024). Does Pakistan's Copyright and Antitrust Law Protect Creators of AI-Generated Content? A Comparative Study with European Union Jurisdictions. Pakistan Journal of Criminal Justice, 4(1), 55-76. centeriir.org

Machnikowski, P. (2024). The Principles of European Tort Law and Product Liability. Journal of European Tort Law. [HTML]

Du, S. & Xie, C. (2021). Paradoxes of artificial intelligence in consumer markets: Ethical challenges and opportunities. Journal of Business Research. [HTML]

Buocz, T. & Eisenberger, I. (2023). Demystifying legal personhood for non-human entities: A Kelsenian approach. Oxford Journal of Legal Studies. [HTML]

Banteka, N. (2020). Artificially Intelligent Persons. Hous. L. Rev.. fsu.edu

Zuiderveen Borgesius, F. J. (2020). Strengthening legal protection against discrimination by algorithms and artificial intelligence. The International Journal of Human Rights, 24(10), 1572-1593. tandfonline.com

Jaynes, T. L. (2020). Legal personhood for artificial intelligence: citizenship as the exception to the rule. AI & SOCIETY. philpapers.org

Shahbaz, M., Hye, Q. M. A., Tiwari, A. K., & Leitão, N. C. (2013). Economic growth, energy consumption, financial development, international trade and CO2 emissions in Indonesia. Renewable and sustainable energy reviews, 25, 109-121.

Wendehorst, C. (2020). Strict liability for AI and other emerging technologies. Journal of European Tort Law. degruyter.com

Waheed, M., & Jam, F. A. (2010). Teacher's intention to accept online education: Extended TAM model. Interdisciplinary Journal of Contemporary Research in Business, 2(5), 330-344.

Zech, H. (2021). Liability for AI: public policy considerations. ERA forum. springer.com

Gordon, J. S. (2021). Artificial moral and legal personhood. AI & society. academia.edu

Selvadurai, N., & Matulionyte, R. (2020). Reconsidering creativity: copyright protection azfor works generated using artificial intelligence. Journal of Intellectual Property Law & Practice, 15(7), 536-543. [HTML]

Kan, C. H. (2024). Artificial intelligence (ai) in the age of democracy and human rights: normative challenges and regulatory perspectives. International Journal of Eurasian Education and Culture, 9(25), 145-166. ijoeec.com

Stahl, B. C., Rodrigues, R., Santiago, N., & Macnish, K. (2022). A European Agency for Artificial Intelligence: Protecting fundamental rights and ethical values. Computer Law & Security Review, 45, 105661. sciencedirect.com

Bandi, S., & Kothari, A. (2022). Artificial intelligence: An asset for the financial sector. Impact of Artificial Intelligence on Organizational Transformation, 259-287. [HTML]

Modi, E. & Acuna, K. (2023). The Effects of Computer and AI Engines on Competitive Chess. Journal of Student Research. jsr.org

Ruoss, A., Delétang, G., Medapati, S., Grau-Moya, J., Wenliang, L. K., Catt, E., ... & Genewein, T. (2024). Grandmaster-level chess without search. arXiv preprint arXiv:2402.04494. [PDF]