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THE LEGAL PERSONALITY OF AI-ENABLED ROBOTS: AN ANALYTICAL STUDY IN LIGHT OF THE 2017 EUROPEAN PARLIAMENT REPORT AND THE 2024 EUROPEAN AI ACT

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Abstract:

This study examines the legal status of AI-powered robots as their autonomy and learning abilities challenge traditional concepts of legal personality. It questions the adequacy of the classical distinction between legal persons and objects, given that such robots can produce direct legal effects. The research reviews the evolution of European legal thinking, starting with the 2017 European Parliament Report that introduced the idea of "electronic personality," and leading to the 2024 European Artificial Intelligence Act. Using an analytical method, the study evaluates European legal texts and doctrinal approaches in light of established legal principles. The findings show that the 2024 AI Act intentionally rejects granting robots independent legal personality. Instead, it adopts a risk-based regulatory approach that preserves the link between legal responsibility and human control, ensuring legal protection without creating a new category of legal persons for intelligent machines.

***Key Words**:* Artificial Intelligence; Intelligent Robots; Legal Personality; Electronic Personality; European Union AI Law.

الشخصية القانونية للروبوتات المزودة بالذكاء الاصطناعي: قراءة تحليلية في ضوء تقرير البرلمان الأوروبي 2017 وقانون الذكاء الاصطناعي الأوروبي 2024

ملخص: تتناول هذه الدراسة الوضع القانوني للروبوتات المدعومة بالذكاء الاصطناعي في ظل تصاعد درجة استقلاليتها وقدراتها على التعلم، وهو ما يثير تساؤلات حول مدى ملاءمة المفاهيم التقليدية للشخصية القانونية. كما تثير إشكالية مدى كفاية التمييز الكلاسيكي بين الأشخاص والأشياء، خاصة وأن هذه الروبوتات أصبحت قادرة على إحداث آثار قانونية مباشرة. وترصد الدراسة تطور الفكر القانوني الأوروبي، بدءًا من تقرير البرلمان

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الأوروبي لسنة 2017 الذي طرح فكرة "الشخصية الإلكترونية"، وصولًا إلى قانون الذكاء الاصطناعي الأوروبي لسنة 2024. وبالاعتماد على المنهج التحليلي، تقوم الدراسة بتقييم النصوص القانونية الأوروبية والمقاربات الفقهية في ضوء المبادئ القانونية المستقرة. وتخلص النتائج إلى أن قانون 2024 يتجه صراحة إلى رفض منح الروبوتات شخصية قانونية مستقلة، معتمداً بدل ذلك مقاربة تنظيمية قائمة على تقييم المخاطر، تحافظ على الارتباط بين المسؤولية القانونية والإشراف البشري، بما يضمن الحماية القانونية دون استحداث فئة قانونية جديدة للآلات الذكية.

الكلمات المفتاحية: الذكاء الاصطناعي؛ الروبوتات الذكية؛ الشخصية القانونية؛ الشخصية الإلكترونية؛ قانون الذكاء الاصطناعي للاتحاد الأوروبي.

La Personnalité Juridique Des Robots Dotés D'intelligence Artificielle: Une Étude Analytique À La Lumière Du Rapport Du Parlement Européen De 2017 Et De La Loi Européenne Sur L'intelligence Artificielle De 2024

Résumé:

Cette étude examine le statut juridique des robots dotés d'intelligence artificielle, dont l'autonomie et les capacités d'apprentissage remettent en cause les concepts traditionnels de la personnalité juridique. Elle interroge la pertinence de la distinction classique entre les personnes et les choses, dès lors que ces robots sont capables de produire des effets juridiques directs. La recherche retrace l'évolution de la pensée juridique européenne, depuis le rapport du Parlement européen de 2017 ayant introduit la notion de « personnalité électronique », jusqu'au Règlement européen sur l'intelligence artificielle de 2024. À travers une approche analytique, l'étude évalue les textes juridiques européens et les constructions doctrinales au regard des principes juridiques établis. Les résultats montrent que le législateur européen écarte explicitement la reconnaissance d'une personnalité juridique indépendante pour les robots, en adoptant plutôt une approche fondée sur les risques, qui maintient le lien entre responsabilité juridique et contrôle humain, garantissant ainsi la protection juridique sans créer une nouvelle catégorie de sujets de droit pour les machines intelligentes.

Mots Clés: intelligence artificielle; robots intelligents; personnalité juridique; personnalité électronique; loi de l'Union européenne sur l'IA.

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Introduction:

In recent years, rapid advances in artificial intelligence and robotics have not only transformed technological capabilities but have also raised fundamental questions regarding their place within the traditional legal framework. AI-enabled robots, which do not readily fit within established legal categories, challenge the classical distinction between legal persons and objects, particularly as they increasingly demonstrate the capacity to learn, adapt, and produce legally significant effects**.**

This transformation has intensified doctrinal debates on the adequacy of traditional concepts of legal personality. Some scholars have begun to question whether autonomy, functionality, and decision-making capacity could justify the emergence of a new legal status for intelligent systems beyond the human-centered model. While the classical theory of legal personality remains grounded in human will, contemporary approaches tend to emphasize functional criteria linked to performance and autonomous information processing. Recent international scholarship has further highlighted these debates, particularly in relation to the European Union's emerging regulatory approach to artificial intelligence.[1]

.Within the European context, this debate acquired an institutional dimension with the European Parliament Report of 2017, which explicitly raised the possibility of rethinking the legal status of advanced robots and suggested, albeit cautiously, the potential creation of a specific legal category tailored to their characteristics. At the same time, it maintained a pragmatic approach by preserving the attribution of responsibility to a human actor, thereby avoiding a complete departure from established legal principles.

This orientation was further clarified in the subsequent legislative phase, notably through the 2024 European Artificial Intelligence Act, which reflects a decisive shift toward a risk-based regulatory framework. Rather than recognizing robots as independent legal persons, the Act focuses on governing their use, managing associated risks, and adapting existing liability regimes, while maintaining the fundamental link between legal responsibility and human control.[2]

Against this background, the present study seeks to examine the evolution of European legal thinking on AI-enabled robots, with a view to assessing the extent to which contemporary legal frameworks are capable of responding to the challenges posed by increasingly autonomous technologies, without undermining the foundational principles of legal personality.

[1] Nathalie A. Smuha, "From a 'Race to AI' to a 'Race to AI Regulation' - Regulatory Competition for Artificial Intelligence", Law, Innovation and Technology, Vol. 13, No. 1, 2021, p. 5, available at: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3501410 , accessed on 5 April 2026.

[2] G. Guégan, "The Elevation of Robots to Legal Personhood", Doctoral Thesis, University of Toulouse, 2016, p. 284.

Accordingly, the research problem may be formulated as follows: to what extent can the concept of legal personality be extended to AI-enabled robots, in light of their increasing autonomy and capacity for independent action, and how is this issue addressed within the European legal framework, particularly through the evolution reflected in the 2017 European Parliament Report and the regulatory approach adopted by the 2024 European Artificial Intelligence Act?

In order to address the research problem, the study seeks to answer the following questions:

- To what extent can AI-enabled robots fit within the traditional concept of legal personality?
- How did the 2017 European Parliament Report approach the notion of "electronic personality" for autonomous robots?
- What position does the 2024 European Artificial Intelligence Act adopt regarding legal personality and liability for AI-enabled robots?
- Does the current European regulatory framework provide sufficient legal protection without recognizing robots as independent legal persons?

The study adopts an analytical method, focusing on the 2017 European Parliament Report and the 2024 Artificial Intelligence Act as key reference points in the evolution of European legal thinking.

The analysis is limited to examining the evolution of the European legislative approach toward AI-enabled robots and the legal implications of autonomy and liability within the European legal framework. It aims to identify the legal foundations of the concept of legal personality for AI-enabled robots and to assess the coherence of the European legislative approach in light of established principles of liability and legal theory.

This method is applied through a systematic analysis of relevant European legal texts and doctrinal literature concerning the legal status of AI-enabled robots.

For the purpose of addressing the various aspects of the subject, the study is divided into two main topics:

Topic One: The legal nature of AI-enabled robots under European Robot Law (2017).

Topic Two: The regulation of artificial intelligence under the 2024 Act and the limits of the possibility of recognizing legal personality for robots.

THE FIRST TOPIC: THE LEGAL NATURE OF AI-ENABLED ROBOTS UNDER EUROPEAN ROBOT LAW (2017)

The European Parliament Report of February 2017 stands as one of the earliest legislative documents to systematically address the legal nature of intelligent robots. It was issued at a juncture when deep learning-based technologies were transitioning from conventional mechanical tools to systems capable of learning and exercising decision-making in an increasingly autonomous manner. The Report marked a significant shift in European legal thinking by introducing a reconceptualization of the robot's position within the legal order, departing from the prevailing view that confined such entities strictly to the category of material objects under human control.

In this context, the Report raised fundamental questions regarding the adequacy of traditional legal categories to accommodate advanced robots, and whether the specific characteristics of these systems necessitate the development of new legal concepts or the drafting of a dedicated framework to regulate their legal status and responsibilities. Consequently, this Report represented a significant starting point in the European debate on the possibility of establishing a "legal status" specifically for highly autonomous robots.

First Requirement: Definition Of Ai-Enabled Robots

The term "artificial intelligence" is relatively recent in the scientific literature, having been first used in 1956 by the American researcher John McCarthy during the Dartmouth Conference, which marked the actual beginning of AI as a field independent from computing and robotics. McCarthy initially defined it as "the science of engineering and building intelligent machines",[1] and later, in 2007, he refined this definition to specifically relate it to intelligent software, considering artificial intelligence as the design of computer systems capable of performing tasks that require human-like intelligence.[2]

This definition raises fundamental questions regarding the extent to which artificial intelligence can resemble human intelligence, or a machine's capacity to think in a manner similar to humans.[3] This issue has been addressed by numerous scholars, most notably Alan Turing in his famous 1950 article, in which he proposed

[1] Marwa Merrouche and Djaouida Ghanem, "John McCarthy: Pioneer and Innovator of Artificial Intelligence", Journal of El Hikma for Philosophical Studies, Vol. 13, No. 1, 2025, pp. 16–34.
[2] Ali Sardouk, "The Use of Intelligent Robots in University Libraries: Global Experiences and the Current Situation in the Maghreb Countries", Journal of Information and Communication Technology, No. 2, 2020, p. 15.
Mohammed Irfan Al-Khatib, "The Legal Status of Robots: Personality and Liability – A Comparative Foundational Study in Light of the 2017 European Civil Law Rules on Robotics", Kuwait International Law School Journal, Vol. 12, No. 1, 2014, p. 9.
[3] Jaana Sild, "Legal Capacity of Artificial Intelligence", L'Europe Unie, No. 13, 2018, p. 74.

his well-known "Turing Test", based on the machine's ability to convince a human that it is thinking in a human-like way.[1]

Building on this perspective, some definitions have approached artificial intelligence as the process of "automating human cognitive activities," including analysis, decision-making, and problem-solving, through software or machines capable of operating in a quasi-autonomous manner[2]. Other definitions have described it as the study of how to enable computers to perform tasks better than humans; in other words, a technology capable of learning and making decisions as an intelligent entity.[3]

Meanwhile, the Information Technology Industry Council (ITI) provided a more comprehensive definition, describing artificial intelligence as a set of technologies capable of learning, applying logic, adapting to changes, and operating according to models inspired by human intelligence. Within this framework, AI can be understood as a collection of systems, machines, or applications programmed to simulate human behavior in light of environmental inputs.[4] Current applications include self-driving vehicles, unmanned aerial vehicles (drones), translation software, autonomous weapons, and smart devices.

AI systems are generally divided into two types narrow intelligence, which performs specific tasks without general cognitive ability, and general intelligence, which surpasses human capabilities across all domains, including creativity, wisdom, and the solving of complex problems. It is intelligence that possesses capacities exceeding even the smartest human minds.[5]

Meanwhile, the robot, or "automaton," represents one of the most prominent applications of artificial intelligence. It is defined as an electronically programmed machine capable of making decisions adapted to varying conditions, and it does not necessarily take a human form; rather, it includes any machine that relies on sensing, analysis, and interaction with its environment in an autonomous manner. Robots may

[1] Alan M. Turing, "Computing Machinery and Intelligence", *Mind*, Vol. 59, No. 236, 1950, pp. 433–460.

[2] Mohammed Abdelhafiz Al-Manaseer, "The Issue of the Electronic Legal Personality of Robots: An Analytical and Comparative Study within the Framework of Omani and European Civil Legislation", Arab Journal of Science and Research Publication, Vol. 6, No. 1, 2020, p. 54.

[3] Khadija Mohamed, "Ethics of Artificial Intelligence and Robotics", International Journal of Library and Information Sciences, Cairo, Vol. 6, No. 3, 2019, pp. 242–243.

[4] Hammam Al-Qawsi, "Errors of Algorithmic Trading Robots Operating with Artificial Intelligence: A Prospective Study of Civil Liability in the Stock Market", Jil Journal of Advanced Legal Research, No. 41, 2020, p. 18.

[5] Mohamed Amin Mouda, "Legal Liability for the Use of Artificial Intelligence", in Mohamed Lamine Ben Kaid Ali (ed.), Artificial Intelligence and Scientific Research: Reality and Prospects, Vol. 3, 1st ed., University of M'Hamed Bougara, Boumerdes, Algeria, 2024, p. 195.

be programmed according to either narrow or general intelligence and can operate under direct human control or independently.[1]

An "AI-enabled robot" refers to a technical entity that combines a physical structure capable of interacting with its surrounding environment with an intelligent software system that relies on inference algorithms or machine learning. This enables it to make decisions and perform actions with a degree of autonomy without direct human intervention at every stage of operation.[2] Such robots are not limited to executing pre-programmed commands; they also possess the ability to adapt to changing inputs, distinguishing them from traditional machines.[3]

The fields of artificial intelligence in robotics are extensive, encompassing computer science[13], whether in hardware or software, and particularly its applications in biology, psychology, mathematics, medicine, and brain functions, including its inherent capacities for thinking, learning, reasoning, and the storage and processing of information and knowledge. The ultimate goal of artificial intelligence is to enable machines, including "robots," to emulate human activities such as thinking, learning, and communication, and even to surpass humans in accuracy, skill, speed, and autonomous decision-making without direct human intervention.[4]

The 2017 European Parliament Recommendation enshrined this expanded understanding of the intelligent robot, considering it an automated system with functional autonomy that raises new legal challenges concerning its legal nature and the limits of subjecting it to traditional rules of liability and legal personality. [5]

In the same context, it is observed that the 2024 European Artificial Intelligence Act does not provide an independent definition of the robot, but it includes within the concept of an "AI system" any system embedded in a physical device capable of producing decisions, recommendations, or predictions that affect individuals or the

[1] Wafaa Yaacoub Janahi, "Legal Status of Smart Robots and the Liability of Their Operators: An Analytical Study in Bahraini and Comparative Law", Al-Houkouq Journal, Vol. 48, No. 03, September 2024, p. 420.
[2] Stuart J. Russell and Peter Norvig, Artificial Intelligence: A Modern Approach, 4th ed., Pearson, 2021, http://lib.ysu.am/disciplines_bk/efdd4d1d4c2087fe1cbe03d9ced67f34.pdf, accessed on 02 December 2025.
[3] ISO 8373:2021, Robots and robotic devices – Vocabulary, available at: https://www.iso.org/obp/ui/#iso:std:iso:8373:ed-3:v1:en, accessed on 02 December 2025.
[4] Hamad Shawki El-Anany and Isam Hadib, Artificial Intelligence and Its Role in Combating Corruption, Dar Al-Nahda Al-Arabiya, Cairo, 2022, p. 16, cited in: Kamel Hattab, "Issues of Criminal Liability for Crimes Committed by Robots", Journal of Algerian and Comparative Public Law, Special Issue, September 2025, p. 404.
[5] European Parliament, Resolution with recommendations to the Commission on Civil Law Rules on Robotics, 16 February 2017, P8_TA(2017)0051, available at: https://www.europarl.europa.eu/doceo/document/TA-8-2017-0051_EN.html, accessed on 22 November 2025.

public order. This renders the AI-enabled robot directly subject to the regulatory and supervisory framework within European public law.[1]

Second Requirement: The Legal Personality Of Robots And Its Impact On Liability According To The 2017 European Parliament Report

The European Commission adopted a balanced approach according to the terminology it employed, in its draft report containing recommendations to the Civil Law Rules Committee concerning robots, dated 21 May 2016. The Legal Affairs Committee of the European Parliament proposed the creation of a specific legal personality for robots (une personnalité juridique spécifique), whereby the most advanced autonomous robots (les plus sophistiqués) could, at least, be considered electronic persons with defined rights and duties, including the right to compensation for any harm caused to others.

The European Parliament sought to establish legal rules regulating the legal nature of intelligent robots by specifying their legal status. It discussed proposals and recommendations on whether robots should be treated as natural or legal persons, included within the category of objects, treated similarly to animals under the law, or whether the matter called for the creation of a new legal category alongside the two traditional types of legal personality (natural and legal), referred to as "electronic personality."[2]

It can be said that the nature of advanced autonomous intelligent robots has shaped the form and limits of the electronic legal personality, as it is difficult to conceive of such a personality as equivalent to the legal personality of corporations and associations, given that advanced intelligent robots possess autonomy and the inherent ability to interact with others and acquire experience through self-learning. This necessitates the recognition of legal personality for this entity through the creation of a new legal category, the "electronic personality," which would be responsible for remedying any harm it may cause to others.[3] Accordingly, any robot that makes independent decisions intelligently or interacts autonomously with others could be considered an electronic person. The Legal Affairs Committee of the

[1] Regulation (EU) 2024/1689 of the European Parliament and of the Council establishing harmonised rules on artificial intelligence (Artificial Intelligence Act), Official Journal of the European Union, 13 June 2024, Art. 3, available at: https://eur-lex.europa.eu/legal-content/FR/TXT/PDF/?uri=OJ:L_202401689, accessed on 24 November 2025.

[2] Reda Mahmoud Al-Abd, Virtual Legal Personality: Towards the Recognition of Legal Personality for Artificial Intelligence-Equipped Robots, 1st ed., Al-Ahram Publishing House, Mansoura, Egypt, 2025, p. 112.

[3] Talal Hussein Ali Al-Raoud, Civil Liability for Damages Caused by Artificial Intelligence Technology Operators: A Comparative Study, PhD Thesis, Faculty of Law, Mansoura University, 2022, p. 114.

European Parliament proposed conferring this electronic personality (la personnalité électronique) on AI systems.[1]

It is noteworthy that the recognition of this new legal personality does not require a certain level of consciousness in intelligent robots, as it constitutes a functional personality aimed at fulfilling specific operational objectives, the most important of which is to attribute responsibility to intelligent robots for the acts they perform.[2]

It is evident from the call for this approach, as an alternative to traditional law, that the Committee adopted a consensual stance seeking to reconcile the various opinions regarding the legal status of artificial intelligence. Some scholars consider that this legal caution toward a technology that is difficult to fully understand and apprehend can only slow down the inevitable recognition of legal personality for AI.

The draft was adopted by the European Parliament on 16 February 2017, but the resolution points to the need to establish a European system for the registration of advanced robots (d'immatriculation des robots avancés) in a register based on specific classification criteria. The European Parliament emphasized the necessity of registering intelligent robots in a dedicated register according to the standards established for the classification of robots by the European Union Agency for Robotics and Artificial Intelligence.[3]

The complex provisions of European civil law regarding intelligent robots have been issued with a view to creating a new category under the designation of “electronic personality,” based on the autonomy of intelligent robots and their practical nature, which constitutes the key feature for granting them legal personality and recognizing the attributes of this legal personality, such as domicile, nationality, capacity, patrimony, and other characteristics and effects associated with acquiring legal personality. The European Parliament issued a set of specific rules for electronic legal personality, requiring that each intelligent robot possess an electronic personality with a unique serial number including its name, surname, and identification number, in addition to a black box in which all information and data related to the intelligent robot are stored.[4]

Meanwhile, the French Senate Report (rapport du Sénat), dated 27 November 2017, supports the establishment of a sui generis legal status for electronic persons. Compared to legal personality in its strict sense, this approach is distinctive in that it assigns liability for damages arising from artificial intelligence to the “maître

[1] Théo Doh-Djanhoundy, "The Legal Status of Artificial Intelligence in Question", Digital Law, November 2019, available at: https://www.researchgate.net/publication/337438902, accessed on 21 October 2025.
[2] Al-Raoud, op. cit., p. 115.
[3] Théo Doh-Djanhoundy, op. cit.
[4] Al-Raoud, op. cit., p. 121.

d'apprentissage" (the supervisor of the learning process), rather than to the device or machine itself, on the basis that a robot cannot bear legal responsibility for such harm.

This position reflects the complex legal positioning of the European Union regarding a technology that is still only partially understood. It further illustrates the rationale behind the adoption of a sui generis legal framework for the regulation of electronic personality in the field of artificial intelligence.[1]

Undoubtedly, the European Parliament's decision of 16 February 2017 regarding the civil law rules on robotics (Règles de droit civil sur la robotique) represents a genuine innovation in this field. The European Parliament questioned whether the development of increasingly autonomous robots capable of self-learning (capables d'autoapprentissage) requires a reconsideration of civil liability in robotics.[2] According to the text voted upon, the currently applicable legal framework is insufficient to cover the damage caused by the new generation of robots, as it would become impossible to attribute liability to humans.

This is due to the fact that the capabilities of these advanced robots entail a certain degree of unpredictability in their behavior, given that they will learn independently from their own experiences, with variations in learning from one robot to another, and they may interact with their environment in unique and unforeseen ways due to the power of their artificial intelligence. Accordingly, the European Parliament encouraged the European Commission (la Commission européenne) to evaluate the solutions it proposes to ensure compensation for victims, such as introducing a mandatory insurance system or creating a compensation fund (création d'un fonds de compensation).[3]

The European Parliament's decision of 16 February 2017 emphasizes that the more autonomous and self-moving a robot is, the less it can be regarded as a mere simple tool (simple outil controlé) controlled by other actors such as the manufacturer, operator, owner, or user. On this basis, the autonomy of robots raises the question of their nature in light of existing legal channels or the necessity to create a new category with its own attributes and effects.

The European legislator defined the notion of robot autonomy in paragraph (AA) of the aforementioned decision, stating that it is "the ability to make and execute decisions in the external world independently of external control or influence, while this autonomy is purely technological in nature and its degree

[1] Théo Doh-Djanhoundy, op. cit.
[2] Al-Abd, op. cit., p. 115.
[3] Nathalie Nevejans, "Should the Legal Status of Robots Evolve?", La Jaune et La Rouge, Dossier: Robotics and Artificial Intelligence, No. 750, December 2019, pp. 40–43, available at: https://www.lajauneetlarouge.com/le-statut-juridique-du-robot-doit-il-evoluer/, accessed on 24 November 2025.

depends on the extent of the robot's interaction with its environment".[1] Accordingly, it appears that the decision implies that the degree of autonomy and self-movement directly affects the nature of the robot, which becomes more than a mere simple object. By proposing to transform the robot into a true legal person (droit de sujet véritable), the decision calls for a reconsideration of the fundamental pillars of law, which are based on the distinction between persons and things (les personnes et les choses), and between legal persons and legal objects (les sujets et les objets de droit).[2]

It can be said that through this decision, the European legislator sought to innovate a civil liability system suited to robots and artificial intelligence technologies that are autonomous in decision-making. The European Parliament's 2017 decision on the civil law rules for robots emphasized that the autonomy of these technologies elevates them above the level of simple objects or machines controlled by humans. The current legal framework does not allow robots to bear liability for the damages they may cause, placing the burden instead on the human proxy, i.e., the manufacturers, operators, owners, or users, who bear full responsibility for the robot's actions.

Undoubtedly, this legal approach removes robots from the category of objects and inanimate things. This is reflected in the legislator's adoption of the term "human proxy" to refer to the person responsible for the robot or artificial intelligence, instead of the traditional term "guardian" used in liability for mechanical machines, objects requiring special care, or in the context of animal liability.[3] The European Parliament confirms through this decision that the burden of compensating for damages caused by intelligent robots cannot be imposed on the robots or AI technologies themselves, but remains the responsibility of the human proxy in accordance with the applicable legal rules.[4]

THE SECOND TOPIC: REGULATION OF ARTIFICIAL INTELLIGENCE UNDER THE 2024 AI ACT AND THE LIMITS OF RECOGNIZING THE LEGAL PERSONALITY OF ROBOTS

The European Artificial Intelligence Act of 2024 constitutes the primary legislative framework through which one can examine how the European legislator

[1] Al-Abd, op. cit., p. 118.
[2] Nathalie Nevejans, op . cit., pp. 40–43.
[3] Mohsen Mohamed Al-Khubani, Civil Liability for Damages Arising from Artificial Intelligence, PhD Dissertation, Dubai Police Academy, United Arab Emirates, 2022, p. 161, cited in: Al-Abd, op. cit., pp. 117–118.
[4] Hammam Al-Qawsi, "The Issue of the Person Responsible for Operating Robots: The Impact of the Human Deputy Theory on the Effectiveness of Law in the Future, A Prospective Analytical Study on the Rules of European Private Civil Law on Robots", Jil Journal of In-Depth Legal Research, Vol. 3, No. 25, Jil Center for Legal Studies, Lebanon, May 2018, pp. 77–112.

regulates intelligent systems and the extent to which it is willing to recognize robots or autonomous systems as independent legal entities.

The European legal framework has witnessed significant developments in the regulation of artificial intelligence following the announcements of 2017 and 2020[1]. In 2024, the European Union adopted the AI Act, which represents the first comprehensive legislative system of its kind at the international level. This law is based on a methodology that classifies intelligent systems according to the level of risk they may pose, imposing strict obligations on high-risk applications, particularly in areas such as security, healthcare, and data management. It also introduces new transparency rules requiring developers of advanced models to disclose the data used and the mechanisms of system operation, in addition to prohibiting certain practices deemed unacceptable. The legislation aims to achieve a balance between fostering innovation and ensuring the protection of users and their fundamental rights, with a phased implementation of its provisions to ensure the readiness of institutions and supervisory authorities.[2]

First Requirement: The Regulatory Framework For Artificial Intelligence Under Law 1689-2024

The European Artificial Intelligence Regulation was adopted by the European Parliament and the Council on 13 June 2024[3], within the ordinary legislative procedure of the European Union. The Regulation was published in the Official Journal of the European Union on 12 July 2024 and entered into force twenty days after its publication, in accordance with the rules applicable under European legislation.

However, not all provisions of the Regulation apply immediately upon entry into force, as certain articles and chapters have been excluded from immediate application due to their technical nature and the complexity of the obligations they entail. This necessitates granting market actors and regulatory authorities additional time to

[1] European Parliament, Resolution of 20 October 2020 with recommendations to the Commission on a civil liability regime for artificial intelligence (2020/2014(INL)), Official Journal of the European Union, 2021, C 404, p. 1, available at: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=oj:JOC_2021_404_R_0006, accessed on 22 December 2025.

[2] Martina Hulok, "The EU model of AI governance: regulating artificial intelligence through law and policy", ERA Forum: Journal of the Academy of European Law, Vol. 26, 2025, pp. 527–547, available at: https://link.springer.com/article/10.1007/s12027-025-00869-1, accessed on 5 April 2026.

[3] Regulation (EU) 2024/1689 of the European Parliament and of the Council of 13 June 2024 laying down harmonised rules concerning artificial intelligence (Artificial Intelligence Act), Official Journal of the European Union, L 144, 12 July 2024, available at: https://www.senat.fr/europe/textes_europeens/ue0201.pdf, accessed on 25 November 2025.

adapt, ensuring a smooth transition toward full compliance with the requirements of this new legal framework.[1]

This legislation constitutes the first comprehensive legal framework adopted at the international level for the regulation of technology and intelligent systems, representing a foundational milestone in the governance of artificial intelligence within both commercial and institutional domains. In this regard, Mahmutovic goes further in emphasizing that the EU Artificial Intelligence Act represents a proactive and comprehensive regulatory framework aimed at balancing technological innovation with the protection of fundamental rights, without attributing legal personality to intelligent systems.[2]

Similarly, Hulok highlights that the European model of AI governance is essentially built on a risk-based and supervisory approach, which reinforces human control over AI systems rather than recognizing them as independent legal actors. The Regulation is structured into thirteen interconnected chapters. Chapter One provides general provisions, encompassing essential definitions and the scope of application, thereby establishing the conceptual foundation upon which the entire text is premised. Chapter Two focuses on the identification of prohibited practices associated with the use of artificial intelligence technologies, offering a precise enumeration of applications whose deployment would contravene the fundamental values and core safeguards of the European Union.[3]

Chapter Three addresses high-risk systems, delineating their characteristics and specifying the obligations of both providers and users. Chapter Four emphasizes requirements regarding transparency and disclosure, obliging all relevant actors to provide the necessary information to ensure safe and responsible utilization of AI technologies. Chapter Five concerns general-purpose AI models, followed by Chapters Six and Seven, which introduce measures to incentivize innovation alongside mechanisms for oversight and sanctions in cases of non-compliance with the provisions of this legislative framework.[4]

With reference to Article 113 of the aforementioned law[5], the full applicability of the Regulation is set for 2 August 2026. Nevertheless, the European legislator deemed it necessary to stagger the entry into force of certain chapters for regulatory

[1] Regulation (EU) 2024/1689, Article 3
[2] Adnan Mahmutovic, "The EU AI Act: A Proactive Framework for Comprehensive AI Regulation", International Journal of Law and Information Technology, Vol. 33, Oxford University Press, 2025, eaaf028. available at: https://academic.oup.com/ijlit/article-abstract/doi/10.1093/ijlit/eaaf028/8404086, accessed on 5 April 2026.
[3] Hulok, op. cit., pp. 527–547
[4] Sara Safwan, "An Analytical Reading of the European Artificial Intelligence Act (EU) 2024/1689", Journal of Legal Studies, Vol. 12, No. 1, April 2025, p. 305.
[5] Article 113, Regulation (EU) 2024/1689 of the European Parliament and of the Council of 13 June 2024 on artificial intelligence (Artificial Intelligence Act).

reasons. Accordingly, Chapter One, concerning general provisions, and Chapter Two, relating to prohibited practices, are scheduled to enter into force on 2 February 2025. The enforcement of Chapter Three of Section Four, Chapter Seven on general-purpose models, Chapter Nine on governance, Chapter Twelve on sanctions, and Article 78 concerning confidentiality, has been established for 2 August 2025.

Exceptions are made for Article 101, which addresses fines applicable to general-purpose models, and Article 6(1), which sets the criteria for classifying AI systems as "high-risk," as these provisions will only become effective on 2 August 2027. This phased implementation is intended to provide a suitable transitional period to prepare the circulating software and to enable supervisory and conformity assessment bodies within Member States to develop the necessary technical and institutional capacities to ensure effective compliance with the new legal framework.

This legislation is founded on a regulatory philosophy aimed at achieving a balance between the necessity of controlling the uses of artificial intelligence from the perspective of legal security and the protection of fundamental rights, and the importance of maintaining investment dynamics and fostering innovation within the framework of the European Union's Digital Single Market strategy. The objective is not merely to regulate technology, but to ensure that such regulation does not hinder technological development, while simultaneously reinforcing the core principles of democracy, the rule of law, and environmental protection.[1]

From this perspective, the legislation provides a set of flexible rules and coherent mechanisms that enhance user safety and support the balanced functioning of the internal market. It also facilitates the cross-border movement of goods and services based on intelligent systems. Member States are prohibited from imposing unjustified restrictions on the development, marketing, or use of such systems, except in cases expressly covered under the prohibited practices delineated by the law. The scope of the legislation is not limited to safeguarding user privacy; it extends to enhancing the competitiveness of enterprises, particularly start-ups, by enabling their access to European markets and allowing them to offer innovative solutions capable of keeping pace with digital transformations.[2]

Second Requirement: Scope Of Application Of The European Artificial Intelligence Act 2024

The European Artificial Intelligence Act of 2024 establishes the first comprehensive legislative framework aimed at regulating the use of intelligent systems within the European Union, seeking to mitigate the potential risks posed by this technology while ensuring its alignment with fundamental European values. The

[1] Safwan, op. cit., p. 306.
[2] Wafi Hajah and Horir Boumediene, "Privacy Protection in European Legislation in the Context of Artificial Intelligence", in Mohamed Lamine Ben Kaid Ali (ed.), Artificial Intelligence and Scientific Research – Reality and Prospects, Vol. 3, 2024, p. 97.

legislator has defined a precise scope of application for the law, based on objective criteria that rely on the nature of the intelligent system and its field of use, rather than the type of entity operating it or the degree of its autonomy. This approach clearly explains why the Act does not incorporate any provisions or orientation toward granting legal personality to robots.[1]

The scope of application of this Regulation encompasses all systems that are developed or placed on the European market, as well as those used within the Member States of the Union, provided that they rely on artificial intelligence technologies as defined by the legislator.[2] The Regulation adopts a risk-based approach, distinguishing between prohibited systems, high-risk systems, and other systems intended for general use.[3] For all these categories, the law imposes specific obligations on the actors throughout the production and operational chain, including developers, suppliers, distributors, and actual operators of the systems, in accordance with the potential impact of those systems on individuals' rights and safety.[4]

The scope of application of the 2024 AI Act does not extend to the creation of a new legal status for robots, nor does it confer independent legal capacity upon them, as the legislative philosophy underpinning the Act is primarily oriented toward the management of technological risks. Responsibilities are assigned to the human actors involved in the design, marketing, or operation of the system, rather than attributing rights and obligations directly to the intelligent entity itself.[5] By delineating the duties of human actors, the European legislator maintains that legal protection can be effectively ensured without necessitating the establishment of a new legal category for robots or autonomous systems.[6]

Accordingly, the application scope set out in the 2024 Act clearly reinforces the European legislator's position that artificial intelligence—regardless of its level of sophistication—remains a technological subject under human oversight, rather than an entity endowed with legal personality. This approach appears to reflect a deliberate intention to avoid the complex social and legal consequences that could arise from recognizing advanced automation as an independent legal actor, while simultaneously preserving the possibility of future legislative developments as the technical capabilities of such systems continue to evolve.

Conclusion:

[1] "The EU Artificial Intelligence Act: Our 16 Key Takeaways", available at: https://www.stibbe.com/publications-and-insights/the-eu-artificial-intelligence-act-our-16-key-takeaways, accessed on 2 December 2025.
[2] Regulation (EU) 2024/1689 on Artificial Intelligence Act, Articles 2 and 3.
[3] Regulation (EU) 2024/1689 on Artificial Intelligence Act, Titles II and III.
[4] Regulation (EU) 2024/1689 on Artificial Intelligence Act, Articles 16–29.
[5] Hulok, op. cit., pp. 527–547.
[6] Regulation (EU) 2024/1689 on Artificial Intelligence Act, Recitals 5, 26 and 27.

This study demonstrates that the question of legal personality for AI-enabled robots has emerged as a central issue in the evolution of European legal thought over the past decade, marking a transition from predominantly theoretical debates toward more structured regulatory responses. The 2017 European Parliament Report introduced a forward-looking perspective by proposing the notion of "electronic personality" as a possible conceptual framework to address issues of autonomy and liability. However, this proposal remained cautious in nature and did not translate into binding legislative recognition.

By contrast, the European Artificial Intelligence Act of 2024 reflects a decisive shift in legislative philosophy. It moves away from the idea of granting independent legal personality to intelligent systems and instead adopts a risk-based regulatory model that assigns responsibility to human actors involved in the design, deployment, and operation of such systems. This approach underscores the European Union's commitment to preserving legal certainty and protecting fundamental rights through mechanisms of governance, transparency, and supervision, without departing from the traditional foundations of legal personality.

It follows that the current European legal framework does not support the recognition of legal personality for AI-enabled robots. Rather, it reaffirms the enduring linkage between legal personality and human agency, treating artificial intelligence -irrespective of its level of sophistication- as a technological construct subject to human oversight and legal control. Nevertheless, this position does not exclude the possibility of future reconsideration, particularly if technological developments reveal the insufficiency of existing legal rules to adequately balance innovation with the protection of legal interests.

In light of these findings, the following recommendations are proposed:

- To reaffirm the principle of human responsibility by clearly attributing liability to the relevant human actor ("human proxy") for damages arising from the operation of AI-enabled robots, in a manner that takes into account both the degree of autonomy of the system and the specific circumstances of the incident.
- To ensure that the development and deployment of artificial intelligence systems remain subject to meaningful human oversight, by preventing the emergence of fully autonomous systems operating beyond effective human control.
- To strengthen the regulatory framework governing the robotics industry by introducing adequate financial and insurance mechanisms capable of ensuring effective compensation for damages resulting from the use of intelligent systems.
- To promote enhanced international cooperation through the development of binding or coordinated legal instruments aimed at preventing the deployment of AI systems that could undermine human control or pose significant risks to legal and social order.

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