

# The extent to which the Algerian Legislation keeps pace with the acceleration of the use of artificial intelligence

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Abstract---Algeria has been paying increasing attention to the field of artificial intelligence by establishing the Higher School of Artificial Intelligence in 2021, and encouraging academic studies on the legal aspects of its uses. However, Algerian legislation faces fundamental challenges in keeping pace with the tremendous acceleration of artificial intelligence applications, most notably the absence of an integrated and specialized legal framework, the problem of applying the concept of legal personality to these systems, as well as the challenges of protecting personal data, intellectual property and security. The studies emphasize the urgent need to develop specialized legislation based on the principles of privacy, security and responsibility, responding to future challenges, and ensuring safe and responsible utilization of these technologies, as Algeria is still in the early stages of bridging the gap between rapid technological development and the current legal framework.

**Keywords---**Algerian law, comparative legislation, artificial intelligence, judiciary.

# Introduction

Today, the world is witnessing an unprecedented technological revolution in the field of artificial intelligence, which has become a key driver of economic and social development in various countries of the world. Algeria has recognized the importance of this technological transformation, and has begun to take serious steps towards the adoption, development and employment of AI technologies in various sectors.

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Artificial intelligence is defined as "the ability of machines and computer systems to perform tasks that typically require human intelligence, such as visual perception, speech recognition, decision-making, and translation between languages." <sup>1</sup> Recent years have witnessed the rapid development of artificial intelligence technologies, which has led to the emergence of diverse applications in various fields, including industry, agriculture, health, education, financial services, and public administration.

Algeria, like other developing countries, seeks to keep pace with this technological development and benefit from the potential of artificial intelligence in achieving economic and social development. The Algerian government has taken several initiatives in this context, including the establishment of the Higher School of Artificial Intelligence, the launch of a national strategy for artificial intelligence, and the promotion of scientific research and innovation in this field.

However, the development and use of AI technologies faces multiple legal and regulatory challenges, related to legal liability, personal data protection, intellectual property rights, cybersecurity, and other issues. This requires the development of an integrated legal and regulatory framework that governs the use of these technologies and ensures the protection of the rights of individuals and institutions.

This study aims to analyze the legal and regulatory framework for artificial intelligence in Algeria, review the most important practical applications of these technologies in various sectors, highlight the legal challenges facing the development and use of artificial intelligence in Algeria, and provide recommendations for the development of the legal framework commensurate with the accelerating technological developments.

#### Research Problem:

The problem of this research revolves around the following main question: What is the legal and regulatory framework for artificial intelligence in Algeria, what are its most important applications in various sectors, and what are the legal challenges facing the development and use of these technologies? This main problem has several sub-questions:

What is the current legal and regulatory framework for AI in Algeria?

What are the most important practical applications of artificial intelligence in various sectors in Algeria? What are the legal challenges facing the development and use of AI in Algeria?

How can the legal and regulatory framework for AI in Algeria be developed in line with rapid technological developments?

#### The research methodology:

This study relied on the descriptive analytical approach, by describing and analyzing the legal and regulatory framework for artificial intelligence in Algeria, and reviewing the most important practical applications of these technologies in various sectors. The study also relied on the comparative approach, by comparing the legal and regulatory framework of artificial intelligence in Algeria with international legislation, especially European and French legislation.

The study relied on a variety of sources, including legal and regulatory texts, academic studies, official reports, scientific articles, and specialized websites.

## The First Axis: The legal and regulatory framework for artificial intelligence in Algeria

The legal and regulatory framework for AI in Algeria focuses on the development of data protection legislation, and the establishment of competent regulators. It also aims to promote national strategies for different applications, provide the necessary education and training, and support innovation through

Belhout, E. "Legal Framing of Artificial Intelligence." Journal of Legal Studies and Research, Volume 9, Number 2, 2024, p. 11

start-up projects. These efforts aim to strike a balance between innovation and protecting the rights of individuals, contributing to the sustainable development of the sector.

# The First Section: Legislation and regulations related to artificial intelligence in Algeria

Algeria is developing a legislative framework to regulate artificial intelligence, with a focus on personal data protection and international cooperation. It also promotes education and training in the field, and encourages innovation by supporting start-ups. For accurate information, it is preferable to follow official government sources

# Sub-section One: Presidential Decree No. 21-323 dated August 22, 2021

Presidential Decree No. 21-323 of August 22, 2021, establishing the Higher School of Artificial Intelligence, is the first Algerian legislation dedicated to artificial intelligence<sup>2</sup>. This decree aims to regulate the use and development of artificial intelligence in Algeria, through the establishment of an institution specialized in training competencies in this field.

This initiative reflects the Algerian state's interest in the field of technology in general and artificial intelligence in particular, and its keenness to keep pace with global technological developments. The decree stipulated that the Higher School of Artificial Intelligence aims to "form highly efficient frameworks in the field of artificial intelligence, develop scientific research and technological development in this field, and contribute to the development of the national economy through applications of artificial intelligence<sup>3</sup>."

# Sub-section Two: Laws and Regulations Relevant to Artificial Intelligence

In addition to the aforementioned presidential decree, there are several laws and regulations related to artificial intelligence in Algeria, although they do not directly address this subject. The most important of these laws are:

E-Commerce Law No. 18-05: This law includes provisions related to electronic transactions, which can include the use of artificial intelligence technologies<sup>4</sup>.

Personal Data Protection Law: Although there is no law on the protection of personal data in Algeria, there are some legal provisions dealing with this subject, such as Article 39 of the Algerian Constitution, which states that "the protection of private life and the confidentiality of correspondence and communications of all forms is guaranteed<sup>5</sup>."

Penal Code: The Algerian Penal Code includes some provisions related to cybercrimes, which can include crimes committed using artificial intelligence techniques.

Intellectual property law: Algerian intellectual property law includes provisions related to the protection of intellectual property rights, which can include innovations in the field of artificial intelligence<sup>6</sup>.

#### The Second Section: Legal challenges of artificial intelligence in Algeria

One of the most prominent challenges is determining civil and criminal liability for damages that may result from the decisions or actions of artificial intelligence systems. The question is whether the responsibility lies with system developers, end-users, or the AI itself if it is granted virtual legal personality.

<sup>&</sup>lt;sup>2</sup> Kunduz, Fadil. "Legal Aspects of Using Artificial Intelligence." Algerian Journal of Law and Political Science, Volume 9, Number 1, 2024, pp.118-119

<sup>&</sup>lt;sup>3</sup> Presidential Decree No. 21-323, establishing the Higher School of Artificial Intelligence." Official Gazette of the Algerian Republic, Issue 65, 25 August 2021.

<sup>&</sup>lt;sup>4</sup> Order No. 66-156, containing the Penal Code, as amended and supplemented." Official Gazette of the Algerian Republic, No. 49, 11 June 1966.

<sup>&</sup>lt;sup>5</sup> Constitution of the People's Democratic Republic of Algeria, amended in 2020." Official Gazette of the Algerian Republic, No. 82, December 30, 2020.

<sup>&</sup>lt;sup>6</sup> Order No. 03-05, relating to copyright and neighbouring rights." Official Gazette of the Algerian Republic, No. 44, 23 July 2003.

### Sub-section One: Absence of a comprehensive legal framework

One of the most prominent legal challenges facing the development and use of artificial intelligence in Algeria is the absence of a comprehensive legal framework regulating this field. While there are some relevant legal texts, they do not constitute an integrated framework covering all aspects of AI<sup>7</sup>.

The absence of this legal framework leads to several problems, including: • The lack of clarity of the legal rules governing the use of artificial intelligence technologies. • Difficulty in determining legal liability in the event of damages resulting from the use of these techniques. • Lack of legal mechanisms to protect the rights of individuals and institutions in the face of potential risks of artificial intelligence.

# Sub-section Two: The Problem of Legal Personality

AI technologies are problematic for legal personality, as it is difficult to apply legal personality provisions to AI devices<sup>8</sup>. Can these organs be considered legal persons with rights and obligations? This topic has sparked a wide debate in the legal circles, where some believe that it is necessary to grant an electronic legal personality to artificial intelligence, to fill the deficit in taking responsibility for the damages resulting from its use. Others argue that the classification of artificial intelligence as a legal person contradicts its truth derived from its individual and independent decisions<sup>9</sup>.

### Sub-section Three: Legal Liability for the Use of Artificial Intelligence

The issue of legal liability is one of the most prominent challenges facing the development and use of artificial intelligence in Algeria. Who is responsible for the damage caused by the use of AI technologies? Is it the designer, the programmer, the user, or the device itself?

This problem is further complicated by the ability of some AI systems to self-learn and make independent decisions, which makes it difficult to predict their behavior and determine who is responsible for the damage that may result from it (Al-Khatib, 2020, pp. 123-178).

The inability of traditional liability rules to keep pace with the rapid development of AI has led to the search for a new pattern of rules that acknowledge responsibility for the action of AI devices (Kunduz, 2024, p. 1187).

#### Sub-section Four: Protection of Personal Data and Individual Privacy

Artificial intelligence technologies pose significant challenges in the field of data protection and privacy, as these technologies rely on the collection and processing of huge amounts of data, including personal data.

In the absence of a law on the protection of personal data in Algeria, the risks of violating the privacy of individuals and exploiting their personal data without their consent increase. This calls for an integrated legal framework for the protection of personal data, which includes clear rules for the collection, processing and use of this data, and guarantees the right of individuals to privacy and control over their personal data<sup>10</sup>.

# Sub-section Five: Intellectual Property Rights in the Use of Artificial Intelligence

Artificial intelligence technologies raise new challenges in the field of intellectual property rights, especially with regard to the innovations resulting from these technologies. Who is the owner of the intellectual property rights of the works produced by artificial intelligence? Is it the programmer, the user, or the device itself?

This problem is further complicated by the current intellectual property system's inability to protect algorithms and innovations resulting from artificial intelligence, and the lack of a clear legal framework for the protection of intellectual property rights associated with artificial intelligence.

The Third Section: Comparing domestic legislation with international legislation.

<sup>&</sup>lt;sup>7</sup> Boukader, E., Ben Fatiha, N. Legal and Regulatory Consecration of Artificial Intelligence in Algeria. Master Memorandum, Mohamed Al-Bashir Al-Ibrahimi University, Bou Arreridj Tower, 2023.

<sup>&</sup>lt;sup>8</sup> Qadouz Fadil, op. Cit., P. 1184.

<sup>&</sup>lt;sup>9</sup> Ibid, p. 15.

<sup>10</sup> Boukader and Ben Fatiha, op. Cit., P. 45.

Comparing Algerian domestic legislation with international legislation in the field of artificial intelligence reveals clear differences in legal and regulatory maturity, as well as in the comprehensiveness of legal frameworks and their alignment with modern technological developments.

# Sub-section One: EU Legislation Against Artificial Intelligence

The European Union is one of the most advanced regions in the field of artificial intelligence regulation, having passed the "European Artificial Intelligence Act" (AI Act), which is the first comprehensive legal framework to regulate artificial intelligence in the world<sup>11</sup>.

This law is based on a risk-based approach, classifying AI applications into four categories according to the level of risk they pose: unacceptable risk, high risk, limited risk, and low risk. The law sets strict rules for transparency and accountability, and bans some serious uses of AI, such as social classification systems and some forms of facial recognition in public 12.

### Sub-section Two: French Legislation and Artificial Intelligence

France is one of the leading countries in the field of artificial intelligence regulation, having developed a national strategy for artificial intelligence, and has issued several laws and regulations in this field <sup>13</sup>.

One of the most prominent of these laws is the Digital Republic Law of 2016, which includes provisions related to the protection of personal data and the right to privacy in the digital age. France has also issued a code of ethics in the field of artificial intelligence, which sets guidelines for the development and use of these technologies in an ethical and responsible manner<sup>14</sup>.

# Sub-section Three: United States Legislation Relating to Artificial Intelligence

The USA adopts a sectoral regulatory approach to AI, with laws and regulations varying by sector and state. The US is focused on self-regulation and guidelines, with some AI-specific laws in place at the state level<sup>15</sup>.

The US administration has issued several guidance documents in the field of artificial intelligence, including the "Guidelines for Trusted Artificial Intelligence", which sets out principles for the development and use of artificial intelligence in a safe, reliable and accountable manner<sup>16</sup>

# Sub-section Four: The legislative gap between Algeria and developed countries in the field of artificial intelligence

A comparison of the legal and regulatory framework for AI in Algeria and developed countries shows that there is a significant legislative gap between them. While developed countries have integrated legal frameworks to regulate AI, Algeria lacks such frameworks.

The most prominent manifestation of this gap is: • The absence of a comprehensive national strategy for artificial intelligence in Algeria. • Lack of specialized laws regulating various aspects of artificial intelligence. • Relying on general laws to regulate sophisticated and complex technologies. • The need to develop an integrated legal framework that keeps pace with technological developments.

The second Axis: Applications of artificial intelligence in Algeria

<sup>&</sup>lt;sup>11</sup> European Commission. Proposal for a Regulation of the European Parliament and of the Council Laying Down Harmonised Rules on Artificial Intelligence (Artificial Intelligence Act) and Amending Certain Union Legislative Acts [COM(2021) 206 final], 21 April 2021.

<sup>&</sup>lt;sup>12</sup> Al-Khatib, M. A. "Artificial Intelligence and Law: A Study in European Civil Legislation." Journal of Law, Kuwait University, Volume 44, Number 2, 2020.

<sup>&</sup>lt;sup>13</sup> Villani, C., et al. For a Meaningful Artificial Intelligence: Towards a French and European Strategy. AI for Humanity, 2018

<sup>&</sup>lt;sup>14</sup> Loi n° 2016-1321. Pour une République numérique. Journal officiel de la République française, 8 October 2016.

<sup>&</sup>lt;sup>15</sup> Office of the President Maintaining American Leadership in Artificial Intelligence [Executive Order 13859]. Federal Register, 1999. 84, no. 31, 14 February 2019.

<sup>&</sup>lt;sup>16</sup> US National Institute of Standards and Technology. U.S. Leadership in AI: A Plan for Federal Engagement in Developing Technical Standards and Related Tools, August 2019.

Artificial intelligence applications in Algeria are witnessing remarkable and diverse development in several sectors, supported by government support and academic and research initiatives aimed at integrating this modern technology into national development.

### The First Section: Applications of artificial intelligence in the economic sector

The applications of artificial intelligence in the economic sector are multiple and comprehensive, revolutionizing ways of working, production and trade, and contributing to promoting economic growth and improving efficiency across different sectors. Here are the most prominent applications and economic impacts of AI

# Sub-section One: Applications of Artificial Intelligence in the Energy Sector

The energy sector is one of the most important sectors that has begun to rely on artificial intelligence technologies in Algeria, given its pivotal role in the national economy<sup>17</sup>. The most prominent applications of artificial intelligence in this sector are:

**Sonatrach Complex**: The Complex has begun to integrate artificial intelligence technologies into its activity, employing specialists in this field, and using these technologies in one of its facilities in Algiers. The park also seeks to benefit from the solutions proposed by startups in the field of artificial intelligence.

**Sonelgaz complex**: The complex works to rely on artificial intelligence technologies through agreements with public research centers and startups, in several fields, including the manufacture of devices to control gas leaks through artificial intelligence, which will close the sources when leaks are sensed.

### Sub-section Two: Applications of Artificial Intelligence in the Agriculture Sector

The agriculture sector in Algeria has witnessed several initiatives to integrate artificial intelligence technologies, with the aim of increasing production, improving quality and reducing risks 18. The most prominent of these initiatives are:

Modern Farms Project for "Sawakry" Complex in the Wilayat of Al-Mughair: This project aims to establish a comprehensive "automation" system equipped with artificial intelligence, to control all production steps, especially in the cultivation of export-oriented cherry tomatoes.

Farm AI: This Algerian company has developed a special system to identify plant diseases through artificial intelligence using drones. The company was ranked as the second best startup in the Tech for Good global competition in China in 2023.

Business incubator affiliated with the National Chamber of Agriculture: This incubator seeks to support agricultural innovation and encourage emerging projects, through accompaniment, training and linking innovators, especially in the field of artificial intelligence and economic institutions.

# Sub-section Three: Applications of Artificial Intelligence in the Forestry and Environment Sector

The Directorate General of Forestry is working to integrate a solution provided by an Algerian start-up, aimed at the prevention and early detection of forest fires. This initiative relies on the installation of environmental sensors using artificial intelligence to assess the risk and magnitude of fires in real time, based on climate indicators, and to provide observation points with this information in real time.

## Sub-section Four: Applications of Artificial Intelligence in the Fishing Sector

More than 75 innovative projects in the field of fisheries have been counted in Algeria, many of which concern artificial intelligence in intensive and organic fish farming and algae production systems.

 $<sup>^{\</sup>rm 17}$  Algeria adopts a national strategy for artificial intelligence." APS, 7 December 2024

<sup>&</sup>lt;sup>18</sup> Ibrahim bin Issa, "The reality of the use of artificial intelligence applications and its relationship to administrative empowerment." "Algerian Journal of Humanities and Social Sciences." Volume 5, Number 2, 2023, p. 230.

### The Second Section: Artificial intelligence applications in the service sector

The applications of artificial intelligence in the service sector are multiple and varied, and include several areas such as banking, government, health, and hospitality, where artificial intelligence contributes to improving the quality of services, enhancing efficiency, and providing more personalized experiences for customers and beneficiaries.

#### Sub-section One: Higher Education and Scientific Research Sector

The higher education and scientific research sector is one of the vital sectors that plays an essential role in the development of societies and the achievement of economic and social development. This sector includes universities, colleges and institutions that provide post-secondary education, in addition to scientific research centers that support innovation and knowledge development. The higher education and scientific research sector in Algeria is witnessing an increasing interest in artificial intelligence technologies, through several initiatives:

The Higher School of Artificial Intelligence: It was established by Presidential Decree No. 21-323 dated August 22, 2021, and aims to train competencies in the field of artificial intelligence<sup>19</sup>.

The Scientific Council for Artificial Intelligence (SCAI) is a scientific advisory body that aims to propose strategic elements for the development of AI across sectors.

Artificial intelligence laboratories in universities and research centers: Algeria has witnessed a significant increase in the number of laboratories dedicated to artificial intelligence, which are working to develop research and innovations in this field.

## Sub-section Two: Applications of Artificial Intelligence in the Telecommunications Sector

Telecom companies in Algeria, such as Ooredoo, are using AI applications to improve their services and empower workers. A study conducted on Ooredoo Algeria has shown a positive correlation between the use of AI applications and the level of empowerment of workers<sup>20</sup>.

## Sub-section Three: Applications of Artificial Intelligence in the Financial Sector

Financial and banking institutions in Algeria have begun to use AI technologies to improve their services and develop smart financial solutions. An example of this is the use of artificial intelligence in the Foreign Bank of Algeria to improve customer services and develop new financial products.

### National AI strategy

The National Strategy for Artificial Intelligence <sup>21</sup>is a comprehensive plan developed by countries to guide their efforts in the development and application of artificial intelligence technologies, with the aim of promoting economic and social development and achieving leadership in this vital field. These strategies include a long-term vision, clear goals focused on innovation and digital transformation, and the identification of necessary legislative and regulatory priorities and policies.

## **Strategy Objectives**

Algeria has adopted a national strategy for artificial intelligence, which aims to develop this field and enhance its contribution to economic and social development. Algeria has declared 2023 as the Year of Artificial Intelligence, reflecting its commitment to the development of the field.

<sup>19</sup> The school is located in the new technological pole of Sidi Abdellah, Algiers with modern facilities and a suitable atmosphere for teaching and scientific research:

In short, the Higher National School of Artificial Intelligence aims to train a group of engineers and researchers capable of developing and deploying artificial intelligence solutions, promoting scientific research, and supporting digital and economic development in Algeria, with a focus on innovation, entrepreneurship, and international cooperation.

<sup>&</sup>lt;sup>20</sup> https://ultraalgeria.ultrasawt.com/

<sup>21</sup> The National Strategy for Artificial Intelligence in Algeria has an ambitious vision to achieve sustainable development and technological innovation, with a focus on building local capacity, supporting emerging institutions, and developing advanced infrastructure, placing Algeria in the ranks of leading countries in this field.

This strategy aims to: • Develop the necessary infrastructure for artificial intelligence. • Training human competencies in this field. b) Promoting scientific research; Promoting public/private cooperation • Developing artificial intelligence applications in various sectors<sup>22</sup>.

# Challenges and Future Prospects in Artificial Intelligence Applications

Despite the efforts made to develop artificial intelligence in Algeria, there are several challenges facing this field, including: • Lack of investment in the research and development sector. • The need to develop infrastructure commensurate with the requirements of artificial intelligence technologies. • Slow digital transformation in some economic, industrial and financial sectors.

As for the future prospects, it is expected that artificial intelligence will transform into an economic sector that contributes to national output, open new horizons for economic activities in various sectors, and enhance the competitiveness of the Algerian economy at the international level<sup>23</sup>.

### The third Axis: Towards an integrated legal framework for artificial intelligence in Algeria

Artificial intelligence poses a new legal and ethical challenge that requires the development of an integrated legal framework regulating its uses and applications in Algeria, in order to keep pace with rapid technological developments and ensure legal security and protection of rights. This framework includes several main axes:

## Section One: Guidelines for the development of the legal framework

The development of an integrated legal framework for artificial intelligence requires the adoption of a set of guidelines that balance the protection of rights and the stimulation of innovation. The following are the most prominent of these principles drawn from international studies and experiences with a focus on the Algerian context.

### Sub-section One: Transparency and Accountability

The legal framework for AI in Algeria should be based on the principles of transparency and accountability, so that decision-making processes by AI systems are transparent and interpretable, and that there are clear mechanisms for accountability in the event of damage resulting from the use of these systems<sup>24</sup>.

#### Sub-section Two: Data Protection and Personal Data

The legal framework for AI in Algeria should include strict rules for the protection of personal data and privacy, in line with international standards in this field. This framework must ensure the right of individuals to control their personal data, and protect them from the unlawful use of such data.

#### Sub-section Three: Justice, non-discrimination and bias.

The legal framework for AI in Algeria should ensure the principles of justice and non-discrimination, so that AI systems do not reinforce prejudices and discrimination against certain groups of society. This framework should include mechanisms to evaluate and monitor AI systems to ensure that they do not violate the principle of equality and non-discrimination.

# Sub-section Four: Security and Safety

The legal framework for AI in Algeria should pay particular attention to security and safety issues, ensuring that AI systems are safe and reliable, and undergo rigorous testing before being deployed and used. This framework should also include mechanisms for continuous monitoring and inspection of these systems to ensure their continued compliance with security and safety standards.

The Second Section: Recommendations for the development of the legal framework Based on recent legal studies and research on AI in Algeria, the most important recommendations for the development of an integrated legal framework can be summarized.

<sup>&</sup>lt;sup>22</sup>Boukader and Ben Fatiha, op. Cit., P. 70.

<sup>23</sup>https://ultraalgeria.ultrasawt.com/

<sup>&</sup>lt;sup>24</sup>Balhout, op. Cit., P. 24

### Sub-section One: Enacting Artificial Intelligence Legislation

One of the most important recommendations for the development of the legal framework for artificial intelligence in Algeria is the enactment of legislation in this field, covering its various legal and ethical aspects. In this regard, it is possible to benefit from international experiences, especially the experience of the European Union in issuing the "European Artificial Intelligence Law"<sup>25</sup>.

### Sub-section Two: Developing Rules for Legal Liability

Rules for legal liability for AI damages should be developed, taking into account the specificity of these technologies and their ability to self-learn and make independent decisions. In this regard, the possibility of establishing a compulsory insurance system to cover damages caused by the use of artificial intelligence techniques could be considered.

## Sub-section Three: Establishing a legal framework for the protection of personal data

An integrated legal framework for the protection of personal data should be developed in the context of the use of artificial intelligence, which includes clear rules for the collection, processing and use of such data, and guarantees the right of individuals to privacy and control over their personal data. The European General Data Protection Regulation (GDPR) can be used in this regard <sup>26</sup>

# Sub-section Four: Updating Intellectual Property Laws

Intellectual property laws in Algeria should be updated to include the protection of creations resulting from artificial intelligence, and to clarify who is the owner of the intellectual property rights for these creations. Mechanisms should be developed to protect algorithms and AI programs from piracy and illegal use.

# Sub-section Five: Benefiting from International Experiences

International experiences in the field of artificial intelligence regulation, especially those of the European Union and France, should be drawn upon, taking into account the specificity of Algerian society and its economic and social conditions. In this regard, a national AI committee<sup>27</sup>, including experts from different fields, could be established to develop an integrated legal and regulatory framework for AI in Algeria.

# Conclusion

This study dealt with the topic of artificial intelligence in Algeria and its most important applications, from a legal perspective. The study concluded that artificial intelligence in Algeria has witnessed a remarkable development, with several initiatives to develop this field, including the establishment of the Higher School of Artificial Intelligence and the launch of a national strategy for artificial intelligence.

There are many applications of artificial intelligence in Algeria, covering various sectors, such as energy, agriculture, forestry and the environment, maritime fishing, higher education and scientific research, communications, and the financial sector.

The development and use of artificial intelligence in Algeria faces multiple legal challenges, including the absence of a comprehensive legal framework, the problem of legal personality, legal responsibility, data protection and privacy, and intellectual property rights.

<sup>25</sup>The European Artificial Intelligence Act, also known as the "Artificial Intelligence Regulation Act" (AI Act), is a comprehensive regulatory framework proposed by the European Commission on 21 April 2021 with the aim of establishing uniform rules for the use of AI technologies in all civilian sectors within the European Union, with the exception of the military field.

<sup>&</sup>lt;sup>26</sup>The General Data Protection Regulation (GDPR) is a comprehensive legal framework adopted by the European Union on 14 April 2016, and entered into force on 25 May 2018, with the aim of protecting personal data and the privacy of individuals within the European Union and regulating how such data is collected and used.

<sup>&</sup>lt;sup>27</sup>A national committee for artificial intelligence has been established in Algeria under the name of the "Scientific Council for Artificial Intelligence", which is an advisory body of a scientific nature affiliated with the Ministry of Higher Education and Scientific Research and the Ministry of Knowledge Economy, Emerging Enterprises and Microenterprises.

There is a significant legislative gap between Algeria and developed countries in the field of artificial intelligence regulation, as developed countries have integrated legal frameworks, while Algeria lacks such frameworks.

# One of the most important recommendations of this research is:

- Enacting legislation on artificial intelligence, covering its various legal and ethical aspects.
- Developing rules for legal liability for artificial intelligence damages.
- Develop an integrated legal framework for the protection of personal data in the context of the use of artificial intelligence.
- Updating intellectual property laws to include the protection of creations resulting from artificial intelligence.
- Benefiting from international experiences in the field of artificial intelligence regulation, taking into account the specificity of Algerian society.
- Establish a national AI committee, including experts from different fields, to develop an integrated legal and regulatory framework for AI in Algeria.

In conclusion, it can be said that artificial intelligence represents a great opportunity for Algeria to achieve economic and social development, provided that an integrated legal and regulatory framework is put in place that governs the use of these technologies and ensures the protection of the rights of individuals and institutions.

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