RESEARCH ARTICLE	**Implementing Artificial Intelligence in Crime Prevention and Digital Security**

Kerroumi Samiya	Doctor
	Transnational Crime Laboratory, University Center of Salhi Ahmed – Naâma
	Algeria
	Email Id: kerroumi@cuniv-naama.dz
Berramdane Hamid	Doctor
	Transnational Crime Laboratory, University Center of Salhi Ahmed – Naâma
	Algeria
	Email Id- berramdane.hamid@cuniv-naama.dz

Abstract

Technological advancement has become a key factor influencing the digital lives of individuals. Consequently, it has become imperative to reinforce digital security within the state, especially in light of the growing number of crimes related to computers and the internet. The current challenge lies in how to employ artificial intelligence systems as a fundamental requirement in crime control, contributing to investigation and inquiry processes, and supporting security and judicial institutions in combating crime—without infringing on privacy or violating the principles of fair trial.

Introduction:

Crime has shifted from its traditional form to a digital nature due to the transformations affecting systems in various forms, and as a result of the tremendous technological developments in media and communication tools. Consequently, both the means and objectives of criminal activity have changed. Cyber and electronic crimes have emerged as modern threats that test the capacities of different state systems to determine whether they are truly capable of combating such crimes and ensuring security and stability for their populations by effectively confronting this phenomenon, which has evolved from a local issue into a global one.

As individuals and institutions increasingly rely on digital technologies, the methods employed by perpetrators have become more sophisticated—so much so that the notion of the "robotic criminal" has emerged, one who utilizes advanced technical tools and smart devices. This evolution necessitates the establishment of legislative and technical frameworks that align with

342 – www.imcra.az.org, | Issue 8, Vol. 8, 2025
Implementing Artificial Intelligence in Crime Prevention and Digital Security
Kerroumi Samiya
Berramdane Hamid

the level of technology being used in order to deal with such offenders. As a result, digital evidence has become a critical component in many criminal investigations, especially in the context of inquiry and crime detection, relying on algorithms and data to track criminals and trace their presence within information systems.

These challenges have inevitably called for the adoption of multiple approaches. Among them are proactive preventive methods such as electronic administrative regulation carried out by specialized bodies, which serves as an effective mechanism used by the state to counter this type of crime—particularly because it establishes preventive pathways before the crime is committed and its consequences materialize in society, thereby protecting digital public security.

In addition, there are punitive methods applied post-crime, which rely on judicial regulation to combat such offenses. These, in turn, require modern approaches to digital inspection, investigation, and detection, which may be enhanced through the implementation of artificial intelligence technologies.

This study centers on the effectiveness of using artificial intelligence systems in the control of organized crime. We will rely on the descriptive method to define key concepts such as artificial intelligence and robotics, and the analytical method to examine and interpret relevant legal texts, especially those related to the procedural and substantive aspects of criminal law.

The structure of the study will be divided into two main sections: The first section addresses the concept and importance of artificial intelligence, while the second section examines the technical application of artificial intelligence in combating crime.

Part One: The Concept and Importance of Artificial Intelligence

States increasingly mobilize technical knowledge across various domains, including the reinforcement of security measures against crime. Artificial intelligence has become one of the technical tools employed for this purpose, given its distinctive technical features. Based on these considerations, it is necessary to first define the key concepts related to artificial intelligence and similar notions, its characteristics, and the objectives it aims to achieve.

We will address the concept of artificial intelligence in Subsection One, and the objectives of artificial intelligence in Subsection Two.

Section One: The Concept of Artificial Intelligence

Legal and economic scholarship has engaged extensively with the concept of artificial intelligence, and multiple doctrinal definitions have been proposed. From these definitions, we can deduce the distinctive features of artificial intelligence. This will be addressed in two divisions: the first division presents the definition of artificial intelligence, and the second division addresses its characteristics.

A. Definition of Artificial Intelligence

Artificial intelligence is defined as:

"A branch of computer science concerned with the design of intelligent computer systems—systems that exhibit characteristics of human intelligent behavior. It is a human-made innovation through which computers are programmed to perform certain tasks that are often comparable to human intelligence, such as the ability to learn and make decisions." [1]

It is also defined as:

"The ability and skill to formulate and find solutions to problems using symbols and various problem-solving methods, and the capacity to use acquired experience to derive new information and knowledge that lead to problem-solving in a specific field." [2]

Thus, it represents the capability to acquire and apply knowledge to human-made artifacts. In this sense, artificial intelligence is the form of intelligence conferred by humans upon machines or computers. [3]

The terms robot and artificial intelligence are often used interchangeably, yet some classifications regard the robot as one application of artificial intelligence. A robot may act intelligently due to human control, but it can also operate autonomously. It is an electronically programmed machine, based on artificial

[1] Ahmad Muhammad Barak, *Towards Regulating the Rules of Liability for Artificial Intelligence Technologies: Forms of Relationship Between Humans and Intelligent Machines (Criminally, Civilly, Internationally)*, 1st ed., Dar Wael Publishing, 2023, p. 33.

[2] Arwa bint Abdulrahman Othman Al-Jaloud, *Legal Provisions of Artificial Intelligence Applications in the Judiciary*, 1st ed., Qadha Center for Research and Studies, 1444 AH / 2023 CE, p. 10.

[3] Alan Winfield, *Robotics*, trans. Asmaa Azab, Hindawi Foundation, United Kingdom, 2017, p. 17.

343 – www.imcra.az.org, | Issue 8, Vol. 8, 2025
Implementing Artificial Intelligence in Crime Prevention and Digital Security
Kerroumi Samiya
Berramdane Hamid

intelligence technology, capable of making appropriate decisions in various conditions and environments. Any machine with the ability to sense, think, and act automatically—regardless of its shape—is considered to fall under this definition, and it does not necessarily have to resemble a human being. [1]

A robot functions intelligently either through human control or independently. It is an electronically programmed machine, using AI technologies, capable of autonomous decision-making under different conditions. This applies to any machine that possesses sensing, reasoning, and autonomous action capabilities, regardless of its physical appearance. [2]

Hence, a robot is a physical structure operating according to human-like logic. It can be programmed or connected to a computer to perform specific tasks. [3] It is characterized by being a multi-functional processor designed to move materials, parts, and tools and to carry out various tasks through a set of programmed movements. [4]

The term artificial intelligence first appeared in 1956, when John McCarthy assembled a research team focused on artificial neural networks. Over time, AI evolved through several stages, beginning with the creation of mechanical models capable of producing simple behaviors such as learning and programs simulating human thought. The term "artificial intelligence" was proposed by John McCarthy in 1956 and was adopted at the Dartmouth Conference led by computer scientists in 1958. Since then, the use of AI has expanded across all areas of life, including the development of neural networks, robotics, and expert systems, with optimistic forecasts about its role in sectors such as education, healthcare, and various essential services. [5]

Accordingly, efforts have been devoted to developing computer systems capable of performing tasks that typically require human intelligence, such as visual perception, speech recognition, autonomous driving, medical diagnostics and surgery, decision-making, and multilingual translation. [6]

B. Characteristics of Artificial Intelligence

From the definitions presented earlier, we can derive the key characteristics of artificial intelligence, which have become strong motivators for institutions to adopt AI technologies. These characteristics represent major advantages that facilitate precision and efficiency in work, reduce reliance on human resources, and significantly contribute to technological and scientific advancement—with lower costs, effort, and time.

We highlight the most prominent of these characteristics, as identified by relevant studies:

- The ability to represent knowledge, through a structured framework for describing information, wherein facts interact with knowledge-based rules. [7]

- The use of intelligence in problem-solving, even when complete information is not available.

- The capacity for reasoning, perception, and inference.

- The ability to explore different possibilities using trial and error.

- The ability to learn and understand from past experiences.

- The ability to handle difficult and complex situations.

- The ability to apply previous knowledge to new contexts.

- The ability to respond rapidly to new situations and changing conditions. [8]

[1] Amal Fawzi Ahmed Al-Awad, *Digital Ownership in the Age of Artificial Intelligence: Challenge of Reality and the Future*, Democratic Arab Center for Strategic, Political, and Economic Studies, Berlin, Germany, n.d., 2021, p. 20.

[2] Ibid., p. 20.

[3] Al-Jaloud, op. cit., p. 10.

[4] Adel Abdelnour bin Abdelnour, *Artificial Intelligence*, King Abdulaziz City for Science and Technology, Saudi Arabia, 2005, p. 65.

[5] Mohammed bin Fawzi Al-Ghamdi, *Artificial Intelligence in Education*, 1st ed., King Fahd National Library, 2024, p. 35.

[6] Barak, op. cit., p. 33.

[7] Mohammed Ali Abu Ali, *Criminal Liability for the Damages of Artificial Intelligence*, Dar Al-Nahda Al-Arabiya Publishing and Distribution, Cairo, Egypt, 1st ed., 2024, p. 14.

[8] Amina Athamnia, "Basic Concepts of Artificial Intelligence," in: *Artificial Intelligence Applications as a Modern Trend to Enhance the Competitiveness of Business Organizations*, ed. Aboubakr Khwalid, Democratic Arab Center, Berlin, Germany, 2019, p. 11.

344 – www.imcra.az.org, | Issue 8, Vol. 8, 2025
Implementing Artificial Intelligence in Crime Prevention and Digital Security
Kerroumi Samiya
Berramdane Hamid

Another categorization of AI characteristics can be summarized as follows:

- **Symbolic representation:** This refers to the use of symbols in program design to represent various forms of available information. [1]

- **Optimistic experimental approach:** A notable feature of artificial intelligence systems is that their programs engage with problems that lack general or well-known solutions. In this context, AI programs do not follow a fixed sequence of steps to reach the correct solution. Instead, they choose a seemingly promising path while retaining the flexibility to switch strategies if the initial choice proves ineffective—thus focusing on **probable rather than perfect solutions.** [2]

- **Ability to handle uncertain or incomplete information:** AI systems can generate appropriate solutions in a timely manner, even when information is only partially available. However, this does not mean that any solution will suffice, whether accurate or not.

- **Learning capability:** A vital trait, enabling the system—and by extension, the user—to gain more knowledge and additional skills that support the development of human capacities, based on accumulated experience. [3]

Section Two: The Objectives of Artificial Intelligence

Artificial intelligence holds significant importance across all levels, and research continues on its nature and how to establish fundamental steps for simulating its methods through programs executed by computers. [4]

The functions it performs—particularly in understanding, learning, and interacting with people or other devices [5]—grant it numerous advantages. Among these these is the case of **narrow AI**, which operates through systems designed for specific and well-defined tasks. It delivers high productivity, uses de-

vices efficiently, operates at low cost, and is marked by flexibility, allowing it to complete tasks in shorter timeframes—even in hazardous environments. [6]

According to scientists, for a system to be considered intelligent, it must possess the ability to perceive, learn, and be goal-oriented, as well as capable of solving problems and engaging in rational thinking. Naturally, intelligence can only be observed through a graduated scale. As one **Italian author** rightly stated: *"Machines cannot display intelligence—but then again, neither can humans."* To avoid underestimating well-designed robots by labeling them as less intelligent than they truly are—or overestimating scientists assumed to be more automated than they realize—it is essential to recall the core conditions for a thinking artificial system and outline the broad contours of original research in this field. [7]

According to legal scholarship, artificial intelligence aims to achieve a number of key objectives, summarized as follows:

- Understanding and simulating human intelligence through the development of computer programs capable of mimicking intelligent human behavior.

- Processing information in the same manner as humans, particularly through *parallel processing*, where multiple commands are executed simultaneously—alongside a deeper understanding of human intelligence by uncovering the mysteries of the brain to replicate its functions. [8]

- Providing accurate solutions despite the absence of complete and verified data related to the problem at hand. [9]

- Using natural human language for machine interaction, instead of programming language, which greatly facilitates accessibility for all segments of society—including individuals with special needs—whereas in the past, interaction with machines was restricted to experts and specialists.

[1] Abdelhamid Bassiouni, *Artificial Intelligence for Computers and Introduction to Prolog*, 1st ed., Egyptian University Publishing House, 1994, p. 33.

[2] Madiha Fakhri Mahmoud, *Artificial Intelligence and University Reengineering*, 1st ed., Dar Dijla, p. 34.

[3] Ibid., p. 34.

[4] Fayez Al-Najjar, *Management Information Systems: An Administrative Perspective*, Dar Hamed Publishing and Distribution, Jordan, 4th ed., 2010, p. 169.

[5] Taha Muhammad Ahmed Youssef, *The Future of Management in the World of Artificial Intelligence*, 1st ed., Hamithra Publishing House, Cairo, 2022, p. 25.

[6] Judge Rami Metwally, "Towards Establishing Rules for Criminal Responsibility and Punishment for the Misuse of Artificial Intelligence Applications," *Journal of Legal and Economic Research*, Special Issue, Faculty of Law, Mansoura University, Egypt, 2021, p. 883.

[7] Jean Goulet, "Legal Informatics: Progressing Toward an Artificial Intelligence Process," *Les Cahiers de droit*, Vol. 21, No. 3-4, 1980, p. 665.

[8] Al-Ghamdi, op. cit., pp. 24–25.

[9] Bin Abdelhour, op. cit., p. 9.

345 – www.imcra.az.org, | Issue 8, Vol. 8, 2025
Implementing Artificial Intelligence in Crime Prevention and Digital Security
Kerroumi Samiya
Berramdane Hamid

- Diagnosing diseases and prescribing medications: AI plays an increasingly prominent role in medical robotics, especially in robotic surgery, due to its proven efficiency and precision in performing operations. [1]

- Providing legal consultations: This raises several questions—can computers engage in legal reasoning? Can they do so effectively? Can they even outperform human reasoning? If so, computers might indeed be able to carry out legal reasoning, since legal thinking is largely normative and deeply rooted in attention to precedent. In this context, AI could make a significant impact on the field of law. [2] The idea of smart justice has also emerged as a development following electronic justice, leading to the concepts of the robot judge and the robot lawyer. Future expert systems and highly skilled robots may be employed in the operation of advanced institutional planning systems. Without being governed by specific ethical frameworks, it is difficult to predict their long-term effects. [3]

- Contributing to sound decision-making, given that machines are accurate, neutral, and objective—free from human error and bias. This could enable organizations to evolve into intelligent entities. The idea of the smart organization represents a necessary shift from traditional to intelligent management through AI applications. This vision is reinforced by strengthening organizational intelligence through excellent administration, collaborative leadership, and the encouragement of participation, among other guiding principles. [4]

- Reducing human burden, risk, and psychological pressure by employing machines in physically demanding jobs or fields characterized by complex tasks requiring high levels of focus and sustained mental presence. [5]

Part Two: The Technical Application of Artificial Intelligence in Crime Prevention

The commission of crimes has become one of the most troubling issues for states and societies. With the growing advancement in technology, new types of crimes have emerged—especially digital crimes—which are a product of the clever and practiced use of smart devices to carry out various activities. From this perspective, such crimes are innovative and differ from traditional crimes that do not require such technical tools. Moreover, the evidence involved in these crimes is often digital and can be quickly concealed or erased, which demands new approaches for prevention and intervention.

In this context, the traditional criminal justice model, which focused predominantly on punitive measures after the occurrence of a crime, is no longer sufficient. Legislative policies have evolved to embrace not only repressive punitive frameworks, but also preventive strategies, involving the implementation of proactive measures aimed at reducing the likelihood of crime before it takes place. This shift is particularly crucial for crimes committed via the internet and smart devices, where early intervention is essential to mitigate the potential damage to individuals, institutions, and societal order.

This part is divided into two main sections:

- Section One addresses preventive measures for crime control through artificial intelligence systems.

- Section Two focuses on the technical framework for detecting and investigating crimes using AI-based systems.

Together, these two sections aim to shed light on how artificial intelligence can serve not only as a tool for post-crime investigation but also as an essential component of modern crime prevention strategies. These strategies range from predictive analytics, behavioral pattern recognition, and intelligent surveillance systems, to more advanced applications involving real-time threat assessment and autonomous decision-making tools within law enforcement and criminal justice institutions.

Section One: Preventive Measures to Combat Crime

Preventive measures represent one of the most important mechanisms employed by the state to combat crime and preserve public order. Given the ongoing developments in media and communication technologies, digital public order has emerged as a core target of preventive strategies. These measures are typically entrusted to administrative control bodies—either traditional or electronic, depending on the

[1] Al-Ghamdi, op. cit., p. 3.
[2] Cass R. Sunstein, "Of Artificial Intelligence and Legal Reasoning," *University of Chicago Law School Roundtable*, Vol. 8 (2001), p. 29.
[3] Stuart Russell, *Human Compatible AI*, trans. Mostafa Mohamed Fouad & Osama Ismail Abdelalim, Hindawi, 2017, p. 89.
[4] Medhat Mohamed Abu Al-Nasr, *Artificial Intelligence in Smart Organizations*, 1st ed., Arab Group for Training and Publishing, Cairo, Egypt, 2020, p. 99.
[5] Al-Jaloud, op. cit., p. 46.

346 – www.imcra.az.org, | Issue 8, Vol. 8, 2025
Implementing Artificial Intelligence in Crime Prevention and Digital Security
Kerrouni Samiya
Berramdane Hamid

nature of the objectives pursued.

The concept of public order in this new digital environment rests on the same fundamental purpose as traditional administrative policing: the protection of the public interest. However, it differs significantly in scope. While traditional public order encompasses general domains such as public security, public health, and public tranquility, digital public order focuses exclusively on information security. This narrower scope necessitates dedicated protection, particularly of public digital activities, against actions that may threaten their safety or continuity. [1]

Applications of artificial intelligence can be employed as proactive and preventive tools before crimes occur. One clear example of this is intelligent surveillance cameras, which are equipped with motion detection capabilities. These systems can automatically send alerts to security services, while simultaneously recording footage, identifying individuals, and analyzing data to trace perpetrators.

Data collection for this purpose may be conducted either manually or automatically, using digital technologies and AI-based systems. However, this process must be carefully aligned with ethical and legal principles. Legal systems are tasked with balancing the use of such technical tools for the public good with the constitutional and legal safeguards that protect individual privacy. Predictive analysis relies on machine learning techniques to detect behavioral patterns and generate accurate forecasts. [2]

Section One: Preventive Measures to Combat Crime

From this perspective, the acceleration by states in adopting digitization and data storage carries significant weight. It allows nations to represent their language, cultural heritage, and intellectual legacy, which in turn enhances the ability to process such data—particularly in translating both written and spoken language. [3]

Among the proactive regulatory mechanisms in Algeria is what is provided under Law No. 23-20 concerning audiovisual activity. [4] This law establishes a licens-

ing system for broadcasting, whether through cable, radio frequencies (via Hertzian waves), liquid transmission, or the Internet, whether the content is open-access or encrypted.

Additionally, Algerian legislation—specifically Article 12 of Law No. 09-04, which outlines special rules for the prevention and suppression of crimes related to information and communication technologies—states the following:

"In addition to the obligations provided in Article 11 above, Internet service providers must:
– Immediately intervene to remove content they make accessible, as soon as they become directly or indirectly aware of its illegality, and ensure it is either stored securely or made inaccessible;
– Implement technical measures to restrict access to servers containing content that violates public order or public morals, and inform their users of its existence."

Within this framework, the Audiovisual Regulatory Authority in Algeria, while exercising electronic administrative oversight, is empowered to impose administrative sanctions on audiovisual service operators (as content providers) when they violate the contractual clauses stipulated in the terms of reference.

It is important to note that artificial intelligence—or the robot, as one of its manifestations—serves multiple functions in criminal matters. Among these is the classification and tracking of offenders in an impartial manner, thanks to AI's inherent neutrality. This is achieved through digital investigative and enforcement procedures.

AI also contributes to digital searches using technologies such as radar and sensors to detect the presence of weapons, drugs, corpses, and other criminal elements. This provides both preventive capability prior to crime occurrence (digital administrative policing) and supports the collection of evidence after the crime. Additionally, AI can assist in reconstructing crime scenes using predictive decision network models. [5]

While the preventive framework plays a vital role, it is not sufficient on its own. It must be complemented by a punitive framework, which fulfills its function to ensure comprehensive protection. In accordance with the Penal Code, [6] and related legislation on infor-

[1] Mohammed Suleiman Shubair, "The Legal Framework of the Authority for Electronic Administrative Control in Palestine," *Human Sciences Series*, Faculty of Law, Al-Azhar University, Gaza, Vol. 17, No. 2, p. 318.

[2] Bassiouni, op. cit., p. 28.

[3] Ibid., p. 28.

[4] Law No. 23-20, dated 2 December 2023, concerning audiovisual activity, Official Gazette No. 77, 2023.

[5] Abu Ali, op. cit., p. 29.

[6] Ordinance No. 66-156, dated 8 June 1966, containing the

347 – www.imcra.az.org, | Issue 8, Vol. 8, 2025
Implementing Artificial Intelligence in Crime Prevention and Digital Security
Kerroumi Samiya
Berramdane Hamid

mation and communication technology, [1] as well as the Code of Criminal Procedure, [2] strict legal provisions are in place to confront criminal acts. However, the challenge lies in identifying such acts and those who commit them.

Section Two: The Technical Framework for Crime Detection Using Artificial Intelligence Systems

As previously discussed, artificial intelligence operates based on a set of programs and algorithms designed to collect, analyze, and interpret data, and respond based on pre-programmed instructions. This data represents the raw material that feeds AI systems, making it fundamentally important. It is drawn from a wide range of digital sources, and the volume of data plays a key role in enhancing the precision, efficiency, and performance of AI systems in decision-making and executing complex tasks. [3]

This exceptional performance is due to significant advances in artificial neural networks, which have become more flexible and far more capable of modeling complex systems. [4]

The activities performed by individuals on computers or smart devices and their peripherals leave traces in the form of magnetic fields, electrical pulses, or digital components. The latter produce information in various forms—such as text, images, or audio—elements that can be retrieved and analyzed by law enforcement and judicial authorities as digital evidence using specialized software. This concept also includes data closely linked to the device itself, such as file creation, login and logout records, and system-generated files. [5]

Nevertheless, hostile entities may exploit AI technol-

ogies to promote illicit goods, weapons, or even to orchestrate acts of terrorism. This includes recruiting individuals, including children, by exploiting their financial and social conditions, spreading hate speech, and teaching how to use weapons—activities that severely threaten public order and national security. [6]

Therefore, AI experts strive to develop expert systems to improve methods of data preparation, processing, and real-world application. These systems simulate the role of human experts in specific domains, and are grounded in research on knowledge engineering and technical intelligence design. [7]

In practice, robots are often used because of their ability to process and store massive amounts of data, supported by their cognitive power and memory capacity. Robots also offer high precision and minimize human error in performing tasks. Understanding and processing information requires categorization based on semantic meaning—this applies particularly to image recognition, which has been a major challenge in AI development. The capacity to recognize images is essential for identifying offenders, tracking them, and enabling law enforcement to intervene. It also supports digital criminal investigations in ways that promote both effective fact-finding and ensure the fairness of judicial proceedings. [8]

This process relies on sensor technologies embedded in robotic bodies. The design of sensors, actuators, and behavioral responses within a robot depends on its intended function. Together, these components determine the robot's capabilities. Recognizing that all robots are built from the same core elements provides a framework for understanding robot design and distinguishing between different types. It also helps identify the strengths and limitations of current robotics systems. [9]

Once data is gathered, it is processed—whether audio or visual—based on a set of hypotheses. The processing operation involves testing assumptions based on the nature and strength of the data. The target recognition process follows a sequence of phases:

Penal Code, as amended and supplemented, Official Gazette No. 49, 1966.

[1] Law No. 09-04, dated 5 August 2009, containing specific provisions for the prevention and combat of crimes related to information and communication technologies, Official Gazette No. 47, 2009.

[2] Ordinance No. 66-155, dated 8 June 1966, concerning the Code of Criminal Procedure, as amended and supplemented, Official Gazette No. 49, 1966.

[3] Moulay Abdullah Qasni & Moulay Abdelrahman Qasni, *Artificial Intelligence in Legal and Islamic Sciences*, Proceedings of the First International Conference, Ait Melloul – Kingdom of Morocco, 8–9 November 2023, p. 28.

[4] Bin Abdelnour, op. cit., p. 25.

[5] Youssef Manasrah, *Electronic Evidence in Criminal Law: The Road to Transforming Evidentiary Proof in Criminal Matters – A Comparative Study*, Dar Al-Khaldounia, Algeria, 2018, p. 31.

[6] Hamda Khalfan Beljafla, *The Jurisprudential Qualification of Artificial Intelligence Applications in Economic and Criminal Fields*, 1st ed., Islamic Affairs and Charitable Activities Department, Dubai, 1446 AH / 2024 CE, p. 45.

[7] Bassiouni, op. cit., p. 38.

[8] Suleiman Yaqoub Al-Farra, "Artificial Intelligence," *Al-Badr Journal*, ISSN 2170-0796, University of Béchar, Vol. 4, No. 1, pp. 4–6.

[9] Winfield, op. cit., p. 17.

348 – www.imcra.az.org, | Issue 8, Vol. 8, 2025
Implementing Artificial Intelligence in Crime Prevention and Digital Security
Kerrouni Samiya
Berramdane Hamid

sensors receive input (sound or image), then move through data processing and hypothesis formulation to eventually distinguish the target.[1] This includes the following:

- Testing hypotheses to uncover new facts;
- Linking these new facts to existing data;
- Reprocessing the information to confirm or revise the hypotheses;
- Ranking hypotheses by strength to improve accuracy.

However, despite the remarkable digital progress and AI innovation, it remains impossible to replicate human intelligence. This is due to the unique characteristics of the human brain, particularly ethical reasoning and emotional capacity. Unlike machines, humans possess consciousness and moral awareness, which influence every action they take. Machines, by contrast, operate without this dimension of awareness and are disconnected from conscience and moral responsibility.[2]

Conclusion

The use of artificial intelligence without oversight and legal regulation poses a threat to individuals' right to privacy. When the privacy of individuals' data intersects with the operation of AI systems, priority must be given to the protection of personal data during the development and deployment of such technologies. Based on this principle, the following recommendations are proposed:

- Establishing a robust set of measures and legal frameworks to safeguard individual privacy.

- Ensuring the existence of secure storage systems for personal data that prevent unauthorized access and violations.

- Reducing the risk of breaches, unauthorized access, or misuse of personal data.

- Providing secure safeguards such as encryption to prevent data breaches and unauthorized access to personal information.

- Guaranteeing legal accountability in cases where personal data is exploited within the framework of artificial intelligence.

---

[1] Bassiouni, op. cit., p. 59.
[2] Ibid., p. 38.

349 – www.imcra.az.org, | Issue 8, Vol. 8, 2025
Implementing Artificial Intelligence in Crime Prevention and Digital Security
Kerroumi Samiya
Berramdane Hamid

Books (in Arabic)

1. Barak, A. M. (2023). *Towards Regulating the Rules of Liability for Artificial Intelligence Technologies: The Forms of Relationship between Humans and Intelligent Machines—Criminally, Civilly, and Internationally* (1st ed.). Dar Wael Publishing.
2. Al-Julaud, A. A. R. O. (2023). *Legal Rulings of Artificial Intelligence Applications in the Judiciary* (1st ed.). Qada Center for Research and Studies.
3. Winfield, A. (2017). *The Science of Robotics* (A. Azab, Trans.). Hindawi Foundation, UK.
4. Al-Awad, A. F. A. (2021). *Digital Ownership in the Age of Artificial Intelligence: Challenge of Reality and the Future.* Arab Democratic Center for Strategic, Political, and Economic Studies, Berlin, Germany.
5. Outhamania, A. (2019). *The Basic Concepts of Artificial Intelligence.* In A. Khawaled (Ed.), *Applications of Artificial Intelligence as a Modern Trend to Enhance Business Competitiveness* (p. 11). Arab Democratic Center, Berlin, Germany.
6. Baljafla, H. K. (2024). *The Jurisprudential Qualification of Artificial Intelligence Applications in Economic and Criminal Fields* (1st ed.). Islamic Affairs and Charitable Activities Department, Dubai.
7. Sabiq, A. (2024). *Artificial Intelligence: Multidisciplinary Perspectives* (1st ed.). Arab Democratic Center, Berlin, Germany.
8. Russell, S. (2017). *Human-Compatible Artificial Intelligence* (M. M. Fouad & O. I. Abdel Aleem, Trans.). Hindawi.
9. Al-Farra, S. Y. (n.d.). *Artificial Intelligence.* Al-Badr Journal, University of Bechar, Vol. 4, No. 1, pp. 4–6.
10. Youssef, T. M. A. (2022). *The Future of Management in the World of Artificial Intelligence* (1st ed.). Hamythra Publishing, Cairo.
11. Abdel Nour, A. A. (2005). *Artificial Intelligence.* King Abdulaziz City for Science and Technology, Saudi Arabia.
12. Bassiouni, A. H. (1990). *Artificial Intelligence for Computers and Introduction to Prolog* (1st ed.). Publishing House for Egyptian Universities.
13. Al-Najjar, F. (2010). *Management Information Systems: An Administrative Perspective* (4th ed.). Hamed Publishing, Jordan.
14. Metwally, R. (2021). *Towards the Adoption of Criminal Responsibility Rules and Punishment for the Misuse of Artificial Intelligence Applications. Journal of Legal and Economic Research*, Special Issue, Faculty of Law, Mansoura University, 883.
15. Al-Ghamdi, M. F. (2024). *Artificial Intelligence in Education* (1st ed.). King Fahd National Library.
16. Shubeir, M. S. (n.d.). *The Legal Framework of Electronic Administrative Control Authority in Palestine. Humanities Series*, Faculty of Law, Al-Azhar University, Gaza, Vol. 17, No. 2, p. 318.
17. Abu Ali, M. A. (2024). *Criminal Liability for Damages Caused by Artificial Intelligence* (1st ed.). Dar Al-Nahda Al-Arabia, Cairo.
18. Abu Al-Nasr, M. M. (2020). *Artificial Intelligence in Smart Organizations* (1st ed.). Arab Group for Training and Publishing, Cairo.
19. Mahmoud, M. F. (n.d.). *Artificial Intelligence and Reengineering of Universities* (1st ed.). Dar Dijla.
20. Al-Adwan, M. (2021). *Studies on Criminal Responsibility for Unlawful Acts of AI Entities. Sharia and Law Sciences*, Vol. 48, No. 4, p. 151.
21. Qasimi, M. A., & Qasimi, M. A. R. (2023). *Artificial Intelligence in Islamic and Legal Sciences: Proceedings of the First International Conference* (1st ed.). Ait Melloul, Morocco, 8–9 November, p. 28.
22. Mnasra, Y. (2018). *Electronic Evidence in Criminal Law: The Path to the Transformation of Proof in Criminal Matters – A Comparative Study.* Al-Khaldounia, Algeria.

Official Legal Texts

23. *Law No. 09-04 of 05/08/2009*, on the special rules for the prevention and fight against crimes related to information and communication technologies. Official Gazette No. 47 of 2009.
24. *Law No. 23-20 of 02 December 2023*, on audiovisual activity. Official Gazette No. 77 of 2023.
25. *Ordinance No. 66-155 of 08 June 1966*, on the Code of Criminal Procedure, amended and supplemented. Official Gazette No. 49 of 1966.
26. *Ordinance No. 66-156 of 08 June 1966*, on the Penal Code, amended and supplemented. Official Gazette No. 49 of 1966.

349 – www.imcra.az.org, | Issue 8, Vol. 8, 2025
Implementing Artificial Intelligence in Crime Prevention and Digital Security
Kerrouni Samiya
Berramdane Hamid

Journal Articles (in French and English)

27. Goulet, J. (1980). L'informatique juridique : en progression vers un processus d'intelligence artificielle. *Les Cahiers de droit*, 21(3-4), 665.

28. Sunstein, C. R. (2001). Of Artificial Intelligence and Legal Reasoning. *University of Chicago Law School Roundtable*, 8, 29.

350 – www.imcra.az.org, | Issue 8, Vol. 8, 2025
Implementing Artificial Intelligence in Crime Prevention and Digital Security
Kerroumi Samiya
Berramdane Hamid