

***Exploring the Applications of Artificial Intelligence:
Bridging the Virtual World to Reality***

مجالات استخدام الذكاء الاصطناعي في العالم الافتراضي وتطبيقاتها على العالم الواقعي



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Abstract:

This research paper examines the significance of artificial intelligence as a leading technological innovation of the modern era. It explores its applications across various governmental and national sectors to enhance public services. AI introduces advanced mechanisms and techniques that redefine roles for both individuals and institutions, while also improving digital competencies in data and information systems. These advancements streamline operations in political, security, military, health, economic, and social domains. Through this study, we have also concluded that AI plays a crucial role in transforming work structures within state sectors by boosting efficiency and service quality. Moreover, integrating AI applications across these sectors is a strategic initiative aimed at achieving sustainable development goals.

Key words: Artificial Intelligence - Digitalization - Digital Transformation - Cyber security - Engagement and e-learning.

ملخص

تهدف هذه الورقة البحثية إلى تسليط الضوء على أهمية الذكاء الاصطناعي كأحد أهم الابتكارات التكنولوجية في العصر الحديث، وإبراز مجالات استخدامه في القطاعات المختلفة للدول والحكومات خدمة لشعوبها، وذلك باستخدام ميكانيزمات وتقنيات جديدة تعطي أدوارًا مختلفة لكل من الأفراد والمؤسسات فضلًا عن تعزيز مهارات التعامل الرقمي الإلكتروني بالاعتماد على نظم البيانات والمعلومات، في سبيل تسهيل عمل الأفراد في المجال السياسي والأمني والعسكري والصحي والاقتصادي والاجتماعي وغيرها، كما توصلنا من خلال هذه الدراسة إلى أن الذكاء الاصطناعي يلعب دورًا محوريًا في إعادة تشكيل نمط العمل داخل القطاعات المختلفة للدولة، عن طريق تعزيز كفاءة العمل وجودة الخدمات المقدمة، كما توصلنا كذلك إلى أن توظيف تطبيقات الذكاء الاصطناعي في القطاعات المختلفة للدولة يعد خطوة استراتيجية في تحقيق أهداف التنمية المستدامة

الكلمات المفتاحية: الذكاء الاصطناعي - الرقمنة - التحول الرقمي - الأمن السيبراني - التفاعل والتدريب الإلكتروني

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INTRODUCTION:

The contemporary world is witnessing a technological and cognitive development driven by the necessities of the modern era. This development results from the multiplicity and complexity of modern and global pathways and the trend towards the use of sophisticated techniques characterized by complexity, known as artificial intelligence. These advancements have significant implications on living reality and all areas of societal, educational, political, military, security, legal, and administrative life. Artificial intelligence is utilized within a digital environment characterized by extensive technological knowledge, generating intelligence that includes using big data and machines to solve issues, understand languages, and diagnose mental and pathological conditions. These forms of digital and electronic transformation of societies are translated into smart technologies that constitute a branch of computer science through which human intelligence can be holistically simulated.

Problematic:

Artificial Intelligence presents significant educational, societal, legal, political, and ethical challenges. Poor management of digital competencies in AI technology, as well as the misuse of machines and robots in critical state functions, can have serious consequences. As AI increasingly simulates human intelligence, its applications raise important questions: **In what domains is AI employed in both virtual and real-world settings? And what are the implications of AI for human privacy?**

To answer these questions and clarify the concepts of artificial intelligence, its areas of use, and its application to knowledge and human intelligence, we decided to evaluate the topic as follows:

First Section: Artificial Intelligence Between the Uses of Information Systems and the Simulation of the Human Mind: Robotics and Data Systems

Artificial intelligence (AI) is a vast and complex field of knowledge and science based on algorithms, software, and large and complex data systems. It aims to bring about significant changes in the fields and ways of life of individuals. This field has evolved beyond mere electronic and digital education to address the requirements of the fourth industrial revolution. Through intelligence technology, AI has imposed a strategy for remote learning using digital robotics platforms and dealing with data, whether ordinary or extensive. AI is now adopted as a digital machine working alongside humanity to perform advanced cognitive tasks based on its primary tool, the computer.

Firstly: What is Artificial Intelligence and Its Cognitive and Automated Uses?

Artificial intelligence is a robust response to the transformative changes of the modern world. It represents the culmination of technical advancements necessitating the development of information and knowledge through electronic media, including computers and the Internet, to provide digital and cognitive services related to information and data systems. This digital system leverages technology by integrating human interaction and robotic technology to enhance performance and knowledge production, as well as the tangible benefits arising from its use in automated fields. This integration creates a digital interaction that combines human-acquired knowledge through data systems with intelligent automated interaction via machine use, resulting in the positive investment of artificial intelligence technology.

1.Essence of Artificial Intelligence

Artificial intelligence represents a profound path of digital transformation that contributes to the development of internal local environments, transforming them into conditions and variables that encompass all organizational activities, processes, competencies, and opportunities. This transformation occurs through the application of smart digital technology, driven by innovation and creativity across multiple fields. The rapid technological advancements in AI have garnered the attention of laws, regulatory bodies, organizations, and international entities responsible for establishing a legal and protective framework. Artificial intelligence refers to algorithmic machines capable of monitoring their environment by learning, gaining knowledge, and acquiring experience. It encompasses systems that utilize multiple technologies such as computing, text, information and data processing, conversation recognition, and more.

a. Definition of Artificial Intelligence

Artificial intelligence is regarded by many experts and technologists as a method to create a computer, a computer-controlled robot, or a program that exhibits intelligent behavior akin to human cognition. It is defined as "a set of applied engineering systems designed to enable machines to accomplish complex tasks based on information¹."

¹ Houssam Rashid Hadi, The Impact of Artificial Intelligence on the International System, First Edition, Dar Kafa'a, Knowledge for Publishing and Distribution, Amman, Jordan, 2023, p. 22.

Western scholars such as John McCarthy and Marvin Minsky have defined artificial intelligence as "the study and design of intelligent systems that independently understand their environment and take necessary actions to achieve specific goals," or as "the science that investigates theories and techniques used in the creation of machines capable of simulating human intelligence."¹ "The Organization for Economic Cooperation and Development (OECD) has described artificial intelligence as "a machine-based system that, through a defined set of human-defined goals, can make predictions, recommendations, or decisions affecting various virtual and real environments." Similarly, the International Organization for Standardization (ISO)² defines it as "the ability of an engineering system to acquire, process, and apply knowledge and skills through experience or education."

b. Components and Tools for the Use of Artificial Intelligence

Many countries around the world are seeking to develop their strategies for using artificial intelligence in various fields to ensure infrastructure support and promotion. Nations such as China, Denmark, Canada, South Korea, Sweden, and Taiwan have developed skills programs to introduce their residents to the basics of machine intelligence. Meanwhile, France and Singapore have launched future skills programs to enhance individuals' abilities to use smart technology through electronic media, namely the Internet and computers, by providing ongoing financial support to learn the art of digital interaction. Singapore has also provided the e-learning platform "Coursera" through the Internet for online training, as well as the digital investment in AI research that India has made in order to develop the country's economic and social sectors³.

The Future Jobs 2040 report confirmed that many current jobs are expected to disappear with the introduction of automation and robotics, where machine skills are blended. This transformation creates new jobs rather than abolishing them, though these new positions require extensive knowledge of technology and the use of computers and information on the Internet. The electronic and digital means of research are the most important mediums adopted as

¹ Mohammed Ahmed Al-Maadawi Abd Rabbo Mujahid, Civil Liability for Artificial Intelligence Robots, Legal Journal for Legal Studies and Research, Vol. 9, Issue 2, Faculty of Law, Egypt, p. 229.

² Ola Brik, Artificial Intelligence from a Financial and Administrative Perspective, Dar Al-Hamed for Publishing and Distribution, Amman, Jordan, 2024, p. 30.

³ Nermeen Magdy, Artificial Intelligence and Machine Learning, Introductory Booklet Series, Issue 03, Arab Monetary Fund, UAE, 2020, p. 19.

mechanisms for using artificial intelligence, particularly in relation to information systems, data, scientific achievement, and program innovation. This is often referred to as digital education, which constitutes a branch of machine learning that uses programs designed to generate ideas through an artificial network capable of analyzing vast amounts of data¹.

Secondly: Artificial Intelligence Between the Use of Information and Data Systems and Robotics

Artificial intelligence is a science that encompasses various theoretical and technical aspects of how a computer can mimic human intelligence. This implies that it is not solely related to machinery but also involves the organization of information and data. AI relies on the transformation of knowledge, enabling machines to process large volumes of data, recognize patterns and relationships within this data, and learn from it, ultimately leading to intelligent use and automated decision-making².

Since AI is not confined to robots or industrial machinery but extends to a wide range of digital technologies that organize data and information, as well as a set of algorithms related to machine learning, it is founded on two fundamental components.

1. Artificial Intelligence Based on the Sub-Symbolic Approach:

This approach focuses on the system's ability to accurately interpret external data, learn from it, and use its acquired knowledge to achieve specific goals and tasks by adapting and applying flexibility. This approach led to the emergence of data science, which is closely related to machine learning. Machine learning relies on data to function, and data science utilizes this new technology to process and derive benefits from big data. Consequently, database technology emerged to address digital needs by processing data digitally and facilitating its search, retrieval, and management, keeping pace with significant developments in information³.

Data systems also contribute to providing many smart technologies that rely on computer systems. These systems store records and save information, enabling users, such as departments and institutions, to meet their needs intelligently through software that manages processes at various levels. For example, data systems assist in coordinating and organizing big data

¹ Ibid., p.12.

² Ola Brik, Previous Reference, p. 27.

³ Faisal Alwan Al-Taie & Fatima Hassan Al-Shammari, Electronic Information Systems, First Edition, Dar Safa for Publishing and Distribution, Amman, Jordan, 2024, p. 91.

hierarchically to facilitate management and retrieval. They also handle the vast size and volume of big data using mainframe computers, which depend on the system's efficiency and the machine's capabilities. This enables data provision for a large number of users compared to ordinary data systems that rely on smaller parallel systems and provide services to a limited number of users¹.

Thus, data is one of the most critical foundational elements associated with the digital smart enterprise, aiding in targeted strategies by utilizing data effectively in the realm of mobile work and enhancing profit margins. AI technology is not merely related to data but rather to the methods of leveraging it in a smart digital manner, executed under a digital intelligence platform.

2.AI Based on the Machine Learning Approach

This approach leverages the modern computer's processing speed and its capacity to store vast amounts of data. It should be coupled with the development level of deep learning algorithms capable of performing any mental or physical human tasks successfully, equipped with cognitive abilities surpassing human intelligence. The machine system operates on what is known as expert systems, a form of artificial intelligence that relies on knowledge to build systems based on the logic of human thinking. It involves providing answers to questions to reach the required solutions and advice, making it one of the most significant applications of artificial intelligence².

The machine learning approach also encompasses a fundamental concept based on robots as machines that perform human tasks and activities on behalf of humans, which they cannot or are unable to perform. These machines have the ability to sense external factors such as light, heat, sound, and movement. Robotics programs provide the capability to simulate the behavior of automated systems in the virtual world by testing various mechanisms, devices, control units, and their applications to real-world scenarios³.

The Second Section: Areas of Use of Artificial Intelligence and the Shift from the Cognitive Field to the Field of Automated Production

Artificial intelligence permeates human lifestyles, influencing their digital behaviors and interactions in various fields. It addresses issues and enhances cognitive abilities, enabling individuals to acquire skills for dealing with machines in education, health, economy, politics, and even the military. This

¹ Ibid., p. 96.

²Faisal Alwan Al-Taie & Fatima Hassan Al-Shammari, Previous Reference , p. 108.

³ Amani Yahya Abdel Moneim Al-Naqeeb, Artificial Intelligence and Its Impact on Society, First Edition, Dar Al-Fikr Al-Jamei, Alexandria, 2024, p. 31.

modern technology has introduced a wealth of advanced knowledge, leading to a quantum leap in the field of artificial intelligence. Consequently, AI has established techniques and rules that extend to all state sectors, particularly in medical image analysis, drug development, genetic research, transportation, traffic management, crisis and risk management related to maintenance and quality in production, energy, trade, defense, and more¹.

Firstly: The Use of Artificial Intelligence in the Humanitarian and Legal Field

Digital transformation and the utilization of artificial intelligence systems contribute to building a participatory and competitive framework of rights and freedoms. This is achieved through the realization of legal obligations and the facilitation of legal procedures to improve individuals' lives and strengthen societal cohesion. Smart systems, based on the data and information approach, play a significant role in simulating the real world of human rights².

1.The Use of Artificial Intelligence in the Field of Rights and Freedoms

There exists an integrated and intertwined relationship between the classification of AI technology usage and the realization of rights and freedoms. This relationship is highlighted by the National Council for Human Rights in its 2020 annual report, which emphasizes the importance of imparting human rights values to technology. The report calls for the development of a digital strategy to explain and ensure the protection of rights when designing applications and algorithms related to artificial intelligence. The Council also launched the 2020 Interaction Platform for Freedom of Expression in the Digital Space and included the Framework Agreement on Artificial Intelligence (CAHAI) of 2022, comprising 46 member states of the Council of Europe. This framework aims to link AI systems with rights, freedoms, equality, and human dignity³. Additionally, AI systems contribute to designing smart software to protect personal security and personal data. In partnership with Google, information and

¹ Ola Brik, Previous Reference, p. 1.

² Semache Linda, Digitalization and the Requirements of Digital Transformation: A Conceptual Approach, National Virtual Symposium on the Digitalization of Public Sectors, held on February 13, 2022, University of M'hamed Bougara, Faculty of Law and Political Science, Boumerdes, Algeria, p. 10.

³ Framework Convention on Artificial Intelligence, Human Rights, Democracy, and the Rule of Law, Council of Europe, 2023/2024.

<https://rm.coe.int/ai-convention-brochure-ar/1680b1de41>, Date and Time of Access: 03 February 2025 at 11:00 AM.

communications about connected devices are stored without being transferred to a server¹.

Smart systems work to develop knowledge through machine learning technology by using computer systems designed to support and improve the learning and teaching process in the field of knowledge, i.e., the right to education. These systems create cultural educational capabilities for individuals by establishing digital platforms that guarantee access to information and data. This ensures the right to access information fairly and equally without marginalizing or excluding any groups². Additionally, smart monitoring technology is used to protect the right to life by detecting and preventing cybercrime.

2.Using AI in the Legal Field

UNESCO has created online training courses through the application of AI technology in the field of the rule of law and its impact on the judiciary. AI helps judicial systems process large amounts of data to assist lawyers in identifying case law and enabling the judiciary to facilitate litigation procedures, providing integrity and transparency, especially in investigations. UNESCO has trained more than 17,000 judicial authorities through the open network MOOC in partnership with the American and African Court on Human Rights and UNESCO's CETIC Center.

AI technology is also being used in the field of parliamentary questioning with robot-proposed questions, as implemented in France in the latest amendment to the law for the 2024 Olympic Games³.

Artificial intelligence software contributes to facilitating justice procedures by efficiently identifying criminals and pinpointing the most dangerous areas that serve as primary locations for crime. It aids in criminal investigations and evidence gathering by examining electronic evidence and identifying the actual

¹ Mohammed Al-Hadi Al-Suhaili, Developments in Artificial Intelligence and the Requirements for Protecting Fundamental Rights and Freedoms, Islamic World Educational, Scientific and Cultural Organization (ICESCO), UNESCO.

<http://www.icesco.org>, Date and Time of Access: 03 February 2025 at 03:20 PM.

² Madihah Fakhry Mahmoud, Artificial Intelligence and University Reengineering: Opportunities, Challenges, and Requirements, First Edition, Dar Dijla for Publishing and Distribution, Jordan, 2023, p. 45.

³ Artificial Intelligence and the Rule of Law: Capacity Building for Judicial Systems, November 8, 2023, UNESCO.

<http://www.icesco.org>, Date and Time of Access: 05 February 2025 at 10:30 AM.

perpetrator of the crime. This is achieved through programs that utilize algorithms to unravel mysteries using data analysis¹.

Artificial intelligence is also more closely related to e-administration laws compared to general laws, as it encompasses a larger number of programs related to jobs, relationships, and various legal transactions in different fields of life. These programs support the administration in achieving its goals through digital administrative planning, specifically query and data mining software².

Many developed countries have resorted to using artificial intelligence in the field of imposing legal penalties. For instance, in the Republic of Congo, robots have replaced traffic policemen in organizing traffic. These robots are equipped with lighting and cameras to monitor traffic situations and issue violations of traffic laws³.

Secondly: Uses of Artificial Intelligence in the Political-Military Field

The political and military security sector sees more extensive use of artificial intelligence systems than other fields. AI is employed in tracking, tracing, and positioning systems, as well as in achieving national defense security to safeguard countries' interests. This includes intelligence and information gathering, utilizing smart combat methods based on data systems and big data, and developing military robots into nuclear robots for monitoring and combat. AI also supports political systems by strengthening them and guiding them to invest more in technology to support political decisions.

1.Using Artificial Intelligence in the Political Sphere

It is the responsibility of decision-makers in society to ensure equitable access to digital technologies, encompassing all groups and strata of society, while addressing mechanical and social risks. Some technologically advanced countries and certain Arab countries, such as Jordan, have established visions and policies to support digital adoption and smart transformation. Jordan's Vision for 2025 outlines the government's general policy in the ICT and postal sector and includes strategies for consultation with procurement, as mentioned in the UN General Assembly resolution in late 2017 and the World Information Summit Forum in 2016, among others. These efforts aim to support digital adoption and smart transformation.

¹ Amani Yahya Abdel Moneim, Previous Reference, pp. 107-108.

² Ihab Issa Abdul Rahman Al-Masri, Digital Management in Light of Digital Transformation, First Edition, Dar Al-Ta'leem Al-Jamei, Alexandria, 2023, pp. 56-57.

³ Mohammed Ahmed Al-Maddawi, Previous Reference, p. 288.

The digital transformation of government policies has compelled states to integrate smart technologies capable of inducing political change. This shift focuses on enhancing production and quality in meeting individuals' needs and supporting their rights and freedoms by adopting an open-world approach and merging with technologically advanced countries. This enables politicians to manage their country's affairs and fulfill the requirements of their modern digital populations. The utilization of artificial intelligence significantly supports political leaders by accessing and analyzing vast amounts of data to formulate decisions that address citizens' needs. This technology enables the creation of rules, regulations, and policies aligned with voters' aspirations. AI also helps determine goals and priorities to achieve political results that satisfy the public¹.

AI devices play a crucial role in promoting digital political participation through information and data systems, thereby creating a digital persona that interacts with state apparatus. Additionally, AI technology is utilized to analyze and leverage databases for concluding and monitoring the implementation of treaties related to nuclear and chemical weapons. Through this analysis, intelligence can reveal the future consequences and possibilities of their use².

Therefore, the Toronto Convention in 2018 aimed to establish an ethical and legal framework for artificial intelligence and emphasized the need to popularize education through modern technology systems that integrate the human mind and AI. However, artificial intelligence cannot always be aligned with the human mind due to their inherent differences in nature and composition. The machine can assimilate all algorithms and data according to its programming and surroundings, surpassing the human mind in certain aspects.

2.Uses of AI in the Military Field

Artificial intelligence technology creates electronic warfare platforms that significantly enhance the strength of countries in military weaponry and security. These platforms, supported by intelligence technology, possess leadership skills that extend beyond human supervision and include machine intervention. AI plays a crucial role in air and sea security defense systems and strengthens military investments by facilitating the rapid deployment of weapons and the implementation of military plans through military robots³.

¹ Artificial Intelligence and the Rule of Law: Capacity Building for Judicial Systems, November 8, 2023, UNESCO, Previous Reference.

² Yasmine Ayman, Report on the Multiple Effects of Artificial Intelligence, October 25, 2018. <http://www.futuranae.com>, Date and Time of Access: 06 February 2025 at 02:20 PM

³ Ibid.

AI systems can also design programs capable of developing information based on knowledge and experience that are not controlled by humans. This is particularly relevant in the field of arms competition, encouraging an electronic or digital arms race between countries. However, achieving this requires substantial financial investment and the ability to absorb this technology. It involves not only acquiring weapons and understanding arms statistics but also training military personnel to use these advanced technologies effectively.

Secondly: The Uses of Artificial Intelligence in the Economic and Health Field

Technological advancements and the applications of artificial intelligence have significantly contributed to the development and growth of the economy and international trade. The digital and informational environment has supported the expansion of business and competitive relations in e-commerce and digital currencies. Artificial intelligence serves as an infrastructure for generating new economies through what is known as basic technology. This foundation accelerates innovation and creates digital platforms that facilitate the growth of modern industry applications and technologies¹.

Additionally, robots or smart systems can work independently by simulating human actions in the health field, performing precise and sensitive tasks that humans may find difficult or impossible, such as complex surgeries.

1.Uses of Artificial Intelligence in the Economic Field

Artificial intelligence technology contributes to increasing economic growth rates, achieving productivity, and enhancing efficiency, as highlighted by the Accretive report. This is especially true for developed and technologically advanced countries, where AI helps provide free services and reduce spending. On the other hand, AI creates new job opportunities that accommodate digital development and require technical skills to integrate AI technology into human and automated labor development². However, many countries indicate that AI may lead to a reduction in the labor force, potentially increasing unemployment. To address this issue, there must be a substantial infrastructure to finance smart economic activities and balance the human element with machines to preserve the foundations of the digital economy.

¹ Hussam Rashid Hadi, The Impact of Artificial Intelligence, First Edition, Dar Al-Kafa'a Al-Ma'rifia, p. 216.

² Report on the Multiple Effects of Artificial Intelligence on State and Society Policies, Future Research and Advanced Studies, October 25, 2018, Previous Reference.

Artificial intelligence also represents a significant digital transformation point in the local and global economy, greatly impacting products and services in the field of e-commerce. AI provides new job opportunities that accommodate smart technologies, benefiting the economy, promoting economic development and growth, addressing complex labor market issues, enhancing productivity, and advancing industrial automation to new levels¹.

There are substantial expectations for the advanced transformation of the global economy due to the use of artificial intelligence technology. According to PricewaterhouseCoopers (PwC), AI is projected to contribute \$15.7 trillion to the global economy by 2030, as per International Monetary Fund data, resulting from the deployment of robots. AI also enhances industry efficiency, profitability, and abundance, aligning with global developments. This leads to a significant increase in industrial production volume and the creation of the "smart factory" concept, particularly in the electronics industry. It also provides continuous support for the production of smart industry using the Internet to achieve integration and participation in production lines².

2. The Use of Artificial Intelligence in the Health Field

Artificial intelligence technology is extensively applied in the health sector, making it one of the most common and widespread areas for this smart technology. Countries have successfully utilized AI to address various diseases, changes, and epidemics over the past years, particularly the Corona virus Covid-19 pandemic. Advanced technology, based on machine learning, language processing, and big data, to track and diagnose the epidemic and expedite the discovery of treatment, cases of virus infections were detected using remote drones and robots in public places due to non-compliance with physical distancing and social isolation rules³. Many countries, including China and North Korea, have successfully combated this disease through electronic marketing using robots. These robots perform services such as delivering medicines, luggage, products, and social benefits to homes.

Artificial intelligence possesses the capability to predict a patient's future condition by accurately diagnosing them, analyzing radiological images, and identifying health issues in record time. Doctors control robots as intelligent

¹ Iman Abdul Aziz Al-Ahmadi, The Requirements for Preparing the Digital Citizen in Light of Saudi Arabia's Vision 2030, Academic Journal for Research and Scientific Publishing, Issue 5.9, September 17, 2020, Saudi Arabia, p. 118.

² Amani Yahya Abdel Moneim Al-Naqeeb, Previous Reference, p. 9.

³ Nermin Magdy, Previous Reference, p. 13.

machines that facilitate access to precise areas of the body that are challenging for humans to reach, thereby minimizing surgeries and avoiding complications¹.

Governments frequently collaborate with telecommunications companies and the smart device industry to track individuals' locations through Smartphone networks. This enables the identification of infections or the locations of those affected by diseases and epidemics. For instance, Google and Apple have developed the use of Bluetooth signals and GPS systems to determine the locations of individuals infected with the virus, by sending warnings or alerts².

The World Bank has also emphasized its role as an educational institution capable of financing healthcare support projects through the use of intelligence and digitalization, given that 4.5 billion people worldwide live without access to healthcare services³.

China has notably developed its healthcare systems using artificial intelligence, particularly in managing research and mining operations for diseases. It stands as one of the largest countries employing smart technology in the health sector, maintaining a vast database that covers most of its population⁴.

Conclusion:

Artificial intelligence has instigated a paradigm shift, catalyzing significant technical advancements across numerous areas of life. Countries are increasingly adopting various modern technologies to mitigate the risks associated with advanced digitization. This necessitates the provision of robust infrastructure in light of political developments within the current societal environment, which is closely linked to smart technology. This reliance extends beyond capital investment; it requires the creation of new responsibilities and jobs that address the educational needs of a globally connected world, the development of the market economy, and the fostering of innovation to tackle smart electronic challenges. Furthermore, AI plays a crucial role in the enhancement of rights and freedoms and facilitates easy access to essential areas such as work, health, environment, and security.

¹ Ibid, p 14.

² Mohammed Al-Hadi Al-Suhaili, *Developments in Artificial Intelligence and the Requirements for Protecting Fundamental Rights and Freedoms*, Islamic World Educational, Scientific and Cultural Organization (ICESCO), UNESCO, p. 13.

<http://www.icesco.org>, Date and Time of Access: 11 February 2025 at 02:45 PM.

³ Ministerial Meeting on Human Capital, held during the 2024 World Bank Meetings, on *Unlocking the Potential of Digital Technology and Artificial Intelligence for Health*. <http://www.albankadawli.org>, Date and Time of Access: 13 February 2025 at 06:35 PM.

⁴ Houssam Rashid Hadi, Previous Reference, p. 61.

After examining the various aspects of this topic and analyzing prevailing trends across different sectors, the following results have been obtained:

- Artificial Intelligence (AI) technology has contributed to digital advancements serving humanity by maximizing the development of state policies, implementing laws, and ensuring their effectiveness in upholding social and economic rights.

- AI technology intersects with many technical dimensions across various societal areas, particularly in the value, political, and societal aspects, promoting openness, inclusion, transparency, and addressing complex issues.

- AI is founded on a multidisciplinary approach that encompasses multiple specialized capabilities in the field of technologies and the integration of new inventions.

- The increasing and intensive use of smart technology should not lead us to blindly accept machines simulating the human mind or turning robots and software into tangible entities that replace individuals in performing their tasks. It is imperative to emphasize ethical and legal controls when using these technologies.

- AI technology is powered by data systems, not merely machines. The human aspect and dignity are integral, and there exists a possibility of errors and harm arising from the use of this technology. A robot or machine cannot replace the human mind, especially in terms of morality, legal aspects, and methods of criminal liability.

- Artificial intelligence facilitates the investment in thought and behavioral change, leading to a radical transformation in state policies towards their citizens. This provides substantial potential to build an effective digital state that can compete with technologically advanced countries.

On the basis of all the previous findings and the conclusions reached after studying the topic, I propose the following:

- Despite the many benefits and services provided by AI to countries and their internal and external policies, we cannot ignore the risks that arise from the use of this modern technology and its significant repercussions on various sectors of society.

- While it is true that AI is achieving substantial radical changes in the state's political, military, economic, and health sectors, with considerable benefits for rights, freedoms, and economies, there must be legal and administrative frameworks and supervised regulations for all areas of digital

education to mitigate the risks of digitization associated with accessing the virtual space.

- Digital citizenship must be given ample opportunities to utilize AI technology to preserve individuals' right to privacy and ensure safe practice across different areas of life. This includes providing opportunities for e-voting, digital referenda, and easy access to information, along with e-awareness initiatives that ensure the acquisition of digital skills for using electronic media and assimilating smart technology.

- Countries can launch initiatives to employ smart technology to provide advanced services across all fields, establish a data protection framework, prioritize Internet access, and invest in learning and skill-building to avoid the risks associated with inadequate AI software, particularly in services provided by robots.

- Countries must enact laws that officially authorize the practice of AI technology, inform citizens about its application and safe use, and ensure transparency to avoid exposure to negative or illegal use of the technology.

- There is an urgent need to monitor and track the use of AI technology in all areas, especially concerning the right to privacy and bodily integrity, to safeguard personal data and mitigate fears of breaching confidentiality and accessing others' information.

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