The Impact of Artificial Intelligence on Sustainable Environmental Development Goals

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Abstract :

Artificial Intelligence is a unique and qualitative leap in the world of software and a technological and information trend that has invaded all areas of life. It is one of the modern branches of computer science, and its primary goal is to build intelligent machines capable of performing complex tasks even if their solution requires human intelligence. Sustainable development, with its various goals, is a comprehensive plan with a common vision to achieve a common future and more. Sustainability, such that these goals address various global challenges, including poverty, Inequality, climate, and health care, and in the midst of the four industrial revolutions, in which artificial intelligence emerges as one of its most important pillars, and which some countries have begun to compete in studying, developing, and relying on for various uses, integrating artificial intelligence in order to achieve sustainable development goals in line with various capabilities and expectations has become a must. Sustainable economic, social and environmental development is an urgent necessity. Artificial intelligence is no longer just science fiction, but rather the future.Keywords: Machine learning, Environmental sustainability and the future

1-INTRODUCTION The industrial revolution took place at the beginning of the twenty-first century, relying on the digital revolution and the internet with the emergence of remote sensors, 3D printing, artificial intelligence, smart robots, and automated transformation. Artificial intelligence has become a comprehensive term for applications that perform complex tasks that in the past required human interventions, such as communicating with customers over the Internet.On September 25, 2015, the member states of the United Nations adopted the Sustainable Development Goals, which, also known as the Global Agenda, it is considered a new vision and global capacity to work towards eliminating poverty and hunger, protecting the planet and climate change, and ensuring that all peoples enjoy peace, justice and prosperity (Al-Hamdan, et al. 2016). The importance of the topic of artificial intelligence and its role in achieving sustainable development goals lies in research that deals with topics of the current and future era and the extent of its connection to the technological revolution and digital, in addition to increasing interest in achieving sustainable development goals in the coming years(Yin, et al. 2020).

- Artificial intelligence, if better employed, can achieve the greatest extent of the sustainable development goals especially eliminating hunger and poverty, equitable distribution of water, and combating climate change.

-The importance of artificial intelligence is highlighted as it is the new human frontier, so it must keep pace with the times and adapt.

-This research represents an attempt to project the basics of artificial intelligence onto various development goals sustainable and finding realistic solutions to implement them .This study aims to identify artificial intelligence and explain its various fields, as it has become one of the topic that has received the most attention over the past few years is that it is the new frontier for humanity. The integration of artificial intelligence applications into various sectors that it has a strong connection to the sustainable development goals that changes by finding optimal solutions because the speed of innovation is changing our world. Therefore, in light of the transformations emerging from the industrial revolution that open new horizons for humanity, how has artificial intelligence contributed to achieving the goals of sustainable development(ARC, 2021).

1-2 The emergence of artificial intelligence:The concept of machines using intelligent algorithms and processing methods is not new in itself, and not every concept can be considered an intelligent algorithm is considered artificial intelligence. Rather, the machine must show the ability to improve its own method of solving a problems and providing solutions, by learning from successive experiences the history of artificial intelligence began in ancient times, through myths, stories, and rumors about artificial beings gifted with intelligence or consciousness by skilled craftsmen, the seeds of intelligence planted(ARC, 2015). Modern Artificial Intelligence by classical philosophers who tried to describe the process of human thought as a phrase on the mechanical manipulation of symbols, this work culminated in the invention of the programmable digital computer in the 1940s(Berkowitz, et al. 2015). The twentieth century is a machine based on the essence of logical-mathematical thinking, which inspired this device and the ideas group of scientists stand behind it to begin seriously discussing the possibility of building an electronic brain(Bounoua, et al. 2015).Artificial intelligence appeared in the same period in which work was being done to lay the theoretical foundations for computers, the first indications of artificial intelligence go back to the computing theory of the mathematician (Broadbent, et al. 2020). The British Alan Turing, who contributed to laying the foundations of the modern theory of computing and how to develop intelligent machines capable of... Intelligent data processing despite the primitiveness of this Turing Machine, in 1939 Alan Turing created a machine device, however, can apply a complex computer algorithm, which was used during World War II to decode it encrypted German messages and communications for the benefit of the British forces and their allies. This test consists of the Turing Test(Yang, 2019). In 1950, the same scientist created a test called group of questions and three players. Two players, one a normal person, the other a device, and the third player referee, task of the two players is to answer the questions that appear on the screen, and the referee's task is to read the answers(Cheval, et al. 2020).-In 1951, the American scientist Arthur Lee Samuel (Checkers or Machine Learning), the scientist Arthur himself was the first to coin the term checkers himself,. Machine learning on this branch of artificial intelligence in 1959(Smith, et al. 2018).Artificial intelligence officially began in 1956 at Dartmouth College in Hanover, United States in American University, during a summer school organized by four American researchers (John McCarthy, Marvin Minsky, Nathaniel Rochester, Shannon Claude), the term artificial intelligence has since succeeded it was initially invented to arouse public attention17, after which the most important mathematicians and physicists met 18, and they decided to hold a conference in the field of smart software, and most of them were employees of the company IBM and Computer on this branch of science 19 Artificial Intelligence during which the term was launched 1978(Roberts, 2021). This period was marked by a stagnation and boom in intelligence-related research - from 1960, Artificial Intelligence, including the failure of machine translation, and the publication of the first issue of the Journal of Artificial Intelligence in 1970, 1987- During this period, devices appeared that could greatly assist in making decisions((ESRI, 2021).The emergence of these devices led to the return of some financial support and interest in expert devices the field of artificial intelligence again. But it is worth noting here that many scientists did not consider these devices to make a decision, which contradicts the basic idea of if-else intelligence is programmed with a huge number of episodes(Fenner, et al. 2019).In 1988, the first computer that played chess appeared deep was .IBM in Deep Blue, and later this project developed into another project called CMU. First chess player to beat Russian world chess champion Garry Kasparov in 211997 Blue-After 1997, a new leap occurred for artificial intelligence, with the emergence of the first speech recognition system, this system can perform Dragon Natural Speaking and is called Speech Recognition, three tasks: speech recognition, text-to-speech conversion, and spoken command recognition 22 in the early twenty-first century, artificial intelligence achieved greater successes, as intelligence began to be used artificial technology in data mining, medical diagnosis, smart education, smart cities, and many other fields others throughout the technology industry(Ferwati, et al. 2018).In 2018, artificial intelligence became a reality, not a fantasy, and no longer occupies a place in the world of culture so great on the ground that it has become a

major tool at the core of all sectors, it led the pioneers of artificial intelligence to formulate seven basic aspects through which the goals of intelligence can be understood artificial intelligence and its basics 23, which are according to Fragomeni, 2019:-The ability to simulate the advanced mental functions of the human brain.-The ability to program computers so that they can use language.- Arranging and organizing artificial (artificial) neurons in a way that enables them to form consciousness and thoughts.-The ability to identify and measure the complexity of problems.-The ability to self-improvement.- Impartiality in the sense of the extent of efficiency with which computers and artificial intelligence software deal with ideas and concepts rather than being limited to responding to events and randomness and innovation.

1-3 International efforts to create artificial intelligence to protect humanity:Artificial intelligence is not linked to one technical field. Rather, it can be said that the algorithms and applications adopted, the concepts and foundations of artificial intelligence have become all around us, starting with smartphones and other media. Social media that we use on a daily basis without stopping, going through hospitals and care agencies, the health care system is increasingly relying on smart software to improve the accuracy of medical diagnosis and search for sources land, and ending with delivery services, which have begun to rely increasingly on robots and drones 59(Gartland, 2008; Kaplan, et al. 2018). Interconnected digital technologies provide great opportunities for the economy, society and the Sustainable Development Goals as a whole, but these technologies raise ethical problems, as the loss of jobs due to automation (learning or automation), and the emergence which is currently used on the internet to determine personal details, Filter Bubble is called a filter bubble, data protection, face recognition, and fake videos using deepfake technology, cyber security and abuse(Shreevastava, et al. 2018; Guy On Climate, 2021). As part of the efforts that must be taken to ensure that the potential of artificial intelligence is exploited in the service of the process of sustainable development for humanity is sought by various countries and bodies, most notably the United Nations and its agencies the company is working hard to highlight the importance of integrating artificial intelligence into various sectors for sustainable development goals, and at the same time warning against the misuse of this technology and the resulting future risks, we mention, for example, the Third World Summit on Artificial Intelligence in order to achieve the public good which aims to make an impact at the global level, in addition to ensuring the development of intelligence technologies(Luber and McGeehin, 2008).Artificial technology in a reliable, safe and comprehensive manner, and equitable access to the benefits of this technology the World Government Summit also witnessed its seventh session in 2018 of the Global Governance Forum Artificial Intelligence, which shed light on artificial intelligence technology, which is witnessing rapid development, and researched its future dimensions on humanity, and despite the efforts of institutions and governmental bodies to confront the challenges and seize the opportunities offered by artificial intelligence, but this field is still marred by a lot of ambiguity and dispersion as for the World Summit on Artificial Intelligence, organized by the Saudi Data and Artificial Intelligence signing a memorandum of understanding with the International Telecommunication Union with the aim of national strategic cooperation to develop capabilities and develop potentials of artificial intelligence(Lui and Mason, 2009; Mustafa, et al. 2020).The third annual global meeting between Interpol and the United Nations Interregional Institute, held in November 27, 2020 for crime and justice research related to artificial intelligence for enforcement agencies but the wrong use of artificial intelligence may reinforce the inequality we see in the world specially if you do not realize the importance of human beings being at the forefront in terms of importance with the tremendous development in the level of technology and its applications turn the matter into other dangers, robots whose intelligence will reach a degree that allows them to excel on humans, and according to some experts, within the coming years (2075), machines equipped with special capabilities will arrive(Panteras and Cervone, 2018; MRLC, 2021). To levels of intelligence that exceed the human level, enabling them to make decisions independently, without returning to any. reference from humansA research paper issued by experts in artificial intelligence in the industrial and academic fields warned entitled Harmful Use of Artificial Intelligence: Prediction, Prevention and Mitigation, this sector will negatively impact(Parastatidis, et al. 2020). The human race will, at some point, cause serious damage to its life the uses of artificial intelligence, most of its dimensions have become the subject of analysis and rational reconstruction by computers. In addition, machines have surpassed our cognitive abilities in most fields, which makes some fear its risks from a moral standpoint, so these risks and potential expectations are as follows according to Roberts, 2016 :-Transcending humanity, which may disappear and be replaced by machines with superior intelligence.-Negative repercussions on the individual's independence, freedom, security, and digital privacy.

-The scarcity of job opportunities, given that the machine will replace humans to perform many tasks.-Automatic fraud, or creating fake email accounts, websites and electronic links to steal information.- Faster hacking operations through automatic detection of software that can be hacked. -Deceiving the artificial intelligence system by exploiting the vulnerabilities through which artificial intelligence sees the world 68-The ability of artificial intelligence to create fake images autonomous smart weapons programmed to kill are one of the methods that pose the greatest risks to humanity sspecially if the major powers decide to abandon the nuclear arms race and replace it with a smart weapons race.-Social manipulation and political influence through social networking sites using algorithms very effective, it is possible to know the interests, desires and secrets of users and thus influence their inclinations and desires, such as influencing American voters during the 2016 presidential elections and the British exit referendum from the European Union.2- Conclusions and Recommendations The importance of artificial intelligence in advancing education, health care, and ending poverty and hunger, social and economic equality, smart mobility, and smart cities are all aspirations for a better future that achieves development goals in the coming years. Accordingly, we have reached a number of results, including scientist John McCarthy coined the term artificial intelligence in 1956 and defined it himself as science and engineering making smart machines, Artificial intelligence is the new frontier for humanity.-Artificial intelligence has become a reality, not a fantasy, in 2018, and it no longer occupies a place in the world of culture popularity only, as 2018 was the major shift in artificial intelligence, as this technology has grown dramatically so great on the ground that it has become a major tool at the core of all sectors.-Artificial intelligence represents a basic foundation on which future service sectors and infrastructure depend because it will become an integral part of daily life in the coming years, in light of the efforts of various sectors sustainable development is defined as the commitment to establishing a fair global society that recognizes the necessity of ensuring dignity humanity of society, as it represents peace, stability, and respect for human rights and fundamental freedoms, including the right in development and respect for cultural diversity.The Sustainable Development Goals focused on ending poverty and hunger, in all their forms and dimensions, and ensuring that all human beings can activate their potential within a framework of dignity, equality and a healthy climate.-Artificial intelligence technologies in education aim to enhance human capabilities and protect human rights for effective cooperation between man and machine in life, learning and work, the uses of artificial intelligence have exceeded most of human cognitive ability in most fields, which it makes its risks increase from a moral perspective, such as blackmail, manipulation, electronic fraud, electronic espionage, smart weapons, bad uses of artificial intelligence may negatively impact the individual's independence, freedom, and security and its digital privacy.From this, we mention some recommendations:-Developing national and international legal frameworks to control the misuse of artificial intelligence.-Protecting digital privacy, personal data, trust, preserving functionality, operation and bias likely.-The ability to create safe, useful and ethical solutions in the field of artificial intelligence that can improve human life on planet Earth in the future. 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