UNESCO Committee

Issue: Question of the risks posed by Artificial Intelligence

Introduction to topic:

Over the last few years, there have been increasing developments in technology and computer science, specifically in the field of artificial intelligence (AI). This innovative enginery is currently being used in more and more industries around the world, and artificial intelligence is playing a greater role in modern society. However, it is crucial to consider the unlimited potentials of this innovative technology, which leads to both positive and negative impacts in our daily lives. As more and more advanced robots and other technology have been introduced into our world, we must consider what areas this new tech is affecting and how it can improve and pose certain risks to society. A few examples of areas that artificial intelligence is currently affecting and will continue to impact the future are healthcare, education, privacy and cybersecurity, sustainability, and job markets.

Definition of key terms:

Algorithm
In their most basic form, algorithms are step-by-step processes that computers use to complete calculations, automated reasoning, and process large amounts of data. They are an essential part of artificial intelligence because some are designed to facilitate the process of machine learning and allow for better recognition of patterns and statistical analysis

Artificial Intelligence
Artificial intelligence (AI) is the "intelligence" demonstrated by computer technology. These systems are often created and developed to replace humans by performing tasks such as the interpretation of visual stimuli, speech recognition, and translation

Ethical
The concept of defining an action, process, or a choice as ethical has long presented dilemmas within many societies, both ancient and modern. However, in this context, the UN-endorsed idea of something that is ethical means that it aligns with good values and the idea of progress.

 A carbon footprint is the total greenhouse gases (especially carbon dioxide) emissions that a specific task or product's manufacturing, among other activities has during a set amount of time. Another aspect of this important concept that must be understood is that that carbon footprints are a useful standardized measure of how environmentally-sustainable and efficient something is.

Background information :

The first step to understanding how technological development could impact our society is understanding what it is exactly. Artificial intelligence is a software used in science, technology, engineering, and math, that is meant to imitate human brain power. Some of the main tasks AI is used for are pattern-finding, image and voice recognition, as well as interpretation of language.

There has been a huge surge in the amount of data shared online in the last decade due to the popularity of social media networks. From photographs to traffic data, our world has become increasingly digitized within all sectors and levels of society and the market. This leads us to the third and final development leading to the spread of artificial technology, the creation of algorithms to handle the new data that has become available. Many tech companies have spent more and more time and resources looking at the progression of machine learning, in order to further enhance these algorithms to cope with the demand of new markets.

There is a distinction to be made between so called "Expert systems" and "true artificial intelligence". Expert systems are able to imitate the decision making process of humans, that are employed to solve complex issues following an if-then model. They have been around since the 1970s and are among the first successes of AI. However, their place in the category of artificial intelligence is debated because they lack the ability to learn from external data. One example of expert system is "computer-aided diagnosis" (CADe) in which expert systems help medical professionals interpret medical images. True artificial intelligence on the other hand has the added capacity to learn and incorporate external data in its decision making process. A lot of these types of AI are still in a prototype phase, an example of this is self-driving cars that use AI safety software that is constantly updated with new data in order to be functional.

Since the popularity of artificial intelligence has been on the rise, this technology has begun to affect many different aspects of modern society. Some of these include: healthcare, education (ex. online courses changing how we learn new information), privacy and cybersecurity (collection of online data poses a real threat to privacy and identity on the internet), sustainability, and environmental management (one possible pro is its efficiency in the field of

sustainability, AI can help companies improve efficiency and develop new products in order to help companies reduce environmental and social impacts).

The benefits of AI:

- <u>Healthcare</u>: AI has an incredible potential to improve healthcare, this technology (along with other systems) can help to calculate and manage risks involved in specific treatments and policies in order to make them more effective. It can also can allow the World Health Organization (WHO) to respond appropriately to the possible emergencies and outbreaks by "facilitating better prediction, scenario modelling, resilience hardening, and response planning."
- <u>Education:</u> Many classes have shifted their focuses to become centered around innovation and engineering, and computers classes are increasingly focused on artificial intelligence and robotics.
- <u>Environment:</u> Artificially intelligent machines can become a great addition to efficiency in the field of sustainability and environmental management, as well as a large portion of research and scientific development. Also, these robots are being crafted to become more and more eco-friendly in regards to the usage of energy, meaning that they can perform specific jobs without requiring excess energy, thus taking away from its carbon footprint.
- <u>Workforce:</u> One very important consequence of technological development in the field of artificial intelligence is how it undermines other development objectives within the United Nations' agenda. Even though robots driven by AI significantly minimize the need for manual labour and routine while improving output, they also have the potential to replace workers in their jobs. Computer-generated labour is also often cheaper than humans, which is another reason why it replaces many people in their jobs.
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<u>Major countries and organizations involved :</u>

China
 China is another one of the world's possible AI superpowers. Between 2011 and 2015, the nation published a total of 41 thousand reports regarding the issue, which is twice as many as the United States did. Also, the government is in full support of the integration of the new technology. In 2017, they announced their goal to become a "principal world center of artificial intelligence innovation" by the year 2030.

United States of America
 A report published in late September of this year by McKinsey Global Institute shows that the United States is ahead in terms of artificial intelligence software research. The United States is the top country regarding the amount of companies that invest and publish research regarding AI.

A few examples include IBM, Google, Amazon, Tesla, Facebook, and Microsoft. They are at the forefront of AI.

Japan

A third country that is very involved with the development of artificial intelligence is the island nation of Japan. Due to Japan's increase in retirees and decrease in workforce, AI must play a crucial role in the economy's growth in upcoming years. According to Harvard Business Review, 55.7% of current work activities could be done by machines, especially in its manufacturing, office, and administrative sectors.

United Arab Emirates (UAE)

It is no surprise that Middle Eastern countries, such as The United Arab Emirates (UAE), are investing heavily in technology of the future. The nation has taken action regarding its development by appointing a State Minister for AI, Omar bin Sultan Al Olama, who promptly proclaimed that in 10 years, the country will be "the capital of AI in service and government," and "a hub for AI in the region."

Saudi Arabia

Another Middle Eastern country that is greatly involved in artificial intelligence technology is Saudi Arabia. Last October, the nation demonstrated this by becoming the first to ever grant citizenship to a robot. According to the World Economic Forum's Future of Jobs analysis, implementation of AI would help expand the nation's economic activities and manufacturing base, which means that by 2030, artificial intelligence could contribute about 13% of the GDP.

United Nations Interregional Crime and Justice Research Center (UNICRI)

In 2015, United Nations Interregional Crime and Justice Research Center (UNICRI) became involved with the debate regarding artificial intelligence when it launched its AI and Robotics program. Essentially, the organization believes that "it will be possible to progress discussion on robotics and artificial intelligence governance" by informing stakeholders, especially those involved with public policymaking through expert information. Also, during the UN General Assembly 71st session, the organization president, Cindy J. Smith, announced that the UNICRI was undergoing the process of opening the first AI and robotics center below UN supervision.

Relevant UN treaties:

Despite the relative modernity of artificial intelligence developments, there has been much involvement from the United Nations regarding the issue. Below are a few examples of how the international organization has taken part in the discussion regarding the benefits and drawbacks of AI.

● Substantive session of July 2018 High-level Segment "Harnessing new technologies to achieve the Sustainable Development Goals" Report of the Secretary General (E/2018/). This document addresses the nuances between the promise that new technology holds for progress and "advancement of human well-being" and the potential to increase inequality and violence, while also protecting human rights.
● Impact of rapid technological change on the achievement of the Sustainable Development Goals (E/HLPF/2017/4xx)
● UN Department for Economic and Social Affairs presented "initial findings of the Technology Facilitation Mechanism (A/RES/72/242)
● Economic and Social Council presented Multi-stakeholder forum on science, technology and innovation for the Sustainable Development Goals (E/HLPF/2018/xx) This report acknowledges the fact that digital technology such as artificial intelligence has "far-reaching impacts, opportunities and challenges, on the economy, society and environment and can already be felt in all countries."
● UNICRI Centre for Artificial Intelligence and Robotics, a branch of the United Nations, is opening in The Hague, Netherlands. This organization uses experts from the field of artificial intelligence in order reinforce understanding and build consensus between those involved on all scales.
● In March of 2016, UNICRI organized a training on artificial intelligence for media professionals

Main Issues

Decrease of employment
As with many increase of technology, one of the main concerns is that the innovations in AI will lead to increased unemployment, suppressed wages and greater inequality. There are fears that machines enabled by artificial intelligence will replace a lot of jobs previously held by humans, resulting in mass unemployment and devastating impoverishment.

International security threats

Autonomous weapons armed with artificial intelligence can have potentially devastating consequences on the world. While they could be conceived with the idea of defense and national

security in mind, there is a great potential for mass casualties that accompany such developments.

Availability of data

From self-driving vehicles to smart cities, data is the driver behind AI. According to a McKinsey Global Institute study, nations that promote open data sources and data sharing are the ones most likely to see AI advances. Sharing data between countries is a positive way to help maximise the benefits of AI. However there lacks a international framework to do so efficiently.

Lack of public awareness on AI

Most citizens aren't well acquainted with the basic concepts of AI and seeing as AI is thought to be one of the most important part of the world's future, it is important that some degree education on the subject be provided to the general population. Another important factor is the education that is provided to students, where the curriculums often don't reflect the importance of AI and technological developments. This is an issue because it can lead to a population that is not educated enough to "survive" in an economy that is based on AI.

Possible Solutions:

Protecting employment

The heavy degree of uncertainty involved in the evolution of technology, and AI in particular, is a factor that needs to be considered. However, the effects of AI on labor markets and income distribution are not predetermined. Governments, as well as the United Nations, should create a regulatory and legal framework in order to facilitate the adoption of new technologies, while helping to decrease their negative consequences.

Contain international security threats

Seeing as there is great potential for disaster in the evolution of AI, the UN should start taking steps in order to help ensure that there are comprehensive directives for countries to follow in order to protect peace and the safety of the global population, all while respecting the sovereignty of member nations.

Increasing availability of date

Seeing as data is one of the most important components of AI, it is imperative that there be more UN-sponsored opportunities for this international exchange of data to take place. For example the process of opening AI and robotics centers below UN supervision, which has already commenced, is something that could be more heavily stressed.

Increasing education

Our education systems could change to promote interpersonal skills and prepare new generations for jobs that aren't just a collection of simple tasks that are easily computable, and instead focus on fostering cooperation between humans and technology. If the workforce shifted from low to high skill jobs, there would be no risk of robots replacing humans, since the jobs would become harder to codify. Through this, the opportunity for new jobs that haven't been created also arises.

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