

**Forum:** United Nations Educational Scientific and Cultural Organization (UNESCO)

**Issue #2:** Addressing the rapid growth, ethics, limitation, and development of Artificial Intelligence due to its compromising nature.

**Student Officers:** Sara Beltrán and Simon Velandia

**Position:** Chair of United Nations Educational, Scientific and Cultural Organization Committee (UNESCO)

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## Introduction

The first concepts of artificial intelligence (AI) date back to the mid-20th century. John McCarthy, known as the 'founding father' of AI and who originally coined the term, alongside Allen Newell's Logic Theorist program contributed to establishing the legitimacy of AI research. Both paved the way for further advancements in the field, the effects of which we are currently experiencing. Artificial intelligence has come a long way from its early days as it is shown not to be the result of a single researcher's discovery but rather the culmination of decades of contributions. For instance, how the development of the first chatbot in the world, Eliza, by Joseph Weizenbaum in 1965, became the catalyst for the later development of virtual assistants like Siri and Alexa.

Artificial intelligence is one of many computer science branches that center on creating machinery that is capable of independent thinking without human intervention. This form of intelligence has become one of the fastest-growing fields in the modern technology sector. Its value of 10 million dollars is expected to twenty-fold up to nearly two trillion dollars by 2030. This market covers a big handful of industries, everything from chatbots, image

generators, research, and analysis. Programs like Bing AI, Bard AI, and ChatGPT are just a few of many examples that comfortably lay in this market. Alongside chatbots, there are artificial intelligence code generators, fraud detectors, virtual assistants and predictive analytics.

Algorithms and various patterns are responsible for these developments. In fact, the development of algorithms is crucial for efficient AI development. These are in charge of synchronicity, order of events, and quick and effective decision-making. It takes a computer program to make a computer do anything; a step-by-step program that instructs the computer exactly what you want it to do. However, rather than let a computer follow exactly what it is programmed to do, some programs and algorithms allow the computer to learn on its own. Algorithms are just mathematical equations; they are neither good nor bad, it's the user who might bring bad or good intentions, which is where the ethical and moral debate lies.

Artificial intelligence dilemmas can be broken down into three areas of ethical concern; privacy and surveillance, bias and discrimination, and most importantly, human judgment. With AI-powered systems creating a bigger online presence, their propensity to collect and analyze all sorts of information, specifically any form of personal data becomes of higher caliber. AI biases also show concern. A copious amount of AI algorithms are used in order to speed the process of job recruitment and while this might seem as an efficient approach, there are algorithms that are biased against women or people of color. These search results originate from a deep-rooted stereotypical representation in our societies, that can perpetuate and strengthen existing gender inequalities, discriminations, and negative social norms. The most ethically concerning category is the role of human judgments. Many argue that AI's lack human consciousness and so they rely on the belief that these are inherently biological processes that machines wouldn't be able to replicate. AI

in the court of law is also an important division to look at. The use of AI in judicial work holds the capability to generate ethical questions and presumably evaluate cases in a more efficient way than a judge could, whereas some others believe that artificial intelligence simply lacks the ability that humans have to sympathize and empathize with certain cases. Similar to the discussion of creativity, where many think that can only be triggered by spontaneity and intuitions that only human beings are able to generate. Many people believe that machines of artificial intelligence could one day replace the duties of people in the job market. Just as there is an idea that even while machines could outperform human beings, some aspects of human values could prove essential to the process of making decisions. Artificial intelligence has the potential to help new firms succeed by providing their owners with in-depth new insights, yet not the capacity to completely take over human jobs.

Some others just standby for the 'inevitable' collapse of artificial intelligence systems. AI can't take more than it can handle. When information is inputted into the machine, and it does not include new areas of work, the machine becomes useless.

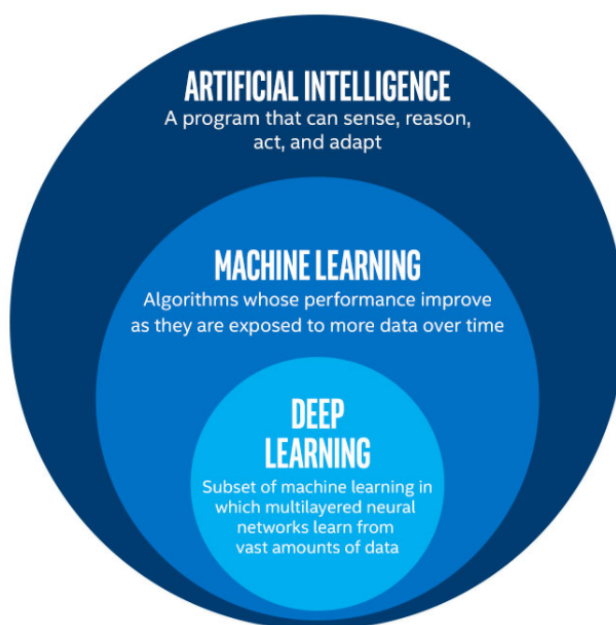
## Definition of Key Terms

**Artificial Intelligence:** In its broadest sense, Artificial intelligence is the catch-all term for any system that can make predictions or categorize information based on previous data, which it "learns from" and tries to mimic.

**Machine Learning:** A subset of artificial intelligence, where the AI system or algorithm is still dependent on a human for training, where the human must label and structure data for the system to be able to make any sense of it. For example, if you gave this system 500 or so pictures of cars, a human would still need to correct the system and guide it over time to eventually make the right

decision. It's a much quicker process and needs less data, but the system's predictions are usually less accurate.

**Deep learning:** A subset of machine learning that goes beyond the need for human intervention, and can, ideally at least, train itself on raw data (images, text, audio, etc.) and can interpret it on its own, almost mimicking a human brain. For example, if you gave this “neural network” pictures of cars for long enough, it would eventually be able to tell you where the car is in each of them, with no help from a human. This makes for a longer process where more data is needed, but the outcome is a neural network that will actually think and is for the most part more accurate.

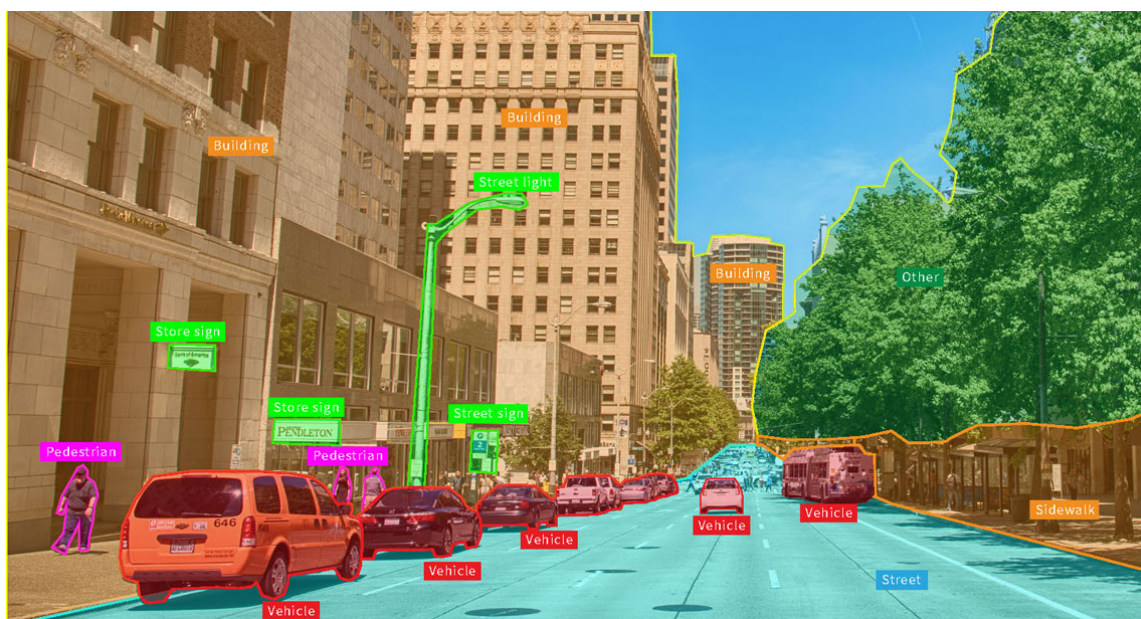


**ChatGPT:** The GPT in ChatGPT stands for “Generative Pre-trained Transformer”, which is a type of “Large Language Model”. This means that ChatGPT is a system trained on extensive amounts of data and information about how humans speak and facts about the world from the internet, websites, books, news articles, movies, etc. This presents a problem, as ChatGPT has an extensive library of information, but it is from 2021 or prior, and, like most people, will mix up

its facts and data when responding to people's prompts. Unlike what most people may believe, ChatGPT is not AI in the fact that it thinks, but more in the aspect that it can process the human prompt and formulate a (mostly) accurate answer that is vaguely human sounding.

**OpenAI:** It is a private research organization and laboratory that was created to develop and benefit humans with the capabilities of AI.

**Computer Vision:** Computer vision is a subset of AI where the program can take out important and understandable information out of visual data like videos or photographs.



**Robotic Consciousness:** The “end goal” of many AI scientists and researchers. Robotic Consciousness can be summarized as robots having the ability to understand that they exist, and be aware of the factors that make them up, but also make up their exterior environment. Some see it as robots and machines being able to learn from experiences and recognize the errors or triumphs in them to make better decisions later on, which to an extent has already been achieved. Some see it as robots being able to mimic the way that the human

consciousness works, wherein we understand and reason between different outcomes.

**Arms Race:** Arms races have been seen all throughout history, where two governments engage in a competition for the development or increase of a certain area, most usually related to the military. Both sides recognize that the other could pull ahead and develop faster, therefore motivating more competition and rivalry.

## General Overview

### Artificial Intelligence's Rapid Acceleration in Development:

The year 2022 will go down in history as a highlight year for the race in Artificial Intelligence, as it may be the year with the most important AI developments in the last few years. With ChatGPT, computer vision, self-driving cars, and Salesforce Einstein, this year has shown many of the world's AI efforts coming to a head. Not just data analysis companies, but also content-creating companies like BuzzFeed or other news sites are implementing AI text-generation and organization into the workflow. Most notably, looking even ahead, scientists and researchers are looking at the possibility of having a robotic consciousness that rivals ours and could reason faster and without emotion.

### The Rising Tensions Around AI Development:

Due to its increasing attention recently, more and more people are becoming involved in the AI space. On February 24, 2023, OpenAI put out statements regarding the future of AI and the things that it could do for the benefit of humanity and wants to adopt a "learn as we go" strategy. Nearly a month later, on March 22, 2023, The Future of Life Foundation released an open letter specifically petitioning for a brief six month pause in the development of AI systems of any higher complexity than ChatGPT. This letter was also cosigned by

other CEOs, researchers, experts, and most notably, the CEO of Tesla, Elon Musk, the co-founder of Apple, Steve Wozniak, and the writer of the famed non-fiction book "Sapiens", Yuval Noah Harari. This letter cites and emphasizes the risks of AI development, and goes as far as to say it could rip up the fabric of our society without proper preparation, including governmental legislation. Acknowledging that the creation of AI systems with reasoning as powerful as humans could be the next history-changing invention. Questions like *should we create beings that could outsmart and outnumber us? Should all jobs be automated, taking away people's jobs?* It should be ensured that AI will have positive effects and that risks are managed. They also reference OpenAI's statement "At some point, it may be important to get an independent review before starting to train future systems, and for the most advanced efforts to agree to limit the rate of growth of computers used for creating new models." But they decide to change it and say that the point is right now. At the end, they demand that this pause be verifiable, real, and enforced by governmental agencies.

### **"AI Arms Race" and its Impact**

More and more countries are joining global tech superpowers like the USA and China in the new race of the 21st century, the search for human-level intellect AI. Looking beyond the scale of the countries involved, if we as a civilization head too deep into AI and its capabilities without knowing the full scope of what could be ahead, we could be in for a rude awakening tenfold the size of the first atomic bomb. Looking just at the US government alone, in the year 2021, 10.8 billion dollars were spent on research and development of AI, and 9.3 billion of those dollars came out of the Department of Defense. Additionally, legislation has been passed for the US to "revitalize" domestic manufacturing of essential materials for AI and machine learning testing and research, therefore limiting the number of resources that other countries will have access to. The next

biggest threat that more “war-proactive” countries are looking towards is the possibility of AI weaponry. The US is attempting to put AI into fighter jets, as well as creating squads that include piloted planes guiding and being assisted by armies of drone “wingmen” letting AI be the ones to pilot and man them. Russia is testing a new version of a tank piloted by AI, while China is looking into fully AI-armed drones. A future where humans are not involved in the war at all and are letting machines do all the work could be a lot closer than we imagine.

### **Legal Issues Around ChatGPT and other AIs like it**

AI has become a very big topic surrounding ChatGPT, and more and more experts are concerned about its legality and the kind of information-based assumptions it makes. ChatGPT, as is widely known, takes most of its information from the internet for granted, and doesn't make any sort of assessment of its sources before using them as the basis for what it says. For example, as Columbia Law Scholars have pointed out, it will accuse people of crimes they did not commit. It will even “cite” news sources for articles they did not write, as in one case, it referenced a non-existent Washington Post article. This brings to attention the question of who should be held accountable for an AI system's wrongdoings. Should their creators be punished? The founder of the company behind them? In that same vein, Clearview AI, a company that owns advanced facial recognition software, sold technology to the United States police that led them to charge innocent people with crimes they had no part in. After doing so, they claimed to have scanned over 30 billion different images on Facebook to train the software even further. This already seems extreme, but the worst part is that not even Facebook had any idea that this had even happened, and was not able to warn their customers and users as a result. Facebook's parent company, Meta, has since hit them with at least one cease-and-desist and has banned the company's founder from their services. This service is only available to law enforcement, and even then, officers are not required to tell anyone that



they are using the platform, making it all the more worrisome. Privacy is a basic human right, and the possibility of AI software that can hack, infiltrate, and decode even the most hidden of people's personal information in the blink of an eye is something that cannot be taken lightly. Other experts are concerned by the naming and identification of such systems, making it known that ChatGPT is nothing like the AI of science fiction movies, and more like a glorified auto-complete. Making sure that proper naming conventions and different subdivisions are established is another key factor in making sure that a future with AI taking bigger parts in our life is as beneficial as it can be. Looking forward, the bigger overall concerns around AI are making sure that everyone remains equal, and that the AI isn't possibly encoded with some sort of bias, as they could perpetuate or even grow the levels of bias and discrimination in high-impact decision-making.

## **Major Parties Involved and Their Views**

### **Denmark**

The Danish government recognizes the significance of artificial intelligence in enhancing the country's economic growth and competitiveness. A new political party called the "Synthetic Party" has recently emerged in Denmark, representing the 20% of Danes who do not participate in elections. The face and leadership of this party are by chatbot, Leader Lars, which has been programmed by Danish fringe parties since 1970. The Synthetic Party aims higher to join the parliament and proposes ideas such as an increase of both income and salary, while simultaneously ensuring that AI's held accountable for any potential bias. The party has even requested a new Sustainable Development Goal, "Life With Artificial," which aims to improve human-AI relationships.

## United States

The United States is a significant player in the field of artificial intelligence, with major tech companies like Google, Microsoft, IBM, and Amazon, the US has established a foundation in which AI can successfully develop further. The country is also home to several leading universities in AI research that I've been able to build upon years of AI research. The government has invested in initiatives to support AI research, including the establishment of the National Artificial Intelligence Initiative Office, and along with this governmental move, the military has also explored the potential uses of AI, including the development of autonomous weapons.

## China

China aims to be a global leader in artificial intelligence by 2030, using its high investment in AI research. Companies are investing in AI for autonomous vehicles, smart cities, and healthcare while China uses it for surveillance and censorship. China has a social credit system that utilizes AI and large sums of data to monitor and control citizens. Citizens that are considered "untrustworthy" by the social credit system, are penalized in a way that their financial services are occluded. Additionally, there are allegations that China uses facial recognition tech to monitor its citizens and curb dissent. China's AI rise raises competition and security concerns for the US. To stay ahead, the United States has worked on restricting tech transfer to China and investing more in domestic research.

## Russia

In hopes to better the Russian military, Moscow has focused on expanding their research and development towards artificial intelligence. While the ethics of AI in Russia was still being discussed amongst representatives, all efforts halted at the Russo-Ukrainian war and its sanctions. Given this, it has now become

challenging to understand if Russia would resume with AI. However, initiatives such as the "National Strategy for the Development of Artificial Intelligence" have been launched to promote AI's integration into key industries including healthcare, manufacturing, and defense. When we compare Russia to globally involved countries like The United States and China we can identify it as an outsider, even so, much like the European Union, Russia prioritizes its technological interdependence, financial, digital and scientific while also concentrating on its internal market and technological sovereignty.

## Timeline of Events

Date	Description of event
1950	Alan Turing first develops the idea of the "Imitation Game" also known as the Turing Test, with his investigation in his seminal : "Computing Machinery and Intelligence". In theory, the test consists of a computer (AI) that utilizes written communication to deceive a human interrogator trying to determine whether Person A is the AI or Person B in a three-person game. The device passes the test if it can trick the interrogator into believing the responses are those of a human being. This test is one of worldwide use in order to analyze if a computer has successfully deceived a human.
1955	As a response to Whitehead and Russell's 'Principia Mathematica (a three-volume work that provides a foundation to prove mathematical theorems and reasoning), mathematicians Allen Newell and Herbert A. Simon create The Logic Theorist, in order to verify its mathematical theorems. The Allen-Simon theory demonstrated the potential of computers and their performance in complex reasoning tasks.

- 1956 John McCarthy and a small group of scientists host the Dartmouth Summer Workshop. The founding event of artificial intelligence as a field of study. The workshop explored the potential development in AI systems and the field itself. They estimated that programs could carry out activities like chess, demonstrate mathematical theorems and translate languages.
- 1958 John McCarthy develops 'Lisp', a program that excels at using lists as a data storage method and at giving programmers the freedom to utilize analytical language. The program quickly became the most popular AI programming language of that period.
- 1959 The term "machine learning" is credited to Arthur Samuel in 1959. He examined the way computers could learn from their previous mistakes and become more effective. He used the game of checkers as his test subject. His research helped to establish machine learning as a topic of study by demonstrating the capability of machines to learn and make judgments based on patterns and experiences.
- 1964-1966 German MIT professor, Joseph Weizenbaum, develops and launches the world's first chatbot; ELIZA. An interactive program that is able to use pattern recognition in order to generate conversations with humans.
- 1970 The first anthropomorphic robot, WABOT-1 was built by Japanese engineer Ichirō Katō. The robot is equipped with a limb system as well as visual and conversational programming.

- 1974-1980 In 1974, the first AI Winter began. This period of time is used to indicate a point in history when advancements in the field of artificial intelligence abruptly collapse. Lack of innovation and a general lack of advancement in the industry during these times has a negative financial impact on investors. Expectations and inflated hopes that don't come through lead to AI Winter. However, after this winter, advances in AI often come back stronger and more concentrated in applications that are far more practical.
- 1995 Inspired by Joseph Weizenbaum's ELIZA program, Richard Wallace develops A.L.I.C.E, the chatbot, with the intention of engaging users in more complex and natural language conversations. With sample data collections and unbounded Web access, A.L.I.C.E was able to test the "Most Human Computer" in the Turing Test.
- 2000 Honda Motor Company develops the world's first humanoid independent robot : ASIMO. Honda's robot is arrayed with cutting-edge sensors and technologies that enable much more natural interactions between individuals given that it is able to detect voice, gestures, and facial features. The humanoid also has excellent dexterity, which enables it to carry out jobs with the same fluidity as humans.
- 2015 Elon Musk, the CEO of Tesla and SpaceX, Stephen Hawking, and Steve Wozniak published an open letter seeking for a ban on the creation and use of artificial intelligence in weaponry. Along with 3,000 others, out of concern that as Musk claims, AI robots could one day be used as automatic weapons to start a third world war. The experts continue by claiming that artificial intelligence has an essential function and called for increased moral awareness on our

part. To prevent a future AI breakout, there must be a set of implementations and pre-mediated solutions.

2016

Microsoft debuts Tay, a chatbot designed to converse and learn from Twitter users. Within hours, Tay began tweeting statements which were both racially and politically charged. After Microsoft apologized they stated that in order to both solve the issue and further the field of AI study, it is important to focus on responsible AI research and the development of a robust system that can withstand the hostile reality of social media.

2018

The Alibaba Group introduced a machine-learning technology known as the Alibaba model, which demonstrates superior comprehension skills compared to humans. This technology was put to the test using the Microsoft Machine Reading Comprehension dataset, which includes challenging artificial intelligence assessments. Impressively, the Alibaba model outperformed human testers in these difficult AI tests, showcasing its advanced capabilities in reading comprehension.

January 2021

OpenAI introduces DALL.E., a system with the ability to develop realistic images and creative art with a prompt. The technology uses deep learning models and an extensive base of language models in order to understand the prompts. Copyright and legitimacy of these images remain an issue.

March 2023

With 117 million parameters with supervised and unsupervised learning, Open AI developed GPT in 2018. The model was renowned for its speedy completion of tasks in a range of national languages and for its ability to discuss with humans. Early in 2020,

OpenAI makes available GPT-3, a model iteration with 175 billion parameters. The chatbot was able to have natural-like discussions with people and complete tasks with excellent accuracy.

## **UN involvement, Relevant Resolutions, Treaties and Events**

UNESCO and the UN have had many speeches and events relating to the long-term impact of artificial intelligence. Still, they have only had one primary published resolution on the topic.

1. On the 23rd of November 2021, UNESCO published and adopted the world's first legislation relating to AI and its development. UNESCO's recommendation on the Ethics of Artificial Intelligence is an agreement of all countries that AI will be heavily regulated and centered around common values between all. This recommendation is addressed to UNESCO's member states. It also ensures that AI development is also based on human rights and the access that AI tools get to our information.
2. On the 15th of September of 2021, then United Nations High Commissioner for Human Rights, Michelle Bachelet, called for a moratorium much like the one by the Future of life Foundation. She called for this moratorium in the hope that human rights will be more heavily emphasized and prepared for. Also, she emphasized that "we can't play catch up with AI." AI explorations that don't follow human rights legislation cannot be allowed and should be outlawed and banned immediately. The problem is that if one system is made to deprioritize human rights, one can be made exactly like it in its place. AI naturally makes assumptions and profiles different groups of people, the damage it can cause is unlimited. The higher the human rights risk associated with an AI system, the harder it should be to even put that network into use. Additionally, the data that AI

systems use can be manipulated since there is no need for it to be fact-checked.

## Evaluation of Previous Attempts to Resolve the Issue

UNESCO acknowledges that artificial intelligence (AI) has the potential to substantially impact human rights, from areas regarding privacy, freedom of expression, and information access. UNESCO recognizes AI ethics as a critical component of upholding human rights and advancing human development. The committee wants to encourage accountability and openness in AI systems to address these problems. This includes tackling the opaqueness of complex algorithms and decision-making procedures and making sure that these systems are transparent and open to review. UNESCO then looks into promoting transparency not only within AI systems but also during interactions with the UN, governments, and top figures in the world, in order to examine and emphasize the implications of AI for morality and ethics. The AI for Good Global Summit, which served as a crucial forum for improving the responsible and ethical development of artificial intelligence, was held by UNESCO in conjunction with other United Nations institutions. The conference promotes fruitful talks on utilizing AI's potential for positive societal effect by bringing together experts, decision-makers, and stakeholders. To guarantee that AI is created and applied in a way that is inclusive, transparent, and consistent with human values, it promotes cross-sector collaboration, information exchange, and the sharing of best practices. The AI for Good Global Summit uses this platform to help shape the future of AI by encouraging its moral application, directing its transformational potential toward accomplishing global goals, and solving pressing global challenges. While UNESCO's involvement in treaties may vary, its focus on AI ethics and the ethical implications of technology align with its



mission to promote peace, sustainable development, and the protection of human rights. It is possible that future treaties or resolutions may incorporate provisions related to AI as the field continues to evolve and discussions around its ethical implications progress.

## Possible Solutions

Create laws or policies in place that make sure all AI developments have the aim of helping make human lives easier and broaden the horizons of what we think is possible for the common good. This could be done any number of ways, either by strict laws or creating general guidelines. Control of all AIs and what they have access to could be something strictly enforced, or trusting creators with the task of management. Additionally, AI's thought processes need to be made 100% traceable and transparent, so you can question systems and be able to understand what influences their decision-making, where they get their data from, etc.

Create long-term legislative change where people's data, including the data from your body and search history, be fully protected and untraceable. This would make it so no one can access what you don't let them. Companies should recognize that AI can change human life radically for the better, and focus on those levels of improvement instead of working on small day-to-day inconveniences.

Have a certifiable AI moratorium on powerful countries like the US, China, Russia, etc, and let smaller countries around the world be able to catch up and figure their way through the basic AI systems of today to prepare the world for the AI revolution which we are not far away from.

An international AI-governing body can be put in place to be dedicated to the control and development of AI as it pertains to not only different

countries' involvement, but also the things that certain AI companies and systems can do. Companies could one day have to check in on this oversight group to make sure that they can move forward with any AI project, and ensure that no human rights are being violated or disregarded. This group could also be put in place for the prosecution of wrongdoers and the deletion of inhuman AI systems.

## **Sustainable Development Goal (SDG)**

Industry, Innovation and Infrastructure make Sustainable Development Goal (SDG) 9. Infrastructure is everything that makes up a country. The basic physical structures of systems like transportation, water, and food are crucial to a country's development, however, its true importance is recognized in how it enables citizens to participate in the socioeconomic development of their community. Many companies now wish to incorporate artificial intelligence as a means to update the scope and timeline of their business proposals. In order to keep the progression of infrastructure, the industry needs to be upgraded alongside the latest artificial intelligence systems. It's critical to support and oversee how we use AI to regulate economic sectors and encourage sustainable development rather than alienate AI systems from the key elements of the global economy. To persuade the skeptics, we have to show an understanding of prioritizing human-centered development and perspective while working mutually with the expertise of AI. For example, AI is a tool that can be used to automate jobs without considering the impact on workers and job displacement, which as a result in social inequality and economic instability.

IoT, or the Internet of Things, refers to the network of affiliated devices that can communicate and exchange data with one another through the Internet. These devices, equipped with sensors and actuators, gather and transmit data, enabling remote monitoring, control, and automation. This system is increasingly common in smart houses where light exposure might trigger actuators that open

curtains or even a virtual assistant that says your agenda. This is increasingly convenient in various domains such as healthcare, transportation, and home automation that allow a more accelerated way of functioning without losing the precision and meticulous work of those in the industries. AIoT, a joint service of Artificial Intelligence (AI) and the Internet of Things (IoT), holds great potential for revolutionizing innovation and infrastructure across industries. IoT, with its focus on connecting various objects and sensors to the internet, enables the collection of data that is processed and analyzed by AI algorithms. This analytical productivity allows for predictive maintenance, intelligent decision-making, and real-time monitoring in IoT systems. Creating easy access to the wonders of AI algorithms allows the 54% of industries that have already incorporated this technology as a means to speed the process of innovation and better infrastructure to serve as an example of the possibilities that artificial intelligence holds for us. These systems can identify patterns, detect anomalies and make accurate predictions that lead to effective performances.

Moreover, AIoT facilitates personalized experiences by analyzing user preferences and behavior, tailoring services and interactions accordingly. Infrastructure systems can become smarter, more efficient, and sustainable, enabling collaborative and responsible management of resources.

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## Appendix

- I. Pause Giant AI Experiments: an Open Letter by Future of Life
  - A. <https://futureoflife.org/open-letter/pause-giant-ai-experiments/>
  - B. Foundation created by scientists to set boundaries and minimize risks on science development.
- II. Planning for AGI and Beyond by OpenAI
  - A. <https://openai.com/blog/planning-for-agi-and-beyond>
  - B. OpenAI is the direct creator of ChatGPT and is cited as the root cause for most of the accelerated development as well as the increased attention placed.
- III. Ethics of Artificial Intelligence - UNESCO perspective
  - A. <https://www.unesco.org/en/artificial-intelligence/recommendation-ethics>
  - B. Summarizes the UNESCO perspective on AI,
- IV. Association for the Advancement of Artificial Intelligence

- A. <https://aaai.org/>
- B. Helpful resource, a collection of scientists and researchers into AI collaborating together for the proper handling of AI moving forward.