# THE IMPACT OF ARTIFICIAL INTELLIGENCE ON HUMAN SOCIETY AND BIOETHICS

**Ms. S.Janani,M.Sc.,** Assistant Professor, Department of Computer ScienceMarudhar Kesari Jain College For Women, Tamilnadu.janani25@mkjc.in

**Abstract**
Artificial intelligence (AI), known by some as the industrial revolution (IR)  is going to change not only the way we do things, how we relate to others, but also what we know about ourselves. This article will first examine what AI is, discuss its impact on industrial, social, and economic changes on humankind in the 21$^{st}$ century, and then propose a set of principles for AI bioethics. The IR1.0, the IR of the 18$^{th}$ century, impelled a huge social change without directly complicating human relationships. Modern AI, however, has a tremendous impact on how we do things and also the ways we relate to one another. Facing this challenge, new principles of AI bioethics must be considered and developed to provide guidelines for the AI technology to observe so that the world will be benefited by the progress of this new intelligence.

**KEYWORDS:** Artificial intelligence, Bioethics, Principles of artificial intelligence bioethics

## 1.Introduction

Artificial intelligence (AI) has many different definitions; some see it as the created technology that allows computers and machines to function intelligently. Some see it as the machine that replaces human labor to work for men a more effective and speedier result. Others see it as "a system" with the ability to correctly interpret external data, to learn from such data, and to use those learnings to achieve specific goals and tasks through flexible adaptation.Despite the different definitions, the common understanding of AI is that it is associated with machines and computers to help humankind solve problems and facilitate working processes. In short, it is an intelligence designed by humans and demonstrated by machines. The term AI is used to describe these functions of human-made tool that emulates the "cognitive" abilities of the natural intelligence of human minds.Along with the rapid development of cybernetic technology in recent years, AI has been seen almost in all our life circles, and some of that may no longer be regarded as AI because it is so common in daily life that we are much used to it such as optical character recognition or the Siri (speech interpretation and recognition interface) of information searching equipment on computer .
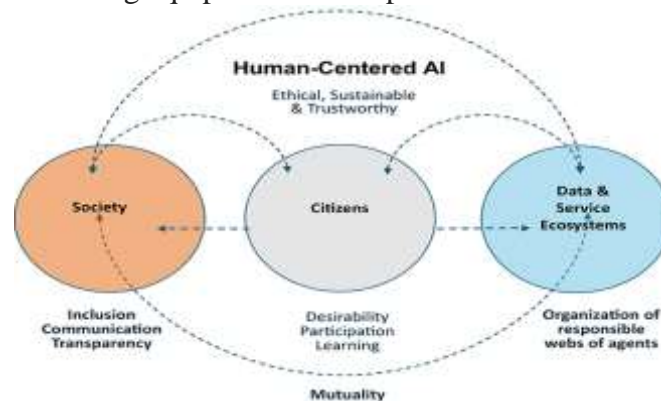


**Figure.1. Human-made tool**

**2.The Impact of Artificial Intelligence on Human Society**

<u>**Positive Impact**</u>

There are, however, many positive impacts on humans as well, especially in the field of healthcare. AI gives computers the capacity to learn, reason, and apply logic. Scientists, medical researchers, clinicians, mathematicians, and engineers, when working together, can design an AI that is aimed at medical diagnosis and treatments, thus offering reliable and safe systems of health-care delivery. As health professors and medical researchers endeavor to find new and efficient ways of treating diseases, not only the digital computer can assist in analyzing, robotic systems can also be created to do some delicate medical procedures with precision. Here, we see the contribution of AI to health care.

**Fast and accurate diagnostics**

IBM's Watson computer has been used to diagnose with the fascinating result. Loading the data to the computer will instantly get AI's diagnosis. AI can also provide various ways of treatment for physicians to consider. The procedure is something like this: To load the digital results of physical examination to the computer that will consider all possibilities and automatically diagnose whether or not the patient suffers from some deficiencies and illness and even suggest various kinds of available treatment.

**Socially therapeutic robots**

Pets are recommended to senior citizens to ease their tension and reduce blood pressure, anxiety, loneliness, and increase social interaction. Now cyborgs have been suggested to accompany those lonely old folks, even to help do some house chores. Therapeutic robots and the socially assistive robot technology help improve the quality of life for seniors and physically challenged.

**Reduce errors related to human fatigue**

Human error at workforce is inevitable and often costly, the greater the level of fatigue, the higher the risk of errors occurring. Al technology, however, does not suffer from fatigue or emotional distraction. It saves errors and can accomplish the duty faster and more accurately.

**3. Artificial intelligence-based surgical contribution**

AI-based surgical procedures have been available for people to choose. Although this AI still needs to be operated by the health professionals, it can complete the work with less damage to the body. The da-Vinci surgical system, a robotic technology allowing surgeons to perform minimally invasive procedures, is available in most of the hospitals now. These systems enable a degree of precision and accuracy far greater than the procedures done manually. The less invasive the surgery, the less trauma it will occur and less blood loss, less anxiety of the patients.

**Improved radiology**

The first computed tomography scanners were introduced in 1971. The first magnetic resonance imaging (MRI) scan of the human body took place in 1977. By the early 2000s, cardiac MRI, body MRI, and fetal imaging, became routine. The search continues for new algorithms to detect specific diseases as well as to analyze the results of scans . All those are the contribution of the technology of AI.

**Virtual presence**

The virtual presence technology can enable a distant diagnosis of the diseases. The patient does not have to leave his/her bed but using a remote presence robot, doctors can check the patients without actually being there. Health professionals can move around and interact almost as effectively as if they were present. This allows specialists to assist patients who are unable to travel.

**The Challenge of Artificial Intelligence On Bio Ethics:**

**Artificial intelligence ethics must be developed**

Bioethics is a discipline that focuses on the relationship among living beings. Bioethics accentuates the good and the right in biospheres and can be categorized into at least three areas, the bioethics in health settings that is the relationship between physicians and patients, the bioethics in social settings that is the relationship among humankind and the bioethics in environmental settings that is the relationship between man and nature including animal ethics, land ethics, ecological ethics…etc. All these are concerned about relationships within and among natural existences.

Studies have shown that AI can reflect the very prejudices humans have tried to overcome. As AI becomes "truly ubiquitous," it has a tremendous potential to positively impact all manner of life, from industry to employment to health care and even security. Addressing the risks associated with the technology, Janosch Delcker, Politico Europe's AI correspondent, said: "I don't think AI will ever be free of bias, at least not as long as we stick to machine learning as we know it today,"…. "What's crucially important, I believe, is to recognize that those biases exist and that policymakers try to mitigate them" . The High-Level Expert Group on AI of the European Union presented Ethics Guidelines for Trustworthy AI in 2019 that suggested AI systems must be accountable, explainable, and unbiased. Three emphases are given.

1. Lawful-respecting all applicable laws and regulations
2. Ethical-respecting ethical principles and values
3. Robust-being adaptive, reliable, fair, and trustworthy from a technical perspective while taking into account its social environment.

## CONCLUSION

AI is here to stay in our world and we must try to enforce the AI bioethics of beneficence, value upholding, lucidity and accountability. Since AI is without a soul as it is, its bioethics must be transcendental to bridge the shortcoming of AI's inability to empathize.As Von der Leyen said in *White Paper on* AI – *A European approach to excellence and trust: "*AI must serve people, and therefore, AI must always comply with people's rights…. High-risk AI. That potentially interferes with people's rights has to be tested and certified before it reaches our single market".

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