

The Study of AI – A Review Paper

Kunal Dilipkumar Rathod and Harsh Mahesh Mishra

U.G. Students, Department of Computer Science and Engineering

Jawaharlal Darda Institute of Engineering and Technology, Yavatmal, Maharashtra, India

Abstract: Artificial intelligence (A.I.) is a multidisciplinary field aimed at automating tasks that currently need human intelligence. Despite its lack of general familiarity, artificial intelligence (AI) is a technology that is revolutionizing every aspect of life. This article aims to educate laypeople about AI and encourage them to utilize it as a tool in many disciplines to rethink how we combine data, analyze it, and make choices. We quickly covered what artificial intelligence (AI) is, how it works, and how it may be applied in our daily lives in this article.

Keywords: Artificial intelligence

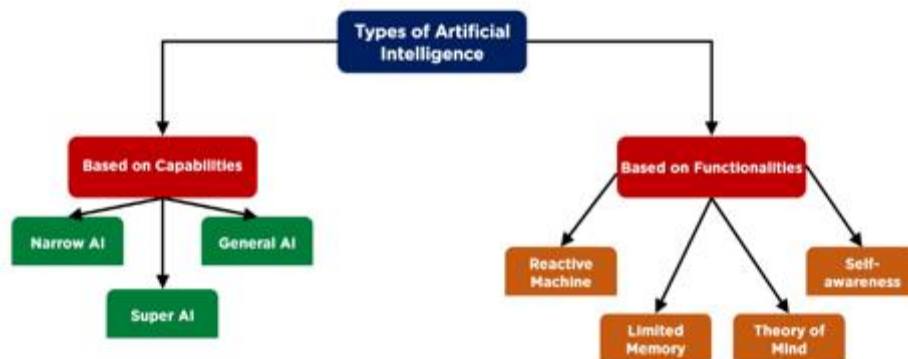
I. INTRODUCTION

Artificial intelligence (AI) is defined as the ability of an artificial entity to solve complicated problems using its own intelligence. Computer science and physiology are combined in Artificial Intelligence. In layman's terms, intelligence is the computational component of one's capacity to attain goals in the real world. Intelligence is defined as the capacity to think, envision, memorize, and comprehend, see patterns, make decisions, adapt to change, and learn from experience. Artificial intelligence is focused with making computers behave more human-like and in a fraction of the time it takes a person to do it. As a result, it is known as Artificial Intelligence. Artificial intelligence is also concerned with pushing the boundaries of practical computer science in the direction of systems that are adaptable, flexible, and capable of forming their own analyses and solution techniques by applying general knowledge to specific situations.

II. OVERVIEW OF AI

Machine or software intelligence is referred to as artificial intelligence. Perceive + Analyze + React = Intelligence. Artificial intelligence is a subject of computer science that is rapidly gaining popularity since it has improved human existence in a variety of ways. Artificial intelligence has substantially enhanced the performance of manufacturing and service systems during the previous two decades. Expert systems are a fast emerging technology that originated from artificial intelligence research. Intelligent machines will replace or augment human capabilities in many sectors in the future.

III. TYPES OF AI



AI type-1: Based on Capabilities

- *Narrow AI:* Narrow AI is a sort of AI that is capable of doing a certain task intelligently. In the area of artificial intelligence, narrow AI is the most frequent and currently accessible AI. Because narrow AI is

exclusively educated for one single activity, it cannot perform outside its field or boundaries. As a result, it's also known as "weak AI." When narrow AI reaches its boundaries, it might fail in unexpected ways. Apple Siri is an excellent example of Narrow AI, yet it only performs a restricted set of duties. Playing chess, purchasing suggestions on an e-commerce site, self-driving automobiles, speech recognition, and picture identification are all examples of narrow AI.

- *General AI:* General AI is a sort of intelligence that is capable of doing any intellectual work as well as a human. The goal of general AI is to create a system that can learn and reason like a person on its own. Currently, no system exists that can be classified as general AI and execute any work as well as a person. Researchers from all across the world are now concentrating their efforts on creating robots that can do general AI tasks. Because generic AI systems are still being researched, developing such systems will take a lot of work and time.
- *Super AI:* Super AI is a degree of system intelligence at which machines may outsmart humans and execute any task better than humans with cognitive qualities. It's a result of AI in general. Some fundamental properties of powerful AI are the capacity to understand, reason, solve puzzles, make judgements, plan, learn, and communicate independently. Super AI is still a futuristic Artificial Intelligence idea. The creation of such systems in the actual world is still a world changing effort.

IV. APPLICATIONS OF AI

There are many ways in which the average technology consumer interacts with artificial intelligence technologies in their daily lives, but most people don't realize what technologies actually use AI. Here are a few examples of artificial intelligence technologies that many people encounter in their lives.

A. Chat bots

If you've ever come across a chat bot on a website or social media messenger, it is powered by AI. Chat bots are one of the more simple examples of AI, since they are simply coded to send messages based on rules about how they should interact with users. Sort of an "if this, then that" type of programming.

B. Smart Assistants

Siri, Alexa, and all the other smart assistants are examples of artificial intelligence. They understand what users say to them and can follow directions and respond accordingly. These are like the next level of chat bots, since they use speech recognition and are connected to larger databases of information such as search engines.

V. ADVANTAGES OF AI

A. Reduction in Human Error

Because people make mistakes from time to time, the term "human error" was coined. Computers, on the other hand, do not make these errors if they are correctly programmed. Artificial intelligence makes choices based on previously obtained data and a set of algorithms. As a result, mistakes are decreased, and the prospect of achieving better precision and accuracy is increased.

For Example: AI has removed the bulk of human mistake in weather forecasting.

B. Takes risks instead of Humans

One of the most significant advantages of artificial intelligence is this. By constructing an AI Robot that can do the dangerous tasks for us, we can transcend many of humanity's risky limits. It can be utilized efficiently in every type of natural or man-made disaster, whether it is travelling to Mars, defusing a bomb, exploring the deepest regions of the oceans, mining for coal and oil.

For Example: Have you heard about the explosion at the Chernobyl nuclear power facility in Ukraine? There were no AI-powered robots available at the time to assist us in minimizing the effects of radiation by controlling the fire early on, since any human who came near to the core died in minutes. They ultimately used helicopters to drop sand and boron from a safe distance. AI Robots can be utilized in circumstances when human interaction is risky.

VI. CONCLUSION

While concluding, it can be analyzed that AI has benefited computer science because it is the artificial psychology that made the machines to focus on the philosophical arguments. AI performs tasks faster than human beings and the major goal of artificial intelligence is to create the technology in an intelligent manner. It is proved that artificial intelligence is the computer knowledge that has human traits, however, these computers and robots help the environment to grow, and they respond rationally to help human beings. AI has already impacted lives of people in various fields and will surely continue to do more in the future.

REFERENCES

- [1] [https://idhjournal.com/article/S2468-0451\(18\)30144-5/fulltext](https://idhjournal.com/article/S2468-0451(18)30144-5/fulltext)
- [2] <https://towardsdatascience.com/advantages-and-disadvantages-of-artificial-intelligence-182a5ef6588c>
- [3] <https://www.forbes.com/sites/cognitiveworld/2019/06/19/7-types-of-artificial-intelligence/?sh=453e91f0233e>
- [4] <https://www.indiatoday.in/education-today/news/story/robots-teachers-bengaluru-school-artificial-intelligence-ai-divd-1594366-2019-09-02>
- [5] <https://www.exametc.com/magazine/details.php?id=521>