



Review on Artificial Intelligence

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Abstract: Artificial intelligence which is basically the use of machines with the use of human minds, making computers think like human. Artificial intelligence works with the brain, it works on various algorithms and logic. Artificial intelligence has been making our lives easier to deal, even on the busy days. It has been coming from the early years; it is just getting improved day by day.

Keywords: Artificial Intelligence, neural network, cyber-security.

I. INTRODUCTION

Artificial intelligence is all about performing task using machines. It uses large amounts of data, intelligent algorithms and iterative processing. Artificial intelligence has been growing exponentially in the past decades, earlier there was less data, which was not enough to predict the accurate result. Nowadays, we have a lot of data which is increasing time to time; with more data we have more advanced algorithms which are an important term for artificial intelligence, STRONGER THE ALGORITHM, STRONGER ARTIFICIAL INTELLIGENCE.

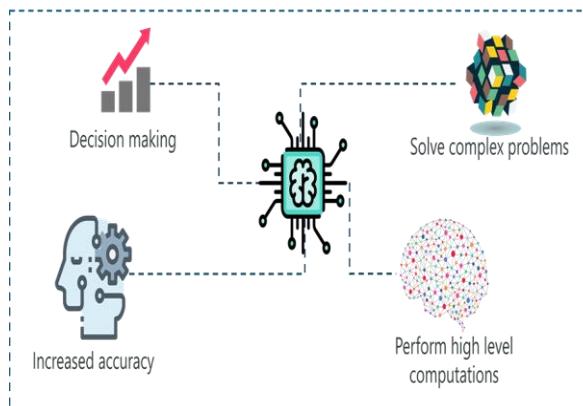


Figure 1: Artificial Intelligence

Artificial intelligence has always been helping our lives. It is one of the biggest scientific breakthroughs, giving the power to the world to work in different approach. It also has the potential to change the humanity. Artificial intelligence is used or made to make machines learn and make decisions. It is

basically a machine which works on human intelligence or human's natural talents which helps to improve and perform tasks in a healthy manner. Machine uses program to run or perform task, programs are of both general and complex. In Artificial intelligence, human's brain plays an important role as it is responsible for the ideas and for forming concepts. It all starts with a random and creative idea, later to stimulate higher functions of the brain. It is also beneficial as it deals only with ideas and not the events. Artificial intelligence is making rapid strides; new evolution which can fundamentally change human's life. It has the potential to revolutionize every aspect of our daily lives, mobility, communication, medicines etc. It is not only about ROBOTS!! It changes many experiences like shopping, security, safety etc. and helps in time management.

Artificial intelligence is not a new term introduced to world, it is actually a very old term and has history to it. It has been growing from a very long time. Earlier It was not very popular or used as it is nowadays. Before, it was done on machines using machine language which was based on 0's and 1's. There were large computers. Artificial intelligence is all about research and implementation. Artificial intelligence research was first started in workshop at DARMOUTH COLLEGE, which was in the year 1956; John McCarthy was the first researcher who researched about artificial intelligence. It distinguished from cybernetics and escapes the cyberneticist. There were many like John McCarthy who was part of this research. Later, artificial intelligence took a drastic changes year to year and now it is one important thing for our lives. Artificial intelligence is now a topic

which is being innovated and researched on daily basis so as to perform better and making our lives even better as machines are not yet ready to be taken over. Still it has been changing our lives and affecting it in many manners, artificial intelligence basically means that if machines can learn on its own. Some says artificial intelligence is threat to our existence, there is no stoppage in its evolution and rise. Human's basic activity is to keep on improving. In the past years, there were many dramatic technological upheavals as compared to all of human history. There will be multi-generational leap in coming next years.

Artificial intelligence has many applications some are healthcare, automotive, cyber security, government, games, military etc. If we talk about some of them for example: Cyber security, it is used to protect from hacking attacks and many more things.

II. RESEARCH/APPROACH OF ARTIFICIAL INTELLIGENCE

There is no particular theory that helps in artificial research. Artificial intelligence answers to most of the questions, there are many factors affecting research related to artificial intelligence.

- 1) The cybernetics which is basically science dealing with both machines and living things.
- 2) Symbols: Early invention of scientists was the symbols for the research of artificial intelligence. These symbolic approaches were the old fashioned way which eventually succeeds in creating any machine. The researchers from robotics background rejected it.
- 3) There were some computers having large memory, was used to build knowledge into artificial intelligence application.
- 4) There are also integrated approaches such as the intelligent agent, architectures etc. which design systems to build an intelligent system. They are designed to copy human cognition and provide a view into general intelligence.

III. CHALLENGES

The goal of artificial intelligence is to compute any machine in an intelligent way, it could be human intelligence. To work any computer according to humans mind is obviously not easily possible. Therefore, human mind comes up with various ideas which make a computer to understand a human mind such as algorithms etc.

There should be a proper planning to achieve the goals of artificial intelligence, for that we have to first set goal and aim for that.

The best way is to think about the results, about what it could do if it comes into existence.

Machine learning is used which is a fundamental concept for artificial intelligence.

There is natural language processing which gives the ability to the machines to read and understand human mind or language.

IV. TOOLS

Tools in artificial intelligence are used to solve the problems in computer science:

SEARCH- Many problems can be solved by only searching the problems which is related to artificial intelligence. Computers are used for the search there is evolutionary computers which are used to get the accurate research.

LOGIC- Logic is another method for artificial intelligence, there are many logics used such as fuzzy set theories, propositional logics, default logics etc. They are also used to solve the artificial intelligence problems.

ARTIFICIAL NEURAL NETWORKS- These neural networks are inspired by the architectures of neurons in the human brain. The neurons accept the input from other neurons to get any solution or result. It is further classified into Deep feedforward and Deep recurrent neural networks.

Other than these, there are various such tools which help to solve the artificial intelligence problems

V. APPLICATIONS

As we talked a little about the applications in the introduction, there are obviously the outcomes of the artificial intelligence in real life:

As we all know artificial intelligence is everything about using computers with human intelligence or general. It is used in various fields:

HEALTHCARE- Used to identify high risk patients for population health. Treatment can be done with more than 95% accuracy.

AUTOMOTIVE- Artificial intelligence contributes in the growth of automotive industry through evolution of self-driving vehicles. Most of the companies utilizes this artificial intelligence.

Finance and economics includes the online trading.

There are various other applications such as cybersecurity, education, government and many more.

VI.CONCLUSION

In this review paper we described in short the introduction, research, challenges, and tools of artificial intelligence with different approaches of Artificial intelligence and some of its advantages. The application area of artificial intelligence will continuously be increasing. Today approximately everyone uses artificial intelligence to manage basic needs, medical use, education etc. So, it is clear that there is major impact of artificial intelligence on society.

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