



ARTIFICIAL INTELLIGENCE

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Abstract: This article throws light on artificial intelligence. These days artificial intelligence has been an integral part of every household ,from your smart phone devices to the electronic gadgets used and so on.T he Amazon Alexa to Apple Siri ,have most certainly become one of our family members. This article briefly discusses the Artificial intelligence and tones its advantages and disadvantage .Further technical aspects of the topic have also been discussed here including types ,parameters and applications.

Keywords: Artificial intelligence ,Smart phone, gadget ,health

Introduction:

In the field of explainable Artificial intelligence there's a renewal , because practitioners find a method for more accuracy to algorithm.(2)

The difficulty of problem solving efficacy –of solving hard questions by computers –are divided into five main areas: Search, Pattern-Recognition, Learning, Planning, and Induction.(1)These days the your daily routine but also tracks your likes and dislikes and further modifies the search results of your smart phone .It only shows you the things relevant for you.In this rapidly growing world our health does matter a lot ,and through artificial intelligence we can track our exercise routine and calorie expenditure. Artificial intelligence is now a part of national security and defence .It is useful in almost all the areas where technology has strong hold. Furthermore development in artificial intelligence can also lead to reading the human thoughts which will marrow the gap between man and machine.

History of Artificial intelligence

Alan Turing, a great mathematician made a revolutionary invention destroying ENIGMA a Nazi encryption machine . His invention helped allied forces to win the second world war. His research built a fundamental base and future for achieving the goal to replicate human intelligence in machines.

What is Artificial intelligence?

It is a branch of interdisciplinary science , which aims to construct intelligent machines which have ability to perceive percepts from surroundings and perform tasks which requires human intelligence .

Approaches of Artificial intelligence ?

According to textbook, ” Artificial intelligence: The modern approach” , written by Norvig and Russell’s ,the following are the Approaches mentioned by them,

- 1) Thinking humanly
- 2) Thinking rationally
- 3) Acting humanly
- 4) Acting rationally

First two approaches involves thought processing and reasoning, while the other two depicts behavioural pattern.

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Types of Artificial intelligence

- 1) Reactive machines: These types are very task specific and do not store memory. It cannot use the previous experiences and inform future decisions. Example: IBM chess program.
- 2) Limited memory: These types have memory so can use the previous experiences and inform future decisions. Example, self driving cars.
- 3) Theory of mind: These types conclude human intentions and predict human behaviour.
- 4) Self awareness: These types have sense of self and consciousness about environment and itself. Not invented till now.

Uses of Artificial intelligence(AI):

- 1) Robotics: Robots are made to make tasks more easy and feasible which are difficult for normal human . Like robots used to move large rockets in NASA.
- 2) Natural language processing (NLP) : It involves human language processing with help of a computer program. Example is spam detection , where NLP looks over the text and decide if its junk or not.
- 3) Automation: expand the amount of work and types of task performed. Example is RPA robotic processes automation .
- 4) Machine learning: making the computer work without any programming. It is automation of predictive analysis. It has three types, supervised learning, unsupervised learning and reinforcement learning.
- 5) Machine vision : machines are programmed in such a way that it captures the visual images more clearly than human eyes.
- 6) Self driving cars: common example is “ Tesla”

Applications:

- 1)AI in security: It's a well safeguarded system in security.
- 2) AI in education: Provides education at their place. It can save the time of the teacher's by assessing the grades of students.
- 3) AI in transportation: It can manage traffic, predict flight delays etc
- 4) AI in manufacturing industries: This increases the productivity and efficiency of products.
- 5)AI in banking: It acts as a virtual assistant and can also organise bank account efficiently.
- 6)AI in law firm: It is very useful in their labour intensive law procedures like extracting and scanning information from hundreds of documents.
- 7)AI in finance: It is used to increase the efficacy and speed in collecting personal data and give financial advices. E.g IBM Watson. The system of agents to carry out this process is discarded because of AI.
- 8) AI in health care: Virtual assistant and chatbots to help patients find medical information about medical procedure , scheduled appointments, billing process and other administrative processes. It makes a faster diagnosis than humans.

Advantages:

- 1) Best at minute detailed work.
- 2) Efficacy.
- 3) Accuracy.
- 4) Always consistent result.
- 5) Virtual agents available.

Disadvantages:

- 1) High technology oriented experts required.
- 2) Shifting from one task to another is not possible.
- 3) Expensive.
- 4) Specified for one task only.

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