



## A Survey on Artificial Intelligence

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**Article History- Received: December 2019; Published: January 2020**

### Abstract

Artificial intelligence is the simulation of human intelligence processes by machines, especially computer system. These processes include learning, reasoning and self-correction when presented with an in familiar task, a strong artificial intelligence system is able to find a solution without human intervention. Popular artificial intelligence cloud offering includes Amazon artificial intelligence services, IBM Watson assistant, Microsoft cognitive services and Google artificial intelligence services. Some industry experts believe that the term artificial intelligence is too closely linked to popular culture, causing the general public to have unrealistic fears about how it will change the workplace and life in general. Researches and markets hope the label augmented intelligence, which has a more neutral connotation, will help people understand that AI will simply improve products and services, not replace the humans that use them.

**Keywords:** *Artificial Intelligence, Self-driving, machines*

## 1. INTRODUCTION

Artificial refers a human that did not occur naturally, intelligence means the ability to learn and apply knowledge. Artificial intelligence is the simulation of human intelligence processes by machines, especially computer systems. These processes include learning (the acquisition of information and rules for using the information), reasoning (using rules to reach approximate or definite conclusions) and self- correction. Particular applications of AI include expert systems, speech recognition machine vision. Artificial intelligence can be categorized as either weak and strong. Weak artificial intelligence also known as narrow artificial intelligence, is a system that is designed and trained for a particular task. Virtual personal assistants, such as Apple 'sisri are a form of weak artificial intelligence, strong also known as artificial general intelligence where an AI system is able to find a solution without human intervention. Some industry experts believe that the term artificial intelligence is too closely linked to popular culture, causing the general public to have unrealistic fears about how it will change the workplace and life in general .Researchers and marketers hope the label augmented intelligence which has a more neutral connotation will help people understand that AI will simply improve products and services not replace the humans that use them.

## 2. ARTIFICIAL INTELLIGENCE

In 1956, the term artificial intelligence was first coined by John McCarthy. He joined the first academic conference on the subject. But the journey to understand if machines can truly think began much before that. Artificial intelligence is an area of computer science that emphasizes the creation of intelligent machines that work and react like humans. Some of the activities computers with artificial intelligence are designed which includes, Speech recognition, Learning, Planning and Problem.

In 2014, more than \$300 million was invested in artificial intelligence startups, showing an increase of 300%, compared to the previous year (Bloomberg). Artificial intelligence will replace 16% of American jobs by the end of the decade (Forrester). 15% of Apple phone owners uses use Siri 's voice recognition capabilities.

## 3. HISTORY

The history of artificial intelligence began antiquity, with myths, stories and rumors of artificial beings endowed with intelligence or consciousness by master craftsmen. This work culminated in the invention of the programmable digital computer in the 1940s, a machine based on the abstract Essence of mathematical reasoning.

The field of artificial intelligence research was founded at a workshop held on the campus of Dartmouth college during the summer of 1956. In 1973, in response to the criticism from James Light and ongoing pressure from congress the U.S. and British Governments stopped funding undirected research into artificial intelligence and the difficult years that followed would later, a visionary initiative by the Japanese Government inspired governments and

industry to provide AI with billions of dollars but by the late 80s the investors became disillusioned by the absence of the needed computer power .

Investment and interest in artificial intelligence boomed in the first decades of the 21st century, when machine learning was successfully applied to many problems in academia and industry due to the presence of powerful computer.

#### **4. TYPES OF ARTIFICIAL INTELLIGENCE**

##### **Reactive machines**

An example is deep blue, the IBM chess program that best Garry Kasparov in the 1990s. Deep blue can identify pieces on the chess board and make predications, but it has no memory and cannot use past experiences to inform future ones. It analyzes possible moves own and opponent and chooses the most strategic move, Deep blue and Google's Alpha GO were designed for narrow purposes and cannot easily be applied to another situation.

##### **Limited memory**

These AI systems can use past experience to inform future decisions. Some of the decision-making functions in self driving are designed this way. Observations inform actions happening in the not so distant future, such as a car changing lanes. These observations are not stored permanently.

##### **Theory of mind**

This psychology term refers to the understanding that others have their own beliefs, desires intentions that impact the decisions they make. This kind of AI does not yet exist.

##### **Self awareness**

In this category, AI system have consciousness. Machines with self awareness understand their current state and use the information to infer what others feeling. This type artificial intelligence does not yet exist.

#### **5. ADVANTAGES**

Artificial intelligence helps us in reducing the error and the change of reaching accuracy with a greater degree of precision. It is applied in various studies such as exploration of space. Artificial Intelligence and the science of robotics can be used for exploring the ocean floor and hence overcome the human limitations. Computer methods for automated reasoning, learning and perception reasoning, learning and a common phenomenon in our lady Siri or Cortana to help us out. We are also hitting the road for long drives and trip with the help of GPS. Detection of fraud uses artificial intelligence in smart card-based system. This is completely ruled out for machine intelligence. Doctors assess the patients and their health risks with the help of artificial machine intelligence. A popular application of artificial intelligence is radio surgery.

## 6. DISADVANTAGES

Creation of artificial intelligence requires huge costs as they are very complex machines huge costs. Intelligence is believed to be an gift of nature. An ethical argument continues , whether human intelligence is to be replicated .No original creativity these are not the forte of artificial intelligence . Artificial intelligence in wrong hands is a serious threat to mankind in general. The power of artificial intelligence that unintentionally causes destruction and damage cannot be ignored. AI can do to the person if the limb can be operated through machine intelligence. Increased costs, difficult with software development slow and expensive, few experienced programmers. The hardware and software need to get updated with time to meet the latest requirements. Machines need repairing and maintenance which need plenty of cost. High standard OS maintenance required, precise programming needed when computer system failure will cause breakdown, new products require complete reprogramming.

## CONCLUSION

AI is at the center of new enterprise to build computational models of intelligence. The main assumption is that intelligence. Now the great challenge of AI is to find ways of representing the commons unknowledge and experience that enable people to carry out everyday activities such as holding a wide ranging conventional or finding their way along a busy street. There is much debate as to whether such an appropriately programmed computer would be a mind AI researches need not wait for the conclusion to that for the hypothetical that could model all human intelligence.

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How to cite this article:

S Preethi, "A Survey on Artificial Intelligence", International Journal of Intelligent Computing and Technology (IJICT), Vol.3, Iss.2, pp.39-42 , 2020