

Artificial Intelligence

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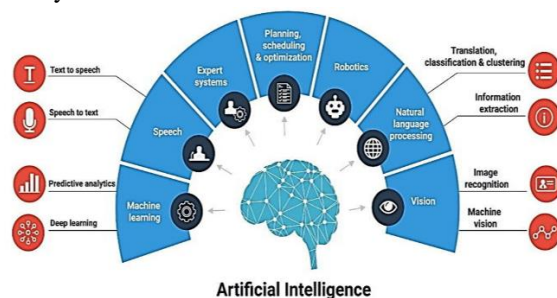
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Abstract: Artificial intelligence (AI) refers to what information about the language structure being transmitted to the machine: It should result in a more intuitive and faster solution, based on a learning algorithm that repeats patterns in new data. The major problem areas addressed in A.I. can be summarized as Perception, Manipulation, Reasoning, Communication, and Learning. Perception is concerned with building models of the physical world from sensory input The system must automatically organize and utilize this information to solve the specific problems that it encounters. This organization process can be generally characterized as a Search directed toward specific goals.

INTRODUCTION

Artificial Intelligence is a method of making a computer, a computer-controlled robot, or a software think intelligently like the human mind. AI is accomplished by studying the patterns of the human brain and by analyzing the cognitive process. The outcome of these studies develops intelligent software and systems.



Learning

Similar to humans, computer programs also learn in different manners. Talking of AI, learning by this platform is further segregated into a varied number of forms. One of the essential components of ai, learning for AI includes the trial-and-error method. The solution keeps on solving problems until it comes across the right results.

Reasoning

The art of reasoning was something that was only limited to humans until five decades ago. The ability to differentiate makes Reasoning one of the essential components of artificial intelligence. To reason is to allow the platform to draw inferences that fit with the provided situation. Further, these inferences are also categorized as either inductive or deductive.

Problem Solving

The different methods of ‘Problem-solving’ count for essential artificial intelligence components that divide the queries into special and general purposes. In the situation of a special-purpose method, the solution to a given problem is tailor-made, often exploiting some of the specific features provided in the case where a suggested problem is embedded.

Perception

In using the ‘perception’ component of Artificial Intelligence, the element scans any given environment by using different sense-organs, either artificial or real. Further, the processes are maintained internally and allow the perceiver to analyze other scenes in suggested objects and understand their relationship and features.

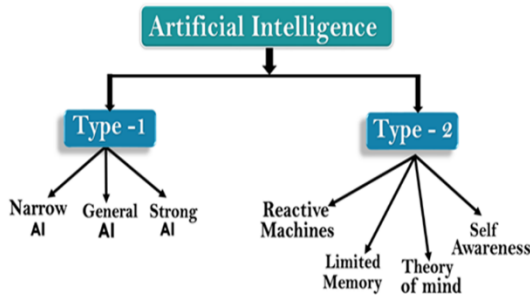
Language-understanding

language can be defined as a set of different system signs that justify their means using convention. Occurring as one of the widely used artificial intelligence components, language understanding uses

distinctive types of language over different forms of natural meaning, exemplified overstatements.

Types of Artificial Intelligence

Artificial Intelligence can be divided in various types, there are mainly two types of main categorization which are based on capabilities and based on functionally of AI.



AI type-1

1. Narrow AI

- Narrow AI is a type of AI which is able to perform a dedicated task with intelligence. The most common and currently available AI is Narrow AI in the world of Artificial Intelligence.
- Narrow AI cannot perform beyond its field or limitations, as it is only trained for one specific task. Hence it is also termed as weak AI. Narrow AI can fail in unpredictable ways if it goes beyond its limits.

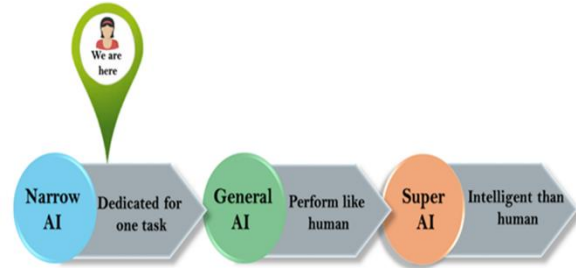
2. General AI

- General AI is a type of intelligence which could perform any intellectual task with efficiency like a human.
- The idea behind the general AI to make such a system which could be smarter and think like a human by its own.
- Currently, there is no such system exist which could come under general AI and can perform any task as perfect as a human.

3. Super AI

- Super AI is a level of Intelligence of Systems at which machines could surpass human intelligence and can perform any task better than human with cognitive properties. It is an outcome of general AI.

- Some key characteristics of strong AI include capability include the ability to think, to reason solve the puzzle, make judgments, plan, learn, and communicate by its own.



Artificial Intelligence type-2

1. Reactive Machines

- Purely reactive machines are the most basic types of Artificial Intelligence.
- Such AI systems do not store memories or past experiences for future actions.
- These machines only focus on current scenarios and react on it as per possible best action.
- IBM's Deep Blue system is an example of reactive machines.
- Google's AlphaGo is also an example of reactive machines.

2. Limited Memory

- Limited memory machines can store past experiences or some data for a short period of time.
- These machines can use stored data for a limited time period only.
- Self-driving cars are one of the best examples of Limited Memory systems. These cars can store recent speed of nearby cars, the distance of other cars, speed limit, and other information to navigate the road.

3. Theory of Mind

- Theory of Mind AI should understand the human emotions, people, beliefs, and be able to interact socially like humans.
- This type of AI machines are still not developed, but researchers are making lots of efforts and improvement for developing such AI machines.

4. Self-Awareness

- Self-awareness AI is the future of Artificial Intelligence. These machines will be super

intelligent, and will have their own consciousness, sentiments, and self-awareness.

- These machines will be smarter than human mind.
- Self-Awareness AI does not exist in reality still and it is a hypothetical concept.

CONCLUSION

In conclusion, artificial intelligence has the potential to revolutionize virtually every area of life and business. This can be done by eliminating mundane or dangerous tasks from humans, allowing us to spend more time doing what we enjoy and are good at.

REFERENCE

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- [2] <https://www.simplilearn.com>