

An Overview on -Artificial Intelligence

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Abstract:

This articles contain an overview on artificial intelligence, it has be presumed by people that machines might one day overshadow human beings but that is not true, as many researcher believe that machine may cut the time taken by human in different task but for quality management and supervision one needs human employee to look after them, the focus of this study is on the various type of artificial intelligence their kind and how they are becoming part of human world, making every task easy and excelling in every domain. Also in here we have discussed about Luna how she is improving day by becoming Strong Artificial Intelligence. And the study ends with an outline of domains referring to which Artificial intelligence could prove to be of importance.

Keywords: Artificial Intelligence, Luna, Computer, Future, Strong AI, Weak AI.

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Introduction

In 1956 at The Dartmouth Conference an American scientist John McCarthy coined the term “Artificial Intelligence”.

According to Winston Artificial Intelligence is basically the study of the calculations of data that results in make it possible to perceive, reason and act. Yet it differs from most of the psychology since great part of it deals with computation, also it differs from most of the computer science as it emphasis goes on perception, reasoning, and action.

But according to Newell AI deals with phenomenon that surrounds computers, hence it is taken as a part of computer science.

Margaret Rouse takes the excerpt from “The essential guide to managing HR” and explains the definition of AI better known as Artificial Intelligence as: “Simulation created by machine of human intelligence and the process includes:

- Learning phase i.e. the procurement of information and rules for the usage of information.
- Reasoning i.e. usage of rules in order to reach a rough or definite conclusion.
- Self-correction

Type of Artificial Intelligence

Turning test has been taken as a way to calculate and define intelligence, according to turning if one cannot tell a difference between computer and a human then the computer is intelligent and if one can the, the intelligence parameter will go vice-versa.

Different people have categorize artificial intelligence in different ways here we are focusing on only two

The first classification of Artificial Intelligence is into two:

- **Strong Artificial Intelligence**
- **Weak Artificial Intelligence**

Strong Artificial Intelligence

A study took place in Berkeley on “A holistic Approach to AI” wherein strong AI was used as a term to refer to certain mindset of artificial intelligence development, goal of this kind of AI is to develop artificial intelligence to the extent where machine’s intellectual capabilities becomes functionally equal to Humans.

Researchers believe that the ideal Strong Artificial Intelligence machine will be built in the form of a man/woman, that should have sensory perceptions same as human.

Robots without Borders is a project that gave birth to Luna. “**Luna**” is a great example of strong AI as she gives replies that are not pre-programmed, and she learns on the basis of experience and feedbacks, which is similar to human kind. She is the type of AI that can be equal to, or might exceed humans in every domain such as speech, vision, creativity and problem solving. She is been working as an assistant for a teacher in New York.

Although one needs to keep in mind that Luna is a test-platform developed by Arana, not the final product.



Fig: 1 “Luna” An example of AI (Image credit: Luis Arana/Youtube)

Weak Artificial Intelligence

According to a report presented by Deloitte (Artificial Intelligence Innovation Report) in 2016. Weak artificial intelligence also called as- “Artificial Narrow Intelligence” is the most restricted form of AI, it is just proficient of carrying out particular tasks in a brilliant manner, it is more of task dependent, depending on the use all it do is uses advance algorithms, deep learning and various other techniques to solve the problem in hand.

It is referred to be narrow in nature because it is usually incapable of performing task outside of its specific purpose. And fail to think for themselves

Castro in his work under the heading-“The promise of Artificial Intelligence” puts **Apple’s SIRI** as a weak artificial intelligence and explains that the virtual assistance provided by SIRI is good but it become of no use when asked to drive a car. Hence proving to be of “Jack of none, master of one.”



Fig: 2 Apple's SIRI an example of weak AI.

The second classification of Artificial Intelligence is of Arend Hintze

Arend has classified artificial intelligence into four types:

- **Reactive Machines**
- **Limited Memory**
- **Theory of Mind**
- **Self-awareness**

Reactive Machines

In the year 1990 a chess program developed by IBM named “Deep Blue” had defeated Garry Kasparov. It was able to make predictions based on the process of identification of the pieces, but had a flaw that it failed to use past experiences to inform future ones.



Fig: 3 “Deep Blue” example of reactive machine a program installed in computer. (Pic Credit: CIO-Asia)

Limited Memory

This kind of AI basically performs decision making functions, it is able to use past experiences in order to

predict future decisions. I.e. it observes the situation and inform about the action that is about to take place in near future.

An Example for that would be “Changing of lanes by cars”. Although there remains a drawback that these information are not deposited permanently.

Theory of Mind

It is a hypothetical kind, not functioning i.e. it does not exist yet, the name is a term taken from psychology, which intent to focus or refers that everyone has their own set of beliefs, desires and intentions that has impact on the decision making.

Self-Awareness

This is another category where, AI systems has a sense of self consciousness. It understands the present state and can use the info to conclude what others are feeling.

AI V/S Human Performance

Simon in study-“Artificial intelligence: an empirical science” explains with an example that computer took over the calculator as it provided rapid results of complex questions, but to check the quality of the task human expert is yet needed. Hence hinting that measure and checks are needed whether or not the need of human expert is there.

Future of AI

- Military Bots
- Music
- Business
- Healthcare
- Predict epidemics
- AI Lawyer can help in legal research
- AI financial advisor
- AI glasses helps children with autism read facial expressions

Conclusion

Although humans are winning the race, new innovations and development of Artificial intelligence is giving a prompt expectation to the world, if the modulation goes on with the same rate the time is soon when, at work place large majority of people will be answering to AI robots.

Example: In Japan, McCann J appointed an artificial intelligence as creative director, to it the CEO Yasuyuki Katagi clearly indicated that he believed in AI-CD β and is looking forward to work with it.



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