

History of Technology

Advancement of Artificial Intelligence

Mathematical efficiency and mountain of data make artificial intelligence a reality. However, what remains behind the technique is the question. Computer hit human champion in games like chess, listen to us and speak to us recognize human face objects and maneuver automobiles as by ghost hand independently through the road traffic. These should be able to make soon many more things. The researchers in universities and concerns worldwide work an artificial intelligence (AI). Practically all IT giants as Apple, Google, Microsoft, IBM and Amazon celebrate the advancement of artificial intelligence (AI). These are to make our whole life better as for example predict Ball Gates and Google Development Chief, Ray Kurzweil. Nevertheless there are critical voices too. Tesla and Space X Grinder Elon Musk warn against intelligent computers as the potential biggest danger of humanity which could cause the third world war. All are unanimous that this technique branch will change basically the life of human being.

The concepts of artificial intelligence arrange one in the long queue of catch phages like digitalization industry 4.0. In the marketing sections the AI label is affixed in a large scale, on the things which do not have anything to do.

What is, therefore, the core of AI?

In this discipline of informatics researchers experimented previously to simulate in computer the reserved capacity of human being. The computer should, as for example, understand and develop on the heard information. Speech assistants a la Alexa and Siri only more or less efficient AI. The concept to that emerged in the scientific world in 1956. But the first developments of the recent past the computers bring in front of the direction of day-to-day usefulness and inspire the fantasies of AI – protagonists to unanticipated in haste.

The enormous growth of favourable computation

efficiency not only in the cloud but also in mobile in Smartphone & Co is one of the progress drivers. To this comes that today so many data are to be evaluated which was never before. These are produced among others from sensors in Internet of Things and from human being in the social networks.

Both these trends are pioneer for the meaningful application of algorithms which were developed in the AI research of the last decade. A sufficient database is for example assumption for the present successful of AI, the machine learning.

This learning phenomenon is a very hard process and required basic quantity of human preparation. The AI expert and robot specialist Rodney Brooks in his internet essay. “The seen death son with the prediction of AI future”. It had chosen the right algorithm which right training data and for each problem a new specific learning structure to be developed. Otherwise it appears with the present king discipline of machine learning, the deep learning. Researchers set up to that in computer a virtual network from one another linked data knots. These can process similarly information as our brain. Such neuronal network therefore experiment learning and decision processes analogous to the events simulate in human nerve system.

Strong and weak AI:

How strong AI apparatus has been developed is shown by placard bargained progress at strategic and knowledge games. With that the computer can surpass in some areas (partial human domains) by all means. In 1997 Deep Blue of IBM world chess master knocked out, Gary Kasparov in 2012 IBM’s Watson won over two best players of Game show Jeopardy and in 2016 failed the bastion of Go spiels to the computer rivals with Goggles Alpha Go.

Nevertheless the researchers speak with the elements of the machine and deep learning only by weaker AI. A AI which essentially uses the computer, in order to simulate intelligence. Then was the Deep Blue really more intelligent than its human rival. No it was simple in position calculate in second speed millions of toy facing with its consequences. And also the gain of Go spiels was a fight of dissimilar resources. So the human player Lee Sedol had only few cups of coffee at his disposal during he entered upon a complex computer network which was more than hundred trained computer specialists and waited upon. Still had someone requested Sedol to the game, to write a poem or sing a song. It would have been principally possible for him. Alpha Go had however not at all for understood what was expected of him. Then, as the human intelligence, the machines were previously finally for narrowly limited duty position trained.

With that intelligent machines not only remain useful technical idiots but the researchers also investigate to develop a universal intelligent machine. Scientist Jürgen Schmidhuber works at the Schwiss AI Laboratory Idsia and is valid as one of researchers who have brought forward the recollection of the AI. I do not have any doubt that AI becomes cleverer that we are today as said by Schmidhuber. With colleagues he works already at an art artificial consciousness.

Contrary to weak AI, one names this the strong AI. Researchers and engineers however struggle whether this art AI will be realized ever. No are there earlier who are doubtful. The really intelligent computer, which is conscious of its existence, can understand

its surrounding and develops out of its own motive, previously a discovery of science fiction.

AI and human being:

The success of weak AI Service prepares already many human beings. They fear that their professions in future will be obsolete and they will sooner or later be replaced through machines. The fear has been taken seriously by all means. That many developments here however stand still completely at the beginning stage the consequences first in the coming years are to be installed realistically.

Experiences with the introduction of PC or the Dot-com-Blasé at the beginning of the millennium confirm the thesis of silicon-valley-freethinker, Ray Arma. We are inclined to that to pass over to the short range effect of technologies and to set under the long range effect. Computer and the internet are scarcely to be divorced from thought in day to day work.

In general the question remains which decision process are wanted to control automatically in daily life. Already today the algorithms determine whether the bank customers are supported with trustworthy credit or decided in USA whether criminals receive trial punishment. The data base on this algorithms are trained for the concerned is not transparent, or it is loaded with racist prejudice, as also with system "Compas" for the judgment of reverting danger of criminals in USA.

No question:

The potential of artificial intelligence as efficient implement is very big. What we want to get regulated of AI in our life is with this on the first line no technical but is a social formulation of questions. Here moral and ethical questions pay an important role.

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