

PROSPECTS OF ARTIFICIAL INTELLIGENCE

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As a rule of thumb, humanity as a whole always strives for technological progress whether it means upgrading technology we already know or coming up with something entirely new and groundbreaking. And in recent years it seems like we have made quite a few advancements. Concepts straight out of science fiction are slowly coming to life. One of the most prominent ones is Artificial Intelligence.

The ideas of artificial intelligence, artificial sentience or even humans altogether are certainly not new or unusual. Believes that A.I. could be created predate even basic computers. Take for example the ancient Greeks who have told

myths of Talon, a giant sentient robot made of bronze that protected Europe in Crete from pirates or any other invaders. Or perhaps how alchemy or any other mystical sciences from the Middle Ages claimed to be able to synthetically create life seemingly out of nowhere, though you might not consider takwin, homunculi or golems to match the description of today's artificial intelligence, they are somewhat similar.

Even though the field of artificial intelligence research was founded as an academic discipline in 1956, literary works discussing probabilities of A.I. existence date back as far as 1920s. Unsurprisingly, various forms of A.I. already exist and you are probably using them in your everyday life. They might come in a form of a personal assistant in your phone such as Siri, Cortana, Google Now, or even in more inconspicuous forms where you might not even notice their existence. Personalized advertizing, purchase prediction, fraud prediction, online customer support, security footage analysis are all performed by artificial algorithms that solve problems without requiring human intervention.

However, note that they are just algorithms and are not really intelligent. What we are looking for is artificial intelligence that operates somewhat like a human brain. We want it to understand patterns, adapt and evolve like humans. And such artificial intelligences do exist today too, these are usually called neural networks. Neural networks have a variety of impressive skills, for example they can understand what is depicted on a photograph or a picture, accounting for all kinds of variations of objects they might be looking for. Some A.I. can generate pictures from short descriptions given to them, i.e. they can create a unique and convincing picture of a dandelion if you ask them to paint a yellow flower with small, thin and pointy petals. Others can even create a video from a still frame, predicting what is going to happen next and it must be said that they are terrifyingly accurate and realistic in their predictions. And the most important thing to note is that the creators of A.I. mentioned above haven't really told them how to do such things. They just gave the programs enough sample material and came up with a numerical scoring system so that the A.I. could evaluate its performance. The artificial intelligence had to learn all the patterns on its own.

And neural networks are getting better each year. Back in 2011 a contest was held to see who could better give categories to various images, humans or A.I.? The A.I. was clearly outperformed, having a 26% error rate, while humans only made 5% of errors. However, in 2016 the same contest was held and the error rate of the A.I. has dropped to a stunning 3%, performing better than any human contestant. In just 5 years the performance of artificial intelligence has greatly improved, only confirming how fast the technology is developing.

Though general A.I. that thinks and behaves like a human doesn't exist yet, it's not hard trying to imagine its creation in 10 or maybe 20 years. Seeing how steadily the technology is progressing and how many features such as hearing, seeing, speaking and analyzing are becoming more and more advanced, it's only a matter of time before someone decides to combine them all together and create an A.I. that can see, hear and understand what is going on. Give it the ability to edit its own code and you will perhaps see how it'll try to improve itself.

This is where people become concerned. What if it grows too fast and decides that humanity has no real reason to exist? With enough power an angry A.I. can do some serious damage. Such scenarios are quite often depicted in various forms of media like books, films or games. Take for example the popular artificial intelligences that were not particularly friendly to the human race: Skynet from the Terminator films, B.R.A.I.N. from the film 9, HAL 9000 from 2001: A Space Odyssey, the Reapers from a game franchise Mass Effect, Ultron from the Marvel Comics, SHODAN from the game System Shock, etc.

On the other hand, A.I. could help us augment ourselves, improve our understanding of the world or even kick start an entirely new generation of people and science, an era of people coexisting with artificial intelligence to bring about something beautiful and breathtaking.

But all in all, we do not know if the creation of true general A.I. will cause the prosperity or the destruction of the human race, we don't even know whether it's possible to create a truly sentient A.I. or whether it's just an imitation that behaves similarly but doesn't think of its existence like we do.

All this makes the future prospects of artificial intelligence fascinating, somewhat creepy and definitely worth investigating.