EDITORIAL

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Artificial intelligence: time to think

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Artificial intelligence (AI) can be defined as intelligence displayed by machines, in contrast with the natural intelligence of human beings and other animals. The progress of AI has been very rapid in recent years. From SIRI to self-driving cars, AI is reigning everyday life. Although we are now in an era of narrow AI (e.g. only facial recognition or only internet searches or only driving a car) but the day is not so far when strong AI will overtake almost all cognitive tasks performed by humans. In the next decade, artificial intelligence-enhanced products are projected to create trillions of dollars in economic value. Tremendous growth of advanced technologies in the field of AI would affect, if not replace, most of the work performed by humans. In the near future, the goal of keeping AI's impact on society beneficial motivates research in many areas, from economics and law to technical topics such as verification, validity, security and control.

In health AI includes technologies that enable machines to sense, comprehend, act and learn, so that these machines can conduct administrative, medical and health-care functions. For example, robot surgery, automated image diagnosis, running medical records, open AI ecosystems or data mining. Whilst in radiology a "cognitive health assistant" can analyze radiology images to detect problems faster and more reliably than a human radiographer.

AI has a dark side too. Researchers from renowned institutions expressed their anxiety about the potential power of AI. AI is unlikely to exhibit human emotions like love or hate, and that there is no reason to expect AI to become intentionally benevolent or malevolent. According to scientist Stephen Hawking the development of full AI could spell the end of the human race. Autonomous weapons which are developed are a part of AI systems that are programmed to kill. In the wrong hands (human or otherwise) these would be weapons of mass destruction. They might difficult to override or "turn off," so humans could plausibly lose control of such a situation.

Highly capable AI systems will learn from experience and run at a much faster serial processing speed than humans. This could mean that their capabilities change quickly and make them hard to manage with trial-and-error processes. This is the most worrying part for scientists about AI, when the machine will learn by itself, subsequently decide and act strategically.

However, in the immediate future we should perhaps worry more about 'stupid' AI in machines such as SIRI or self-driving cars, or our lives being run by algorithms. Whereby what see on Facebook adverts or on Twitter is determined by an algorithm that works out what we are like as a person and what our views are likely to be. The danger is that decisions about our lives are being made without sufficient scrutiny and reflection.

Keywords

Artificial intelligence, emotions, human, machine, scientist

Competing interests

None declared.