



ARTIFICIAL INTELLIGENCE AND ITS GLOBAL RISK

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ABSTRACT

The rapid advancement of Artificial intelligence (AI) and Artificial General Intelligence (AGI) has poses a fear in the minds of its experts. AI is named among the top global risk that threatens human civilization in many ways. This research work is restricted to explore and argue based on commonsense on economic challenges posted by Robots/expert systems and other intelligent machines in industries and slightly argue on “Technological Singularity” or “Intelligence explosion” we have recommend that there is a compelling necessity to evaluate and control the development of intelligent machines by international security agencies such as FBI and CIA in collaboration with IEEE and other professional bodies. We conclude that AGI and AI systems along has no power eliminate human race in whatever situation.

Keywords: Artificial Intelligence, Artificial General Intelligence, Robots/Expert system, Technological Singularity, intelligent Machine.

INTRODUCTION

Artificial Intelligence (AI) is now becoming a reality and no one knows for sure what

direction it will take [1]. In case you missed it, 2014 is being hailed as the year we awoke to artificial intelligence as risk to humanity [13]. Artificial intelligence and Nanotechnology have been named alongside nuclear war, ecological catastrophe and super-volcano eruptions as “risk that threatens human civilization in a report by the global challenges foundation [10]. In the case of AI, the report suggests that the future machines and software with “Human-level intelligence” could create new dangerous challenges for humanity although they could also help to combat many of the other risk cited in the report [10]. This research work is aimed to explore and argue based on commonsense on economic challenges posted by Robots/expert systems and other intelligent machines in industries and slightly argue on “Technological Singularity” or “Intelligence explosion”

CHALLENGES OF INTELLIGENT MACHINES ON HUMAN CIVILIZATION

American software entrepreneur and Author Martin Ford think the economic impact of intelligent machines is likely to be nothing short of disastrous, and not just for displaced workers. As companies turn to lower-cost

machines replaces people, according to Ford, it could be the beginning of the end for traditional capitalism. “It’s not just about unemployment”, “Ford says it about consumers as people lose their incomes they can no longer go out and buy things” [2]. Once computers can effectively reprogram themselves and successfully improve themselves, leading to so-called “Technological Singularity” or “Intelligence explosion” the risk of machine outwitting humans in battles for resources and self-preservation cannot simply be dismissed” [9]. Yet some economists argue that the negative economic effect of intelligent machines will be transitory and that their development can improve society [2]. Artificial intelligence leading to gloom and doom? I think it’s possible says MIT’s Brynjolfsson [2].

The vast majority of respondents to the 2014 future of the internet canvassing anticipate that robotics and artificial intelligence will permeate wide segments of daily life by 2025, with huge implications for a range of industries such as healthcare, transport and logistics, customer services and home maintenance [3]. Vint Cerf, Vice President and chief internet Evangelist for Google, said “Historically, Technology has created more jobs than it destroys and there is no reason to think otherwise in this case [3]. Jonathan Grudian, Principal researcher for Microsoft concurred Technology will continue to disrupt jobs, but more jobs seem likely to be created. When the world population was a few hundred million people there were hundreds of million jobs. When we reached a

few billion people there were billion of jobs. There is no shortage of things that need to be done and that will not change [3].

“My take is that AI is taking over”. Said Sebastian Thrun, a well-know roboticist who led the development of Google’s self-driving car. “A few humans might still be in charge” but less and less so”[4]. In an interview, Dr. Horvitz said he was unconvinced by recent warnings that super-intelligent machine were poised to outstrip human control and abilities instead, he believe these technologies will have positive and negative effect on society [4]. Loss of control of AI systems has become a big concern,” he said “it scares people rather than simply dismiss these dystopian claims, he said, scientist instead must monitor and continuously evaluate the technology [4].

In the near future, major technological development will give rise to new unprecedented risks. In particular, like nuclear technology, development in synthetic biology, reengineering, distributed manufacturing and artificial intelligence create risk of catastrophe on a global scale [5]. Hawking in December 3rd 2014 stated that “I think the development of full artificial intelligence could spell the end of human race” [7]. Some experts have suggested that these technologies are even more worrying than nuclear weapons, because they are more difficult to control whereas nuclear weapons require the rare and controllable resources of uranium-235 or plutonium-239, once these new technologies are developed, they will be very difficult to regulate and easy accessible

to small countries or even terrorist groups [5].

A machine that exceeds human intelligence, with the ability to create its own computer programs and techniques, is referred to as Artificial General Intelligence (AGI) [8]. Artificial General Intelligence (AGI) only exists in very primitive forms today. However the computing power of the leading supercomputers now comes close to that of the human brain, and a survey conducted in 2012 found that the leading AI researchers believe that there is a 10% chance that within two decades researchers will develop AGI systems capable of doing most jobs that humans do today, rising to 50% probability of such systems by 2050 [5]. It's likely that machines will be smarter than US before the end of the century-not just at chess or trivia questions but at just about everything, from mathematics and engineering to science and medicine. These might be a few jobs left for entertainers, writers, and other creative types, but computers will eventually be able to program themselves, absorb vast quantities of new information and reason in ways that we carbon-based units can only dimly imagine. And will be able to do it every second of every day, without sleep or coffee breaks [9].

The challenges of governing emerging technologies are highlighted by the world Economic forum in the 2015 edition of its global risk report. Focusing in particular on synthetic biology, gene drives and artificial intelligence, the report warns that these and other emerging technologies present hard-to-foresee risks, and that oversight mechanism

need to more effectively balance likely benefits and commercial demands with a deeper consideration of ethical questions and medium to long term risk [11].

Carl Frey and Michael Osborne at the University of Oxford conclude that upcoming technology advances will over the next decade or two put 47% of US employees at a high risk of being displaced by technology and 19% at a medium risk. That means that 60% of the US workforce has a medium to high risk of job destruction. If Frey and Osborne are only half right, the numbers are staggering [6]. Two of the most sophisticated robots in the world include "Baxter" and "Hoya Robots" is a humanoid robot that is designed to work safely alongside people on factory production lines. It can be trained in less than 30 minutes by applying common sense and by adapting to the environment [12]. South Korea's Hoya Robot can enter burning buildings, withstanding temperatures' up to 320F [12]. Robots still need to become more advance before they can replace traditional secretaries and assistant [12].

The rapid development of artificial intelligence has poses a fear in the minds of its experts. But some experts argue that there is nothing to fear about the AI. In this scenario the idea that machine would take over the job of expert is becoming a reality to some certain extend. But if we ponder over the situation before the advent of computer we have minimal number of job opportunities in the world. However the advancement of technology has created many opportunity

more than ever before. The dazzling display of technology especially AI and Nanotechnology has made USA to be world superpower. If the researchers intend to create robots or AGI system that would fight against human race is a different case entirely. For this there is a need to have a policy in collaboration with IEEE, ISO, and other professional bodies governing the creation of expert system/AGI machines.

RECOMMENDATION

Based on this research work the following recommendations were made;

1. There is a compelling necessity to evaluate and control the development of Robots/Expert system and intelligent software by international security agency such as FBI, CIA, among others and professional bodies like IEEE, ISO etc.
2. There is a need to impose an international policy on the development of Robots and Expert systems.
3. It has become necessary for international law to provide a judgment on the developers of robots/expert machines in case of “singularity” so that they should take serious note.
4. Every expert system and robots should be under critical evaluation and psychological test regularly to avoid “Singularity”

CONCLUSION

In this research work we argue that the AGI and artificial intelligence machines has no

power within themselves to organize and form a team without human contribution and eliminate the human race that is projecting to 8 billion people. But in the case of replacing of human expert we agree with the situation at hand but anything can happen in the future.

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