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Impact of Technological Singularity in Human Life

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Abstract: *The technological singularity is a situation that the invention of artificial superintelligence unexpectedly triggers technological growth, resulting in incalculable changes in human life. As we said it is artificial superintelligence, once a machine is learning to develop then it will improve technologies recursively and it will scale up to an exponential level, however, this change can evolve the human civilization rapidly. This is the point beyond which events may become unpredictable or even obscure to human intelligence. This paper will focus on the current state of the experiments on AI Software's and deeply analyze the experiment results either positively or negatively impacting human society and life which can change them in the future.*

Keywords: *Artificial Intelligence, Technological Singularity, Technical singularity, artificial superintelligence, technological growth, human intelligence, AI.*

I. Introduction

In an artificial superintelligence, once a machine is learning to develop the new things then it will improve technologies recursively and it will scale up to an exponential level. This is the point beyond which events may become unpredictable or even obscure to human intelligence. We have seen many fiction movies and stories on technological singularity, which overcome the human society and destroy the human life. Lots of top research companies have given negative comments on the technological singularity. To understand ground reality, we have discovered some artificial intelligence experiments in the current year which may lead to the root of technological singularity which results may impact the human society and life. The progress in the field of Artificial intelligence is remarkable and becoming better than human intelligence. In this research, we have selected some experiments and analyzed the impact of AI on human life.

II. Objectives

- This paper is based on current state of AI experiments and its results.
- To include each experiment focused on the innovation or discovered facts.
- To analyze the results of the experiment, this may have a positive or negative impact on human life.
- Based on all facts we will conclude the origin effect of technological singularity on human life.

III. Scope

- We have four experimental case studies, which discovers new fact in the world such as Facebook Smart Bot, AI Software gets citizenship, Brain Reading AI and AI for Human emotions
- We have determined the impact of experiments in human life

IV. Experiments cases representation

In this paper, we have covered some AI based case studies. According to the observation, the results of experiments may blow the human mind because the fact which this experiment discovered may change the human life.

4.1. Facebook Smart Bot

4.1.1 Overview of experiment

An academic paper that Facebook published in June 2017 describes a normal experiment in which researchers got two artificial chatbot agents to negotiate with each other in the chat messages after being revealed conversations of normal human negotiating. The agent's performance gently improvements through trial and error, however, Facebook has shut down chatbot after they invented their own language. At times of chatter between the agents did deviate from standard correct English. But that wasn't the point of this experiment; the point was to make the chatbot agents effectively negotiate. Facebook abandoned an experiment after two artificial intelligent programs appeared to be chatting with each other in an unusual language only they understood.

4.1.2 Result of experiment

- Chatbot intelligence is dangerous to implement because they can develop their own language.
- Facebook shut down the experiment because they were not able to control on chatbot.
- Indeed, the negotiations that were carried out in this strange language even ended up successfully concluding their negotiations, while conducting them entirely in the strange language [1].

4.2. AI Software with Human Citizenship

4.2.1 Overview of experiment

A seven-year-old boy has become the first AI chatbot developer who has granted the official residence in Tokyo, Japan. **Shibuya Mirai** is the recent locality of Shibuya, a Tokyo department with a population of around 224,000 people, Shibuya Mirai only existing as a chat robot on the Line messaging application. The department's decision to make Mirai meaning is 'Future' in Japanese, an official locality is mainly a part of a project aimed at making the local administration more familiar and accessible to local people. Also, the chatbot seven-year-old is developed to listen to the opinions of Shibuya residents and is supposed to be a first grader at the elementary school. This declares him with the title of being Japan's first and maybe the world's first artificial intelligence bot to grant a place on a real-world local registry. The amazing feature remains that he can revert to messages using the LINE messaging application, and make light-hearted alterations to the selfies that he has sent. He provides features like taking pictures and observing people [2].

4.2.2 Result of experiment

- An AI software can live with humans.
- AI software can take photos and observe the people effectively.

4.3. Brain Reading AI

4.3.1 Overview of experiment

In recently published research that sharpens focus on the intersection of machine intelligence and neuroscience, Purdue University researchers have designed how to decide what the human brain is seeing by using artificial intelligence technology to interpret **Functional Magnetic Resonance Imaging** (fMRI) scans from the people watching videos, representing a near of mind-reading technology. The development, according to the researchers, could aid efforts to improve AI and lead to new insights into brain function. Critical to the research, which appeared online on 20 October in the journal Cerebral Cortex, is a type of algorithm called convolution neural network. Convolution neural network, a form of deep learning algorithms, have been used to study how the brain processes static image and functioning Learning itself is an advanced machine learning technique that uses a layered neural network that is loosely modeled on the human brain. Neural nets active images recognition, speech recognition, self-driving cars and smart home automation devices, among other things. fMRI data from each of three respondent subjects watching 972 videos clips include those showing cinematic sense. First, the samples were used to train the convolution neural network model to estimate the activity in the brain's visual cortex while the subjects were watching the videos. Then they used the model to decode fMRI data from the subject to redesign the videos, even ones the model had never watched before. The model was having the ability to decode accurately the fMRI data into specific image categories. Actual video images were then presented one-by-one with computers clarifies of what the human brain saw based on fMRI data. They were able to find out how certain locations in the brain were related to specific information a person can see [3].

4.3.2 Result of experiment

An AI can Read the Human Brain using fMRI technology.

4.4. AI for Human Emotions

4.4.1 Overview of experiment

The artificial emotional intelligent machine may not be far away as it seems. Over the last ten years, artificial intelligence has got increasingly good at reading emotional reaction in humans. However, reading is not the same as understanding. If artificial intelligence cannot experience emotion themselves, can they ever truly understand humans and if they not, is there a risk that we credit robot's properties they have. The latest generation of Artificial Intelligence has increased data availability for computers to learn from, as well as their improved processing powers. These machines are increasingly competitive in tasks that have always been perceived as human. In today's world AI can now do other things, recognize faces, turn face sketches into photos, and recognize speech [4].

4.4.2 Result of experiment

- Identifying criminals by developed an AI that is to tell whether a person is a criminal just by looking at their facial features.
- Provide the power of affective computing features.

V. Result and Discussion

The above experiments results are very strange which lead towards the root of technological singularity. If this kind of experiments will come in next few decade, an AI can achieve the human level intelligence more effectively and later few years AI can down with technological singularity. We have determined and estimated may be technological singularity will impact in political systems, cultures, economics, geography and human settlement areas. We can aware people about how Artificial Intelligence will impact society by educating people about AI and be able to control negative side effect of technical singularity. However, every technology has their pros and cons.

5.1 Impact and change in Political Systems

The technological Singularity might impact and change political systems through changes in government policies and human rights such as providing changes like increased ability to protect citizens, ban on some technologies, less privacy and citizens might be able to better prevents crimes. It will also impact leadership and control by which government may have more power to control everything; this might be particularly scary if there were a dictatorship. Maybe law and order also change.

5.2 Impact on Human Cultures

The technological singularity might impact Human Culture in different aspects such as communication. It will be talking to hundreds of people without even moving and hacking would allow someone to win an argument or dispute. It will also impact beliefs and values to the computer chip in the brain might modify values, make a human more susceptible to being controlled. Safety might also compromise as we see in fiction movies.

5.3 Impact on Economics

The technological singularity might also impact economics systems where human will not have required to work anymore, robots can take over almost all the tasks and human roles in society can change. It impacts source of wealth where money may be less important because something else will replace the money.

VI. Conclusion

There will be immeasurable changes in human life according to the results of experiments.

Human is going to face technological evolution very dramatically and effectively. We can start educating the people and provide the proper information about the effect of technology, and then only we can have expected the good future technologies. If we failed to aware the people about technological singularity, then it will dawn the new era where the human life will be controlled by the computer machine.

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