

The Global Impact of Artificial Intelligence

Sean Bachiller

100710946

Instructor: Professor Lon Appleby

Humanity's Destiny

Durham College

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The Global Impact of Artificial Intelligence

This document will present my compiled research on the impacts made by Artificial Intelligence, and how it is changing the future of our society. I chose this topic because technology is my career path and I want to explore how it impacts our lives.

Artificial Intelligence is a branch of technology that aims to mimic human behavior through the automation of human tasks. (Frankenfield, 2021) In Humanity's Destiny course, Professor Lon Appleby stated that the evolution of machines cannot be stopped, similar to how the biggest force humans contend with is evolution. How do we deal with the rapid transformation of society caused by AI? Are we supposed to fear the changes, or can we utilize it to our advantage? And most importantly, what is the relationship between AI and environmental sustainability and how can we improve it?

Machine Learning

To delve in deeper into these questions, we must understand Artificial Intelligence. AI's fundamental purpose is to learn. A machine's learning process is comparable to a human brain. (Rajnoch, 2017) Machine learning is a process executed by a program that aims to learn as it operates without human intervention. (IBM, 2020) Similar to the human brain, AI is made up of layers and connections. This network of connections is called the deep neural network. (Rajnoch, 2017) This neural network consists of everything a machine is programmed to learn from a set of data that is provided. As the machine progresses and learns, it provides an output of the compiled knowledge. A visual automation platform called Deepomatic collaborated with Light for Life Technologies to develop an image recognition program that detects signs of cancer. (Deepomatic, n.d.) This technology analyzes microscopic tissue images and performs its own diagnoses,

proven to be as accurate as trained medical professionals. The way this technology learns is through a neural network. As it analyzes various images, its neural network expands. Hence, it develops a better decision-making process and provides better findings. Think of it like the early stages of human life. As we grow older, our perspectives expand as we learn new things. The more we learn, the better our judgment becomes, for most people at least. Comparing it to the model of machine learning, programmers and engineers have developed a technology that learns just like a human would.

How do we deal with change?

As mentioned, Professor Lon Appleby stated that the biggest force humans contend with is evolution. The evolution of technology will only keep on going as we humans evolve. And as the universe decides to make our kind extinct, technology will stay, and our ideas will live on. Focusing on our current situation, how do we deal with AI's rapid growth and development? There will come a time when technology replaces humans in the workplace. According to Oxford Economics, 20 million manufacturing jobs globally will be replaced by AI by 2030. (BBC news, 2019) The assembly speed will be much quicker and more accurate, and there will be no opportunities for human error in the production. However, this results in 20 million jobs lost. How do governments adapt to that? My proposal is for the government to set a salary replacement budget in their agenda for all those that will be replaced with this technology. They could also provide a universal income, payment made to the entire population regardless of their status of employment. (Tucker, 2020) Or they could create new jobs that would incorporate humans and technology together in the workplace. These are only some rough ideas, and there could be a million other ways we could adapt to these changes, but the unpredictability of our future circumstances is what brings fear and uncertainty to our society.

How can we manage fear?

I am sure that almost everyone has heard the question ‘what if technology wakes up and decides to kill us all?’. This comes from our uncertainty of what technology may possibly eventually become. Most of us do not realize that technology will only go as far as humans want it to go. It is fundamentally based on our own decisions. AI is centered on human behavior. The possibility of it becoming sentient depends on the decision of the developer. And the possibility of it killing us all is slim, unless it is allowed by humans. Professor Lon Appleby also mentioned that we could explore technology just like how we discovered many uses for fire. The discovery of this tool was one of the very first steps to evolution. We are responsible for treating it either as a useful tool for crafting or as a weapon of destruction. This method of thinking should also be applied to how we explore technology. Are we going to develop useful tools or use it as a weapon to kill us all? It is all up to us.

Sustainability and Artificial Intelligence

Environmental sustainability is one of the main concerns with the rapid growth of technology. How can we incorporate technology and sustainability? AI runs on large quantities of data on servers that depend on energy. (Gow, 2020) According to a study in University of Massachusetts, AI is regarded as one of the top carbon dioxide emitters in the world. (Gow, 2020) However, there are also positive impacts produced by AI such as cloud platforms. Amazon, Google, and Microsoft, some of the largest tech companies globally, run on massive quantities of data. These three companies have incorporated an AI to store a large portion of data into a cloud platform, an internet-based data center. (Gow, 2020) This reduces the energy needed to power their large data centers. In agriculture, AI has also helped farmers monitor crops and

improve crop yields. (Gow, 2020) In manufacturing, AI has reduced production waste while robots provide better assembly accuracy (Gow, 2020). There are many other net positive impacts of AI on our environment that we should continue developing and building upon. In conclusion, there is a hope for a more sustainable future with the help of Artificial Intelligence.

Conclusion

As Artificial Intelligence evolves, it will come with many challenges. We humans should be prepared to adapt to the changes and incorporate technology into our lives. It is our responsibility to use it as a useful tool, and not a weapon of destruction. There will come a time when the universe decides to banish us all, technology will survive, our ideas will live on.

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