

Homework 4: AI Essay

Topic chosen

2- Present and future societal changes caused by the development of AI and deep learning. Changes to the work market, self-driving cars, interpersonal relationship changes.

Introduction

1) - Effects of AI on the job market

1.1. Industrial revolution

1.2. The digital revolution

1.3. The AI revolution

2) - Effects of AI on society

2.1. How the internet changed society

2.2. How AI will change society

Conclusion

Introduction

While asked about the future of jobs in the age of AI, Elon Musk replied with "There will be fewer and fewer jobs that I robot could do better than a human being."

AI might be faraway from a general AI but AI seems to be already ready to use in specialized tasks. In this essay, I go through the past, present and future changes related to the rise of AI and the advancement of technology in general.

In this essay, I refer to AI as both Artificial Intelligence and machine learning.

1) - Effects of AI on the job market

1.1. Industrial revolution

Before the industrial revolution

Before the appearance of the machine with the industrial revolution, jobs were mainly hand labor jobs requiring physical strength or attention to detail. The concept of craftsmanship revolved around the know-how of creating a complete product from beginning to end. Examples that I can state are shoe manufacturing, wood craftsmanship, and metal craftsmanship. Work usually used to take place in small workshops that are usually owned by a craftsman and/or a family business. It was even common for generations to work the same job.

After the industrial revolution

With the arrival of the industrial revolution, the job market started shifting gradually. We have started seeing more and more machines in the workshops. Workshops became bigger and needed bigger investments. Gradually, the craftsman becomes a worker that works for an hourly rate. [1] The worker complements the machines to create a product in a continuous loop. With the power in the hands of investors, the workers are finding it more and more difficult to compete with the machine.

The outsourcing of manufacturing jobs

As a result, we can see that manufacturing jobs have immigrated to poorer countries. With the rise of Chinese wages, industries like textiles have shifted to

even poorer countries to fulfill their needs. After having explored every poor country, these countries will eventually use machines to sustain their needs.

Effects on politics

Currently, in Europe and the United States, we can see that the population is very unhappy about this shift that happened in the job industry. This influence of technology has even fueled a new political era. Countries want to close their borders to keep the few low-skill jobs that they have.

1.2. The digital revolution

Jobs in the digital age

On the other hand, people now have to get a university education to be able to have a more comfortable job. With a degree in law, management or economy workers try to get a role in a large corporation. These jobs need a new set of skills. These skills usually involve the use of a computer. We can even say that companies in today's world recruit people to use a software. However, unfortunately, this dream is becoming more and more difficult to reach as the job market has already started shifting again. A number of jobs or even job sectors have started disappearing.

The Internet

With the arrival of the world wide web, a new kind of shift started taking place. Large industries like marketing, newspapers, and magazines that used to hire a large number of skilled workers are struggling because of social media websites like Facebook and YouTube. Media and advertisement European companies in Italy, France, and England have been crushed their new digital rivals. This had made these skilled workers the new blue-collar workers of today's age.

New internet jobs

On the other hand, the internet gave birth that never existed before: frontend developer, backend developer, full-stack developer, UX designer, UI designer, social media influencer, social media administrator.

The outsourcing of internet jobs

The most recent trend now in the job market is that even these new jobs are being outsourced just like what happened with manufacturing before. If China has become

the world's hardware factory, India might become the software factory. It has become common that companies rely on Indian developers to build and maintain software. While websites are becoming easier to create with a drag-and-drop platform like Squarespace and Wix. As we have witnessed before, the blue-collar work will soon expand once again to include even some software development jobs.

1.3. The AI revolution

Data economy

With the rise of Artificial Intelligence jobs will likely become centered around data instead of software. We have already started witnessing this. Jobs went from being centered around a physical product to software, to finally data. Companies have now realized that the value is in the data and not the software. They are getting reading of the new age of AI by accumulating as much data as possible. Data is the new gold. The big 5 data companies: Apple, Google, Amazon, and Microsoft, have already taken the top spots of the world's most valuable companies. We will definitely witness the rise of many new companies that implement AI in different fields.

AI companies

Netflix, Spotify, and Tesla are examples of companies that were able to climb the ladder quickly in a short time. Three of them implement AI in different industries: cinema, music industry and transportation. They all rely on user-generated data to feed their AI algorithms. [2] This proves to be able to have a big advantage over newer competitors as their algorithms are more trained than any other.

The future of the job market

The rise of AI companies will only continue in the future. We can expect that new industries, like health care, insurance, finance, research, will be disrupted by AI-driven companies. This will result in a new shift in the job market. A number of jobs will start to disappear.

Autonomous driving

Driving is a good example. Driving is a job market that fields a sizable portion of the world population. Taxi driver, bus driver, truck driver are all jobs that can disappear completely in the coming future. In this case, it is hard to imagine what the outcome

of this situation will be. Many companies are developing AI technology that will replace humans.

2) - Effects of AI on society

2.1. How the internet changed society

Society after the internet

The Internet started appearing in households around the year 1995 in the United States. In the early 2000s, the internet has reached household all over the world. This has had an everlasting effect on our lives. Everything changed; the way we think, communicate, travel, make new relations, etc.

Social relations in the age of social media

Social media has changed the definition of a friend or a relation. We now communicate more by messages and use even for a future partner online.

Political effect

The internet has even had a significant effect on politics. The Arab spring is an example of how the new possibilities to spread information has resulted in well-organized demonstrations.

2.2. How AI will change society

Society after AI

Just how the internet changed our lives, AI will change our lives as well. Society will become more and more reliant on AI.

AI-driven social media

We can already see that the new application TikTok was able to have a remarkable success. It is now, after a short time of its inception the second most downloaded mobile application. The algorithm is able to adapt to the input data created by the user. This made it possible to captivate the time and attention of teenagers around

the world. AI can help social media companies to make users more attached to the product.

The future of social interaction

We can also a world where social media can even replace the physical. Facebook by its acquisition of Oculus has demonstrated its vision of the future of social media. A world that blends both what's physical and what's digital. Can companies can even predict your behavior. They create fictional friends and customized experiences for users.

The shrinking of the job market

This new age can cause significant shrinkage in the job market. This will definitely have an effect on society in general. Job opportunities for not technical workers will probably shift more to entertainment, art, and tourism. However, we have to confront this serious issue. Theoretically, we can say that humans will always want to work. However, we should as a society regulators, acknowledge the seriousness of this threat. There will most likely be an era in the distant future will humans will no longer have many jobs that AI can't do. Will our continuous strive to efficiency this will eventually be a problem that we have to deal with. Universal basic income can be a solution to this problem.

Universal basic income

Universal basic income is the idea of paying a part of the totality of the population a basic salary. This is a paycheck that you do not have to work for. This might be enough to have full economical safety or a partial economical safety. The concept of universal basic income may seem very futuristic at first sight but it is a system that has already started being implemented by a number of countries. A number of Scandinavian countries offer a large set of benefits to their citizens. This helps them have more economic stability. It helps the unemployed, new mothers or anyone in a difficult financial situation surpass the hotel.

Effects on politics

We have started to notes that more and more people are starting to adopt a more socialist approach to politics. In the United States, low skill workers have demonstrated that asking for a drastic change. In the current elections, we can see that more and more people are starting to lean to the ideas of Bernie Sanders. A couple of years ago, we wouldn't have imagined that all this political change will

happen. However, this demonstrates that the age of AI, politics will change drastically as people's point of views will continue to be influenced by AI-driven social media.

3) - Positif effect of AI

I mentioned a lot of mostly negative effects of AI. However, we should also not forget that AI is technology that gives us a lot of benefits.

Health industry

We have now seen that AI has a number of applications in the health industry. Doctors are already using AI-driven application that can diagnose diseases thanks to image recognition of shapes. [3] The AI is able to compare the pictures captured thanks to vast learning experience data. The human can simply not match this level of image recognition.

Dangerous tasks

The power of AI can also help humans avoid dangerous work environments. It can perform tasks that could be a threat to a human worker. In situations like war, fire, helicopter driving or even car driving, AI can replace the human. This will result in a decrease in the number of deaths. Even overly stressful jobs like trading can be taken over by AI as it can even perform better than regular employers.

Helping us with daily tasks

Just how the Internet made our lives easier, AI can make our lives easier. We don't have to drive. AI can help prepare meals and cleans the house. It can even help parents and elders in difficult daily tasks.

Efficiency

In general, AI will make just make our economy more efficient. You will need less workers to execute the same tasks. This can bring large revenue to companies resulting in general prosperity. Not as we might think, and the economy less reliant on works can bring more prosperity. Humans can then focus on other priorities like taking care of children and traveling.

Conclusion

We should not be afraid of change. These changes should not be a reason for us to stop the development of technology. We should accept the challenge. Technology is the set of tools that brought humanity to the current advancement. We should always strive to push the development of new technologies.

Bibliography

- [1] - **Forecasts of AI and Future Jobs in 2030: Muddling Through Likely, with Two Alternative Scenarios**, William Halal, Jonathan Kolber & Owen Davies, Journal of Futures Studies, December 2016, 21(2): 83–96
<https://jfsdigital.org/wp-content/uploads/2017/01/JFS212Final%EF%BC%88%E5%B7%B2%E6%8B%96%E7%A7%BB%EF%BC%89-6.pdf>
- [2] - **AI AND JOBS: THE ROLE OF DEMAND**, James Bessen, NATIONAL BUREAU OF ECONOMIC RESEARCH, 2018
<https://www.nber.org/papers/w24235.pdf>
- [3] - **Health Care, Capabilities, and AI Assistive Technologies**, Coeckelbergh, M., Ethic Theory Moral, 2010
<https://link.springer.com/article/10.1007%2Fs10677-009-9186-2>