The Meaning of Robot's Future for Human Existence

During the Industrial Revolution, which began in the late 1700s, people were facing the challenges of being replaced by the automation. Work done by humans are taken over by the machines. Today, in the 21st century, people are having similar concerns as a result of the innovation of Artificial Intelligence (AI). AI is an advanced technology nowadays that suggests robots have the ability to take over human jobs with precise programming to perform basic job tasks with specific orders. It is believed to bring the future into an automated world and will lead to the high rates of unemployment in both developing and developed countries. However, not all careers are at risk of being replaced. The possibility of the jobs become automated depends on the nature of the industry. In order to deal with the job loss problem caused by the improving technologies, the government can propose some plans to protect people's jobs. This essay will evaluate in what areas the jobs are potentially being replaced by the Artificial Intelligence and what are the possible solutions that can be launched by the government.

In the report of Frey and Osborne (2017), it is predicted that about 47 percent of the overall United State workers will meet a chance of being replaced as a result of the new generation of technology, which indicates that the AI will causes a great amount of job losses in the future workforce. However, some jobs are sensitive in terms of being automated, some remain in the stage where they can hardly replace with the computers. Jobs are at the high risk of becoming automated shared similar characteristics, by practicing four different intelligences. Those intelligences are the respectively defined as the "Mechanical, Analytical, Intuitive, and Empathetic intelligence." (Huang and Rust, 2018) All of these intelligences function in different ways, therefore, they are threatening different areas of jobs.

The mechanical intelligence is believed to be the most practical one out of the four intelligences. It can perform certain actions that does not require knowledge, face to face communication, or experience, therefore, it is applicable on many unskilled job tasks. Examples provided by Chui, et al. (2017) are the food service industry. Some tasks in a restaurant are automatable, such as ordering and serving the food, cleaning and checking. Works that have an assembly line, the manual tasks such as packaging, or the construction works that involved with physical activity and specific orders are also examples of jobs that can be taken by the computer programme.

Another feasible intelligence is called analytical intelligence. The analytical intelligence is considered to have the ability of practicing human jobs that are associated with adopting information and making arrangement based on a set of rules. This is agreed by Levy (2018), who gives several examples of the jobs that can be replaced by this type of intelligence. One of them is the bank teller. Due to the existence of ATMs, a huge part of the bank tellers' job is gone. It is reasonable to predict the job of bank tellers will disappear in the future once the technology is able to recognize one's identity and security code, make the transaction and read the dollar amount on the cheque. Another example of job being replaced by analytical robots is the medical transcriptionists. The medical transcriptionist can be replaced by the technology of "speech recognition" software. The only barrier that prevent it being replaced right now is because the software is still unable to recognize a human voice properly, it might cause a few mistakes.

While the mechanical and analytical intelligence are having a high possibility of being operated in recent years, intuitive and empathetic intelligence are still not yet being perfectly developed to replace humans. The intuitive intelligence is the robot with creative thinking skills and is able to solve problems according to the situation, applicable on jobs such as sales manager, lawyer and doctor; whereas the empathetic intelligence is about emotions and social ability, applicable on therapist types of job (Huang and Rust, 2018). There is a real life example of using the intuitive intelligence, which is the creation of the AlphaGO. (Granter et al. 2017) AlphaGo is a robot developed by Google DeepMind and is programmed to play the board game Go. It first played a tournament against the professional Go player Lee Se-dol in 2016, and then another game with the world champion Ke Jie in 2017, both masters ended up defeated by the robot AlphaGo. (BBC, 2016, 2017) The two duels show that through the precise coding, computer intelligence can learn from the experience and make rational, creative decision. The robot named Sophia (Hanson Robotic, 2019) is also an example in reality of the application of empathetic intelligence. She is able to interact with people with her own opinions. However, there are a lot of doubts towards robots like AlphaGo and Sophia in terms of limitation. It is argued by the experts in the industry that those robots are only able to operate one program per time, therefore, they are not fully suitable in some human position that require various thinking skills at the same time. It is also questioned by the public the possibility of the robots actually thinking like a human, some people suspect the expression of them are just parts of the coding (Lu et al., 2018). Hence, jobs contain experience, cognitive tasks and require emotions and social ability are less likely to be replaced in a short time.

Large amount of unemployment will result in great loss of tax revenue for the government, and it can lead to a financial crisis. However, with three possible solutions the government can avoid this situation. The first one is to retrain workers and move them into other industry since there will be high demand in several categories. According to Manyika et al. (2017), specific areas like technology, education, professional services and healthcare are expected to have a considerable amount of jobs created. For the technology industry, it is reasonable that in the future, there will be the great demand of programmers, computer engineers and computer scientists to help establish higher level of automations. As noted by Wilson et al. (2017), technology jobs like the “Trainer” for the AI is needed as the robots are currently waiting to be developed to be more human-alike, for instance, one of their job involved with contents like discover errors in algorithms. Another notable industry that will be contributing for the employment in the future is the healthcare, personal services industry where the robots are not yet able to take over the jobs. The medical industry is estimated to “add around 5 million new jobs over that decade.” (West, 2015) due to the aging population and the growth of fertility rates. Therefore, even though the advanced technology may let many people lose their job, it also creates lots of new jobs in various areas at the same time, and the government can move the displaced workers into those new labour markets.

Besides moving people into valuable industries, the government can invest in higher education and support the change of ways to educate children from the primary education. As mentioned in analysis from the previous paragraphs, jobs that require high-skilled workers cannot be easily taken by the computer. Conversely, the needs of high-skilled workers will increase a lot in the future. Furthermore, it is believed that the creative industry such as art and design, can hardly replaced by programming. However, most of the present workforce barely requires creative skills (Chui, 2015). Hence, the government should develop a new education system from the primary education. Currently the education system is teaching students to follow the instruction and memorise knowledge from textbook. Encouraging children to think independently and be

creative is becoming an important topic.

Lastly, the idea to tax the robot application is considered important for the government to cover the loss in tax revenue. Gasteiger et al. (2017) state that the economies will face “stagnation” in terms of high unemployment rates, since the result of low skilled workers being substituted by robotic technologies is leading to huge loss of tax revenue for the government. It then causes the government to struggle to help the unemployed workers to find new jobs or provide funding for training and education if they are not receiving enough tax revenue. Eventually, the high rates of unemployment will continue to occur and enlarge, lead to serious financial burden. Therefore, the government should consider taxing the robot activity.

To sum up, this essay has investigated the jobs that are most at risk in the future where AI is being widely applied in different industries. It also examined the possible plans the government can practice to deal with the unemployment problems. Jobs associated with predictable actions and the processing of information are most likely to be automated, whereas the creative thinking and interacting skills are still valuable, which is difficult to be programmed. Based on the result of the analysis above, the government is suggested to provide training projects for unemployed workers in order to help them make transition into other industries. The government can also invest in higher education and increase creative educating system due to the changed forms of fundamental skills in the future workforce. Finally, the government will have to hold an idea of taxing the utilization of AI, which should cover the loss of revenue due to the decline in employment.