Algorithms may adapt to human beings

In March 2016, AlphaGo, an artificial intelligence program that plays games, defeated the go player Lee sedol, who has won eighteenth world champions. After this incident, people have attached importance to algorithms, a set of instructions that solve some complicated problems. Nowadays, algorithms are the most widely used in artificial intelligence and automation, which free people from tedious and repetitive work, increase productivity and the overall economic level. However, algorithms lead to some problems in life, especially in the workplace, such as higher unemployment and increased bias. If people do not do anything change, they will be replaced quickly. For example, the automated equipment of Foxconn Technology Group, which is the largest contract electronic manufacturing in the world, replace workers on the production line. In the end, people fall into anxiety. In this paper, the statement is that artificial intelligence and automation should adapt to people in the workplace to relieve anxiety.

There are two obvious changing in the workplace. One change is the number of unemployment. In manufacturing, machines can replace three to four people to complete production so that employers are no longer willing to hire these workers who are engaged in single work. Calum McClelland, who is the managing editor of
IoT For All, said that “McKinsey reckons that, depending upon various adoption scenarios, automation will displace between 400 and 800 million jobs by 2030, requiring as many as 375 million people to switch job categories entirely”(2). The statistic shows that there will be a large number of workers facing unemployment in the future due to automation. Also, the appearance of machine learning allows workers to be replaced faster. Machine learning can simulate human learning behavior and produce new data based on existing knowledge. It implies that algorithms can rewrite themselves, leading to an increase in unemployment.

Another is a change in the way of working. In recent decades, we can see that artificial intelligence has applied and penetrated more and more fields. One of application is in medicine. In the past, all operations were performed by doctors, doctor assistants, and nurses. But in recent years, there is a new invention called surgical robot first used in California which makes the accuracy of surgery exceed the limits of the human hand. Matt Beane who is a project scientist and assistant professor at the University of California said that “This is a four-armed robot that holds sticklike surgical instruments, controlled by a surgeon sitting at a console 15 or so feet away from the patient” (2). It demonstrates that doctor and robots do the current operation together. This example shows the transformation of the way of working from the cooperation of people to the cooperation of people and machines.

Through a couple of the changes we discussed above, there is no doubt that people will fall into anxiety. So, it leads to a question: whether is algorithms adapt to us, or people adapt to algorithms. From point of view, I think automation and artificial
intelligence should adapt to humans. The first reason is that human adaptability is stronger than machine so that people can handle problems quickly. There are many companies which overestimate automation now. We all know that “we can move forward by walking, swimming, jumping, climbing and crawling – and we can do so even if we lose the use of a limb” (Buchel and Floreano 2). It demonstrates that people can adapt their bodies to the different situation. For AI, it is the truth that “Developments in robotics also mean that new robots made of soft materials can physically adapt to unforeseen objects in the physical environment” (Buchel and Floreano 2). However, “adaptability is limited to variations within a restricted category of objects or events” (Buchel and Floreano 2). It shows that the adaptability of the machine is limited. In the case that both the person and the machine are injured, the person can also be active. However, the machine will be paralyzed, which will hinder the development of the things. Thus, if automation should adapt to people, the problem will be solved quickly.

The second reason is that it will increase productivity. In the past, machines and people had their division of labor, like machines did many single repetitive tasks, and humans did some other complicated work. But, in the current era, with the rapid technological development, you can see a variety of machines in the factory to help people work. According to the study in Paul Daugherty who is Accenture’s chief officer, she said that “The technology can learn the workers' capability, help them understand best practice and help workers do higher-skilled jobs with higher quality, higher productivity, more effectively,” says Daugherty”(2). It means that robot can
adjust itself to work with people by learning people’s abilities and preferences so that people with robots improve productivity in the working. Jennifer Chu who is a writer covering mechanical engineering in MIT News said: “If the robot can provide tools and materials so the person doesn’t have to walk over to pick up parts and walk back to the plane, you can significantly reduce the idle time of the person”(1). It also proves that robots can save time by serving people according to their needs, which improves efficiency.

The third reason is that it can reduce bias in our daily life. Nowadays, we have to admit that algorithms are biased. Eder, who is COO and founder of NewtonX, the world’s first AI-powered expert network, said “if you run a search on a professional network for software engineers, you are most likely to see a first page of results consisting exclusively of Caucasian men. As you engage with the profiles of these candidates, and request more, the AI will deliver candidates with similar attributes to the first wave, very likely resulting in more white men”(2). It not only indicates that algorithms are biased on social media but also reflects the facts that the person entering the data is biased. Letting the algorithm to adapt to humans, the bias will be greatly reduced since these prejudices were created by people. Humans can “set rules to ensure that algorithms are not a racist”(Eder 3) and make algorithm developer diversity. In the long term, the bias will decrease.

Of course, there will be people who say why algorithms adapt to humans. Is there is possible to make people adapt to automation and artificial intelligence? Maybe it is possible. The reason is that the algorithm is stronger than people so that humans follow the algorithm to make society develop better. In May 2017, at the China Go Summit, the Alpha dog confronted the Chinese player Ke jie, the world's number one
player in Go. The result was a three-to-one victory over Chinese players. And, the development of AlphaGo just uses three years. Here we can see that the development of the algorithm is faster than the development of human beings. However, algorithms are not as smart as humans. Mortenson who is CEO and founder of X.AI and an expert in leveraging data said “AI isn’t very good at jobs that require creativity, empathy, critical thinking, leadership, artistic expression, and a whole host of other quality we traditionally think of as “human”(2). It shows that there are still many things that the algorithm cannot do. Also, if the initiative is given to the algorithm, the future will be more unpredictable; instead, if people seize the initiative, people have the ability to solve the problems brought by algorithms and make the society more harmonious. Thus, automation and artificial intelligence adapting to human beings will be a good choice.

The most important thing during the process of the algorithm adapting to the human process is that human beings must continuously learn new knowledge and improve workers ability to protect them in this changing. No matter what new situation in the future will threaten people’s career, people cannot be replaced. In this era of rapid development, one career is quickly replaced, and another new career will be created, which requires them to learn some new knowledge by themselves. For example, dishwashers are replaced by self-service dishwashers, resulting in people who wash the dishes. People who rely heavily on the workforce are replaced, and they can learn some new skills to contribute to social development. At the same time, people can also cope with problems brought by algorithms in the future.
In conclusion, there are still many uncertainties about artificial intelligence and automation in the future. But, we can see that there are many changes in the workplace now, such as the way of working and the number of unemployment. Thus, I think letting automation and artificial intelligence to adapt to people will be a good choice due to increasing productivity, high human adaptability and reducing bias. In the meanwhile, algorithms adapt to people, which means that people take the initiative. So people can make adjustments in time according to the problem brought by algorithms. And people should learn a lot of new skill areas to enrich themselves so that they are not so easily eliminated by society.
Word Cited

Beane, Matt. “Young Doctors Struggle to Learn Robotic surgery- So They Are Practicing In The Shadows”. The Conversation, 9 Jan. 2018,

Buchel,Bettina and Floreano, Dario. “Tesla’s Problem—Overestimating Automation, Underestimating Humans”. The conversation, 2 May.2018,


http://news.mit.edu/2012/robot-manufacturing-0612

McClelland, Calum. “The Impact Of Artifical Intelligence-Widespread Job Losses”. Iotforall, 17 Aug. 2018

Mortense, R. Dennis. “Automation May Take Our Jobs—But It Will Restore Our Humanity”. Quartz, 16 Aug. 2017,