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# To What Extent Can Automation Be Helpful In The Workforce

In this report I will be discussing the controversy of unemployment caused by automation in the ever evolving workforce. It is important to research this topic because of how it will affect us in the imminent future. This essay will be analyzing the different viewpoints of the public, government and companies to examine what they consider on this topic. I have decided to research on this topic because I believe that there are numerous misconceptions on the issue.

## Global Perspective

Automation could help solve the labor shortages in farms in the United States. (NRDC) has stated that in North America, approximately 20% of all grown fruits and vegetables are wasted due to the lack of labor available (p. 6).

Along with this, Agriculture has written that an additional issue farmers are facing is that the prevailing labor force is reaching their retirement age and younger workers aren't replacing them. With these issues, jobs such as farmers are in dire need of an advanced method to harvest crops such as Abundant Robotics. Techcrunch. com has written about how Abundant Robotics has automated the once tiresome task of apple picking which requires establishing which fruit are ripe enough to be harvested and using the proper technique so that the apples won't get bruised, all whilst keeping harvesting expenditure and environmental impacts nominal. Another company, Blue River Technology has created a robot that uses artificial intelligence to detect weeds so that it can spray herbicides only in affected areas. This method allows farmers to save up to 90% of herbicide which can let them conserve money. Mckinsey reports that share of labor in agriculture has reduced from 40% in 1900 to 2% in 2010<sup>5</sup>. Due to the scarcity of working labor, robots can be used to benefit the company both economically and environmentally. Automation could help work without human supervision which can lead to further productivity. Automation can help factories reduce mistakes whilst improving accuracy, speed and therefore productivity. Based on the Mckinsey scenario modeling, they predict that automation help benefit productivity growth worldwide from 0. 8% to 1. 4 percent per annum. Bloomberg has reported around how the company Fanuc, has created a whole workforce of autonomous robots and has predicted that the amount of new industrial robots installed in China by 2019 will be greater than 400,000. Fanuc is currently one of the largest maker of industrial robots in the world.

The robots can work overnight to assemble components for workers during the day which

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increases the productivity of the factory floor. Fanuc also states that their products are manufactured with 99.99% accuracy. Although, robots will most likely be replacing jobs with less skill biased tasks and more repetitive tasks. But McKinsey reports that the optimum approach to obtain the highest amount of productivity is to pair human and robot together<sup>5</sup>.

National Robots can operate on jobs that would be dangerous for humans. On July 13, 2018 there was an explosion in a Chinese chemical plant resulting in 19 deaths and 12 injured. This wasn't the first blast in China caused by a chemical factory. Another explosion occurred in 2015, this time killing 173 people and the catastrophe costed roughly \$1 billion US Dollars. This devastating event also injured 800 others and could have been obviated if robots had been working there instead of humans. An additional problem is that younger Chinese people don't want to work in such repetitive, dangerous jobs for an inadequate salary. The robots working in the factory are around 5 times more productive, don't get tired and with accuracy and swiftness, usually lacking in humans. Experts also say that by 2038, China will have tripled the productions of ammunition due to automation of robots and artificial intelligence. Due to automation, chemical and ammunition factories in China could be safer and further productive in producing dangerous materials which could injury humans. Robots can eliminate the chance of human error, therefore creating a more accurate product. Currently, companies are trying their best to prevent inaccurate products and going all the way to even force the workers to stop talking to "ensure accuracy and their own safety".

Although this may be effective, it has increased the overall suicide rate in China and companies are even installing suicide nets to prevent this. Companies like Foxconn are especially using robots when producing mobile phone components which are usually very tiny in size yet complicated. Performing repetitive tasks often causes workers to become bored almost immediately and causes an increase in potential human errors not to mention workers getting tired. Automation can help solve this especially in repeated work patterns. Future Scenarios Unemployment due to automation is a scenario that is going to occur with no doubt as jobs will be replaced by robots and threatens around 77% of all jobs in China. In China, Everwin Precision Technology fired 90% of their working staff whilst the remaining 10% were able to retrain to inspect and command the new robots. Although 90% of the people were laid off, McKinsey suggests that people will encounter new jobs due to automation just like the decline in agriculture and manufacturing in the United States which were followed by the establishment of brand new jobs<sup>5</sup>. From 2000 - 2008, robots led to an estimated 8 million to 10 million jobs. The International Federation of Robotics has conducted research and shows that in the United States automotive manufacturing sector, between 2010 and 2015 there was an increase by 230,000 jobs. Retraining workers to work with robots is a recommended solution instead of laying them off. McKinsey reports that around 50% of all jobs can be automated if some changes were made but the White House suggests that only 7% of the population would be affected by 2025. This means that for the vast majority of us, there's still time to relearn and

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adapt to automation. But Mckinsey believes that companies located in countries with relatively high economies will likely retrain and deploy more than 10 million workers, which has happened in the past20. I believe that this solution is the most likely to happen.

## Conclusion

My view on automation is that it is a remarkably enormous issue and that there are many viewpoints on it. My understanding of the topic has changed extremely as I used to think that automation was a small issue only affected those at big factories like the semi automated Tesla factory but not at this extent. In conclusion, I presume that this issue will affect me because soon, we will be graduating from college and trying to find jobs that are most likely not existing right now and I believe that if I research this topic now, I will be better equipped for the very imminent future. I feel that I do not yet have a role to play in this issue but soon will. After researching about this topic, I have gathered different viewpoints of the matter and has influenced my view on how robots can be used in an assortment of different tasks and jobs that can benefit us humans whether it be GDP or us physically. I have learnt substantially on this topic and I conclude that we should appreciate and embrace what will be coming after all, it is inevitable that companies will try to find different techniques to decrease costs, and to increase productivity.

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