Artificial Intelligence-Application, and Impact

Executive Summary

The objective of this project is achieving a proper insight about the artificial intelligence (AI), its modern applications and the impact of the improvements in this field on society and economy.

First, we provide a brief overview about the AI and its evolution is prepared. It is found that AI is an interdisciplinary field that its goal is developing systems that having the ability to do intelligent tasks such as reasoning and learning. By reviewing the history of AI, it can be seen that understanding the cognitive processes plays a crucial role in the progresses of this field.

Then, we investigate "IBM Watson" as a cutting-edge AI. We study the first appearance, its features, the way it learns and works and current and future application. We observed that Watson can help humans in different industries ranging from healthcare to the food industry.

After that, the negative socio-economic impacts of AI are examined. It is found that the decline of employment opportunities can be considered the most significant threat to the societies. Also the damages to the ecosystem and increases of resource's prices are mentioned as indirect harmful impacts.

Finally, we concluded that by taking a strategic approach, such as defining higher-skills jobs before implementing the AI systems, society can take advantage of AI systems such as IBM Watson in different domains.

The implementation of AI systems in order to decrease the costs and increase the productivity and efficiency should be considered as strategic process and all aspects affected by this

implementation should be investigated. China is a good example providing insight about not having a planned approach. Economic growth in China is controlled with both manufacturing exports and investments in different fields such as housing and factories. There should be some returns on these investments. It means that houses should be occupied and rents should be paid. One of the key players for generating this return would be Chinese households. As a result, they should spend more on products and services. Nonetheless the low income and the tendency to save are the barriers. It is worth noticing that replacing workers with robots makes this situation tremendously difficult. Based on the International Federation of Robotics, China will have more installed manufacturing robots than any other country by 2017(China's Troubling Robot Revolution, 2015). It can be seen that China has not taken a strategic approach to implementing the AI systems in different fields and firms.

One way to avoid this situation is to design well-defined policies and rules to minimize laying off staff whose position is occupied by an AI system as follow: "Companies/business firms that are going to implement an AI system into their field, should first define higher-skill jobs and train/educate the employees whose positions will be at risk because of this implementation."

To conclude, by doing a brief review about artificial intelligence and its new generation systems such as Watson, it can be said that AI systems can help people do their tasks better in a variety of sectors including manufacturing, business, food industry, healthcare, etc., because they are fast, precise, explicit and they are better in numerical and repetitive computations. Nevertheless, they cannot displace humans due to lack of qualities such as intuition, common sense, love, emotion, loyalty, etc. As a result, by taking a systematic approach such as enforcing appropriate rules mentioned above, societies can minimize the harmful impacts of AI and take advantage of implementing them.