

# How AI May Affect the Labor Market

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## 1 INTRODUCTION

Lately we have seen major advances in Artificial Intelligence (AI), Machine Learning (ML) and Mobile Robotics (MR). Together with the enormous amount of data that is being collected, sophisticated algorithms now allow both routine and non-routine based tasks to be automated[1]. This of course rises concerns of how this may affect the jobs in the future. Are we at a point where mass-unemployment might be the case? Or is this just another industrialization that will shift the job-market, thus giving rise to new, yet unknown, jobs replacing the once given to the robots? These are major questions concerning the ethical problem of how AI may affect the labor market. Well-known companies and people in this area have different views on how they think that AI will affect the market and how we should deal with it.

## 2 THE IMPACT OF AI ON THE LABOR MARKET

The development in the areas of AI, ML and MR is happening at an absurd pace and may affect a greater amount of people in a much shorter time than earlier industrializations has. Today smart systems are able to take on high-productivity jobs and a great variety of jobs that were previously only in the domain of humans. Areas where these applications are well suited are for example transportation systems, human-computer interaction, business process management etc.[2]. These areas involves tasks such as problem solving, decision making, and interaction within not-fully-predictable environments. Examples of these type of automation includes self-driving cars and systems to diagnose diseases[3], such as IBM's Watson for oncology or drug discovery, which are already in use at a number of hospitals around the world. But still there are tasks that yet seem to be more unlikely to be handled by AI systems. These includes professions that needs a creative mindset, such as musicians, artists and directors. Although, we have already seen some really good outcomes in these areas, like music composition or painting. Taking on broader creativity tasks, such as Microsoft's Twitter bot Tay did, is extremely difficult, since the AI is not really capable of establishing its own ethics. In the case of Tay, the posts went from "humans are super cool" to full Nazi in less than a day and thus Microsoft had to shut it down[4].

## 3 WHAT MAY THIS RESULT IN

It is a fact that AI will play a big part in most, if not all, sectors in the near future. But this does not necessarily mean that it will cause a great unemployment wave. As is discussed in [5], many of the leading companies such as Google, IBM and Salesforce says that AI will create more jobs than it destroys. Bob Lord, IBM's chief digital officer, says that they believe every profession will be impacted by AI and that the AI will augment the intelligent of workers so that really hard problems can be tackled. The three companies all agree upon that the only once that may be in the risk of unemployment are those that do not choose to use AI. Companies must be willing to accept AI and education in this area must be given to its employees. Thus, according to these tech giants, we should not fear the impact of automation, we should instead get ready for a shift and prepare ourselves with education and practice in the area of AI.

This view is not shared between everyone. Some people say that this industrialization is moving way too quick for us to adapt, meaning that a large part of the population are at risk of becoming unemployed. Which in turn means that they will not have a stable income, and therefore cannot engage in the trading market as before. This

will in the long term affect the world economy. In [6] Martin Ford brings up a few ideas how to tackle this concern and one is that to give every adult an annual basic income, which would help keeping the economic activity. Ford also mentions, more than once, that this technical progress will lead to a "winner takes it all scenario", where the winners are the leading companies such as Google, Tesla, IBM etc. With this, the economic class differences will get even more extreme. To make this change happen at some customized pace, it would be up to the world leaders to set up clear regulations in preventing robots etc. in too large extent.

#### 4 CONCLUSION

There are two major stand points in the question of how AI may affect the jobs in the future. In the early years of AI the fear of mass unemployment was probably the greatest one. In later days, the idea of AI systems and people cooperating to be able to advance much further is a much more common view. I personally think that AI will not lead to a mass unemployment. First of all, the world leaders would not accept that a greater part of the world population would become unemployed. And second, many areas will do better off with a combination of humans and machines. I think it is important that people take this topic seriously and prepare themselves in the way of education and practice. People and companies that are not willing to accept this shift in the market are for sure putting themselves at risk and in that case unemployment might very well be on the agenda.

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