Special Conference on Artificial Intelligence (SpCf. on AI)

The labour market and AI

Research Report

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"Out of this world"

Forum:	Special Conference on Artificial Intelligence (SpCf. on AI)
Issue:	The labour market an AI
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Introduction

Nowadays, Artificial Intelligence (AI) is one of the most discussed, key topics of our society. Right now we can see that artificial intelligence is developing rapidly, and gradually changing all parts of our lives, including the structure of the labour market. As it continues to change at a rapid scale, it is transforming the number of jobs, the amount of work humans have to do and how we work in general. In order to understand this evolution of Ai, we have to dive deeper into the nature of artificial intelligence and what impact it can have on the labour market as we know it today.

Definition of Key Terms

Artificial Intelligence (AI):
A technology that impersonates human intelligence.

Chatbot:
An AI that can mimic a human-to-human/real life conversation.

Data mining:
Searching for more data to make further research and developments possible.

Generative Artificial Intelligence:
An AI able to to create different media (texts, images, videos) when given instructions (e.g. Chat GPT, Invideo AI and Midjourney)

General Overview

The relationship between the labour market and AI is a very complex issue. Artificial intelligence is rapidly changing the labour market, and people fear that it will eventually result in countless job losses, wage inequality and the over modernization of professions that require a higher amount of human resources than computers.

The progression of AI in the labour market can be traced back to the mid-20th century, when computer algorithms started to be developed. After the introduction of industrial robots and many more technologies, these were started to be used in healthcare and finance. However, the conditions of AI, as we know it today - advanced formulation, processing all different kinds of information, such as text and voice input, etc. - was not introduced until the 1990s, 2000s. As a consequence of the always improving technologies, studies and data-driven research, artificial intelligence could make a significant improvement in fields such as deep learning and machine learning.

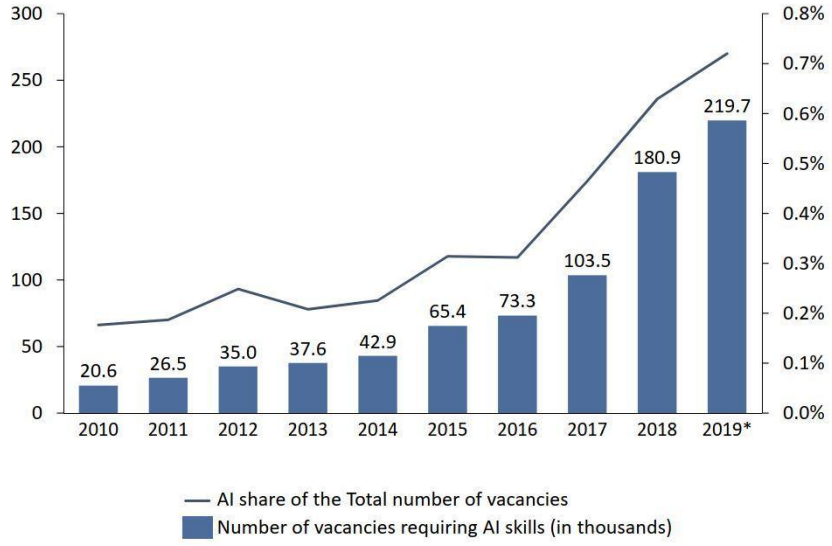
From that point forward, there was no turning back, AI started to gain ground on the labour market. Studies convey that the demand for AI-skills in different sectors are increasing. These are occupations where they are working on the development of AI, namely AI researchers, different types of data scientist and machine (learning) engineers. Additionally, a significant income difference can be

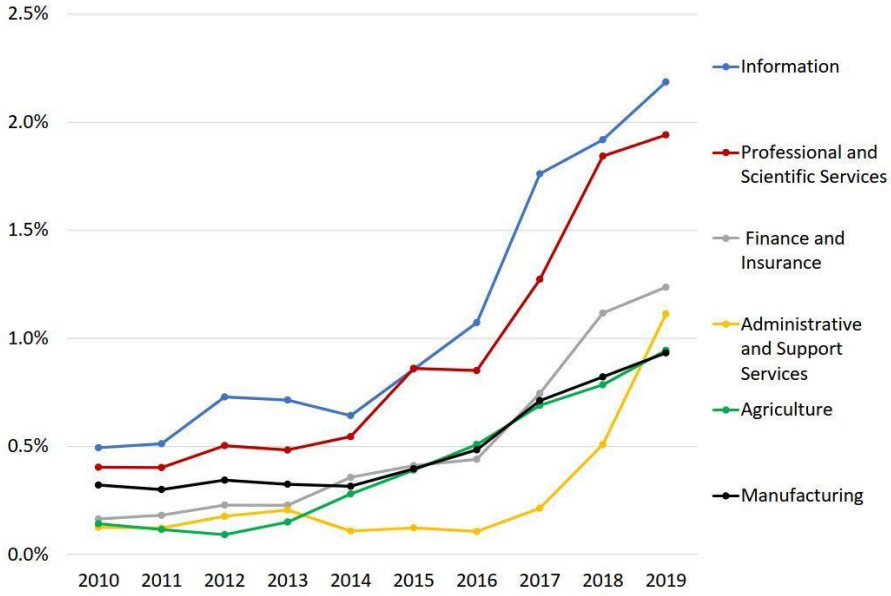
observed here, hence the workers of these jobs have a higher income due to the higher level knowledge they require.

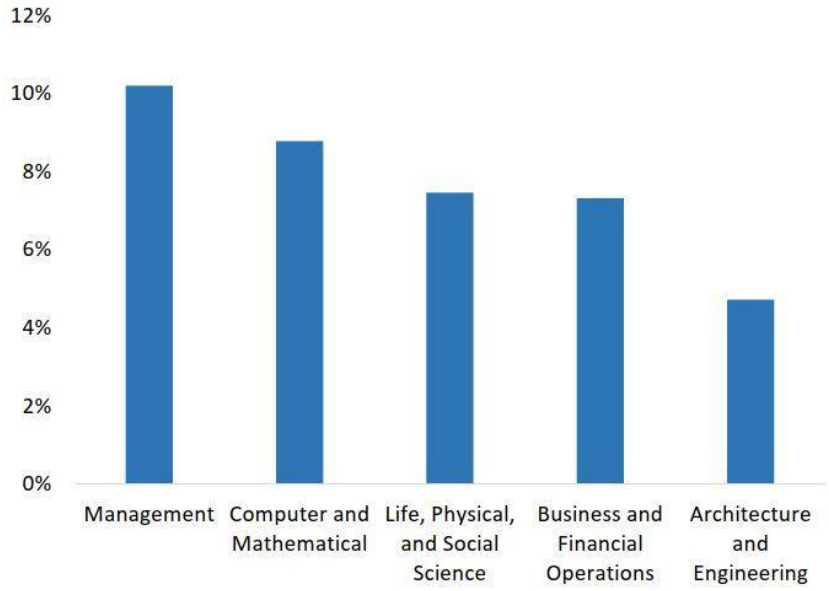
This drives us to the next key aspect of the issue: the way AI is completely transforming and terminating jobs, and the question of wage equality.
It is indisputable that artificial intelligence is creating plenty of new opportunities and helps keeping up with the rapidly changing modern world and job market by allowing workers to perform tasks more effectively and efficiently (with the help of AI techniques). On the contrary, AI is taking away the jobs of people at a slow pace. One reason for that is the fact the latest developments of AI can effortlessly replace human resources. A further reason is that numerous jobs expect high AI-skills from their labourers, the possession of which is not fairly awaited from everyone, for example from elderly people. This enlarges the skill gaps within the labour market as well, since the workers who possess higher level knowledge in the fields of AI, computers, engineering and informatics, will have a greater advantage.

The future of artificial intelligence is still not certain, yet it can be confidently said that the technologies are still going to expand, and will exert an impact on the labour market. Additionally, it is important to note that the regulations, solution attempts, etc. of certain governments, or more narrowly certain sectors, companies etc.; and the extent to which artificial intelligence can continue to evolve will considerably influence the future of AI, and its impact on the global labour market.

To portray it with numerical evidence, the following statistics show the significance of AI-knowledge for different occupations over the years and the differences in wages:







Major Parties Involved

United States of America (USA):

The biggest user of artificial intelligence globally, with major tech companies like Apple, Microsoft, etc. The government is really supportive of AI, there are countless researches with new ideas and technologies.

China:

Owing to rapid development in the last few years, China became a huge competitor on the AI market. The government and universities both play a significant role in the development of new technologies. There is also a need for new innovations. The country's goal is to become a world leader in AI innovation by 2030.

United Kingdom (UK):
The UK is also a notable country in the field of artificial intelligence. They focus extensively on the ethical side of AI development. Among others, prestigious universities (e.g. Oxford University, Cambridge University) help the country in this process.

Canada:
Like the UK, Canada also focuses on innovations and research. In 2017 they established the Pan-Canadian Artificial Intelligence Strategy to support collaborations and promote research.

Timeline of Events

1940	The Axis used Enigma code was deciphered by Allied scientists using AI
1956	John McCarthy coined the term 'Artificial Intelligence'
1960's	AI research is in its early stages, the main focus is on problem-solving and language-translations
1966	The first Chatbot was invented by Joseph Weizenbaum
1980's	Artificial intelligence is beginning to be used in healthcare
1990's	The birth of Kismet, the first robot equipped with emotions
2011	Voice recognition on iPhone and the birth of Siri
2014	Alexa, a virtual assistant, becomes a primary tool on Amazon devices
2017	Sophia the Robot becomes the first robot to receive a citizenship
2017	The music album 'I AM AI' is launched by the artist Taryn Southern and Amper, an AI software which composes music
2020	GPT-3 is launched, which is a revolutionary tool used for automated conversations
Present	AI has become an inseparable part of the workforce
2020's	Through data mining AI is enabled to outperform humans in many tasks

Possible Solutions

Based on the aforementioned information, we can confidently say that AI has slowly become an essential part of our lives and the job market, and it is still going to improve. For that reason, it is crucial to find possible solutions to deal with the risks of AI and make use of the benefits of it at the same time. For instance, implementing proper regulations is essential. This means that social safety nets should be established to ensure that artificial intelligence is used in an ethical way. These safety nets would also provide support to people who lost their jobs due to the expansion of AI, and would equalise the wages of people who work in sectors where AI already plays a bigger role. That way, mass unemployment could be slowed down.

Furthermore, it is also important to educate workers, companies, etc. about AI. Hence it would be beneficial to hold training programs and workshops, where people could learn about all the advantages and disadvantages of AI and how it can affect the labour market.
Needless to say that the development of artificial intelligence will only accelerate more, and more jobs will be at risk, but with cooperation and education, we might make use of the benefits of AI and save these jobs.

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