

Blog post for AI4Labour webpage.

Preparing the Workforce for an Automated Future

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Over the past few years, artificial intelligence has experienced a remarkable development. The surge of deep neural networks, with the subsequent development of computer vision and foundational models, has gradually allowed machines to perform increasingly better at tasks that were previously reserved for humans. In fields such as object recognition in images or text translation, the latest developments are highly competitive compared to those achieved by biological beings.

However, the rise of artificial intelligence has been the catalyst for making the general public realize that this technology has arrived and is here to stay. The presentation of the OpenAI's chatbot ChatGPT 3.5 grabbed headlines and had the fastest user growth in history. At the same time, there were also voices calling for a halt to such developments, focusing on their potential negative effects. Among these effects, the danger of incorrect answers provided by models like ChatGPT and the risk of rapid automation of a great number of tasks, were listed.

Regarding the first point, it is clear that, just as people had to learn to drive when the car was invented, people also need to learn to use artificial intelligence models. That involves getting used to verify important information, learning to evaluate their responses, and being cautious with the information shared in the chat (after all, everything written in it will have passed, in one way or another, through the systems of the company providing the service). Additionally, the emergence of models capable of generating realistic images can impact our ability to stay informed, as a photography, or even a video, could be entirely artificially generated. But it is also true that photographic manipulation is not a new invention, and until now we have managed to stay relatively informed despite it.

Perhaps the most concerning aspect is the second point. Although current models are not capable of completely replace a programmer, a doctor, or a lawyer, they can take on some of the tasks associated with these professions. Thus, fewer people could handle more work than before, reducing society's need for professionals to meet the same needs. This could lead to a decrease in labour demand in many areas of the future. At the same time, the skills required to perform many professions would change, with skills associated with automated tasks becoming less necessary, and other skills that are harder to automate becoming more relevant. This would involve retraining and acquiring new skills to adapt to the future job market.

Similar situations have occurred in the past. At the beginning of the Industrial Revolution, for instance, the invention of the mechanized loom lowered clothes prices in England. Artisans who had made clothes until then saw their incomes decreasing while their skills were devalued, as people without their qualifications could work on the new looms. This gave rise to the luddite movement, composed of artisans who destroyed mechanized looms.

Nowadays, concerns in many sectors are similar to those of the Luddites. Many artists and graphic designers, whose work is not generally taken very seriously, see AI-generated posters and designs proliferating. Journalists see blogs whose texts are written by tools like ChatGPT, while translators see automatic (and often flawed) translations proliferate on the Internet. The Pandora's box has already been opened, and we can only adapt to the new times ahead. If something can be learnt from the luddites, it is that a technological revolution cannot be stopped by destroying machines.

To adapt to the new times, it is important to focus on training in skills that machines still cannot match. That is the main motivation of the current European project, **AI4Labour (Reshaping labour force participation with Artificial Intelligence)**. The project aims to develop an Internet portal where users, by providing information about their educational background, skills, and professional goals, can receive recommendations on what training they could do to keep their jobs in the changing world of artificial intelligence. In this portal, users' skills would be filtered to discard recommendations with a higher likelihood of automation, highlighting those skills that can still only be performed by humans. In this way, we hope to contribute to making the transition between the pre-Artificial Intelligence and post-Artificial Intelligence eras as smooth as possible.