


Chapter 16

Role of AI in Skilling, Upskilling, and Reskilling the Workforce

Narendra Kumar Swami

 <https://orcid.org/0000-0003-2865-8114>

Arya College of Engineering and Information Technology, India

Amit Sharma

Arya College of Engineering and Information Technology, India

Rohit Mittal

Manipal University Jaipur, India

ABSTRACT

This chapter investigates the most recent advancements in artificial intelligence (AI) study and application of AI to change professional skills. The integration of AI into many sectors of organizations holds promise for automating jobs now handled by humans or decreasing cognitive burden. According to this study, incorporating AI into a company requires putting multiple organisational techniques into practice at once. The first step in closing the present skills gap in the workplace is to map the transversal competencies that employees need. Companies may also assist employees in learning the competencies needed to implement AI, as well as in enhancing and gaining new capabilities. The findings also show that businesses need to implement policies that support employees via offering opportunities for ad hoc training and development in order to make certain that workers' attitudes and mental models regarding AI are open and prepared for the changing labour market and its related issues.

INTRODUCTION

Business, society, and the global economy are all greatly affected by the use of technology, particularly in the field of AI. The ability of a system to accurately comprehend external input, learn from such data, and use those learnings to accomplish objectives.

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Through awareness, understanding, education, and application, flexibility can either complement or even completely replace human tasks. These days, modern AI systems require machine learning. A machine learning system receives large amounts of information, interprets it, and applies methods to find patterns and relationships in the data. For organizations to effectively respond to these changes, they must adjust to new working and organizational models. One of the main adjustments to be anticipated is a reassessment of the skills required by the labor force, since automation in some jobs may call for retraining or the learning of new skills. The introduction of AI will have an impact on both knowledge workers and blue-collar workers because it can automate a wide range of tasks presently completed by people. (Abe et al., 2021; Doshi et al., 2023; Hiran et al., 2024)

Because numerous employment opportunities may be automated and lead to job losses in businesses that rely on manual labour, the effects of AI may be more severe for blue-collar workers. Known as “mid-range” talents, manual, functioning and visual-spatial abilities are among them, and their need is decreasing. (Abe et al., 2021; Priyadarshi et al., 2021)

The way AI impacts human skills is likely to rely on the specific tasks and abilities being mechanised. Depending on the specific skills required for a task, some tasks may be better suited for automation than others, and the impact on human talents will change accordingly. It's also feasible that certain skills, like critical thinking, may become more in-demand as AI advances.

There will be a big change in the skills required for every profession during the following five years, leading to a skills gap. This is true for both people who intend to enter the labour market and people who wish to stay in their current positions. In the next five years, the percentage of vital skills will shift by 40%, according to the World Economic Forum (WEF), and 48 to 52% of workers would need retraining and further education. Soft skills, or transversal skills, such as analysing and thinking critically, problem-solving, and self-management, are among the core competences that are expected to become more crucial by 2025. Technical talents are necessary for employing AI systems efficiently. (Mubarak, 2022; Doshi et al., 2023)

To find answers to the problems that occur, this paper will look into the most current advancements in practice and research on the automation of professional abilities through artificial intelligence (AI). It is necessary to anticipate the type of organizational changes brought about by the implementation of AI systems in order to design key responsive training pathways for roles, responsibilities, and skills. Thus, in order to understand how AI is affecting human abilities in organizations, we have examined the key theories and methodologies. Next, we looked at how workers' skill requirements have changed as a result of AI's entrance and how AI can assist workers in acquiring and developing critical skills (Hiran et al., 2023; Mishra et al., 2021).

The current study makes multiple recommendations. It identifies tactics that can help workers and organizations overcome the difficulties brought on by upskilling and reskilling proclivities. Thirdly, it offers suggestions for practitioners to determine the competencies required for AI adoption, with the goal of customizing possibilities for training and development to the evolving labor market. Fourthly, it emphasizes the value of a transdisciplinary approach in producing insightful information and the significance of psychology in comprehending the whole range of applications of AI and how it affects society. Lastly, it offers recommendations for more study opportunities based on the labor market patterns that were found.

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