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Community service: Artificial intelligence in employment and the reconfiguration of the workforce in the digital age

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Abstract---The impact of artificial intelligence on employment and the configuration of the workforce in the digital age is a topic of great relevance today. The objective of the research is to analyze how the adoption of artificial intelligence is transforming work roles, generating both opportunities and challenges for workers. Changes in skill demand, the emergence of new occupations, and potential automation of tasks are examined, as well as implications for workforce training and adaptation. A bibliographic review and a qualitative analysis of the aspects involved in the introduction of new



technologies in the work process were carried out. The result was that artificial intelligence could be implemented to improve employment and take advantage of the opportunities offered in all work spheres, mainly science and education.

Keywords---artificial intelligence, community service, digital age, employment, reconfiguration.

Introduction

In today's digital age, Artificial Intelligence (AI) has become a transformative force that is radically reshaping the workplace landscape. The introduction of advanced technologies is creating significant disruption in various industries, affecting both employers and employees. This phenomenon has generated a growing interest in understanding how this technology is redefining work roles, the demand for skills, and the dynamics of the labour market (Van Doorn et al., 2023; Baptista et al., 2020; Avaro, 2023).

The impact of AI on employment and workforce configuration is critical to anticipating and managing the changes that are occurring and what may happen in the future. The adoption of this tool offers both opportunities and challenges: on the one hand, greater efficiency and the creation of new types of jobs are perceived; Task automation raises concerns about job displacement and the need for massive workforce reduction (Armas, 2022).

The purpose of this study is to comprehensively analyze how AI is transforming employment, identifying both the opportunities presented and the challenges that must be faced. With the introduction of AI, there were changes in skills, the emergence of new occupations and the possible automation of traditional tasks, all of which brought implications for the training and adaptation of the workforce, highlighting the importance of continuing education and the acquisition of new skills to stay relevant in the labour market (Ocaña & Garro, 2019; Dwivedi et al., 2021; Stefanelli, 2001).

A mixed methodology was used that combines bibliographic review with qualitative techniques. This approach allows for a holistic understanding of the effects of AI on employment, considering both technical aspects and human perceptions. In the education process, AI has also played an important role in different aspects such as teaching, and research in the preparation of students (Ocaña et al, 2019). According to this, in higher education, it is necessary to draw up a strategy that includes digital skills to train professionals capable of thinking and developing the technological environment based on their needs.

Additionally, new roles and employment opportunities are identified in areas such as software development, data analysis, and ethical management of AI. However, the ethical and regulatory challenges that accompany the implementation of these advanced technologies are also highlighted, as well as the need for proactive policies that mitigate negative effects and maximize benefits (Holford, 2019; Murugesan et al., 2023).

Materials and Methods

A comprehensive review of the existing literature on the topic was carried out using academic databases, specialized journals, books and other resources to collect relevant information on the impact of AI on employment and the workforce. A qualitative investigation was carried out based on studies carried out by other authors.

Analysis and Discussion of Results

AI is playing an increasingly significant role in automating tasks and processes, which can have a significant impact on employment. Ethical considerations were taken into account, this is necessary when conducting research in this field, especially when keeping in mind the conditions that can affect humans. This comprehensive approach allowed you to effectively address the topic, providing a comprehensive view of the impact of AI on employment and the reconfiguration of the workforce in the digital age. The worker's perception was assessed when integrating AI into the work environment, which can mostly influence in various ways, these are affected by factors shown in Figure 1.

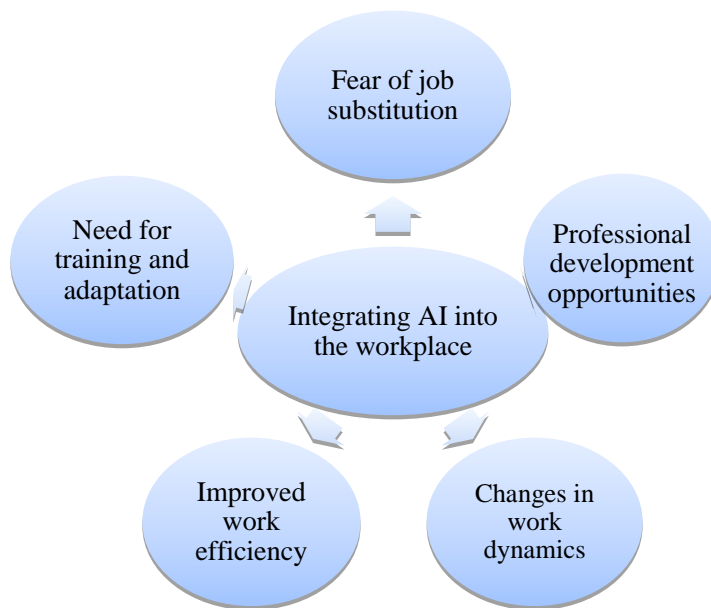


Figure 1. Integration of AI in the work environment

There are different concerns related to this technology here you can see how they are raised by the respondents; Many employees may be afraid of the possibility of AI automating their tasks, generating anxiety and job insecurity. Others see it as an opportunities to acquire new skills and advance professionally in roles related to programming, data analysis or systems management; Positive perception arises when AI facilitates routine tasks, allowing employees to focus on more creative and strategic activities.

Changes in work dynamics are also proposed according to how tasks are organized and performed, which can generate resistance or acceptance among workers, depending on how they perceive these changes induced by AI. What is clear is that there is a need for training and adaptation, this may require employees to acquire new skills, generating both enthusiasm for learning and resistance to change.

The worker's perception regarding the integration of AI varies depending on the company's communication and transparency, training support, and individual perception of opportunities and challenges. Organizations must manage change effectively, considering these perceptions to achieve a successful transition towards integrating AI into the workplace.

AI is reconfiguring the labour market by automating tasks and, simultaneously, generating new employment opportunities in various sectors. These opportunities include business areas where some of them consider that there may be job layoffs. In Peru, work is being done on AI so that the Peruvian worker is better prepared when it is extended ([Armas, 2022](#); [Doellgast et al., 2022](#); [Budhwar et al., 2023](#)).

AI supports the research process, they have transformed the scenario of writing, creating and preparing research works, generating a revolution in the academic publishing world irreversibly, this is a tool that empowers researchers by reducing in many cases the work of the researcher ([Johnson et al., 2022](#)). In the process of developing and maintaining AI, the demand for development professionals increases; they must prepare themselves to achieve the implementation and maintenance of the technologies linked to it, such as software engineers, data scientists and machine learning experts that universities must prepare new generations in it.

Roles emerge in creating and managing user interfaces, designing AI-focused experiences, and collaborating with other systems generating job opportunities. The massive generation of data by AI drives the demand for data analysts and scientists, as well as professionals specialized in the interpretation and decision-making based on this data. This is shown in studies carried out, allowing the development of more advanced study and analysis systems, facilitating obtaining relevant data for decision-making ([Márquez, 2020](#)). AI tasks can introduce process automation, which responds to the demand for professionals to design, implement and supervise computerized systems.

The use of AI is changing the employment landscape while creating new opportunities that require specialized skills and the ability to adapt by collaborating with them. This phenomenon is shaping an innovative labour market in the digital age where the economic growth it can generate is appreciated.

In Spain, they have analyzed different impacts on the industry, achieving economic impacts in different sectors, and increasing the country's GDP ([EDS, 2023](#)). In this sense, different sectors are shown where their impact is high, for example in the automotive, health, and home automation among others.

According to (Hernández, 2022; Makarius et al., 2020), AI is focused on repetitive tasks, referring to any technology that allows computers to imitate human abilities, so they can learn experiences, adapt and have behaviours similar to those that a human being would have, to through unlimited processing capacity and the growth of big data to feed systems. In this sense, some applications of these are proposed that are based on other technologies such as large-scale machine learning, deep learning, natural language processing, and collaborative systems. (collaborative systems) among others that can help humans in their daily work. The work culture has been transforming and adapting to the technological changes that some propose that the fourth industrial revolution is taking place, where technological advances are occurring very quickly, this being noticeable in the industries (López et al., 2018).

Conclusion

The integration of artificial intelligence (AI) into employment and the reconfiguration of the workforce in the digital age offers notable benefits in efficiency, productivity and job creation. However, it also presents challenges such as potential job displacement, skills gap, impact on job quality, and ethical and regulatory issues. The challenges encountered must be proactively analyzed where it is essential to achieve an effective transition towards a work environment driven by AI, where unemployment does not occur in its implementation, managing to adjust according to this process. Benefits include automating repetitive tasks, creating new jobs, increasing efficiency, and developing specialized skills.

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