

AI In the Workplace: Studying the Impacts Toward Employees

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Abstract

The idea of artificial intelligence (AI) can be dated as far back as the introduction of modern technology itself, and early foundations of this concept have been around since the mid 20th century. In recent years, major developments in AI have been introduced to the public, and it is becoming more commonly utilized in businesses. This paper seeks to address AI in the workplace with a focus directed on the impacts it has on employees. Drawing from the disciplines of sociology, economics, and science and technology, insights regarding this topic can be addressed. My findings show that, if incorporated gradually, AI has the potential to increase efficiency within organizations without being a threat to the pre-existing workers. The significance of this work is to highlight the adaptation process employees will experience when AI is incorporated into their work environments.

AI is a new form of technology that has quickly become a powerful tool used in everyday life as well as business environments. Due to its rapid development, AI is a current topic of debate, and Mochovec et al. (2025) attribute this spark of interest to the release of generative AI, namely, ChatGPT in late 2022. Since generative AI is still in its infancy, questions have arisen regarding its implementation within the workplace. Looking at this topic through the lens of a corporate official, AI is an efficient technology that can be used to lower business expenses through automation of certain tasks. On the other hand, employees might see the application of AI as a threat to their current standing within their place of work. However, this topic is more of a spectrum rather than two opposing sides. There are those who see both the benefits and consequences of utilizing these systems of automation. Resulting from the complexity of this issue, a multi disciplinary approach is required in order to address both sides of the topic. Therefore, as this technology continues to advance, it's important to consider the effects its integration into the workplace will have on employees by applying information from the disciplines of science and technology, sociology, and economics.

Science & Technology

A change in the industry like none ever seen before is taking place as more businesses make the decision to utilize AI as a means of enhancing workplace efficiency. According to Pechova et al. (2024), AI will change how the workplace operates and will make a difference in the tasks that are performed by employees. With the accelerated development of this technology, AI is able to execute new tasks which would have previously been conducted by employees. One reason that AI has taken off at such a rapid pace is due to machine learning, which is a key aspect of AI wherein algorithms are utilized to identify common patterns in data (Ratten, 2024). By using these commonalities within the data, AI systems are able to continuously learn and evolve regarding the tasks they are assigned. This learning mechanism allows for these systems to quickly identify which areas of their operations that they can improve on in order to be as precise and efficient as possible. Conversely, humans are more prone to

making errors when it comes to repetitive tasks, due to boredom, fatigue, unrelated factors, and while they are able to learn from their mistakes, they are not able to do so in a manner as absolute as an AI system that utilizes machine learning. Yet machine learning is unable to be applied to tasks that require more creativity and in-depth, thought provoking solutions such as researchers, artists, engineers, architects, etc. These fields of occupation are still able to utilize AI as a tool in their work environments, and as AI continues to advance, it's to be expected that its capabilities will grow as well.

Sociology

With the implementation of AI comes new concerns surrounding the moral impacts of this technology, especially surrounding the effects it will have on workers and their displacement within the companies they are employed. Similar to the introduction of computers to the general public, AI has the potential to cause a shift of the social structures commonly found in business environments. While AI adoption into the workplace can enhance productivity, it can also cause worries to arise amongst employees regarding new workplace regulations and operations (Pytel-Kopczynska & Niedbal, 2023). Additionally, acceptance of AI within the workplace can be correlated to the cultural backgrounds of the people working at a facility (Francis Xavier et al., 2024). Their research proposes that people who originate from a more collectivistic culture have shown to be more accepting of AI systems and automation in the workplace, whereas those with a more individualistic background weren't as open to AI integration.

There are bound to be people who are apprehensive to the acceptance of this new technology with rumors circulating the media of AI overtaking jobs from humans. There might be some truth to those rumors in regard to certain jobs and tasks, however, many more jobs will be created to replace those deemed best suited for automation. It's only natural for some people to feel uncertain about their new standing within the workplace after the introduction of AI, but the new environment could enhance collaborative efforts among employees so that people can feel reassured of their skills and responsibilities in their place of work (Scott & Le Lievre, 2020).

Ultimately, if given appropriate notice and time to learn and adjust to these changes, then the best outcome for employees and businesses can be achieved. Routine training courses could be applied to organizations who implement AI into their workforce in order to accommodate workers who are unsure how to move forward within the company.

Economics

Being the owner of a business requires that the company's income is regularly weighed with monthly expenses in order to remain afloat. As aforementioned, AI can be a frugal means of lowering expenses and optimizing output, which explains why many business leaders are keen on incorporating this asset into their workplace operations. Almaqtari (2024) provides findings to support how AI integration within companies provides the ability to aid with accounting operations, however, challenges may arise surrounding the quality of data. Furthermore, autonomous systems may be implemented into job sectors to account for employees' lack of digital skills (Babashahi et al., 2024). Consequently, AI needs to be utilized within businesses to address the areas where employee abilities are lacking while still verifying the quality of work produced by these systems are up to company standards.

Drawing from the science and technology section of this paper, machine learning is a critical function of AI that can ensure the quality of data and output remains intact. Furthermore, for less repetitive tasks that AI can be implemented to carry out, new jobs can arise for employees that might require them to certify that AI systems are achieving expected business standards. Artificially intelligent systems are also going to experience periods of downtime where they are not running properly, so there will need to be workers within companies that have the skillset to identify what went wrong within the systems and make the appropriate repairs that would allow the systems to run as they are intended to.

Overall, AI implementation can be both alarming and exciting depending on who you ask. While AI systems are beginning to automate certain types of human labor, it's important to remember that there will always be a need for human workers. Furthermore, AI has the potential

to provide new opportunities of creativity and collaboration amongst employees, making for an enhanced job environment. One critical aspect that will make AI implementation as smooth as possible and result in relief amongst employees is that they are given time to adapt to these new changes and that employers remain aware of their workers' responses to this shift in the workplace dynamic. By creating a dynamic where employees can provide feedback regarding their experience around new AI systems, business owners would be able to understand which aspects of AI are beneficial and which ones are creating problems around the workplace.

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